STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

Natural Resources Evaluation Report

Florida Department of Transportation

District One

SR 35 (US 98) PD&E Study

Limits of Project: From North of West Socrum Loop Road to South of CR 54

Polk County, Florida

Financial Management Number: 436673-1-22-01

ETDM Number: 14334

Date: November 2021

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.



Natural Resources Evaluation

SR 35 (US 98)

Project Development and Environment (PD&E) Study From North of West Socrum Loop Road to South of CR 54

FPID 436673-1 ETDM Project No. 14334 Polk County, Florida





Florida Department of Transportation District One

> Prepared by: Faller, Davis & Associates, Inc.

> > November 2021

EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT) District One is conducting a Project Development and Environment (PD&E) study along State Road 35/US Highway 98 (US 98) in Polk County to evaluate roadway and safety improvements along the corridor. The study limits extend for 8.7 miles from north of West Socrum Loop Road to south of County Road 54 (CR 54), near the Pasco County line. The study will evaluate the effects of widening this section of US 98 from a two-lane undivided roadway to a four-lane divided roadway and will also assess existing and future traffic operations, access management, and freight mobility.

The PD&E study is supported by preliminary engineering design activities and will determine the proposed build alternative, which will be depicted on typical roadway sections and conceptual design plans. The build alternative and the no-build, or "no action," alternative will be evaluated and compared to assess potential effects to the natural and physical environment, to determine their ability to meet the project's Purpose and Need, to obtain and consider agency and public comments, and to ensure compliance with all applicable federal and state laws. The proposed build alternative will include the construction of stormwater management facilities (SMFs) and floodplain compensation (FPC) sites. The no-build alternative will assume no improvements are made to the facility beyond routine roadway maintenance. A Type 2 Categorical Exclusion (Type 2 CE) is being prepared as the environmental document for this study.

A Natural Resource Evaluation (NRE) has been prepared to document and summarize the potential impacts to natural resources including federal and state protected species, wetlands, and protected lands. This report also documents measures considered to avoid, minimize, and mitigate for potential impacts.

The proposed project was evaluated for potential occurrences of federally and state listed animal and plant species in accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended, the Fish and Wildlife Conservation Act, the Migratory Bird Treaty Act, Part 2, Chapter 16 of the FDOT PD&E Manual, and Chapters 5B-40 and 68A-27 Florida Administrative Code (F.A.C.). Based on this evaluation, a total of 29 federally listed species and 39 state listed species were identified as potentially occurring within the project study area. Additionally, three other species were included in the analysis due to the regulatory protections associated with those species. Coordination with the National Marine Fisheries Service (NMFS) during the Efficient Transportation Decision Making (ETDM) process indicated that the proposed project would not directly impact any NMFS trust resources (i.e., Essential Fish Habitat [EFH]). Therefore, EFH was not further evaluated. **Table ES-1, ES-2**, and **ES-3** provide summaries of the federally and state listed species and other protected species with a potential to occur within the project study area, along with their corresponding effect determinations. Upon completion of evaluating and selecting the preferred SMF and FPC sites, further assessment of potential impacts to listed species will be conducted of which the results will be provided in an addendum to this report.

The project study area was also evaluated for the presence of federally designated Critical Habitat as defined by Congress in 50 Code of Federal Regulations (C.F.R.) 17. Based on this evaluation, it was determined that no federally designated Critical Habitat is present within the project study area.

Project Impact Determination	Federal Species		
	Eastern Indigo Snake (Drymarchon couperi)		
	Blue-tailed Mole Skink (Plestiodon egregious lividus)		
May affect, not likely to adversely affect	Sand Skink (Plestiodon reynoldsi)		
	Eastern Black Rail (Laterallus jamaicensis jamaicensis)		
	Wood Stork (Mycteria americana)		
	Everglade Snail Kite (Rostrhamus sociabilis)		
	Florida Panther (<i>Puma concolor coryi</i>)		
	Florida Grasshopper Sparrow (Ammodramus savannarum		
No effect	floridanus)		
	Audubon's Crested Caracara (Caracara cheriway)		
	Federally listed plants		

Table ES-1 Summary of Federally Listed Species Effect Determinations

Table ES-2 Summary of State Listed Species Effect Determinations

Project Impact Determination	State Species		
No adverse effect anticipated	Gopher Tortoise (Gopherus polyphemus) Florida Pine Snake (Pituophis melanoleucus mugitus) Florida Sandhill Crane (Antigone canadensis pratensis) Florida Burrowing Owl (Athene cunicularia floridana) Little Blue Heron (Egretta caerulea) Tricolored Heron (Egretta tricolor) Southeast American Kestrel (Falco sparverius paulus)		
No effect anticipated	Short-tailed Snake (<i>Lampropeltis extenuate</i>) Least Tern (<i>Sternula antillarum</i>) State listed plants		

Table ES-3 Summary of Other Protected Species Effect Determinations

Project Impact Determination	Other Protected Species	
No effect anticipated	Bald Eagle (Haliaeetus leucocephalus) Osprey (Pandion haliaetus)	
	Florida Black Bear (Ursus americanus floridanus)	

In accordance with Presidential Executive Order 11990 entitled *Protection of Wetlands*, US Department of Transportation Order 5660.1A, *Preservation of the Nation's Wetlands* and Part 2, Chapter 9 of the FDOT PD&E Manual, the project study area was assessed for the presence of wetlands that may be impacted by proposed project activities. Based on this evaluation, a total of 65 wetlands and 92 other surface water habitats were identified within the existing right-of-way (ROW) within the proposed project limits. These wetland and surface water habitats were classified using both Florida Land Use, Cover and Forms Classification System (FLUCFCS) (FDOT, 1999) and the United States Fish and Wildlife Service's (USFWS) *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, et

al., 1979). **Table ES-4** lists the types of wetlands and other surface waters present within the project limits by FLUCFCS and USFWS classification, along with their corresponding acreages.

FLUCFCS Code (USFWS Classification)	Acres		
Federally Jurisdictional Wetlands			
617 – Mixed Wetland Hardwoods (PFO1C)	2.70		
621 – Cypress (PFO2C)	0.87		
630 – Forested Wetland Mix (PFO1/2C)	6.18		
631 – Wetland Scrub (PSS1C)	0.28		
641 – Freshwater Marsh (PEM1C)	13.45		
Subtotal Federally Jurisdictional Wetlands	23.48		
Federally Jurisdictional Other Surface Waters			
510 – Streams and Waterways (PEMx)	1.87		
State-only Jurisdictional Other Surface Waters			
510 – Streams and Waterways (PEMx)	4.41		
TOTAL	29.76		

 Table ES-4
 Wetlands and Other Surface Waters within the Limits of Mainline Widening

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded; PEMx = Palustrine, Emergent, Excavated; PSS1C = Palustrine, Scrub-shrub, Broad-leaved Deciduous, Seasonally Flooded. Sources: FDOT, 1999; Cowardin *et al.*, 1979; FDA, 2021.

An additional 18 wetlands and three other surface waters were identified within the preliminarily selected SMF and FPC sites during the evaluation of the SMF and FPC site alternatives. **Table ES-5** summarizes the wetland and other surface water types identified within these areas. Upon completion of evaluating and selecting the preferred SMF and FPC sites, further assessment and delineations will be conducted of which the results will be provided in an addendum to this report.

FLUCFCS Code and Description	Acres
Federally Jurisdictional Wetlands	
617 – Mixed Wetland Hardwoods (PFO1C)	0.17
621 – Cypress (PFO2C)	1.71
630 – Forested Wetland Mix (PFO1/2C)	8.91
641 – Freshwater Marsh (PEM1C)	0.56
643 – Wet Prairie (PEM1C)	0.11
Subtotal Federally Jurisdictional Wetlands	11.46
State-only Jurisdictional Other Surface Waters	
530 – Reservoir (POWx)	5.26
510 – Streams and Waterways (PEMx)	0.11
Subtotal State-only Jurisdictional Other Surface Waters	5.37
TOTAL	16.83

Table ES-5 Wetlands and Other Surface Waters within the SMF and FPC Sites

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded; POWx = Palustrine, Open Waters, Excavated.

Sources: FDOT, 1999; Cowardin *et al.*, 1979; FDA, 2021

Potential impacts to federally jurisdictional wetlands and other surface waters include:

- 23.48 acres of direct wetland impacts
- 17.07 acres of secondary wetland impacts
- 1.87 acres of temporary other surface water impacts

Potential impacts to state jurisdictional wetlands and surface waters include:

• 4.41 acres of temporary other surface water impacts

The Uniform Mitigation Assessment Method (UMAM) was used to assess proposed mainline widening impacts to federal and state jurisdictional wetlands which resulted in a functional loss of 14.93 units resulting from direct and secondary impacts. UMAM was not used to assess impacts to federal jurisdictional other surface waters that provide potential suitable foraging habitat for the Wood Stork because no net loss of suitable foraging habitat in other surface waters is anticipated as on-site replacement will occur. State jurisdictional surface waters do not require mitigation per Section 10.2.2.2 of Applicant's Handbook Volume I. Mitigation to compensate for impacts to wetlands will be in accordance with 373.4137, Florida Statutes (F.S.) to satisfy requirements of Part IV, Chapter 373, F.S. and 33 US Code (U.S.C) Section 1344. Once the final SMF/FPC sites are selected, further UMAM analyses will be conducted, and results will be provided in an addendum to this report. Anticipated mitigation requirements to offset wetland impacts resulting from the proposed mainline widening include a total of 2.52 credits (1.21 freshwater forested credits; 1.31 freshwater herbaceous credits) within the Withlacoochee Watershed and 12.41 credits (5.93 freshwater forested credits; 6.48 freshwater herbaceous credits) within the Hillsborough River Watershed. There are several private wetland

mitigation banks available that service the Hillsborough River and Withlacoochee Watersheds, are state and federally permitted, and provide wood stork foraging habitat. Each wetland impact will be mitigated dependent on the watershed it occurs in to satisfy state and federal mitigation requirements.

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SECTION 1 INTRODUCTION

1.1 **PROJECT DESCRIPTION**

The Florida Department of Transportation (FDOT) District One is conducting a Project Development and Environment (PD&E) study to evaluate capacity and safety improvements along SR 35 (US 98) from north of West Socrum Loop Road to south of CR 54 in Polk County. Throughout the remainder of this document only the US 98 designation will be used. The project limits are shown in **Figure 1-1** and the total project length is approximately 8.7 miles. The purpose of this PD&E study is to evaluate and document the benefits, costs, and impacts of widening US 98 from the existing two-lane undivided roadway to a four-lane divided roadway. US 98 is not designated as a Strategic Intermodal System (SIS) facility. The portion from West Socrum Loop Road to just north of Rock Ridge Road is functionally classified as Urban Principal Arterial Other, while the portion from just north of Rock Ridge Road to CR 54 is functionally classified as Rural Principal Arterial Other.



Figure 1-1 Project Location Map

This PD&E study will aid FDOT District One and the FDOT Office of Environmental Management (OEM) in determining the type, preliminary design, and location of the proposed improvements. This improvement is necessary to provide additional capacity to accommodate the future year travel demand generated by the projected population and employment growth in both northwest Polk County and southeast Pasco County. US 98 is a major north-south roadway that extends from US 92 (Memorial Boulevard) in Lakeland to US 301 (Gall Boulevard) in Dade City and provides a critical regional connection between Polk and Pasco Counties. US 98 is a designated evacuation route and is also included in the Polk Transportation Planning Organization (TPO) Regional Freight Network.

This project was screened through the Efficient Transportation Decision Making (ETDM) process as ETDM Project Number 14334. The initial results were published in the *Preliminary Programming Screen Summary Report* on March 11, 2021, with comments provided by the Environmental Technical Advisory Team (ETAT). The ETAT evaluated the proposed project's effects on various natural, physical, and social resources. The Class of Action was determined to be a Type 2 Categorical Exclusion (Type 2 CE).

1.2 PROJECT PURPOSE AND NEED

The following Purpose and Need statement was documented in the March 11, 2021, Preliminary Programming Screen Summary Report:

The purpose of the project is to improve an existing traffic bottleneck along US 98 from north of West Socrum Loop Road to south of CR 54 within unincorporated Polk County. The need for the project is based on the following criteria:

AREA WIDE NETWORK/SYSTEM LINKAGE – Improve Transportation Network Connectivity

The US 98 corridor is an intraregional connecting link between Polk and Pasco Counties. The project segment of US 98 transitions from four lanes just north of West Socrum Loop Road to an undivided twolane facility, creating a traffic bottleneck. The project is intended to enhance transportation network connectivity by:

- Maintaining a critical link to an SIS facility (i.e., I-4), and
- Providing a viable alternate route to parallel north-south arterials (i.e., Kathleen Road and Old Dade City Road).

CAPACITY/TRANSPORTATION DEMAND – Improve Operational Conditions

US 98 serves as a regional freight mobility corridor as it connects to I-4 (an SIS facility) and US 301 (a designated regional freight mobility corridor). Approximately 13.1 percent (%) of the Average Annual Daily Traffic (AADT) volume on US 98 is composed of trucks. Defined Freight Activity Centers (FAC's) in the area (clusters of industrial land parcels) include the Kathleen Road FAC, North Combee Road FAC and West Lakeland Industrial Area FAC. Not only does this roadway facilitate truck traffic and the distribution of goods to local activity areas, but it also functions as an important north-south corridor for commuters between Pasco and Polk Counties.

According to Momentum 2040 (the Polk TPO's Long Range Transportation Plan (LRTP)), the northwest area of Polk County where the project corridor is located, is projected to increase in population by approximately 39,000 people and employment by approximately 11,000 employees by 2040.

Per the Polk TPO's 2020 Roadway Network Database and Momentum 2040:

<u>2019 AADT</u>

- From West Socrum Loop Road to Rock Ridge Road = 16,900 vehicles per day (vpd)
- From Rock Ridge Road to SR 471 = 11,900 vpd
- From SR 471 to CR 54 (Pasco County Line) = 10,400 vpd

Existing Level of Service (LOS)

- From West Socrum Loop Road to Rock Ridge Road = LOS "C"
- From Rock Ridge Road to SR 471 = LOS "C"
- From SR 471 to CR 54 (Pasco County Line) = LOS "D"

Existing Volume-to-Capacity Ratio

- From West Socrum Loop Road to Rock Ridge Road = 0.51
- From Rock Ridge Road to SR 471 = 0.64
- From SR 471 to CR 54 (Pasco County Line) = 1.11

2040 Volume-to-Capacity Ratio

- From West Socrum Loop Road to SR 471 = 1.25 1.50
- From SR 471 to CR 54 (Pasco County Line) = 1.00 1.25

It is important to note that a Volume-to-Capacity (V/C) ratio greater than 1.0 means the volume of vehicles on the roadway segment is greater than what the roadway was designed for when it was constructed. The existing V/C ratio on US 98 from SR 471 to CR 54 is 1.11. The 2040 V/C ratios for the project corridor are 1.25 - 1.50 from West Socrum Loop Road to SR 471 and 1.00 - 1.25 from SR 471 to CR 54. Conditions along the roadway are anticipated to worsen by 2040 if no improvements occur as the roadway will exceed its capacity and not be able to accommodate future travel demand. The project is anticipated to enhance operational conditions within the corridor by increasing its capacity.

SAFETY – Improve Safety Conditions

According to Polk TPO's 2020 Roadway Network Database, during the five-year period from 2014 - 2018, there were 167 total crashes. The total number of crashes per roadway segment, along with the statewide average crash rate for similar facility types, are provided below:

- From West Socrum Loop Road to Rock Ridge Road 37 crashes
 - Actual crash rate = 0.471
 - Statewide average crash rate = 1.202 (Suburban 2-3 lanes 2-way undivided)

- From Rock Ridge Road to SR 471 93 crashes
 - Actual crash rate = 0.841
 - Statewide average crash rate = 0.768 (Rural 2-3 lanes 2-way undivided)
- From SR 471 to CR 54 (Pasco County Line) 37 crashes
 - Actual crash rate = 1.336
 - Statewide average crash rate = 0.768 (Rural 2-3 lanes 2-way undivided)

The crash rates for two of the project roadway segments exceed the statewide average crash rate. The high number of crashes may be attributed to the current roadway's operational conditions. If no improvements are made to the existing roadway, the greater the probability for vehicle-to-vehicle conflicts to occur as traffic increases along the project corridor.

The proposed project is anticipated to improve safety conditions along the roadway by:

- Reducing congestion through the provision of additional capacity, and
- Enhancing a viable parallel alternate north-south route to Kathleen Road and Old Dade City Road that will aid in emergency access and response times.

1.3 EXISTING FACILITY AND PROPOSED IMPROVEMENTS

1.3.1 Existing Facility

US 98 is a two-lane undivided facility with a posted speed limit of 60 miles per hour (mph) throughout the project limits. The roadway is centered within 160 feet of existing right-of-way (ROW) and consists of one 12-foot travel lane in each direction and eight-foot outside shoulders (four feet paved). There are no existing designated bicycle or pedestrian facilities. Stormwater runoff is collected in roadside ditches that outfall to adjacent wetlands and ultimately convey to the Hillsborough and Withlacoochee River watersheds. There are 22 cross drains within the project limits, including bridge culverts at Main Stream, Fox Branch, and Cypress Run. The US 98 intersection with Rock Ridge Road is signalized and there is a flashing signal at the intersection with SR 471. Overhead utilities are located throughout the project limits and conservation lands are present along portions of the corridor. The assigned US 98 Context Classifications within the project limits are shown in **Table 1-1** and the existing typical roadway section is depicted in **Figure 1-2**.

Table 1-1	Existing	Context	Classification
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Begin Limit	End Limit	Context Classification	
North of West Socrum Loop Road	Rock Ridge Road	C3R – Suburban Residential	
Rock Ridge Road	CR 54	C2 – Rural	



Figure 1-2 Existing US 98 Typical Section

1.3.2 Proposed Improvements

The proposed build alternative is a four-lane divided roadway throughout the project limits. The typical section for the portion of US 98 from north of West Socrum Loop Road to Rock Ridge Road includes 12-foot travel lanes, curb and gutter along the inside and outside edges of pavement, a 22-foot grassed median, and 10-foot shared use paths on both sides of the roadway, as shown in **Figure 1-3**. Design, target, and posted speeds of 45 mph are proposed for this 2.3-mile section of the project.



Figure 1-3 Proposed US 98 C3R (Suburban) Typical Section

The typical section for the portion of US 98 from Rock Ridge Road to CR 54 includes 11-foot travel lanes, four-foot paved shoulders with curb and gutter on the inside, ten-foot outside shoulders (five feet paved), and a 30-foot grassed median, as shown in **Figure 1-4**. Design, target, and posted speeds of 55 mph are proposed for this 6.4-mile section of the project.



Figure 1-4 Proposed US 98 C2 (Rural) Typical Section

Both typical sections can be accommodated within the existing ROW. Stormwater runoff will be collected and conveyed to stormwater management facilities (SMFs) that will be constructed along the corridor and impacts to adjacent floodplains will be mitigated through the construction of floodplain compensation (FPC) sites.

1.4 PURPOSE OF THIS REPORT

A Natural Resource Evaluation (NRE) has been prepared to document and summarize the potential impacts to natural resources including federal and state protected species, wetlands, and protected lands. This report also documents measures considered to avoid, minimize, and mitigate for potential impacts. This NRE will provide an opportunity for agency review and concurrence of the findings. Coordination with the National Marine Fisheries Service (NMFS) during the ETDM process indicated that the proposed project would not directly impact any NMFS trust resources (i.e., Essential Fish Habitat [EFH]). Therefore, EFH was not further evaluated.

SECTION 2 EXISTING CONDITIONS

2.1 INTRODUCTION

The project study area is situated in the northwest portion of Polk County. For purposes of this report, the project study area includes a 500-foot buffer extending from the centerline of the project limits (1,000 feet total). In addition to the 500-foot buffer, portions of the preliminarily selected SMF and FPC sites that extend beyond the 500-foot buffer are also included. The project study area encompasses approximately 1,142.6 acres. Upon completion of evaluating and selecting the preferred SMF and FPC sites, further assessment will be conducted of which the results will be provided in an addendum to this report.

2.2 METHODOLOGY

Agency Coordination

This proposed project was reviewed in the FDOT's ETDM under Project Number 14334 in March 2021. As part of their review of the project in the ETDM Programming Screen, agencies commented on the potential effects to natural, cultural, and community resources. The following summarizes the agency comments as it relates to potential effects to naturals resources:

- The Florida Department of Environmental Protection (FDEP) and Southwest Florida Water Management District (SWFWMD) commented that an Environmental Resource Permit (ERP) would be required to authorize the construction of stormwater management and impacts to wetland and surface waters resulting from the proposed project. In addition, the ERP application would be required to eliminate or reduce the proposed wetland resource impacts to the greatest extent possible. Impacts to the roadside ditches would be considered temporary impacts if the ditch is shifted to accommodate the proposed roadway widening and infrastructure improvements associated with the construction. However, the piping of these surface waters would be considered to be permanent impacts even though they may not require wetland mitigation pursuant to Subsection 10.2.2.2 or 10.2.2.1 of the ERP Applicant's Handbook Volume I.
- The NMFS stated that the proposed project does not appear to directly impact any NMFS resources but does cross several small creeks that drain into river systems that ultimately empty into Tampa Bay and the Gulf of Mexico. NMFS also stated that increased use of US 98, with the proposed widening, could result in an increase in the amount of sediment, oil, and grease, and other pollutants reaching estuarine and marine habitats utilized by marine fishery resources. NMFS noted that with stormwater management upgrades and best management practices (BMPs), any indirect impacts to downstream estuarine and marine habitats should be minimal.
- The Florida Fish and Wildlife Conservation Commission (FWC) stated that direct and indirect effects of the proposed project could be moderate, if wetland impacts are minimized and

adequately mitigated; construction is limited to the maximum degree possible to the existing ROW; and BMPs are followed for treatment of stormwater runoff. FWC also recommended the following measures be implemented to conserve fish and wildlife that may occur within or adjacent to the project area: 1) conduct plant community mapping and wildlife surveys for the occurrence of federally and state listed wildlife species; 2) based on survey results, develop plan to address direct, indirect, and cumulative effects of the proposed project on wildlife and habitat resources, including listed species; 3) refer to the FWC's Gopher Tortoise Permitting Guidelines to address potential presence of gopher tortoises within the project area; 4) develop compensatory mitigation plan for the replacement of any wetland, upland, or aquatic habitat functional values for listed species that are lost as a result of the proposed project.

• The US Fish and Wildlife Service (USFWS) noted that the project corridor is located in the Core Foraging Area (CFA) of active nesting colonies of the wood stork and stated that the loss of wetlands within a CFA resulting from the proposed project would result in the loss of foraging habitat for the wood stork. To minimize adverse effects to the wood stork, the USFWS recommended that any lost foraging habitat be replaced within the CFA of the affected nesting colony or that wetland credits be purchased from an USFWS-approved mitigation bank outside of the CFA provided that the impacted habitat occur within the permitted service area of the bank. For impacts to wood stork foraging habitat totaling five or more acres, the USFWS requires a functional assessment be conducted in accordance to the USFWS *Wood Stork Foraging Analysis Methodology*. The USFWS also stated the following listed species have the potential to occur within or near the project site: Audubon's crested caracara, eastern indigo snake, Everglade snail kite, Florida scrub jay, wood stork, and federally listed plants.

Data Collection and Field Review

To determine the locations and boundaries of existing land use, vegetative cover and soils within the project study area, the following available site-specific data were collected and reviewed prior to field reviews:

- True color aerial imagery (ESRI, 2020);
- Soil Survey (Natural Resources Conservation Service [NRCS], 2021);
- Topgraphic Maps (U.S. Geological Survey [USGS], 2018); (USGS, 2021);
- Hydric Soils (Hurt, 2007);
- Florida Land Use, Cover and Forms Classification System (FLUCFCS) (FDOT, 1999);
- SWFWMD FLUCFCS Geographic Information System (GIS) Database (SWFWMD, 2017);
- USFWS Wetland Habitats Classifications (Cowardin et. al., 1979);
- USFWS, National Wetlands Inventory, Wetlands Online Mapper (USFWS, 2021a);

- FDEP Map Direct Gateway (FDEP, 2021);
- Florida Conservation Lands (FNAI, 2021a);
- FDOT's ETDM Environmental Screening Report (#14334, published March 2021).

Environmental scientists familiar with Florida natural communities conducted field reviews of the project study area June through September 2021. Field reviews consisted of pedestrian transects throughout all habitat types found within the project study area. The purpose of these reviews was to verify and/or refine preliminary habitat boundaries and classification codes established through literature reviews and photo interpretation. During the field reviews, each upland and wetland community was visually inspected. Attention was given to identifying dominant plant species composition for each community.

2.3 EXISTING LAND USE AND VEGETATIVE COVER

Based on in-house and field reviews, 19 upland community types, eight wetland community types, and two other surface water community types are present within the project study area. All vegetative habitats and land uses within the project study area were classified using FLUCFCS (FDOT, 1999). Wetland and surface water habitats were also classified using the USFWS Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et. al., 1979). Within the existing ROW, land use consists of mostly Transportation (810) with open ditches and swales for drainage. **Figure A-1** in **Appendix A** depicts the land use/vegetative cover types within the project study area. **Table 2-1** summarizes the land use/vegetative cover types within the project study area. Adjacent land uses are predominately residential low density (FLUCFCS 110), commercial and services (FLUCFCS 140), open lands (FLUCFCS 190), cropland and pastureland (FLUCFCS 210), and upland and wetland forests.

	USFWS		Percent of Project
FLUCFCS Classification/Description	Classification	Acres	Study Area
Uplands			
110 – Residential Low Density	N/A	228.4	20.0
130 – Residential High Density	N/A	24.3	2.1
140 – Commercial and Services	N/A	17.1	1.5
150 – Industrial	N/A	9.9	0.9
182 – Golf Courses	N/A	19.3	1.7
190 – Open Land	N/A	9.3	0.8
210 – Cropland and Pastureland	N/A	278.8	24.4
240 – Nurseries and Vineyards	N/A	5.6	0.5
250 – Specialty Farms	N/A	0.9	0.1
260 – Other Open Lands	N/A	14.0	1.2
320 – Shrub and Brushland	N/A	8.8	0.8
410 – Upland Coniferous Forest	N/A	7.0	0.6
411 – Pine Flatwoods	N/A	44.2	3.9

 Table 2-1
 Existing Land Use/Vegetative Cover Types within Project Study Area

SECTION 2 EXISTING CONDITIONS

FLUCFCS Classification/Description	USFWS Classification	Acres	Percent of Project Study Area
434 – Upland Hardwood-Coniferous Mix	N/A	122.5	10.7
440 – Tree Plantation	N/A	8.7	0.8
740 – Disturbed Land	N/A	0.3	0.0
810 – Transportation	N/A	37.9	3.3
820 – Communication	N/A	3.0	0.3
830 - Utilities	N/A	7.1	0.6
Su	btotal Uplands	847.1	74.1
Wetlands and Other Surface Waters			
520 – Lakes	POW	<0.1	<0.1
530 – Reservoirs	POWx	10.5	0.9
615 – Stream and Lake Swamps	PFO	23.7	2.1
620 – Wetland Coniferous Forests	PFO	0.5	0.0
621 – Cypress	PFO	77.0	6.7
630 – Wetland Forested Mixed	PFO	126.2	11.0
640 – Vegetated Non-forested Wetlands	PEM	0.2	<0.1
641 – Freshwater Marsh	PEM	52.7	4.6
643 – Wet Prairie	PEM	0.8	0.1
644 – Emergent Aquatic Vegetation	PEM	3.9	0.3
Subtotal Wetlands and Other	Surface Waters	295.5	25.9
	Total	1,142.6	100.0

Notes: PEM = Palustrine, Emergent; PFO = Palustrine, Forested; POW = Palustrine, Open Water; POWx = Palustrine, Open Water, Excavated.

Source: FDOT, 1999; SWFWMD, 2017; Cowardin, et al., 1979.

2.4 SOILS

The Soil Survey for Polk County (NRCS, 2021) was reviewed to determine the soils mapped within the project study area. The Hydric Soils of Florida Handbook (Hurt, 2007) classifies 10 of the 24 soil types within the project study area as hydric. Figure A-2 in Appendix A depicts the soils mapped within the project study area. Table 2-2 provides a list of the soils mapped within the project study area, the hydric classification for each, the area of each within the project study area, and percent of each within the project study area.

Map ID	Soil Name	Hydric	Acres	Percent of Project Study Area
2	POMONA FINE SAND	NO	9.6	0.8
6	EATON MUCKY FINE SAND, DEPRESSIONAL	YES	86.1	7.6
7	POMONA FINE SAND	NO	555.0	48.6
8	SELLERS MUCKY LOAMY FINE SAND	YES	1.0	0.1
9	LYNNE SAND	NO	31.7	2.8
10	MALABAR FINE SAND, 0 TO 2 % SLOPES	YES	2.3	0.2
13	SAMSULA MUCK, FREQUENTLY PONDED, 0 TO 1 % SLOPES	YES	7.3	0.7
14	SPARR SAND, 0 TO 5 % SLOPES	NO	48.2	4.2
15	TAVARES FINE SAND, 0 TO 5 % SLOPES	NO	11.8	1.0
16	ZEPHYR MUCK	YES	0.2	<0.1
17	SMYRNA AND MYAKKA FINE SANDS	NO	29.0	2.5
19	FLORIDANA MUCKY FINE SAND, FREQUENTLY PONDED, 0 TO 1 % SLOPES	YES	75.4	6.6
26	LOCHLOOSA FINE SAND	NO	12.4	1.1
31	ADAMSVILLE FINE SAND, 0 TO 2 % SLOPES	NO	1.6	0.1
32	KALIGA MUCK, FREQUENTLY PONDED, 0 TO 1 % SLOPES	YES	37.1	3.3
33	HOLOPAW FINE SAND, FREQUENTLY PONDED, 0 TO 1 % SLOPES	YES	34.6	3.0
35	HONTOON MUCK, FREQUENTLY PONDED, 0 TO 1 % SLOPES	YES	23.3	2.0
38	ELECTRA FINE SAND	NO	1.5	0.1
40	WAUCHULA FINE SAND	NO	142.7	12.5
47	ZOLFO FINE SAND, 0 TO 2 % SLOPES	NO	4.5	0.4
58	UDORTHENTS, EXCAVATED	NO	9.0	0.8
62	WABASSO FINE SAND	NO	3.4	0.3
76	MILLHOPPER FINE SAND, 0 TO 5 % SLOPES	NO	4.6	0.4
87	BASINGER FINE SAND	YES	6.6	0.6
99	WATER	UNRANKED	3.7	0.3
		Total	1,142.6	100.0

 Table 2-2
 Soil Types within Project Study Area

Source: NRCS, 2021; Hurt, 2007.

2.5 CONSERVATION LANDS

The Florida Natural Areas Inventory (FNAI) Florida Conservation Lands GIS database (FNAI, 2021) was used to determine the boundaries of the conservation lands shown in **Figure A-3** in **Appendix A**. Gator Creek Reserve, managed by Polk County, is located adjacent to the northbound US 98 ROW approximately 1.1 miles northwest of West Socrum Loop Road. The Green Swamp, managed by SWFWMD, is located adjacent to the northbound US 98 ROW approximately 1.3 miles southeast of SR 471. The Green Swamp is designated as an Area of Critical State Concern pursuant to Section 380.0551, Florida Statutes (F.S.). Gator Creek Reserve is also protected as an Area of Critical State Concern as it is

located in the Green Swamp. This Green Swamp Area of Critical State Concern consists of approximately 322,690 acres with portions lying in both Polk and Lake counties. Both the Gator Creek Reserve and Green Swamp are located outside of the existing FDOT ROW. The widening of the mainline as part of the proposed project will take place entirely within the existing FDOT ROW. The proposed SMF and FPC sites are located outside of these areas. As a result, there are no impacts anticipated to the Green Swamp Area of Critical State Concern.

SECTION 3 PROTECTED SPECIES AND HABITATS

3.1 INTRODUCTION

The analysis described in this section is consistent with Part 2, Chapter 16, Protected Species and Habitat of the PD&E Manual. Listed species are afforded special protective status by federal and state agencies. This special protection is federally administered by the United States Department of the Interior, USFWS, and NMFS pursuant to the Endangered Species Act of 1973, as amended (ESA). The USFWS administers the federal list of animal species (50 Code of Federal Regulations [CFR] 17.11(h), 2019) and plant species (50 CFR 17.12(h), 2019).

Administered by the FWC, the state of Florida affords special protection to animal species designated as State-designated Endangered or Threatened or State Species of Special Concern, pursuant to Chapter 68A-27, Florida Administrative Code (F.A.C.). Federally listed species are also considered state listed species. The state of Florida also protects and regulates plant species designated as endangered, threatened, or commercially exploited as identified on the Regulated Plant Index (5B-40.0055, F.A.C.), which is administered by the Florida Department of Agriculture and Consumer Services (FDACS), Division of Plant Industry, pursuant to Chapter 5B-40, F.A.C.

The following sections describe the methodology used to assess the potential for occurrence of protected species and to identify the effects that implementation of the proposed project alternatives may have on protected species.

3.2 METHODOLOGY

Agency Coordination

In addition to the ETDM summary review discussed in **Section 2.2**, an official species list was requested from the USFWS Information for Planning and Consultation (IPaC) database (consultation code 04EF2000-2021-SLI-0767), and an elemental occurrence report was requested from the FNAI (see **Appendix B**). Consultation with state and federal agencies is ongoing. Commitments as a result of consultation coordination will be included in the final documents.

Data Collection and Field Review

To determine federally and state listed protected plant and animal species that have the potential to occur within the project study area and to identify the approximate locations of existing upland and wetland communities, available site-specific data were collected and evaluated.

The literature and databases reviewed as part of this evaluation in addition to those listed in **Section 2.2** included:

- Endangered, Threatened and Commercially Exploited Plants of Florida, Chapter 5B-40.0055(2), F.A.C. (2020);
- Bald Eagle Nest Locator (FWC, 2021a);

- Species Conservation Measures and Permitting Guidelines (FWC, 2021b);
- Florida's Endangered Species, Threatened Species, and Species of Special Concern, Chapter 68A-27 F.A.C. (FWC, 2021c);
- FNAI Element Occurrence Report (Appendix B) (FNAI, 2021b);
- FNAI Polk County Tracking List (FNAI, 2019);
- 2010 Notes on Florida's Endangered and Threatened Plants: Botany Contribution (FDACS, 2010);
- USFWS Information for Planning and Consultation Species List (Appendix B) (USFWS, 2021b);
- USFWS Critical Habitat (USFWS, 2021c);
- Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12, updated April 8, 2019 (USFWS, 2019a);
- Wood Stork Nesting Colonies Maps (USFWS, 2019b).

During the 2021 field reviews, additional attention was given to identifying wildlife and signs of wildlife usage in each wetland and upland community within the project study area.

3.3 RESULTS

Based upon background data collection and desktop reviews, as well as site-specific field reviews conducted, 29 federally listed, 39 state listed, and three protected species were identified as having the potential to occur within the project study area. **Tables 3-1** through **3-3** provide a complete listing of these protected species, their federal or state protection status, preferred habitat, and a ranking of potential for occurrence within the project study area. Each species was assigned a none, low, medium, or high potential for occurrence within the project study area based on the following:

- None The project is outside of the species' known range or the project is within the species' range; however, no suitable habitat for or previous documentation of this species occurs within or adjacent to the project study area, and it was not observed during the field reviews;
- Low The project is within the species' range, and minimal or marginal quality habitat exists within or adjacent to the project study area; however, there are no documented occurrences of the species in the vicinity of the project, and it was not observed during the field reviews;
- Medium The project is within the species' range and suitable habitat exists within or adjacent to the project study area; however, there are no documented occurrences of the species, and it was not observed during the field reviews; or

 High – The project is within the species' range, suitable habitat exists within or adjacent to the project study area, there is at least one documented occurrence of the species within the project study area, and/or the species was observed during the field reviews.

Table 3-1	Federally	Listed S	pecies	Potentially	Occurring	g within the Pro	ject Study	/ Area

Federally Listed Mammals
Florida Panther _ extensive blocks of forested _
(Puma concolor coryi) E communities and large wetlands med
Federally Listed Reptiles
Eastern Indigo Snake scrub, sandhill, wet prairies, and
(Drymarchon couperi) mangrove swamps nig
Bluetail Mole Skink (CA) Well drained sandy uplands above 100
(Eumeces egregious lividus) feet
Sand Skink (Neoseps reynoldsi) (CA) T Xeric uplands with sand substrates med
Federally Listed Birds
Florida Grasshopper Sparrow (CA) large, frequently burned areas of dry
(Ammodramus savannarum E prairie habitat with patchy open areas nor
floridanus) for foraging; pasture lands
Audubon's Crested Caracara (CA)
(Caracara cheriway) pasture lands with cabbage palms
Eastern Black Rail
(Laterallus jamaicensis jamaicensis)
and overnead
(Myctaria amaricana)
(Wycteriu umericunu) Swamps, and poilus
(Restrigade Shall Kite (CA) E Restrigade addes of lakes med
Federally Listed Plants and Lichens
Florida Bonamia
(Bonamia arandiflora)
Pygmy Fringe-tree scrub, sandhill, and xeric hammock on
(<i>Chionanthus pygmaeus</i>)
Florida Perforate Cladonia white sands in sand pine scrub and
(Cladonia perforata)
Pigeon Wings
(Clitoria fragrans)
Short-leaved Rosemary
(Conradina brevifolia)
Avon Park Harebells bare patches of white sand in Lake
(Crotalaria avonensis) E Wales Ridge scrub; occasionally in noi
disturbed areas or in partial shade
Scrub Mint E sand pine scrub and sandhill on the Lake nor
(Dicerandra frutescens) Wales Ridge
Scrub buckwneat sandhill, oak-hickory scrub on yellow
angnhalifolium)

SECTION 3 PROTECTED SPECIES AND HABITAT

Species	Listing	Preferred Habitat	Potential to Occur
Highlands Scrub Hypericum (Hypericum cumulicola)	E	open patches in white sand scrubs; occasionally in openings in scrubby flatwoods and oak scrub	none
Scrub Blazingstar (Liatris ohlingerae)	E	rosemary balds; scrubby flatwoods and disturbed scrub	low
Scrub Lupine (<i>Lupinus aridorum</i>)	E	openings in sand pine and rosemary scrub	none
Britton's Beargrass (Nolina brittoniana)	E	scrub, sandhill, scrubby flatwoods, and xeric hammock	low
Papery Whitlow-wort (Paronychia chartacea)	т	Lake Wales Ridge scrub	none
Lewton's Polygala (Polygala lewtonii)	E	oak scrub, sandhill, transition zones between high pine and turkey oak barrens	low
Wireweed (Polygonella basiramia)	E	bare patches within sand pine- evergreen oak scrub vegetation	none
Sandlace (Polygonella myriophylla)	E	open, sandy areas within scrub	low
Scrub Plum (Prunus geniculata)	E	sandhill and oak scrub	low
Wide-leaf Warea (Warea amplexifolia)	E	limited to sunny openings with exposed sand in longleaf pine/turkey oak/wiregrass sandhills	low
Carter's Mustard (Warea carteri)	E	sandhill, scrubby flatwoods, inland and coastal scrub	low
Florida Ziziphus (Ziziphus celata)	E	oak-hickory scrub, scrubby flatwoods, or sandhills	low

Notes: E = Endangered; T = Threatened; CA = USFWS Consultation Area; CFA = Core Foraging Area Sources: USFWS, 2019; USFWS, 2021b; FNAI, 2019; FNAI, 2021b.

Table 3-2 State Listed Species Potentially Occurring within the Project Study Area

Species	Listing	Preferred Habitat	Potential to Occur
State Listed Reptiles			
Gopher Tortoise (Gopherus polyphemus)	т	sandhills, scrubs, xeric oak hammocks, and dry pine flatwoods	high
Short-tailed Snake (Lampropeltis extenuata)	т	dry uplands, sandhill, xeric hammock, sand pine scrub	low
Florida Pine Snake (Pituophis melanoleucus mugitus)	т	relatively open canopies and dry sandy soils, especially sandhills and former sandhills	low
State Listed Birds			
Florida Sandhill Crane (Antigone canadensis pratensis)	т	prairies, freshwater marshes, and pastureland	high
Florida Burrowing Owl (Athene cunicularia floridana)	т	high, sparsely vegetated, sandy ground including dry prairie and sandhill; ruderal areas	low
Little Blue Heron (Earetta caerulea)	Т	freshwater, brackish, and saltwater sites	high
Tricolored Heron	т	shallow freshwater, brackish, and	high
Southeastern American Kestrel (Falco sparverius paulus)	т	open pine habitats, woodlands edges, prairies, and pastures	high
Least Tern (<i>Sternula antillarum</i>)	Т	coastal areas including beaches, lagoons, bays, and estuaries; occasionally nests on gravel rooftops, dredge spoil, construction sites, causeways, and mining lands.	low
State Listed Plants			
Incised Groove-bur (Agrimonia incisa)	Т	sandy, dry-mesic, usually upland; longleaf pine-deciduous scrub oak, sandy or sandy loam; open pine woods or mixed pine-oak woods, bluffs, small clearings and old roads	low
Ashe's savory (Calamintha ashei)	т	dry pinelands and sand pine scrub in canopy openings and disturbed areas	low
Many-flowered Grass-pink (Calopogon multiflorus)	Т	dry to moist flatwoods with longleaf pine, wiregrass, saw palmetto	none
Sand butterfly-pea (Centrosema arenicola)	E	mixed woodlands; pine thickets	low
Highlands Goldenaster (Chrysopsis highlandsensis)	E	sand pine scrub, scrubby flatwoods	none
Piedmont Jointgrass (Coelorachis tuberculosa)	т	karst areas; margins or shallow of lakes and ponds or in wet savanna swales	low
Cutthroat Grass		temporary pool; herbaceous wetland; scrub-shrub wetland	low
Hartwrightia (Hartwrightia floridana)	т	seepage slopes, edges of baygalls and springheads, wet prairies, and flatwoods with wet, peaty soils	low
Edison's Ascyrum (Hypericum edisonianum)	E	depressions in scrub, cutthroat seeps, flatwoods ponds, lake margins, wet	low

SECTION 3 PROTECTED SPECIES AND HABITAT

Species	Listing	Preferred Habitat	Potential to Occur
		prairies	
Star Anise (Illicium parviflorum)	E	banks of spring-run or seepage streams, bottomland forest, hydric hammock, baygall dominated by red maple and sweet bay	low
Nodding Pinweed (Lechea cernua)	т	fire-maintained scrub	none
Pine Pinweed (Lechea divaricata)	E	scrubby flatwoods	none
Tall Twayblade (Liparis nervosa)	E	cypress swamps, hammocks	low
Florida Spiny-pod (<i>Matelea pubiflora</i>)	E	sandhills, scrubs	none
Celestial Lily (Nemastylis floridana)	E	wet flatwoods, prairies, marshes, cabbage palm hammocks	low
Hand Fern (Ophioglossum palmatum)	E	on cabbage palms in hydric hammocks, strand swamps	low
Plume Polypody (Pecluma plumula)	E	tree branches or limestone in hammocks, wet woods, and limesinks	low
Swamp Plume Polypody (Pecluma ptilota var. bourgeauana)	E	rockland hammocks, strand swamps, and wet woods; often on tree bases and fallen logs	low
Low Peperomia (Peperomia humilis)	E	shell mounds and limestone outcrops in mesic hammocks, coastal berms, cypress swamps	none
Yellow Fringeless Orchid (Platanthera integra)	E	wet pine flatwoods, wet prairies, seepage slopes, organic black sandy peat. marshes, swamps, acid bogs	low
Lewton's Polygala (Polygala lewtonii)	E	oak scrub, sandhill, and transition zones between high pine and turkey oak barrens	low
Giant Orchid (Pteroglossaspis ecristata)	т	sandhill, scrub, pine flatwoods, pine rocklands, and occasionally in old fields	none
Large-plumed Beaksedge (Rhynchospora megaplumosa)	E	scrubby flatwoods	none
Florida Willow (Salix floridana)	E	bottomland forests, floodplains, hydric hammocks, swamps, edges of spring-runs, and streams	low
Scrub Bluestem (Schizachyrium niveum)	E	white sand patches in rosemary scrub, sand pine scrub and oak scrub	none
Scrub Stylisma (Stylisma abdita)	E	scrub and sandhills	none
Toothed Maiden Fern (Thelypteris serrata)	E	floodplains, cypress sloughs, swamps	low
Wide-leaved Triphora (Triphora latifolia)	E	hardwood hammocks	low
Tampa Vervain (Verbena tampensis)	E	flatwoods, hammocks	low
Simpson's Zephyr-lily (Zephyranthes simpsonii)	т	wet pinelands and pastures, wet roadsides	low

Notes: E = Endangered; T = Threatened

Sources: FWC, 2021c; FDACS, 2010; FNAI, 2019; FNAI, 2021b.

Table 3-3 Other Protected Species Potentially Occurring within the Project Study Area

Species	Listing	Preferred Habitat	Potential to Occur
Other Protected Birds			
Bald Eagle (Haliaeetus leucocephalus)	None ¹	coastal areas, bays, rivers, lakes, etc. w/concentrated food source	Low
Osprey (Pandion haliaetus)	None ²	on or near large lakes, rivers, and coastal areas where suitable nesting sites can be	High
Other Protected Mammals			
Florida Black Bear (Ursus americanus floridanus)	None ³	wide variety of forested communities including forested wetlands for diurnal cover	Low

¹ Protected by Migratory Bird Treaty Act (16 U.S.C. 703-712), the Federal Bald and Golden Eagle Act, and the State Bald Eagle Management Plan (FWC, 2008).

² Protected by Migratory Bird Treaty Act (16 U.S.C. 703-712) and State-protected by Chapter 68A, F.A.C.

³ State-protected by Chapter 68A-4.009, F.A.C. (2015) and the Florida Black Bear Management Plan (FWC, 2019).

3.3.1 Federally Designated Critical Habitat and Listed Species

Critical Habitat

The project study area was evaluated for the occurrence of Critical Habitat as defined by the ESA and 50 CFR part 402. The USFWS is the authority, as a federal agency, to protect from destruction or adverse modification the biological or physical constituent elements essential to the conservation of listed species. Critical Habitat is defined as the specific areas within the geographical area occupied by a species on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection. No Critical Habitat was identified within the project study area.

Florida Panther

Status: Endangered

The Florida panther (*Puma concolor coryi*) prefers a variety of habitats, including upland forests, prairies, wetlands, stands of saw palmetto and swamps. The project study area does not fall within the USFWS Consultation Area, Panther Focus Area, or the "Primary" or "Secondary" Zones for this species. Though this species has been documented within Polk County, the FWC panther telemetry database (updated March 2021), does not document panthers within approximately 25 miles of the project study area. Suitable habitat occurs adjacent to the proposed project along US 98 and near the proposed pond sites. As a result, the potential for occurrence of the Florida panther within the project study area has been determined to be **medium**.

Though suitable habitat for the Florida panther occurs adjacent to the proposed project, majority of disturbance from the proposed project will occur within existing, maintained, and mostly fenced-in FDOT ROW. If a live Florida panther is found in a construction area, all work will cease and will resume only after the panther is allowed to leave the area on its own. Live sightings will be reported to the FDOT

District Environmental Administrator or the Construction Environmental Coordinator and the Engineer. Should a dead panther be observed within the project site, or if a collision with a panther occurs (including injury), this shall be reported immediately to the FWC via the wildlife alert line and the fore mentioned FDOT personnel shall be immediately notified as well. Based on the information presented above, it has been determined that the proposed project will have **no effect** on the Florida panther.

Eastern Indigo Snake

Status: Threatened

The eastern indigo snake (*Drymarchon couperi*) can be found in a range of habitats, from scrub and sandhill to wet prairies and mangrove swamps. It may be found in gopher tortoise burrows in sandy uplands but forages in more hydric habitats. This species requires very large tracts to survive. Suitable habitat does occur throughout the project study area and gopher tortoise burrows were observed within the southern portion of the project study area. According to the FNAI Elemental Occurrence report (**Appendix B**), a dead eastern indigo snake was documented within one mile of the project study area and none were observed during field reviews. As a result, the potential for occurrence of the eastern indigo snake within the project study area has been determined to be **high**.

To minimize potential impacts to the eastern indigo snake, FDOT will commit to use the USFWSapproved *Standard Protection Measures for the Eastern Indigo Snake* (updated August 2013) (see **Appendix C**) as part of the proposed project. In addition, the proposed project will impact less than 25 acres of xeric habitat. The most recent USFWS Eastern Indigo Snake Programmatic Effect Determination Key (USFWS, 2017), provided in **Appendix D**, was used to evaluate potential effects on this species. Based on this evaluation, it was determined that the proposed project **may affect, but is not likely to adversely affect** the eastern indigo snake.

Blue-tailed Mole Skink and Sand Skink

Status: Threatened

The blue-tailed mole skink (*Eumeces egregious lividus*) and sand skink (*Neoseps reynoldsi*) are found in xeric upland habitats of the Lake Wales Ridge and requires loose sand in open spaces with scattered shrubby vegetation. The project study area is located within the USFWS Consultation Area for these species. Based on the presence of suitable habitat, the potential for occurrence of the blue-tailed mole skink and sand skink within the project study area was determined to be **medium**.

Based on a skink soils survey, three areas within the project limits of the proposed mainline widening, located approximately 0.4 mile north of Socrum Loop Road, were identified as containing appropriate skink soils within the US 98 ROW. From April 23 to May 13, 2021, these areas were surveyed in accordance with the USFWS' *Sand Skinks and Blue-tailed Mole Skinks Survey Protocol Peninsular Florida* (updated July 31, 2020) (i.e., Survey Protocol) to determine the presence of these skinks within the project limits along the mainline of US 98. This survey included both pedestrian and coverboard survey methodology per the Survey Protocol. During the survey period, no skink tracks were observed and no

direct observation of sand or blue-tailed mole skinks was encountered. There is no suitable habitat or soils within the proposed SMF or FPC sites and no further skink surveys are anticipated. **Appendix E** provides a report summarizing the methodology and results of this survey.

Pursuant to the Survey Protocol and based on the results of skink survey, it was determined that the proposed project **may affect**, **but is not likely to adversely affect** the blue-tailed mole and sand skinks.

Florida Grasshopper Sparrow

Status: Endangered

The southern half of the project study area is located within the USFWS Consultation Area for the Florida grasshopper sparrow (*Ammodramus savannarum floridanus*). This species requires large areas of frequently burned dry prairie habitat, with patchy open areas sufficient for foraging and may persist in pasture lands that have not been intensively managed so as to remove all the vegetation clumps. There are no large areas of frequently burned dry prairie within the project study area and pasture lands within the project study area are managed for agricultural uses. There are no documented historic occurrences of the grasshopper sparrow within the project study area and none were observed during field reviews. As a result, it has been determined that the potential for occurrence of the Florida grasshopper sparrow within the project study area is **none**.

Proposed habitat impacts related to the construction will take place mostly within existing FDOT-owned ROW which is mowed and maintained and does not provide suitable habitat for the grasshopper sparrow. Preferred pond sites related to the proposed project do not consist of any suitable habitat for the Florida grasshopper sparrow. As a result, is has been determined that the proposed project will have **no effect** on the Florida grasshopper sparrow.

Audubon's Crested Caracara

Status: Threatened

The project study area is located within the USFWS Consultation Area for the crested caracara (*Caracara cheriway*). Preferred habitat for this species includes open country that may include dry prairie, pasture lands with cabbage palm, cabbage palm/live oak hammocks, and shallow ponds and sloughs. Caracaras prefer cabbage palms for nesting and secondarily may use live oaks. According to the FNAI, the crested caracara has been documented within Polk County, but not within one mile of the project study area. Based on the presence of suitable habitat, the potential for occurrence of crested caracara within the project study area was determined to be **medium**.

As part of the PD&E study, a survey was conducted within the project study area, pursuant to the USFWS Crested Caracara Draft Survey Protocol (provided for the 2016-2017 Breeding Season), from January 7, 2021, through April 30, 2021. A description of the 2021 survey methodology and results is provided in **Appendix F**. A caracara survey will be conducted during the 2022 survey season within the selected SMF and FPC sites, as necessary, of which results will be provided in an addendum to this report.

No crested caracara individuals or caracara nesting activity were observed within the survey area during the 2021 survey. Also, no caracaras were observed at any time during the additional field surveys that were conducted within the project limits during the same timeframe. Based on the results of the survey and pursuant to the caracara survey protocol, it has been determined that the proposed project will have **no effect** on the crested caracara.

Eastern Black Rail

Status: Threatened

The eastern black rail (*Laterallus jamaicensis jamaicensis*) is found in marsh habitat that can be tidally or non-tidally influenced and ranges in salinity from saltwater to brackish to freshwater. Along portions of the Gulf Coast, the black rail can be found in higher elevation wetland zones with some shrubby vegetation. The black rail requires dense overhead vegetation for cover during all stages of their life cycle. There are no documented historic occurrences of the eastern black rail within the project study area and none were observed during field reviews. Suitable habitat within and adjacent to the project study area is limited as majority of the herbaceous wetlands within the project study area are not heavily vegetated. As a result, it has been determined that the potential for occurrence of the eastern black rail within the project study area is within the project study area is **medium**.

As part of the proposed project, impacts to wetland habitat within the project area will be mitigated in accordance to the requirements of Part IV, Chapter 373 F.S and 33 U.S. Code (U.S.C.) Section 1344 to prevent a net loss of wetland habitat functions and values. Based on this information, it has been determined that the proposed project **may affect**, **but is not likely to adversely affect** the eastern black rail.

Wood Stork

Status: Threatened

The wood stork (*Mycteria americana*) nests colonially in a variety of inundated forested wetlands, including cypress strands and domes, mixed hardwood swamps, sloughs, and mangroves. Foraging habitat includes shallow water in freshwater marshes, swamps, lagoons, ponds, tidal creeks, flooded pastures, and ditches where fluctuating water levels concentrate food sources.

The USFWS has defined the CFA for the wood stork in Polk County as an 18.6-mile radius from breeding colonies. Based on information provided by the USFWS, the project study area is located within the 18.6-mile radius CFA of four active wood stork nesting colonies. The nearest colony, Little Gator Creek in Pasco County, is located approximately 3.3 miles northwest of the project study area. Wood storks were observed within and adjacent to the project study area during the field reviews and there is suitable foraging habitat present within some of the wetlands and other surface waters throughout the project study area. As a result, the potential for occurrence of the wood stork in the project study area has been determined to be **high**.

In an effort to gather the information needed to determine the amount of compensation required to offset the loss of suitable wood stork foraging habitat associated with the proposed mainline widening,

a Wood Stork Foraging Analysis was prepared per the USFWS's Wood Stork Foraging Habitat Assessment Methodology (USFWS, 2012). The Methodology includes calculations of prey-base analysis, loss of suitable foraging habitat, and compensation required to offset the loss of suitable habitat. The methodology and results of the analysis conducted for this PD&E study are summarized in Appendix G. Based on the results of the analysis, the proposed project will result in a total biomass loss of 12.25 kilograms. Compensation for suitable foraging habitat will be provided within the service area of an USFWS-approved wetland mitigation bank (preferably located within the CFA of wood stork foraging habitat lost) that will offset the 12.25 kilograms of short hydroperiod forage biomass loss. In addition, only temporary impacts to existing other surface waters (i.e. ditches) will occur to accommodate the proposed project as they are proposed to be replaced in-kind; therefore, no net loss of suitable foraging habitat is anticipated as a result of proposed temporary impacts to other surface waters. Pursuant to the 2010 USFWS Wood Stork Effect Determination Key (USFWS, 2010), provided in Appendix D, the proposed project is not located within 2,500 feet (0.47 mile) of an active nesting wood stork colony, and suitable foraging habitat will be compensated in accordance with Section 404(b) of the Clean Water Act (CWA) and the USFWS Habitat Management Guidelines for the Wood Stork in the Southeast Region through the purchase of federal credits at a USFWS-approved mitigation bank. Therefore, it was determined that the proposed project may affect, but is not likely to adversely affect the wood stork. Upon completion of evaluating and selecting the preferred SMF and FPC sites, further assessment of the potential loss of suitable wood stork foraging habitat resulting from the SMF and FPC sites will be conducted of which the results will be provided in an addendum to this report.

Everglade Snail Kite

Status: Endangered

The project study area is located within the USFWS Consultation Area for the Everglade Snail Kite (*Rostrhamus sociabilis plumbeus*) but is not located within designated critical habitat. This species prefers large open freshwater marshes and lakes with shallow water and feeds exclusively on apple snails (*Pomacea paludosa*). Suitable foraging habitat is present within and adjacent to the project study area within the freshwater marshes and apple snails were observed in these areas during the field reviews. There are no documented occurrences of the Everglade snail kite within one mile of the project study area and no individuals were observed during the field reviews. Therefore, the potential for occurrence of the Everglade snail kite within the project study area has been determined to be **medium**.

As part of the proposed project, impacts to wetland habitat within the project area will be mitigated in accordance to the requirements of Part IV, Chapter 373 F.S. and 33 U.S.C. Section 1344 to prevent a net loss of wetland habitat functions and values. Based on this information, it has been determined that the proposed project **may affect, but is not likely to adversely affect** the Everglade snail kite.

Federally Listed Plant Species

Federally listed plant species, their habitat, and potential for occurrence have been provided in **Table 3-1**. The majority of the proposed project improvements will take place within existing FDOT-owned ROW that is largely mowed and maintained. Additionally, preferred habitat of the federally listed species potentially occurring within the project study area is limited to sandhill scrub typically occurring on the Lake Wales Ridge. In September 2021, a pedestrian survey for listed scrub plant species with a fall flowering/survey season was conducted within the areas of suitable and marginally suitable habitat occurring within the project limits. No suitable habitat for listed scrub plant species occur within the preliminarily selected SMF/FPC sites. During the fall survey, no listed plant species were identified. For listed scrub plant species with a spring flowering/survey season, a pedestrian survey will be conducted within the areas of suitable and marginally suitable habitat occurring within the areas of suitable and marginally suitable conducted within the areas of suitable and marginally suitable habitat occurring within the project limits in March 2022 to further determine the absence/presence of federally listed scrub plant species. The results of the March 2022 spring survey will be included in an addendum to this report. **Table 3-4** lists the federally listed scrub plants, survey season, and preferred habitat. Based on the results of the 2021 survey and due to the minimal presence of suitable habitat within the project study area, it was determined that the proposed project will have **no effect** on federally listed plant species.

Species	Listing	Preferred Habitat	Survey Season
Federally Listed Plants			
Florida Bonamia (<i>Bonamia grandiflora</i>)	т	open or disturbed areas in white sand scrub	Spring
Pygmy Fringe-tree (Chionanthus pygmaeus)	Е	scrub, sandhill, and xeric hammock on the Lake Wales Ridge	Spring
Pigeon Wings (Clitoria fragrans)	Т	scrub oak, scrubby high pine	Spring
Short-leaved Rosemary (Conradina brevifolia)	E	scrub on Lake Wales Ridge	Spring or Fall
Avon Park Harebells (Crotalaria avonensis)	E	bare patches of white sand in Lake Wales Ridge scrub; occasionally in disturbed areas or in partial shade	Spring
Scrub Mint (Dicerandra frutescens)	E	sand pine scrub and sandhill on the Lake Wales Ridge	Fall
Scrub buckwheat (Eriogonum longifolium var. gnaphalifolium)	т	sandhill, oak-hickory scrub on yellow sands; high pineland between scrub and sandhill, turkey oak barrens.	Fall
Highlands Scrub Hypericum (Hypericum cumulicola)	E	open patches in white sand scrubs; occasionally in openings in scrubby flatwoods and oak scrub	Fall
Scrub Blazingstar (Liatris ohlingerae)	E	rosemary balds; scrubby flatwoods and disturbed scrub	Fall
Scrub Lupine (<i>Lupinus aridorum</i>)	E	openings in sand pine and rosemary scrub	Spring
Britton's Beargrass (Nolina brittoniana)	E	scrub, sandhill, scrubby flatwoods, and xeric hammock	Spring
Papery Whitlow-wort	Т	Lake Wales Ridge scrub	Fall

Table 3-4	Federally	Listed S	crub	Plants	Survey
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SECTION 3 PROTECTED SPECIES AND HABITAT

Species	Listing	Preferred Habitat	Survey Season
(Paronychia chartacea)			
Lewton's Polygala (Polygala lewtonii)	E	oak scrub, sandhill, transition zones between high pine and turkey oak barrens	Spring
Wireweed (Polygonella basiramia)	E	bare patches within sand pine-evergreen oak scrub vegetation	Fall
Sandlace (Polygonella myriophylla)	E	open, sandy areas within scrub	Spring or Fall
Scrub Plum (Prunus geniculata)	E	sandhill and oak scrub	Spring
Wide-leaf Warea (Warea amplexifolia)	E	limited to sunny openings with exposed sand in longleaf pine/turkey oak/wiregrass sandhills	Fall
Carter's Mustard (Warea carteri)	E	sandhill, scrubby flatwoods, inland and coastal scrub	Fall
Florida Ziziphus (Ziziphus celata)	E	oak-hickory scrub, scrubby flatwoods, or sandhills	Spring

Sources: FNAI, 2021; FDACS, 2010. Notes: E = Endangered; T = Threatened

3.3.2 State Listed Species

Gopher Tortoise

Status: Threatened (Federal Status: Candidate)

The gopher tortoise (*Gopherus polyphemus*) is typically found in dry upland habitats, including sandhills, scrub, xeric oak hammock, and dry pine flatwoods. It also commonly uses disturbed habitats such as pastures, old fields, and road shoulders. Suitable habitat for the gopher tortoise is available within and adjacent to the project study area. In June 2021, a 15% survey was conducted within the project limits within suitable habitat for gopher tortoise burrows to determine presence/absence. During this survey, 12 gopher tortoise burrows (one abandoned, 11 potentially occupied) were observed within the existing ROW in the southern portion of the project limits. **Figure A-4** in **Appendix A** depicts the approximate location of these burrows. As a result, the potential for occurrence of the gopher tortoise within the project area has been determined to be **high**.

Prior to construction of the proposed project, 100% surveys of the appropriate habitats will be conducted for the presence of gopher tortoise burrows. If gopher tortoises or their burrows are found in or within 25 feet of the construction limits of the proposed project, coordination with the FWC will be implemented to secure permits needed to relocate the gopher tortoises prior to construction. Based on these commitments, **no adverse effect anticipated** for the gopher tortoise as a result of the proposed project.

Short-tailed Snake

Status: Threatened

The short-tailed snake (*Lampropeltis extenuata*) inhabits dry upland habitats such as longleaf pine and xeric oak sandhills but may also be found in scrub and xeric hammock habitats. There are no

documented historic occurrences of the short-tailed snake within the project study area and no observations were made during field reviews. Marginally suitable habitat for the short-tailed snake is present within and adjacent to the project study area. As a result, the potential for occurrence of the short-tailed snake within the project study area has been determined to be **low**.

Though marginally suitable habitat occurs within the project study area, implementation of the proposed project will only directly affect the existing US 98 ROW and the proposed pond sites which do not consist of suitable habitat for the short-tailed snake. Due to the lack of documented occurrence or observation during field reviews and absence of suitable habitat, **no effect anticipated** for the short-tailed snake as a result of the proposed project.

Florida Pine Snake

Status: Threatened

The Florida pine snake (*Pituophis melanoleucus mugitus*) prefers dry, upland areas with well-drained, sandy soils. This includes natural habitats such as upland pine forests and sandhills, but they have also been known to occur in scrubby flatwoods, oak scrub, dry oak forest, old fields, and agricultural borders. The pine snake often coexists with pocket gophers and gopher tortoises. There are no documented historic occurrences of the pine snake within or adjacent to the project study area and no observations were made during field reviews; however, some areas of marginally suitable habitat are present within the project study area. In addition, gopher tortoise burrows are present within the project study area has been determined to be **low**.

Prior to construction of the proposed project, surveys of the appropriate habitats will be conducted for the presence of gopher tortoise burrows and coordinate with the FWC accordingly. Based on these commitments, **no adverse effect anticipated** for the Florida pine snake as a result of the proposed project.

Florida Sandhill Crane

Status: Threatened

Two subspecies of sandhill cranes occur in Florida. The Florida sandhill crane (*Antigone canadensis pratensis*) is a non-migratory subspecies that resides in Florida year-round. The greater sandhill crane (*A. canadensis*) winters in Florida but nests in the Great Lakes region. The migratory subspecies arrives in Florida in October and November and leaves for breeding grounds in northern U.S. and Canada from late January to early March. Sandhill cranes are associated with wet and dry prairies, freshwater marshes, open woods, and pasture. Sandhill cranes have been known to frequent agricultural areas like feed lots and crop fields, and also golf courses and other open lawns, especially in winter and early spring. Suitable habitat is present throughout the project study area and sandhill cranes were observed within the project study area during the January 2021 caracara surveys. However, based on the timing of these observations, it cannot be determined which subspecies was observed. Additional, marginally
suitable nesting habitat is present within the herbaceous wetlands present within project study area. As a result, the potential for occurrence of the Florida sandhill crane is **high**.

As part of the proposed project, impacts to wetland habitat within the project area will be mitigated in accordance to the requirements of Part IV, Chapter 373 F.S. and 33 U.S.C. Section 1344 to prevent a net loss of wetland habitat functions and values. In addition, the project area will be resurveyed for sandhill crane nests prior to construction. If Florida sandhill crane nests are found within the proposed project area, coordination with the FWC will be conducted prior to construction to minimize adverse impacts to this species to the greatest extent possible. As a result, **no adverse effect anticipated** for the Florida sandhill crane.

Florida Burrowing Owl

Status: Threatened

The Florida burrowing owl (*Athene cunicularia floridana*) requires upland habitats such as high, sparsely vegetated, sandy ground. It also makes extensive use of ruderal areas such as pastures, airports, ball fields, parks, school grounds, road rights-of-way, and vacant spaces in residential areas. There are no documented historic occurrences of the Florida burrowing owl within the project study area and no individuals or burrows were observed during field reviews; however, suitable habitat is present within the project study area since the owl has been known to utilize road rights-of-way. The potential for occurrence of the Florida burrowing owl within the project study area has been determined to be **low**.

To avoid any potential impacts to this species, appropriate upland habitats within the proposed project area will be surveyed for burrowing owls or their burrows prior to construction. If any burrows are located in the project area, coordination with the FWC will be conducted to develop and implement the appropriate protection criteria prior to construction. With this commitment, the proposed project is not anticipated to affect the Florida burrowing owl. As a result, **no adverse effect anticipated** for the Florida burrowing owl.

Little Blue Heron and Tricolored Heron

Status: Threatened

The little blue heron (*Egretta caerulea*) and tricolored heron (*Egretta tricolor*) feed in shallow freshwater, brackish, and saltwater habitats. Preferred nesting habitat for these wading birds includes woody vegetation such as cypress, willow, maple, black mangrove, and cabbage palm. The herbaceous wetlands and surface waters within and adjacent to the project study area provide foraging habitat and some wetland areas may provide nesting habitat. During the field reviews, tricolored and little blue herons were observed within the project study area. The potential for occurrence of the little blue and tricolored herons within the project study area has been determined to be **high**.

As part of the proposed project, impacts to wetland habitat within the project area will be mitigated in accordance to the requirements of Part IV, Chapter 373 F.S. and 33 U.S.C. Section 1344 to prevent a net loss of wetland habitat functions and values. As a result, **no adverse effect anticipated** for the little blue heron and tricolored heron.

Southeastern American Kestrel

Status: Threatened

The southeastern American kestrel (*Falco sparverius paulus*) is found in open pine habitats, woodland edges, prairies, and pastures throughout much of Florida. This species nests in tall dead trees or utility poles generally with an unobstructed view of surroundings. Sandhill habitats seem to be preferred but the kestrel may also occur in flatwoods settings having open patches of grass or bare ground to detect prey.

During the 2021 caracara surveys, a kestrel was observed near the northern portion of the project study area perched on overhead wires and foraging in an offsite pasture. Marginally suitable foraging habitat is present adjacent to the ROW. As a result, the potential for occurrence of the southeastern American kestrel in the project study area has been determined to be **high**.

As part of the PD&E study, a survey for the southeastern American kestrel was conducted in June-July 2021. Surveying for kestrels was done in accordance with the survey methodology contained in FWC's *Species Conservation Measures and Permitting Guidelines for the Southeastern American Kestrel,* effective December 2020. Data sheets from the survey are provided in **Appendix H**. Habitat mapping was done to identify suitable foraging habitat per the FWC 2020 guidelines. Based on these guidelines, suitable foraging habitat identified within a 600-foot buffer of the project corridor consisted of the following vegetative cover types, classified using FLUCFCS: Open Land (FLUCFCS 190); Cropland and Pastureland (FLUCFCS 210); Other Open Lands (FLUCFCS 260); Shrub and Brushland (FLUCFCS 320); Upland Coniferous Forest (FLUCFCS 410); and Pine Flatwoods (FLUCFCS 411). Figure A-5 in Appendix A depicts the location of the survey stations and suitable foraging habitat.

No known active nest cavities were identified, and no individual kestrels were observed within the project study area during the 2021 survey period. Suitable nesting and foraging habitat are not present within the existing US 98 ROW. A kestrel survey will be conducted during the 2022 survey season within the selected SMF and FPC sites, as necessary, of which results will be provided in an addendum to this report. If any individuals or nests are observed prior to construction, coordination with FWC will be implemented. As a result, it has been determined that **no adverse effect anticipated** for the southeastern American kestrel.

Least Tern

Status: Threatened

The least tern (*Sterna antillarum*) is found in coastal areas including beaches, lagoons, bays, and estuaries. They increasingly use artificial nesting sites including gravel rooftops, dredge spoil islands or other dredged material deposits, construction sites, causeways, and mining lands. There are no documented historic occurrences of the least within or adjacent to the project study area and no observations were made during field reviews. Areas of well drained sand or gravel with little vegetation that may provide natural nesting habitat are not present within the project study area. Additionally,

artificial nesting sites are not located within the project study area. Therefore, the potential for occurrence of the least tern within the project study area has been determined to be **low**.

Due to the lack of documented occurrence or observation during field reviews and absence of suitable nesting habitat, **no effect anticipated** for the least tern.

State Listed Plant Species

State listed plant species, their habitat, and potential for occurrence have been provided in Table 3-2. The majority of the proposed project improvements will take place within existing FDOT-owned ROW that is largely mowed and maintained. Impacts to wetlands and surface waters include impacts to linear roadside ditches and freshwater herbaceous wetlands. Additionally, preferred habitat of the federally listed species potentially occurring within the project study area is limited to sandhill scrub typically occurring on the Lake Wales Ridge. In September 2021, a pedestrian survey for listed scrub plant species with a fall flowering/survey season was conducted within the areas of suitable and marginally suitable habitat occurring within the project limits. No suitable habitat for listed scrub plant species occurs within the preliminarily selected SMF/FPC sites. During the fall survey, no listed plant species were identified. For listed scrub plant species with a spring flowering/survey season, a pedestrian survey will be conducted within the areas of suitable and marginally suitable habitat occurring within the project limits in March 2022 to further determine the absence/presence of state listed scrub plant species. The results of the March 2022 spring survey will be included in an addendum to this report. Table 3-5 lists the state listed scrub plants, survey season, and preferred habitat. Based on the results of the 2021 survey and due to minimal presence of suitable habitat within the project study area, it was determined that the proposed project will have **no effect anticipated** on state listed plant species.

Species	Listing	Preferred Habitat	Survey Season
State Listed Plants			
Incised Groove-bur (Agrimonia incisa)	т	sandy, dry-mesic, usually upland; longleaf pine- deciduous scrub oak, sandy or sandy loam; open pine woods or mixed pine-oak woods, bluffs, small clearings and old roads	Fall
Ashe's savory (Calamintha ashei)	Т	dry pinelands and sand pine scrub in canopy openings and disturbed areas	Spring or Fall
Many-flowered Grass-pink (Calopogon multiflorus)	Т	dry to moist flatwoods with longleaf pine, wiregrass, saw palmetto	Spring
Sand butterfly-pea (Centrosema arenicola)	E	mixed woodlands; pine thickets	Fall
Highlands Goldenaster (Chrysopsis highlandsensis)	E	sand pine scrub, scrubby flatwoods	Fall
Nodding Pinweed (Lechea cernua)	Т	fire-maintained scrub	Spring or Fall
Pine Pinweed (Lechea divaricata)	E	scrubby flatwoods	Fall
Florida Spiny-pod (<i>Matelea pubiflora</i>)	E	sandhills, scrubs	Spring or Fall

Table 3-5	State Listed Scrub Plants Survey
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SECTION 3 PROTECTED SPECIES AND HABITAT

Species	Listing	Preferred Habitat	Survey Season
Lewton's Polygala (Polygala lewtonii)	E	oak scrub, sandhill, and transition zones between high pine and turkey oak barrens	Spring
Giant Orchid (Pteroglossaspis ecristata)	Т	sandhill, scrub, pine flatwoods, pine rocklands, and occasionally in old fields	Fall
Large-plumed Beaksedge (Rhynchospora megaplumosa)	E	scrubby flatwoods	Spring or Fall
Florida Willow (Salix floridana)	E	bottomland forests, floodplains, hydric hammocks, swamps, edges of spring-runs, and streams	Spring
Scrub Bluestem (Schizachyrium niveum)	E	white sand patches in rosemary scrub, sand pine scrub and oak scrub	Fall
Scrub Stylisma (<i>Stylisma abdita</i>)	E	scrub and sandhills	Spring

Sources: FNAI, 2021; FDACS, 2010. Notes: E = Endangered; T = Threatened

3.3.3 Other Protected Species

Bald Eagle

Status: Protected by Federal and State Law

The bald eagle (*Haliaeetus leucocephalus*) was removed from the endangered species list in August 2007; however, this species is protected under the Bald and Golden Eagle Protection Act in accordance with 16 U.S.C. Section 668, the Migratory Bird Treaty Act in accordance with 16 U.S.C. Sections 703-712., and the State Bald Eagle Management Plan (FWC, 2008). Bald eagles frequent areas close to coastal areas, bays, rivers, lakes, or other bodies of water with a concentrated food source as the ideal habitat. Tall trees, mostly live pines, typically serve as nesting sites; however, in urban areas the bald eagle may nest in cell towers. The FWC online bald eagle nest locator website indicates that the nearest document nest is located approximately 1.8 miles northeast of the northern terminus of the project limits in the Colt Creek State Preserve (nest ID PO124). A bald eagle was observed flying over the project study area during the field reviews; however, no nests have been observed within or adjacent to the project study area and foraging habitat is limited. As a result, the potential for occurrence of the bald eagle is **low**.

Pursuant to the USFWS bald eagle guidelines, any disturbance within 1,000 feet of a bald eagle nest requires additional coordination and potential permitting with the USFWS. To avoid any potential impacts to this species, the FDOT will resurvey appropriate upland habitats within 1,000 feet of the proposed project area for bald eagle nests prior to construction. If a bald eagle nest is found within 1,000 feet of the proposed project area, the FDOT will coordinate with USFWS to secure any and all approvals regarding this species. As a result, **no effect** anticipated on the Bald Eagle.

<u>Osprey</u>

Status: Protected by Federal and State Law

The osprey (*Pandion haliaetus*) was removed from Florida's endangered and threatened species list in 2018; however, this species is protected under the Migratory Bird Treaty Act and 68A-16.001, F.A.C. This species can be found on or near large lakes, rivers, and coastal areas where suitable nesting sites can be found. Water bodies must be large, fairly open, and clear for osprey to locate prey. Nesting sites are large living or dead trees and man-made structures and sites often stand above surrounding vegetation or in more open fields and sparsely timbered forests. Active osprey nests (i.e. nests with eggs or flightless young) are protected from destruction by the Migratory Bird Treaty Act. During the field reviews, an active osprey nest was observed on a cell tower within the southern portion of the project study area. A nest was also observed in this nest during the field reviews. **Figure A-6** in **Appendix A** depicts the location of these nests in relation to the project limits. Foraging habitat is present in the vicinity of the project study area but not within the ROW. As a result, the potential for occurrence of the osprey is **high**.

Currently, there are no osprey nests located within the ROW or proposed FPC and SMF sites that will be impacted by the proposed construction of the proposed project. FDOT will re-evaluate the project area prior to the start of construction for the presence of osprey nests. As a result, **no effect** anticipated on the osprey.

Florida Black Bear

Status: Protected by State Law

The Florida black bear (*Ursus americanus floridanus*) was removed from Florida's endangered and threatened species list in 2012; however, this species is protected by 68A-4.009, F.A.C. (2015) and the Florida Black Bear Management Plan (FWC, 2019). The Florida black bear occurs in a wide variety of forested communities, including forested wetlands which are particularly important for diurnal cover.

No black bears were observed during field reviews and there are no documented historic occurrences within the project study area. The nearest documented bear nuisance call is located approximately two miles west of the center of the project study area in the Green Swamp Wildlife Management Area. Suitable habitat for the black bear is present within and adjacent to the project study area, but not within the existing ROW. Marginally suitable habitat may occur within the proposed FPC and SMF sites. As a result, the potential for occurrence of the Florida black bear within the project study area has been determined to be **low**.

Measures to be taken to minimize conflict with bears during construction activities include:

- Following BMPs during construction;
- Requiring clean construction sites with wildlife-resistant containers for workers to use for food-related and other wildlife-attractant refuse; and

• Requiring frequent trash removal and the use of proper food storage and removal on work sites.

In addition, wildlife crossings are proposed to be constructed as part of the proposed project that will include wildlife fencing to guide wildlife to the crossing. The addition, these features will provide enhanced opportunity for the safe passage of wildlife under US 98. As a result, **no effect** anticipated for the Florida black bear.

3.4 SUMMARY

Tables 3-6 through **3-8** summarize the impact determination that has been made for protected species based upon their probability of occurrence in the project study area, impacts to habitat suitable required to support the life cycle of the various species and their needs, and the commitments made to offset any potential impacts to each species. To further minimize impacts to wildlife, FDOT is also evaluating the addition of wildlife features along US 98 including a wildlife crossing at the Main Stream Bridge culvert (located approximately 1.4 miles southeast of SR 471) that will be designed for the crossing of large mammals (e.g., panther, bear, deer, hogs) and several smaller features designed for the crossing of smaller mammals (e.g., rabbits, raccoons, fox, etc.). These features will provide enhanced opportunity for the safe passage of wildlife under US 98. Further discussion will be provided in an addendum to this report following completion of the wildlife features evaluation.

Project Impact Determination	Federal Species	
	Eastern Indigo Snake (Drymarchon couperi)	
	Blue-tailed Mole Skink (Plestiodon egregious lividus)	
May affect not likely to advarcally affect	Sand Skink (Plestiodon reynoldsi)	
way affect, not likely to adversely affect	Eastern Black Rail (Laterallus jamaicensis jamaicensis)	
	Wood Stork (Mycteria americana)	
	Everglade Snail Kite (Rostrhamus sociabilis)	
	Florida Panther (Puma concolor coryi)	
	Florida Grasshopper Sparrow (Ammodramus savannarum	
No effect	floridanus)	
	Audubon's Crested Caracara (Caracara cheriway)	
	Federally listed plants	

Table 3-6	Summary of	Fede	rally Li	sted Species	Effect Determinations
	-		-	-	

Project Impact Determination	State Species
No adverse effect anticipated	Gopher Tortoise (Gopherus polyphemus) Florida Pine Snake (Pituophis melanoleucus mugitus) Florida Sandhill Crane (Antigone canadensis pratensis) Florida Burrowing Owl (Athene cunicularia floridana) Little Blue Heron (Egretta caerulea) Tricolored Heron (Egretta tricolor) Southeast American Kestrel (Falco sparverius paulus)
No effect anticipated	Short-tailed Snake (<i>Lampropeltis extenuate</i>) Least Tern (<i>Sternula antillarum</i>) State listed plants

Table 3-7 Summary of State Listed Species Effect Determinations

Table 3-8 Summary of Other Protected Species Effect Determinations

Project Impact Determination	Other Protected Species		
No effect anticipated	Bald Eagle (Haliaeetus leucocephalus)		
	Osprey (Pandion haliaetus)		
	Florida Black Bear (Ursus americanus floridanus)		

4.1 INTRODUCTION

The analysis described in this section is consistent with Part 2, Chapter 9, Wetlands and Other Surface Waters of the PD&E Manual. Presidential Executive Order (EO) 11990 entitled *Protection of Wetlands* establishes a National Policy to "avoid to the extent possible the long and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative." FDOT has assessed wetlands and surface waters that may be affected by the proposed project.

4.2 METHODOLOGY

Wetland and other surface water were delineated and surveyed in June through August 2021 within the proposed project limits (i.e., existing US 98 ROW). A preliminary evaluation of wetlands and other surface waters within the proposed SMF and FPC sites was conducted in June 2021. Wetland limits were delineated using the procedures within Chapter 62-340, F.A.C. (1994), *Delineation of the Landward Extent of Wetlands and Surface Waters* and the criteria found within the U.S. Army Corps of Engineers (USACE) *1987 Corps of Engineers Wetland Delineation Manual* (Y-87-1) and *2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coast Plain Region* (Version 2.0) (USACE, 1987; USACE, 2010).

In accordance with Chapter 62-340.600, F.A.C., surface water limits were delineated at top of the bank for conveyance systems with side slopes of one foot vertical to four feet horizontal or steeper (i.e., ditches). Other roadside conveyance systems not meeting this surface water definition such as swales (defined in Section 403.803, F.S. as trenched conveyances with side slopes equal to or greater than three feet horizontal to one foot vertical) were not delineated as surface waters.

Wetlands and other surface waters were classified using FLUCFCS (FDOT, 1999) and the USFWS *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin *et. al.*, 1979). The literature and databases reviewed prior to wetland and surface water delineations are listed in **Section 2.2.** During the field reviews, each wetland and other surface water within the project limits was visually inspected and attention given to identifying dominant plant species. The presence of nuisance/exotic vegetation and other disturbances, such as channelization, clearing, etc. were also noted.

4.3 INDIVIDUAL WETLANDS AND OTHER SURFACE WATERS

A total of 65 wetlands and 92 other surface waters were identified within the project limits of the proposed mainline widening. Descriptions of these wetlands are provided in **Appendix H**. Included in each description are the FLUCFCS and USFWS wetland classification codes, listings of dominant vegetation, watershed location, and field observations. **Figure A-7** in **Appendix A** depict the location of these wetlands and other surface waters. Photographs of each wetland identified within the project limits are provided in **Appendix H**.

Table 4-1 provides a summary of the federally jurisdictional wetlands and other surface waters (Waters of the US) identified within the project limits. **Table 4-1** also provides a summary of the state-only jurisdictional (non-Waters of the US) within the project limits. Federal regulatory jurisdiction of wetlands and other surface waters identified within the project limits was determined in accordance with the Navigable Waters Protection Rule (NWPR) (85 FR 22250). The NWPR, finalized June 22, 2020, defines the definition of non-jurisdictional surface waters and jurisdiction surface waters (i.e., Waters of the US) under the CWA.

Based on the NWPR, the surface waters that are cut from non-hydric soil, not connected to federally jurisdictional wetlands, and solely provide conveyance for roadway drainage were not considered to be Waters of the US.

The other surface waters identified within the project limits are man-made ditches and function as part of the roadside conveyance system for stormwater runoff and discharge offsite via a series of pipe culverts and cross drains. Vegetation predominately consists of bahia grass (*Paspalum notatum*), torpedo grass (*Panicum repens*), pennywort (*Hydrocotyle umbellata*), and primrose willow (*Ludwigia peruviana*) and are routinely disturbed by maintenance activities like mowing or regrading.

Wetland/Surface Water ID	FLUCFCS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres within Existing ROW
Federally Jurisdictional Wetlands				
WL 1	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.31
WL 2	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.07
WL 3	617 – Mixed Wetland Hardwoods	PFO1C	Withlacoochee River	0.08
WL 4	617 – Mixed Wetland Hardwoods/641 – Freshwater Marsh	PFO1C/PEM1C	Withlacoochee River	0.51
WL 5	631 – Wetland Scrub	PSS1C	Withlacoochee River	<0.01
WL 6	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.05
WL 7	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.81
WL 8	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.70
WL 9	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.60
WL 10	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.26
WL 11	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.03
WL 12	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.56
WL 13	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.76
WL 14	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.24
WL 15	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.31
WL 16	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.43
WL 17	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.15
WL 18	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.22
WL 19	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.58

Table 4-1 Wetlands and Other Surface Waters within the Limits of Mainline Widening

Wetland/Surface Water ID	FLUCFCS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres within Existing ROW
Federally Jurisdict	ional Wetlands			
WL 20	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.43
WL 21	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05
WL 22	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.27
WL 23	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.12
WL 24	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.15
WL 25	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.21
WL 26	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.30
WL 27	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.47
WL 28	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.09
WL 29	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.25
WL 30	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.01
WL 31	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.56
WL 32	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	1.27
WL 33	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.29
WL 34	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05
WL 35	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.09
WL 36	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.03
WL 37	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.25
WL 38	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.21
WL 39	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.30
WL 40	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.13
WL 41	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05
WL 42	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.67
WL 43	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.33
WL 44	641 – Freshwat <mark>er</mark> Marsh	PEM1C	Hillsborough River	0.45
WL 45	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.38
WL 46	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.41
WL 47	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.35
WL 48	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.53
WL 49	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.46
WL 50	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.15
WL 51	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.28
WL 52	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.48
WL 53	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.11
WL 54	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.49
WL 55	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.68
WL 56	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.78
WL 57	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.34

Wetland/Surface Water ID	FLUCFCS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres within Existing ROW
Federally Jurisdict				
WL 58	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.73
WL 59	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.52
WL 60	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.58
WL 61	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.85
WL 62	621 – Cypress	PFO2C	Hillsborough River	0.87
WL 63	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.09
WL 64	631 – Wetland Scrub	PSS1C	Withlacoochee River	0.28
WL 65	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.42
	Si	ubtotal Federally	Iurisdictional Wetlands	23.48
Federally Jurisdict	ional Other Surface Waters			
SW 4	510 – Streams and Waterways	PEMx	Withlacoochee River	0.07
SW 10a	510 – Streams and Waterways	PEMx	Withlacoochee River	0.05
SW 15a	510 – Streams and Waterways	PEMx	Withlacoochee River	0.08
SW 15	510 – Streams and Waterways	PEMx	Withlacoochee River	0.15
SW 34	510 – Streams and Waterways	PEMx	Hillsborough River	0.07
SW 55	510 – Streams and Waterways	PEMx	Hillsborough River	0.16
SW 56	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 62	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 77	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 83	510 – Streams and Waterways	PEMx	Hillsborough River	0.78
SW 84	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 86	510 – Streams and Waterways	PEMx	Withlacoochee River	0.27
SW 88	510 – Streams and Waterways	PEMx	Withlacoochee River	0.05
SW 89	510 – Streams and Waterways	PEMx	Withlacoochee River	0.08
SW 90	510 – Streams and Waterways	PEMx	Withlacoochee River	0.03
	Subtotal Fede	erally Jurisdictiona	l Other Surface Waters	1.87
State-only Jurisdic	tional Other Surface Waters			
SW 1	510 – Streams and Waterways	PEMx	Withlacoochee River	0.02
SW 2	510 – Streams and Waterways	PEMx	Withlacoochee River	0.01
SW 3	510 – Streams and Waterways	PEMx	Withlacoochee River	0.23
SW 5	510 – Streams and Waterways	PEMx	Withlacoochee River	0.05
SW 6	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 7	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 8	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 9	510 – Streams and Waterways	PEMx	Hillsborough River	<0.01
SW 10	510 – Streams and Waterways	PEMx	Hillsborough River	<0.01
SW 11	510 – Streams and Waterways	PEMx	Withlacoochee River	0.01
SW 12	510 – Streams and Waterways	PEMx	Withlacoochee River	0.02
SW 13	510 – Streams and Waterways	PEMx	Withlacoochee River	0.01
SW 14	510 – Streams and Waterways	PEMx	Withlacoochee River	0.02

Wetland/Surface Water ID	FLUCFCS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres within Existing ROW
State-only Jurisdic	tional Other Surface Waters			
SW 16	510 – Streams and Waterways	PEMx	Withlacoochee River	0.04
SW 17	510 – Streams and Waterways	PEMx	Withlacoochee River	0.03
SW 18	510 – Streams and Waterways	PEMx	Withlacoochee River	0.04
SW 19	510 – Streams and Waterways	PEMx	Withlacoochee River	0.03
SW 20	510 – Streams and Waterways	PEMx	Withlacoochee River	0.15
SW 21	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 22	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 23	510 – Streams and Waterways	PEMx	Hillsborough River	0.10
SW 24	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 25	510 – Streams and Waterways	PEMx	Hillsborough River	0.04
SW 26	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 27	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 28	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 29	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 30	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 31	510 – Streams and Waterways	PEMx	Hillsborough River	0.42
SW 32	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 33	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 35	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 36	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 37	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 38	510 – Streams and Waterways	PEMx	Hillsborough River	0.16
SW 39	510 – Streams and Waterways	PEMx	Hillsborough River	0.13
SW 40	510 – Streams and Waterways	PEMx	Hillsborough River	0.19
SW 41	510 – Streams and Waterways	PEMx	Hillsborough River	0.10
SW 42	510 – Streams and Waterways	PEMx	Hillsborough River	0.16
SW 43	510 – Streams and Waterways	PEMx	Hillsborough River	<0.01
SW 44	510 – Streams and Waterways	PEMx	Hillsborough River	0.14
SW 45	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 46	510 – Streams and Waterways	PEMx	Hillsborough River	0.05
SW 47	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 48	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 49	510 – Streams and Waterways	PEMx	Hillsborough River	<0.01
SW 50	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 51	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 52	510 – Streams and Waterways	PEMx	Hillsborough River	0.05
SW 53	510 – Streams and Waterways	PEMx	Hillsborough River	0.09
SW 54	510 – Streams and Waterways	PEMx	Hillsborough River	0.05
SW 57	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 58	510 – Streams and Waterways	PEMx	Hillsborough River	0.04

Wetland/Surface Water ID	FLUCFCS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres within Existing ROW
State-only Jurisdic				
SW 59	510 – Streams and Waterways	PEMx	Hillsborough River	0.04
SW 60	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 61	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 63	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 64	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 65	510 – Streams and Waterways	PEMx	Hillsborough River	0.07
SW 67	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 68	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 69	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 70	510 – Streams and Waterways	PEMx	Hillsborough River	0.04
SW 71	510 – Streams and Waterways	PEMx	Hillsborough River	0.05
SW 72	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 73	510 – Streams and Waterways	PEMx	Hillsborough River	0.09
SW 74	510 – Streams and Waterways	PEMx	Hillsborough River	0.05
SW 75	510 – Streams and Waterways	PEMx	Hillsborough River	0.04
SW 76	510 – Streams and Waterways	PEMx	Hillsborough River	0.04
SW 78	510 – Streams and Waterways	PEMx	Hillsborough River	0.02
SW 79	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 80	510 – Streams and Waterways	PEMx	Hillsborough River	0.03
SW 81	510 – Streams and Waterways	PEMx	Hillsborough River	0.07
SW 82	510 – Streams and Waterways	PEMx	Hillsborough River	0.01
SW 85	510 – Streams and Waterways	PEMx	Withlacoochee River	0.80
SW 87	510 – Streams and Waterways	PEMx	Withlacoochee River	0.09
	4.41			
			TOTAL	29.76

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded; PEMx = Palustrine, Emergent, Excavated; PSS1C = Palustrine, Scrub-shrub, Broad-leaved Deciduous, Seasonally Flooded Sources: FDOT, 1999; Cowardin *et al.*, 1979; FDA, 2021.

An additional 18 wetlands and three other surface waters were identified within the preliminarily selected SMF and FPC sites during the evaluation of the SMF and FPC site alternatives. **Figure A-7** in **Appendix A** depicts the location of these wetlands and other surface waters. **Table 4-2** summarizes the wetland and other surface water types identified within these areas. Upon completion of evaluating the SMF and FPC sites, further assessment and delineations will be conducted of which the results will be provided in an addendum to this report.

Wetland/Surface Water ID	FLUCECS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres
Federally Jurisdicti	ional Wetlands	clusomeution	Buom	
WL 66	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.17
WL 67	630 – Wetland Forested Mixed	PFO1/2C	Hillsborough River	1.95
WL 68	630 – Wetland Forested Mixed	PFO1/2C	Withlacoochee River	0.28
WL 69	630 – Wetland Forested Mixed	PFO1/2C	Withlacoochee River	0.13
WL 70	621 – Cypress	PFO2C	Withlacoochee River	0.04
WL 71	630 – Wetland Forested Mixed	PFO1/2C	Withlacoochee River	0.89
WL 72	630 – Wetland Forested Mixed	PFO1/2C	Hillsborough River	0.01
WL 73	630 – Wetland Forested Mixed	PFO1/2C	Hillsborough River	1.94
WL 74	621 – Cypress	PFO2C	Hillsborough River	0.43
WL 75	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.17
WL 76	630 – Wetland Forested Mixed	PFO1/2C	Hillsborough River	0.02
WL 77	630 – Wetland Forested Mixed	PFO1/2C	Hillsborough River	3.35
WL 78	621 - Cypress	PFO2C	Hillsborough River	1.18
WL 79	630 – Wetland Forested Mixed	PFO1/2C	Hillsborough River	0.21
WL 80	621 – Cypress	PFO2C	Hillsborough River	0.06
WL 81	643 – Wet Prairie	PEM1C	Hillsborough River	0.11
WL 82	630 – Wetland Forested Mixed	PFO1/2C	Hillsborough River	0.13
WL 83	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.39
	S	ubtotal Federally J	lurisdictional Wetlands	11.46
State-only Jurisdic	tional Other Surface Waters			
SW 91	530 – Reservoir	POWx	Hillsborough River	0.17
SW 92	530 – Reservoir	POWx	Withlacoochee River	5.09
SW 93	510 – Streams and Waterways (Ditch)	PEM1C	Hillsborough River	0.11
	Subtotal State-	Only Jurisdictiona	l Other Surface Waters	5.37
			TOTAL	16.83

Table 4-2	Wetlands and Other Surface Waters within the SMF/FPC Sites
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Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded; POWx = Palustrine, Open Water, Excavated;

Sources: FDOT, 1999; Cowardin et al., 1979; FDA, 2021

4.4 WETLAND AND OTHER SURFACE WATER IMPACTS

4.4.1 Avoidance and Minimization

The mainline widening of US 98 within the project limits will occur wholly within FDOT ROW. Approximately 23.48 acres of wetlands and 6.28 acres of other surface waters (i.e., ditches) occur within the ROW limits of the project area. During evaluation of SMF and FPC alternatives, preliminary sites were selected to minimize wetland impacts to the greatest extent practicable. While no practicable alternative avoiding all wetland impacts was identified, wetland and other surface water impacts will be avoided and minimized to the greatest extent practicable during the project design and permitting. Temporary impacts due to construction will be minimized utilizing BMPs, maintaining a stormwater pollution prevention plan (SWPPP), and implementing FDOT design standards. Unavoidable wetland impacts will be mitigated to satisfy requirements of Part IV, Chapter 373, F.S. and 33 U.S.C. Section 1344.

4.4.2 Summary of Impacts

Wetland and other surface water impacts have been assessed and quantified based on the preliminary design plans for the proposed mainline widening. For this study, the entire existing ROW within the project limits is proposed to be disturbed. Therefore, all of the wetlands identified in **Table 4-1** are proposed to be impacted. Approximately 23.48 acres of federally and state jurisdictional wetlands will be permanently impacted as a result of the construction of the proposed mainline widening. To accommodate the proposed project, the existing surface waters (i.e., ditches) will be impacted; however, these impacts are proposed to be temporary as these ditches will be reconstructed and replaced in-kind. All of the cross drains will be replaced as part of the proposed project, but the locations will remain at or similar to the current locations.

Secondary impacts to the habitat functions of wetlands within 25 feet of the direct impacts were also quantified pursuant to state guidelines and are shown in **Table 4-3**. Approximately 17.07 acres of secondary impacts to wetlands would occur as a result of the proposed project.

Wetland ID	FLUCFCS Code	USFWS Classification	Watershed/ERP Basin	Acres
WL 1	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.16
WL 2	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.07
WL 3	617 – Mixed Wetland Hardwoods	PFO1C	Withlacoochee River	0.05
WL 4	617 – Mixed Wetland Hardwoods/641 – Freshwater Marsh	PFO1C/PEM1C	Withlacoochee River	0.42
WL 5	631 – Wetland Scrub	PSS1C	Withlacoochee River	0.02
WL 6	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.07
WL 7	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.59
WL 8	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.57
WL 9	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.17
WL 10	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.05
WL 11	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.36
WL 12	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.59
WL 13	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.35
WL 14	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.37
WL 15	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.25

 Table 4-3
 Secondary Impacts to Wetlands Resulting from Mainline Widening

Wetland ID	FLUCFCS Code	USFWS Classification	Watershed/ERP Basin	Acres
WL 16	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.30
WL 17	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.12
WL 18	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.16
WL 19	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.45
WL 20	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.32
WL 21	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05
WL 22	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.23
WL 23	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.11
WL 24	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.18
WL 25	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.20
WL 26	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.23
WL 27	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.32
WL 28	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.10
WL 29	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.27
WL 30	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05
WL 31	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.47
WL 32	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.00
WL 33	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.33
WL 34	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05
WL 35	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.07
WL 36	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.07
WL 37	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.16
WL 38	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.24
WL 39	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.23
WL 40	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.11
WL 41	641 – Freshwater M <mark>ar</mark> sh	PEM1C	Hillsborough River	0.07
WL 42	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.43
WL 43	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.22
WL 44	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.48
WL 45	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.24
WL 46	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.25
WL 47	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.15
WL 48	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.43
WL 49	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.30
WL 50	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.13
WL 51	617 – Mixed Wetland Hardwoods	PFO1C	Hillsborough River	0.32
WL 52	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.33
WL 53	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.12
WL 54	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.36

Wetland ID	FLUCFCS Code	USFWS Classification	Watershed/ERP Basin	Acres
WL 55	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.33
WL 56	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.62
WL 57	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.25
WL 58	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.39
WL 59	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.37
WL 60	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.54
WL 61	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.51
WL 62	621 – Cypress	PFO2C	Hillsborough River	0.54
WL 63	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.15
WL 64	631 – Wetland Scrub	PSS1C	Withlacoochee River	0.20
WL 65	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.42
			TOTAL	17.07

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded; PSS1C = Palustrine, Scrub-shrub, Broad-leaved Deciduous, Seasonally Flooded Sources: FDOT, 1999; Cowardin *et al.*, 1979; FDA, 2021.

Wetland impacts as a result of the construction of each preliminary SMF and FPC site were also assessed. These impacts are summarized in **Table 4-4**. Once evaluation of the SMF/FPC sites is completed and selection is finalized, wetland impacts within the selected preferred sites will be reassessed and included in an addendum to this report. Therefore, an overall total of direct impacts resulting from the SM/FPC sites is not provided in **Table 4-4** as many of these areas overlap the same wetland area.

	Wetland/Surface	FLUCFCS	USFWS	Watershed/ERP	Acres
500711010	Water ID	Code	Classification	Basin	Acres
FPC 4A	WL 67	630	PFO1/2C	Hillsborough River	0.83
FPC 4A Easement	WL 67	630	PFO1/2C	Hillsborough River	0.23
FPC 4B	SW 91	530	POWx	Hillsborough River	0.17
FPC 4B	WL 66	641	PEM1C	Hillsborough River	0.17
FPC 4B	WL 67	630	PFO1/2C	Hillsborough River	0.50
FPC 4B Easement	WL 67	630	PFO1/2C	Hillsborough River	0.38
FPC 4C	WL 67	630	PFO1/2C	Hillsborough River	1.30
FPC 4C Easement	WL 67	630	PFO1/2C	Hillsborough River	0.23
FPC 5B	WL 68	630	PFO1/2C	Withlacoochee River	0.28
FPC 5C	WL 68	630	PFO1/2C	Withlacoochee River	0.03
FPC 5E	WL 70	621	PFO2C	Withlacoochee River	0.04
FPC 6A	WL 83	630	PFO1/2C	Hillsborough River	0.39
FPC 6C	WL 81	621	PFO2C	Hillsborough River	0.11
FPC 6C	WL 82	621	PFO2C	Hillsborough River	0.13

 Table 4-4
 Direct Impacts to Wetlands Resulting from SMF/FPC Sites

SMF/FPC ID	Wetland/Surface Water ID	FLUCFCS Code	USFWS Classification	Watershed/ERP Basin	Acres
FPC 7B	WL 72	630	PFO1/2C	Hillsborough River	0.01
FPC 8A	WL 80	641	PEM1C	Hillsborough River	0.06
FPC 9A	WL 78	630	PFO1/2C	Hillsborough River	1.18
FPC 11A	WL 76	621	PFO2C	Hillsborough River	0.02
FPC 12A	WL 75	630	PFO1/2C	Hillsborough River	0.17
POND 2C-2	WL 71	617	PFO1C	Withlacoochee River	0.89
POND 2D-1	SW 92	530	POWx	Withlacoochee River	5.09
POND 2D-1	WL 69	630	PFO1/2C	Withlacoochee River	0.13
POND 3D-1	WL 79	641	PEM1C	Hillsborough River	0.22
POND 3D-2	WL 73	630	PFO1/2C	Hillsborough River	1.94
POND 4C-2	SW 93	510	PEM1C	Hillsborough River	0.11
POND 4C-2	WL 74	621	PFO2C	Hillsborough River	0.43
POND 4D-1	WL 77	643	PEM1C	Hillsborough River	3.35

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded. Sources: FDOT, 1999; Cowardin *et al.*, 1979; FDA, 2021.

Potential secondary impacts to the habitat functions of wetlands within 25 feet of the direct impacts resulting from the preliminarily selected SMF and FPC sites were also quantified pursuant to state guidelines and are shown in **Table 4-5**. As previously stated, wetland impacts within the selected preferred sites will be reassessed and included in an addendum to this report once they have been selected. Therefore, an overall total of secondary impacts resulting from the SM/FPC sites is not provided in **Table 4-5**.

SMF/FPC ID	Wetland/Surface Water ID	FLUCFCS Code	USFWS Classification	Watershed/ERP Basin	Acres
FPC 4A	WL 67	630	PFO1/2C	Hillsborough River	0.48
FPC 4A Easement	WL 67	630	PFO1/2C	Hillsborough River	0.38
FPC 4B	WL 66	641	PEM1C	Hillsborough River	0.15
FPC 4B	WL 67	630	PFO1/2C	Hillsborough River	0.29
FPC 4B Easement	WL 67	630	PFO1/2C	Hillsborough River	0.62
FPC 4C	WL 67	630	PFO1/2C	Hillsborough River	0.55
FPC 4C Easement	WL 67	630	PFO1/2C	Hillsborough River	0.38
FPC 5B	WL 68	630	PFO1/2C	Withlacoochee River	0.50
FPC 5C	WL 68	630	PFO1/2C	Withlacoochee River	0.24
FPC 5E	WL 70	621	PFO2C	Withlacoochee River	0.18
FPC 6A	WL 83	630	PFO1/2C	Hillsborough River	0.17
FPC 6C	WL 81	621	PFO2C	Hillsborough River	0.13
FPC 6C	WL 82	621	PFO2C	Hillsborough River	0.09
FPC 7B	WL 72	630	PFO1/2C	Hillsborough River	0.07

 Table 4-5
 Secondary Impacts to Wetlands Resulting from SMF/FPC Sites

SMF/FPC ID	Wetland/Surface Water ID	FLUCFCS Code	USFWS Classification	Watershed/ERP Basin	Acres
FPC 8A	WL 80	630	PFO1/2C	Hillsborough River	0.11
FPC 9A	WL 78	630	PFO1/2C	Hillsborough River	0.50
FPC 11A	WL 76	621	PFO2C	Hillsborough River	0.13
FPC 12A	WL 75	630	PFO1/2C	Hillsborough River	0.14
FPC 13A	ADJACENT WL	630	PFO1/2C	Hillsborough River	0.12
POND 1A	ADJACENT WL	630	PFO1/2C	Withlacoochee River	0.09
POND 2C-2	WL 71	617	PFO1C	Withlacoochee River	0.10
POND 2D-1	WL 69	630	PFO1/2C	Withlacoochee River	0.17
POND 3D-2	WL 73	630	PFO1/2C	Hillsborough River	0.55
POND 4C-2	ADJACENT WL	621	PFO2C	Hillsborough River	0.26
POND 4D-1	WL 77	630	PFO1/2C	Hillsborough River	0.60

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded. Sources: FDOT, 1999; Cowardin *et al.*, 1979; FDA, 2021.

4.4.3 Cumulative Impacts

Cumulative impact is the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time (40 CFR 1508.7).

The current baseline condition in the watershed includes past and ongoing wetland, wildlife, and water quality impacts resulting from residential, commercial, agricultural, and transportation development. The impacts of these development activities overlap in time and space with the effects of the proposed project. However, this project's cumulative wetland and surface water impacts would be discountable since the project is proposing to fill only the amount of wetlands necessary to achieve the project purpose and to offset the impacts with compensatory mitigation within the same ERP basin. Cumulative water quality impacts will be discountable given the permit erosion control conditions, state permitting requirements, and proposed stormwater management facilities and floodplain compensation sites. Cumulative wildlife and fisheries impacts would also be discountable given the existing use of the roadway corridor, the functions and services of the impacted wetlands, and the mitigation proposed for the impacts. No other measurable cumulative impacts are expected for any other resource.

The proposed project does not represent a new facility; however, additional ROW acquisition will be required to accommodate proposed SMF and FPC sites. The proposed project will not increase access to areas suitable for development but enhance pedestrian safety. In summary, the proposed project's impacts on the environment resulting from the incremental impact of the proposed project when added to the past, present, and reasonably foreseeable future actions are minor and discountable given the current requirements of federal laws including Section 404 of the CWA and the conditions of the permit.

Sufficient and appropriate compensatory in-basin mitigation will fully offset the reasonably anticipated direct, secondary and cumulative wetland impacts resulting from the implementation of the proposed project. Cumulative impacts should be minor and effectively compensated through the cumulative benefits of the proposed project and related in-basin mitigation including water quality enhancements through stormwater management improvements and compensatory in-basin mitigation.

4.4.4 Uniform Mitigation Assessment Method

The Uniform Mitigation Assessment Methodology (UMAM) per Chapter 62-345, F.A.C. (2007), is a state and federally approved method used to assess wetlands in the state of Florida. UMAM was developed by the FDEP and the water management districts to determine the amount of mitigation required to offset adverse impacts to wetlands. The methodology was designed to assess functions provided by wetlands, the amount those functions are reduced by a proposed impact, and the amount of mitigation necessary to offset the proposed functional losses.

The UMAM assessment includes a Qualitative Characterization (Part I) as well as a Quantitative Assessment and Scoring (Part II). The Qualitative Assessment is a basic descriptor of the site being evaluated. The variables described include the following:

- Significant nearby features,
- Water classification,
- Assessment area size,
- Hydrology and relationship to contiguous off-site wetlands,
- Uniqueness of the assessment area,
- Functions of the assessment area, and
- Wildlife utilization.

The Quantitative Assessment provides a score of the assessment area in both the current condition and "with impact" condition. The assessment scoring evaluates the following parameters:

- Location and landscape support,
- Water environment, and
- Vegetative community.

UMAM was used to assess wetland impacts as appropriate for the federal and state requirements. UMAM was not used to assess impacts to federal jurisdictional surface waters that provide potential suitable foraging habitat for the wood stork because no net loss of suitable foraging habitat in surface waters is anticipated as on-site replacement will occur. Mitigation to compensate for impacts to wetlands will be in accordance with 373.4137, F.S. to satisfy requirements of Part IV, Chapter 373, F.S. and 33 U.S.C. Section 1344. The other surface waters are exempt from state-required mitigation under 10.2.2.2 of the ERP Applicant's Handbook Volume I.

4.4.5 UMAM Analysis Results

Utilizing the calculated wetland impact acreages and the UMAM scores, the proposed mainline widening will have a total of 14.93 units of functional loss resulting from direct and secondary impacts. Of the 14.93 units, 12.41 units occur within the Hillsborough River Watershed and 2.52 units occur within the Withlacoochee Watershed. **Table 4-6** provides an overall summary of the UMAM analysis for proposed mainline widening. Once the final SMF/FPC sites are selected, further UMAM analyses will be conducted, and results will be provided in an addendum to this report. The UMAM scores presented have not been approved by the permitting agencies and may be refined during both the federal and state permitting process for the proposed project. A summary of the UMAM analyses for the direct and secondary wetland impacts resulting from the proposed mainline widening are provided in **Tables 4-7** and **4-8**, respectively. A summary of the UMAM analyses for the wetland impacts resulting from the proposed SMF/FPC sites are provided in **Tables 4-9** and **4-10**. The corresponding UMAM worksheets are provided in **Appendix I**.

Wetland Type	Wetland Type Impact Type		Functional Loss (Units)
Hillsborough River	Watershed		
Forested Direct		8.37	5.23
	Secondary	10.32	0.70
Subtotal Forested		18.69	5.93
Herbaceous	Direct	11.18	6.22
	Secondary	3.82	0.26
	Subtotal Herbaceous	15.00	6.48
Subtotal Hillsbo	orough River Watershed	33.69	12.41
Withlacoochee Rive	er Watershed		
Forested	Direct	1.66	1.05
Porested	Secondary	2.51	0.16
	Subtotal Forested	4.17	1.21
Harbacaaus	Direct	2.27	1.28
Herbaceous	Secondary	0.42	0.03
	Subtotal Herbaceous	2.69	1.31
Subtotal Withlaco	ochee River Watershed	6.86	2.52
	TOTAL	40.55	14.93

Table 4-6 UMAM Analysis Summary (Mainline Widening Only)

Sources: FDA, 2021.

Wetland	FLUCFCS Code	Score (Delta)	Acres of	Functional
ID	(USFWS Classification)		Impact	Loss (Units)
Hillsboroug	h River Watershed		[
WL 7	641 (PEM1C)	0.57	0.81	0.46
WL 8	630 (PFO1/2C)	0.63	0.70	0.44
WL 14	641 (PEM1C)	0.53	0.24	0.13
WL 15	641 (PEM1C)	0.53	0.31	0.17
WL 16	641 (PEM1C)	0.53	0.43	0.23
WL 17	641 (PEM1C)	0.53	0.15	0.08
WL 18	641 (PEM1C)	0.53	0.22	0.12
WL 19	641 (PEM1C)	0.53	0.58	0.31
WL 20	641 (PEM1C)	0.53	0.43	0.23
WL 21	641 (PEM1C)	0.53	0.05	0.03
WL 22	641 (PEM1C)	0.60	0.27	0.16
WL 23	641 (PEM1C)	0.60	0.12	0.07
WL 24	641 (PEM1C)	0.60	0.15	0.09
WL 25	641 (PEM1C)	0.63	0.21	0.13
WL 26	641 (PEM1C)	0.57	0.3	0.17
WL 27	641 (PEM1C)	0.60	0.47	0.28
WL 28	641 (PEM1C)	0.60	0.09	0.05
WL 29	641 (PEM1C)	0.60	0.25	0.15
WL 30	641 (PEM1C)	0.60	0.01	0.01
WL 31	641 (PEM1C)	0.53	0.56	0.30
WL 32	617 (PFO1C)	0.63	1.27	0.80
WL 33	641 (PEM1C)	0.53	0.29	0.15
WL 34	641 (PE <mark>M1</mark> C)	0.53	0.05	0.03
WL 35	641 (PEM1C)	0.53	0.09	0.05
WL 36	641 (PEM1C)	0.53	0.03	0.02
WL 37	641 (PEM1C)	0.57	0.25	0.14
WL 38	641 (PEM1C)	0.53	0.21	0.11
WL 39	641 (PEM1C)	0.53	0.3	0.16
WL 40	641 (PEM1C)	0.60	0.13	0.08
WL 41	641 (PEM1C)	0.57	0.05	0.03
WL 42	641 (PEM1C)	0.53	0.67	0.36
WL 43	641 (PEM1C)	0.53	0.33	0.18
WL 44	641 (PEM1C)	0.57	0.45	0.26
WL 45	641 (PEM1C)	0.57	0.38	0.22
WL 46	641 (PEM1C)	0.60	0.41	0.25
WL 47	641 (PEM1C)	0.53	0.35	0.19
WL 48	617 (PFO1C)	0.67	0.53	0.35

Table 4-7UMAM Analysis of Direct Wetland Impacts Resulting from the MainlineWidening

Wetland ID	FLUCFCS Code (USFWS Classification)	Score (Delta)	Acres of Impact	Functional Loss (Units)
Hillsboroug	h River Watershed			
WL 49	630 (PFO1/2C)	0.63	0.46	0.29
WL 50	617 (PFO1C)	0.63	0.15	0.10
WL 51	617 (PFO1C)	0.60	0.28	0.17
WL 52	630 (PFO1/2C)	0.60	0.48	0.29
WL 53	641 (PEM1C)	0.50	0.11	0.06
WL 54	630 (PFO1/2C)	0.60	0.49	0.29
WL 55	630 (PFO1/2C)	0.63	0.68	0.43
WL 56	630 (PFO1/2C)	0.60	0.78	0.47
WL 57	630 (PFO1/2C)	0.63	0.34	0.22
WL 58	630 (PFO1/2C)	0.63	0.73	0.46
WL 59	630 (PFO1/2C)	0.60	0.52	0.31
WL 60	641 (PEM1C)	0.53	0.58	0.31
WL 61	641 (PEM1C)	0.53	0.85	0.45
WL 62	621 (PFO2C)	0.63	0.87	0.55
WL 63	630 (PFO1/2C)	0.63	0.09	0.06
	Subtotal For	ested Wetlands	8.37	5.23
	Subtotal Herba	ceous Wetlands	11.18	6.22
	Subtotal Hillsborough R	iver Watershed	19.55	11.45
Withlacood	hee River Watershed			
WL 1	641 (PEM1C)	0.57	0.31	0.18
WL 2	641 (PEM1C)	0.63	0.07	0.04
WL 3	617 (PFO1C)	0.60	0.08	0.05
WL 4	617 (PFO1C)	0.67	0.39	0.26
WL 4	641 (PEM1C)	0.53	0.12	0.06
WL 5	631 (PSS1C)	0.67	<0.01	<0.01
WL 6	630 (PFO <mark>1/</mark> 2C)	0.67	0.05	0.03
WL 9	630 (PFO1/2C)	0.63	0.6	0.38
WL 10	630 (PFO1/2C)	0.63	0.26	0.16
WL 11	641 (PEM1C)	0.53	0.03	0.02
WL 12	641 (PEM1C)	0.53	0.56	0.30
WL 13	641 (PEM1C)	0.60	0.76	0.46
WL 64	631 (PSS1C)	0.60	0.28	0.17
WL 65	641 (PEM1C)	0.53	0.42	0.22
	Subtotal For	ested Wetlands	1.66	1.05
	Subtotal Herba	ceous Wetlands	2.27	1.28
	Subtotal Withlacoochee R	iver Watershed	3.93	2.33
Total Direct Wetland Impacts			23.48	13.78

Sources: FDA, 2021.

Note: Functional loss is calculated in UMAM to the nearest 1/1000. Therefore, totals may not add up due to rounding.

PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded; PSS1C = Palustrine, Scrub-shrub, Broad-leaved Deciduous, Seasonally Flooded

Wetland	FLUCFCS Code	Score (Delta)	Acres of	Functional	
Hillsboroug	Hillsborough River Watershed				
WL7	641 (PEM1C)	0.07	0.59	0.04	
WL 8	630 (PFO1/2C)	0.07	0.57	0.04	
WL 14	630 (PFO1/2C)	0.07	0.37	0.02	
WL 15	630 (PFO1/2C)	0.07	0.26	0.02	
WL 16	630 (PFO1/2C)	0.07	0.30	0.02	
WL 17	630 (PFO1/2C)	0.07	0.12	0.01	
WL 18	630 (PFO1/2C)	0.07	0.16	0.01	
WL 19	630 (PFO1/2C)	0.07	0.45	0.03	
WL 20	641 (PEM1C)	0.07	0.32	0.02	
WL 21	641 (PEM1C)	0.07	0.05	0.003	
WL 22	630 (PFO1/2C)	0.07	0.23	0.02	
WL 23	641 (PEM1C)	0.07	0.11	0.01	
WL 24	641 (PEM1C)	0.07	0.18	0.01	
WL 25	641 (PEM1C)	0.07	0.20	0.01	
WL 26	631 (PSS1C)	0.07	0.23	0.02	
WL 27	641 (PEM1C)	0.07	0.32	0.02	
WL 28	641 (PEM1C)	0.07	0.10	0.01	
WL 29	641 (PEM1C)	0.07	0.27	0.02	
WL 30	641 (PE <mark>M1</mark> C)	0.07	0.05	0.003	
WL 31	641 (PEM1C)	0.07	0.47	0.03	
WL 32	617 (PFO1C)	0.00	0.00	0.00	
WL 33	617 (PFO1C)	0.07	0.33	0.02	
WL 34	621 (PFO2C)	0.07	0.05	0.003	
WL 35	617 (PFO1C)	0.07	0.07	0.005	
WL 36	617 (PFO1C)	0.07	0.07	0.005	
WL 37	630 (PFO1/2C)	0.07	0.16	0.01	
WL 38	630 (PFO1/2C)	0.07	0.24	0.02	
WL 39	641 (PEM1C)	0.07	0.23	0.02	
WL 40	641 (PEM1C)	0.07	0.11	0.01	
WL 41	641 (PEM1C)	0.07	0.07	0.005	
WL 42	630 (PFO1/2C)	0.07	0.43	0.03	
WL 43	621 (PFO2C)	0.07	0.22	0.01	
WL 44	641 (PEM1C)	0.07	0.48	0.03	
WL 45	630 (PFO1/2C)	0.07	0.24	0.02	

Table 4-8UMAM Analysis of Secondary Wetland Impacts Resulting from the MainlineWidening

Wetland ID	FLUCFCS Code (USFWS Classification)	Score (Delta)	Acres of Impact	Functional Loss (Units)
Hillsborough River Watershed				
WL 46	630 (PFO1/2C)	0.07	0.25	0.02
WL 47	641 (PEM1C)	0.07	0.15	0.01
WL 48	617 (PFO1C)	0.07	0.43	0.03
WL 49	630 (PFO1/2C)	0.07	0.30	0.02
WL 50	617 (PFO1C)	0.07	0.13	0.01
WL 51	617 (PFO1C)	0.07	0.32	0.02
WL 52	630 (PFO1/2C)	0.07	0.33	0.02
WL 53	641 (PEM1C)	0.07	0.12	0.01
WL 54	630 (PFO1/2C)	0.07	0.36	0.02
WL 55	630 (PFO1/2C)	0.07	0.33	0.02
WL 56	630 (PFO1/2C)	0.07	0.62	0.04
WL 57	630 (PFO1/2C)	0.07	0.25	0.02
WL 58	630 (PFO1/2C)	0.07	0.39	0.03
WL 59	630 (PFO1/2C)	0.07	0.37	0.02
WL 60	630 (PFO1/2C)	0.07	0.54	0.04
WL 61	630 (PFO1/2C)	0.07	0.51	0.03
WL 62	621 (PFO2C)	0.07	0.54	0.04
WL 63	630 (PFO1/2C)	0.07	0.15	0.01
	Subtotal For	10.32	0.70	
	Subtotal Herba	3.82	0.26	
Subtotal Hillsborough River Watershed			14.14	0.96
Withlacooc	hee River Watershed			
WL 1	630 (PFO1/2C)	0.07	0.16	0.01
WL 2	630 (PFO1/2C)	0.07	0.07	0.005
WL 3	617 (PF <mark>O1</mark> C)	0.07	0.05	0.004
WL 4	617 (PF <mark>O1</mark> C)	0.07	0.42	0.03
WL 5	631 (PSS1C)	0.07	0.02	0.001
WL 6	630 (PFO1/2C)	0.07	0.07	0.005
WL 9	630 (PFO1/2C)	0.07	0.17	0.01
WL 10	630 (PFO1/2C)	0.07	0.05	0.003
WL 11	617 (PFO1C)	0.07	0.36	0.02
WL 12	630 (PFO1/2C)	0.07	0.59	0.04
WL 13	630 (PFO1/2C)	0.07	0.35	0.02
WL 64	631 (PSS1C)	0.07	0.20	0.01
WL 65	641 (PEM1C)	0.07	0.42	0.03
	Subtotal For	ested Wetlands	2.51	0.16
	Subtotal Herba	ceous Wetlands	0.42	0.03
	Subtotal Withlacoochee R	iver Watershed	2.93	0.19
Total Secondary Wetland Impacts			17.07	1.15

Sources: FDA, 2021.

Note: Functional loss is calculated in UMAM to the nearest 1/1000. Therefore, totals may not add up due to rounding.

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded; PSS1C = Palustrine, Scrub-shrub, Broad-leaved Deciduous, Seasonally Flooded

SMF/FPC ID	Wetland ID	FLUCFCS Code (USFWS Classification)	Score (Delta)	Acres of Impact	Functional Loss (Units)
Hillsborough River Watershed					
FPC 4A	WL 67	630 (PFO1/2C)	0.67	0.83	0.55
FPC 4A Easement	WL 67	630 (PFO1/2C)	0.67	0.23	0.15
FPC 4B	WL 66	641 (PEM1C)	0.47	0.17	0.08
FPC 4B	WL 67	630 (PFO1/2C)	0.67	0.50	0.33
FPC 4B Easement	WL 67	630 (PFO1/2C)	0.67	0.38	0.25
FPC 4C	WL 67	630 (PFO1/2C)	0.67	1.30	0.87
FPC 4C Easement	WL 67	630 (PFO1/2C)	0.67	0.23	0.15
FPC 6A	WL 83	630 (PFO1/2C)	0.67	0.39	0.26
FPC 6C	WL 81	621 (PFO2C)	0.67	0.11	0.07
FPC 6C	WL 82	621 (PFO2C)	0.67	0.13	0.09
FPC 7B	WL 72	630 (PF <mark>O1/2C</mark>)	0.67	0.01	0.01
FPC 8A	WL 80	641 (PE <mark>M1</mark> C)	0.57	0.06	0.03
FPC 9A	WL 78	630 (PFO1/2C)	0.67	1.18	0.79
FPC 11A	WL 76	621 (PFO2C)	0.63	0.02	0.01
FPC 12A	WL 75	630 (PFO1/2C)	0.63	0.17	0.11
POND 3D-1	WL 79	641 (PEM1C)	0.57	0.22	0.12
POND 3D-2	WL 73	630 (PFO1/2C)	0.67	1.94	1.29
POND 4C-2	WL 74	621 (PFO2C)	0.63	0.43	0.27
POND 4D-1	WL 77	643 (PEM1C)	0.53	3.35	1.79
Withlacoochee River Watershed					
FPC 5B	WL 68	630 (PFO1/2C)	0.63	0.28	0.18
FPC 5C	WL 68	630 (PFO1/2C)	0.63	0.03	0.02
FPC 5E	WL 70	621 (PFO2C)	0.63	0.04	0.03
POND 2C-2	WL 71	617 (PFO1C)	0.60	0.89	0.53
POND 2D-1	WL 69	630 (PFO1/2C)	0.67	0.13	0.09

Table 4-9 UMAM Analysis of Direct Wetland Impacts Resulting from the SMF/FPC Sites

Sources: FDA, 2021.

Note: Functional loss is calculated in UMAM to the nearest 1/1000. Therefore, totals may not add up due to rounding.

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded.

SMF/FPC ID	Wetland ID	FLUCFCS Code (USFWS Classification)	Score (Delta)	Acres of Impact	Functional Loss (Units)
Hillsborough River	Watershed				
FPC 4A	WL 67	630 (PFO1/2C)	0.07	0.48	0.03
FPC 4A Easement	WL 67	630 (PFO1/2C)	0.07	0.38	0.03
FPC 4B	WL 66	641 (PEM1C)	0.07	0.15	0.01
FPC 4B	WL 67	630 (PFO1/2C)	0.07	0.29	0.02
FPC 4B Easement	WL 67	630 (PFO1/2C)	0.07	0.62	0.04
FPC 4C	WL 67	630 (PFO1/2C)	0.07	0.55	0.04
FPC 4C Easement	WL 67	630 (PFO1/2C)	0.07	0.38	0.03
FPC 6A	WL 83	630 (PFO1/2C)	0.07	0.17	0.01
FPC 6C	WL 81	621 (PFO2C)	0.07	0.13	0.01
FPC 6C	WL 82	621 (PFO2C)	0.07	0.09	0.01
FPC 7B	WL 72	630 (PFO1/2C)	0.07	0.07	0.005
FPC 8A	WL 80	630 (PFO1/2C)	0.07	0.11	0.01
FPC 9A	WL 78	630 (PFO1/2C)	0.07	0.50	0.03
FPC 11A	WL 76	621 (PFO2C)	0.07	0.13	0.01
FPC 12A	WL 75	630 (PFO1/2C)	0.07	0.14	0.01
FPC 13 A	Adjacent WL	630 (PF <mark>O1/2C)</mark>	0.07	0.12	0.01
POND 3D-1	WL 79	641 (PE <mark>M1</mark> C)	0.00	0.00	0.00
POND 3D-2	WL 73	630 (PFO1/2C)	0.07	0.55	0.04
POND 4C-2	WL 74	621 (PFO2C)	0.07	0.26	0.02
POND 4D-1	WL 77	630 (PFO1/2C)	0.07	0.60	0.04
Withlacoochee River Watershed					
FPC 5B	WL 68	630 (PFO1/2C)	0.07	0.50	0.03
FPC 5C	WL 68	630 (PFO1/2C)	0.07	0.24	0.02
FPC 5E	WL 70	621 (PFO2C)	0.07	0.18	0.01
Pond 1A	Adjacent WL	630 (PFO1/2C)	0.07	0.09	0.006
POND 2C-2	WL 71	617 (PFO1C)	0.07	0.10	0.01
POND 2D-1	WL 69	630 (PFO1/2C)	0.07	0.17	0.01

Table 4-10 UMAM Analysis of Secondary Wetland Impacts Resulting from the SMF/FPC Sites

Sources: FDA, 2021.

Note: Functional loss is calculated in UMAM to the nearest 1/1000. Therefore, totals may not add up due to rounding.

Notes: PEM1C = Palustrine, Emergent, Persistent, Seasonally Flooded; PFO1C = Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded; PFO1/2C = Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded.

4.4.6 Wetland Mitigation

As previously mentioned, mitigation to compensate for impacts to wetlands will be in accordance with 373.4137, F.S. to satisfy requirements of Part IV, Chapter 373, F.S. and 33 U.S.C. Section 1344. There are several private wetland mitigation banks available that service the Hillsborough River and Withlacoochee Watersheds, are state and federally permitted, and provide wood stork foraging habitat. Each wetland impact will be mitigated dependent on the watershed it occurs in to satisfy state and federal mitigation requirements. **Table 4-11** below lists the current permitted mitigation banks servicing the Hillsborough River and Withlacoochee River Watersheds. It is anticipated that the FDOT will purchase wetland credits from one or more of the banks listed below to offset the loss of the wetland functions resulting from the proposed project.

Mitigation Bank	Watershed	Forested (F)/ Herbaceous (H) Credits
Hilochee	Withlacoochee River	F/H
Withlacoochee River	Withlacoochee River	F/H
Fox Branch	Hillsborough River	F/H
Hillsborough River	Hillsbor <mark>ou</mark> gh River	F/H
Two Rivers	Hillsborough River	F/H
Boarshead Ranch	Withlacoochee/Hillsborough River	F/H
Crooked River	Withlacoochee River	F/H
Wiggins Prairie	Hillsborough River	F/H
North Tampa	Hillsborough River	F
Green Swamp	Withlacoochee River	F

Table 4-11 Current Wetland Mitigations Bank Options

SECTION 5 ESSENTIAL FISH HABITAT

The Magnuson-Stevens Fishery Conservation and Management Act, as amended through October 11, 1996, requires the regional Fishery Management Councils and the Secretary of Commerce to describe and identify EFH for species under federal Fishery Management Plans. EFH is defined in the Magnuson-Stevens Act as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Coordination with the NMFS during the ETDM process indicated that the proposed project would not directly impact any NMFS trust resources (i.e., EFH). Therefore, no EFH involvement.



SECTION 6 ANTICIPATED PERMITS

Section 404 of the CWA requires a permit before dredged or fill material may be discharged into Waters of the US. Section 404(g) of the CWA gives states the option of assuming the permitting responsibility and administration of the Section 404 permit program for certain waters. The state then issues the Section 404 permits for those assumed waters rather than USACE. Pursuant to the CWA, the USACE retains permitting authority in certain tidal waters and other specified waters that are currently used or may be used in the future to transport interstate or foreign commerce.

On December 17, 2020, the US Environmental Protection Agency (EPA) approved the state of Florida's request to assume administration of a portion of the CWA Section 404 Program. The State 404 Program became effective as of December 22, 2020, and is administered by the FDEP pursuant to Chapter 62-331, F.A.C.

The State 404 Program is a separate permitting program from the existing ERP program under Chapter 62-330, F.A.C., and agency action for State 404 Program verifications, notices, or permits are taken independently from ERP agency action. The purpose of the State assumption of the 404 program is to provide a streamlined permitting procedure within which both federal and state requirements are addressed by state permits.

Based on the FDEP's Retained Waters Screening Tool, which provides a depiction of the approximate extent of federally retained waters of the US, the wetlands identified within the project study area fall within the jurisdiction of the State 404 Program (state-assumed waters).

Therefore, for the proposed project, the FDEP and SWFWMD regulate impacts to wetlands and other surface waters within the project study area. Other agencies, including the USFWS, NMFS, EPA, and the FWC, review and comment on permit applications as well. Chapter 62-330, F.A.C. provides joint application forms meant to include information required for both the ERP and the State 404 Program authorizations.

Through the ERP process, SWFWMD is also responsible for authorizing the construction, alteration, operation, maintenance, repair, abandonment or removal of stormwater management systems. The design of stormwater management systems must demonstrate reasonable assurance that water quality, water quantity, flood control, and design features meet all SWFWMD applicable requirements pursuant to the Conditions for Issuance in Section 62-330.301, F.A.C.

In addition, the FDEP regulates stormwater discharges from construction sites. 40 CFR Part 122 prohibits point source discharges of stormwater to waters of the U.S. without a National Pollutant Discharge Elimination System (NPDES) permit. Under the State of Florida's delegated authority to administer the NPDES program, construction sites that will result in greater than one acre of disturbance must file for and obtain either coverage under an appropriate generic permit contained in Chapter 62-621, F.A.C., or an individual permit issued pursuant to Chapter 62-620, F.A.C. A major component of the NPDES permit is the development of a SWPPP. The SWPPP identifies potential sources of pollution that may

reasonably be expected to affect the quality of stormwater discharges from the site and discusses good engineering practices (i.e., BMPs) that will be used to reduce the pollutants. **Table 6-1** includes a list of permits that will be required for this project.

Issuing Agency	Permit Type
FDEP	State 404 Program
SWFWMD	Individual ERP
FDEP	NPDES

Table 6-1 Anticipated Permits

SECTION 7 CONCLUSION

The FDOT has determined that the proposed project qualifies for a Type 2 Categorical Exclusion. An NRE has been prepared to document that the proposed project does not involve significant environmental impacts and provide an opportunity for agency review and concurrence of the findings.

7.1 PROTECTED SPECIES AND HABITAT

Based on background data collection and desktop reviews, as well as site-specific field reviews, 29 federally listed, 39 state listed, and three protected animal species were identified as having the potential to occur within the project study area. Tables 3-6, 3-7, and 3-8 in Section 3.4 summarize the impact determinations that have been made for protected species based upon their probability of occurrence, the potential for impact, and the commitments made to offset any potential impacts to each species. No federally listed species or designated critical habitats are expected to be adversely affected by the proposed project. Based on the findings and commitments of this report, a determination has been made that the proposed project is not likely to adversely affect any state or federally listed plant or animal species. Upon completion of evaluating and selecting the preferred SMF and FPC sites, further assessment of potential impacts to listed species will be conducted of which the results will be provided in an addendum to this report. To further minimize impacts to wildlife, FDOT is also evaluating the addition of wildlife features along US 98 including a wildlife crossing at the Main Stream Bridge culvert (located approximately 1.4 miles southeast of SR 471) that will be designed for the crossing of large mammals (e.g., panther, bear, deer, hogs) and several smaller features designed for the crossing of smaller mammals (e.g., rabbits, raccoons, fox, etc.). These features will provide enhanced opportunity for the safe passage of wildlife under US 98. Further discussion will be provided in an addendum to this report following completion of the wildlife features evaluation.

No Critical Habitat was identified within the project study area. As a result, there will be no impacts to Critical Habitat.

7.2 WETLANDS AND OTHER SURFACE WATERS

The proposed project was evaluated for the presence of wetlands and other surface waters within the project study area. A total of 65 wetlands and 92 other surface waters were identified existing ROW within the proposed project limits. Impacts were assessed based on the assumption that all wetlands and other surface waters within the existing ROW would be impacted as a result of the proposed project. As previously mentioned in **Section 4.4.1**, impacts to wetlands and other surface waters will be avoided and minimized to the greatest extent practicable during the project design and permitting. A preliminary evaluation of potential wetland impacts resulting from SMF and FPC sites is summarized in **Section 4.4.2.** Once evaluation of the SMF and FPC sites is completed and a selection of sites is finalized, wetland impacts resulting from the SMF and FPC sites will be reassessed and included in an addendum to this report.

Impacts to federally jurisdictional wetlands and other surface waters resulting from the proposed mainline widening include:

- 23.48 acres of direct wetland impacts
- 17.07 acres of secondary wetland impacts
- 1.87 acres of temporary other surface water impacts

Impacts to state jurisdictional wetlands and other surface waters resulting from the proposed mainline widening include:

• 4.41 acres of temporary other surface water impacts

UMAM was used to assess proposed mainline widening impacts to federal and state jurisdictional wetlands which resulted in a functional loss of 14.93 units resulting from direct and secondary impacts. UMAM was not used to assess impacts to federal jurisdictional surface waters that provide potential suitable foraging habitat for the wood stork because no net loss of suitable foraging habitat in surface waters is anticipated as on-site replacement will occur. State jurisdictional surface waters do not require mitigation per Section 10.2.2.2 of Applicant's Handbook Volume I. Mitigation to compensate for impacts to wetlands will be in accordance with 373.4137, F.S. to satisfy requirements of Part IV, Chapter 373, F.S. and 33 U.S.C. Section 1344. Once the final SMF/FPC sites are selected, further UMAM analyses will be conducted, and results will be provided in an addendum to this report. Anticipated mitigation requirements resulting from the proposed mainline widening construction include a total of 2.52 credits (1.21 freshwater forested credits; 1.31 freshwater herbaceous credits) within the Withlacoochee Watershed and 12.41 credits (5.93 freshwater forested credits; 6.48 freshwater herbaceous credits) within the Hillsborough River Watershed. There are several private wetland mitigation banks available that service the Hillsborough River and Withlacoochee Watersheds, are state and federally permitted, and provide wood stork foraging habitat. Each wetland impact will be mitigated dependent on the watershed it occurs in to satisfy state and federal mitigation requirements.

7.3 ESSENTIAL FISH HABITAT

Coordination with the NMFS during the ETDM process indicated that the proposed project would not directly impact any NMFS trust resources (i.e., EFH). Therefore, no EFH involvement.

7.4 IMPLEMENTATION MEASURES AND COMMITMENTS

Based on the field and literature reviews outlined in this report, federally listed and state listed species have a potential to occur within the proposed project area. To avoid or minimize adverse impacts to these species, FDOT will adhere to the following measures and commitments:

Implementation Measures

• Prior to construction, the FDOT will resurvey appropriate habitats within the project area to confirm the presence or absence, gopher tortoises, Florida burrowing owls, and Florida

sandhill crane nests. If any of these species or their nests are present, the FDOT will coordinate with the USFWS and/or the FWC to minimize the Proposed Project impacts and obtain the necessary permits;

- Prior to construction, the FDOT will resurvey the project area for the presence of active osprey nests. If an active osprey nest is later identified within the project area, FDOT will coordinate with the FWC (as applicable) to secure all necessary approvals regarding this species prior to project construction;
- Prior to construction, the FDOT will resurvey appropriate habitats within 1,000 feet of the Proposed Project area for bald eagle nests. If a bald eagle nest is found within 1,000 feet of the Proposed Project, the FDOT will coordinate with the USFWS to secure any and all approvals regarding this species; and
- To prevent black bear encounters during construction activities, contractors will follow BMPs; keep construction sites clean with wildlife-resistant containers for workers to use for food-related and other wildlife-attractant refuse; and frequently remove trash and use proper food storage on work sites.

<u>Commitments</u>

- The loss of wetland functions and values as a result of constructing the proposed project will be mitigated pursuant to Section 373.4137, F.S. to satisfy all mitigation requirements of Part IV of Chapter 373, F.S. and 33 U.S.C Section 1344; and
- The most current version of USFWS-approved Standard Protection Measures for the Eastern Indigo Snake will be adhered to during all construction phases of the proposed project (see Appendix C).

SECTION 8 REFERENCES

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APPENDICES

Appendix A Figures

Appendix B Data Request Results

Appendix B.1 USFWS IPaC Report

Appendix B.2 FNAI Standard Data Report

- Appendix C Standard Protection Measures for the Eastern Indigo Snake
- Appendix D USFWS Effect Determination Keys
- Appendix E Sand Skink and Blue-tailed Mole Skink Survey Technical Report
- Appendix F Crested Caracara Survey Technical Report
- Appendix G Wood Stork Foraging Analysis
- Appendix H Wetland Descriptions and Photos

Appendix H.1 Wetland Descriptions

Appendix H.2 Wetland Photos

Appendix I UMAM Worksheets

- Appendix I.1 UMAM Worksheets Mainline Direct Impacts
- Appendix I.2 UMAM Worksheets Mainline Secondary Impacts
- Appendix I.3 UMAM Worksheets Preliminary Pond Site Direct Impacts
- Appendix I.4 UMAM Worksheets Preliminary Pond Site Secondary Impacts

APPENDIX A

Figures





US 98 PD&E Study from From West Socrum Loop Road to CR 54 FPID: 436673-1 Polk County, FL



1 inch = 401 feet 200 400 Feet Coordinate System: NAD 1983 Florida State Plane West S\mxd\Draft NRE\Figure A-1 - FLUCCS Land Use_rev2.mxd Polk Cit Document Path: H:\64800\Data-GIS





































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Figure A-5 - 2021 Southeastern American Kestrel Survey US 98 PD&E Study from West Socrum Loop to CR 54 FPID 436673-1 Polk County, FL

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	Station 2
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	Station 4
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	Coordinate System: NAD 1983 Florida State Plane West
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APPENDIX B

Data Request Results

APPENDIX B.1

USFWS IPaC Report


United States Department of the Interior

FISH AND WILDLIFE SERVICE South Florida Ecological Services Field Office 1339 20th Street Vero Beach, FL 32960-3559 Phone: (772) 562-3909 Fax: (772) 562-4288 <u>http://fws.gov/verobeach</u>



June 01, 2021

In Reply Refer To: Consultation Code: 04EF2000-2021-SLI-0767 Event Code: 04EF2000-2021-E-01942 Project Name: US 98 PD&E

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq*.), and projects affecting these species may require development of an eagle conservation plan

(http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and hwww.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

http://

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

South Florida Ecological Services Field Office

1339 20th Street Vero Beach, FL 32960-3559 (772) 562-3909

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

North Florida Ecological Services Field Office

7915 Baymeadows Way, Suite 200 Jacksonville, FL 32256-7517 (904) 731-3336

Project Summary

Consultation Code:	04EF2000-2021-SLI-0767
Event Code:	04EF2000-2021-E-01942
Project Name:	US 98 PD&E
Project Type:	TRANSPORTATION
Project Description:	This project proposes the potential widening of US 98 (SR 35/700) from
	two lanes, undivided to four lanes, divided from north of West Socrum
	Loop Road to south of CR 54 in unincorporated Polk County.

Project Location:

Approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/@28.2120927,-82.01508945386641,14z</u>



Counties: Pasco and Polk counties, Florida

Endangered Species Act Species

There is a total of 34 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

 <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NM office of the National Oceanic and Atmospheric Administration within the E Commerce. 	IFS), is an Department of
Mammals NAME	STATUS
Florida Panther <i>Puma (=Felis) concolor coryi</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/1763</u>	Endangered
Puma (=mountain Lion) Puma (=Felis) concolor (all subsp. except coryi) Population: FL No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/6049</u>	Similarity of Appearance (Threatened)

Birds

NAME	STATUS
Audubon's Crested Caracara <i>Polyborus plancus audubonii</i> Population: FL pop. No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/8250</u>	Threatened
Eastern Black Rail Laterallus jamaicensis ssp. jamaicensis No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/10477</u>	Threatened
Everglade Snail Kite <i>Rostrhamus sociabilis plumbeus</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: <u>https://ecos.fws.gov/ecp/species/7713</u>	Endangered
Florida Grasshopper Sparrow Ammodramus savannarum floridanus No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/32</u>	Endangered
Whooping Crane <i>Grus americana</i> Population: U.S.A. (CO, ID, FL, NM, UT, and the western half of Wyoming) No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/758</u>	Experimental Population, Non- Essential
Wood Stork <i>Mycteria americana</i> Population: AL, FL, GA, MS, NC, SC No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/8477</u>	Threatened

Reptiles

NAME	STATUS
American Alligator Alligator mississippiensis No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/776</u>	Similarity of Appearance (Threatened)
Bluetail Mole Skink <i>Eumeces egregius lividus</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/2203</u>	Threatened
Eastern Indigo Snake Drymarchon corais couperi No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/646</u>	Threatened
Gopher Tortoise Gopherus polyphemus Population: eastern No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/6994</u>	Candidate
Loggerhead Sea Turtle Caretta caretta Population: Northwest Atlantic Ocean DPS There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: <u>https://ecos.fws.gov/ecp/species/1110</u>	Threatened
Sand Skink <i>Neoseps reynoldsi</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/4094</u>	Threatened

NAME	STATUS
Avon Park Harebells <i>Crotalaria avonensis</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/7093</u>	Endangered
Britton's Beargrass Nolina brittoniana No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/4460</u>	Endangered
Carter's Mustard Warea carteri No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/5583</u>	Endangered
Florida Bonamia <i>Bonamia grandiflora</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/2230</u>	Threatened
Florida Ziziphus Ziziphus celata No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/2950</u>	Endangered
Highlands Scrub Hypericum Hypericum cumulicola No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/2940</u>	Endangered
Lewton's Polygala <i>Polygala lewtonii</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/6688</u>	Endangered
Papery Whitlow-wort Paronychia chartacea No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/1465</u>	Threatened
Pigeon Wings Clitoria fragrans No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/991</u>	Threatened
Pygmy Fringe-tree Chionanthus pygmaeus No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/1084</u>	Endangered
Sandlace Polygonella myriophylla No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/5745</u>	Endangered
Scrub Blazingstar <i>Liatris ohlingerae</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/864</u>	Endangered
Scrub Buckwheat <i>Eriogonum longifolium var. gnaphalifolium</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/5940</u>	Threatened

NAME	STATUS
Scrub Lupine Lupinus aridorum No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/736</u>	Endangered
Scrub Mint <i>Dicerandra frutescens</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/799</u>	Endangered
Scrub Plum <i>Prunus geniculata</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/2238</u>	Endangered
Short-leaved Rosemary <i>Conradina brevifolia</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/2929</u>	Endangered
Wide-leaf Warea <i>Warea amplexifolia</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/412</u>	Endangered
Wireweed Polygonella basiramia No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/1718</u>	Endangered
Lichens NAME	STATUS
Florida Perforate Cladonia <i>Cladonia perforata</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/7516</u>	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

APPENDIX B.2

FNAI Standard Data Report



1018 Thomasville Road Suite 200-C Tallahassee, FL 32303 850-224-8207 fax 850-681-9364 www.fnai.org

Tia Norman Faller, Davis & Associates, Inc. 4200 W Cypress Street, Suite 500 Tampa, FL 33607

Dear Ms. Norman,

Thank you for requesting information from the Florida Natural Areas Inventory (FNAI). At your request we have produced the following report for your project area.

The purpose of this Standard Data Report is to provide objective scientific information on natural resources located in the vicinity of a site of interest, in order to inform those involved in project planning and evaluation. This Report makes no determination of the suitability of a proposed project for this location, or the potential impacts of the project on natural resources in the area.

June 8, 2021

Project:	PD&E Study for US 98	3
Date Received:	6/2/2021	
Location:	Polk County	

Element Occurrences

A search of our maps and database indicates that we currently have several element occurrences mapped in the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

Federally Listed Species

Our data indicate federally listed species are present on or very near this site, specifically Eastern Indigo Snake (*Drymarchon couperi*) (see enclosed map and tables for details). This statement should not be interpreted as a legal determination of presence or absence of federally listed species on a property.

The element occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, element occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant. Extirpated element occurrences will be marked with an 'X' following the occurrence label on the enclosed map.



Florida Resources

and Environmental Analysis Center

Institute of Science

Likely and Potential Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity Matrix Report). These species should be taken into consideration in field surveys, land management, and impact avoidance and mitigation.

Tracking Florida's Biodiversity

and Public Affairs The Florida State University FNAI habitat models indicate areas, which based on land cover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Habitat models have been developed for approximately 300 of the rarest species tracked by the Inventory, including all federally listed species.

FNAI species range models indicate areas that are within the known or predicted range of a species, based on climate variables, soils, vegetation, and/or slope. Species range models have been developed for approximately 340 species, including all federally listed species.

The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.

CLIP

The enclosed map shows natural resource conservation priorities based on the Critical Lands and Waters Identification Project. CLIP is based on many of the same natural resource data developed for the Florida Forever Conservation Needs Assessment, but provides an overall picture of conservation priorities across different resource categories, including biodiversity, landscapes, surface waters, and aggregated CLIP priorities (that combine the individual resource categories). CLIP is also based primarily on remote sensed data and is not intended to be the definitive authority on natural resources on a site.

For more information on CLIP, visit http://www.fnai.org/clip.cfm.

The Inventory always recommends that professionals familiar with Florida's flora and fauna conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

Please visit www.fnai.org/trackinglist.cfm for county or statewide element occurrence distributions and links to more element information.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site-specific field surveys. Therefore this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. The maps contain sensitive environmental information, please do not distribute or publish without prior consent from FNAI. FNAI data may not be resold for profit.

Thank you for your use of FNAI services. An invoice will be mailed separately. If I can be of further assistance, please contact me at (850) 224-8207 or at kbrinegar@fnai.fsu.edu.

Sincerely,

Kerri Brineçar

Kerri Brinegar GIS / Data Services

Encl

Tracking Florida's Biodiversity







FNAI ELEMENT OCCURRENCE REPORT on or near

PD&E Study for US 98



INVENT	ORY		Global	State	Federal	State	Observation	n	
Map Label	Scientific Name	Common Name	Rank	Rank	Status	Listing	Date	Description	EO Comments
DRYMCOUP*14	Drymarchon couperi	Eastern Indigo Snake	G3	S2?	Т	FT	1983-12	No general description given	1983-12: SPECIMEN OBSERVED DEAD ON ROAD BY J. COX (PNDCOX02FLUS).
GOPHPOLY*1260	Gopherus polyphemus	Gopher Tortoise	G3	S3	С	ST	2008-07-25	2008-07: heavily disturbed mesic to wet flatwoods, with ORV use and fire exclusion (PNDHER03FLUS).	2008-07-25 and -23: 2 tortoises foraging ca. 2.5 km apart; more southern one in grassy road that passes through mesic flatwoods, more northern one feeding on Dichanthilium in fire-suppressed wet flatwoods; observations were incidental to natural community survey (PNDHER03FLUS).
GOPHPOLY*1263	Gopherus polyphemus	Gopher Tortoise	G3	S3	С	ST	2008-07-16	2008-07-16: actively grazed improved pasture (PNDDIA02FLUS).	2008-07-16: single burrow observed in actively grazed improved pasture (PNDDIA02FLUS).
GYMNCHAP*26	Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N	1987-11-02	1987-11-02: Flatwoods (Hall).	1987-11-02: Infrequent; scattered in flatwoods; specimen taken [leaves, inflor., and few roots] (Hall).
PTERECRI*104	Pteroglossaspis ecristata	giant orchid	G2G3	S2	Ν	Т	2009-08-06	2009-08-06: Improved Paspalum notatum pasture with scattered Quercus virginiana, Quercus geminata, and Pinus elliotii moderately disturbed by agriculture and clearing. Site is very close to the Green Swamp. The Upland habitat has mostly been converted to Paspalum notatum pasture and cows and donkeys are on parts of the property. Wiregrass is still present in some areas and there are lots of isolated wetlands/dome swamps (F09FNA09FLUS).	2009-08-06: 27 plants in leaf with elongated flower stalks but no buds or flowers (F09FNA09FLUS).



FNAI ELEMENT OCCURRENCE REPORT on or near



PD&E Study for West Socrum Loop

INVENT	TORY		Global	State	Federal	State	Observation	n	
Map Label	Scientific Name	Common Name	Rank	Rank	Status	Listing	Date	Description	EO Comments
PTERECRI*105	Pteroglossaspis ecristata	giant orchid	G2G3	S2	Ν	Т	2009-08-06	2009-08-06: Improved Paspalum notatum pasture with scattered Pinus elliotii, Quercus geminata, Quercus virginiana, and Euthamia caroliniana with disturbances of agriculture and clearing. Site is very close to the Green Swamp. The Upland habitiat has mostly been converted to Paspalum notatum pasture and cows and donkeys are on parts of the property. Wiregrass is still present in some areas and there are lots of isolated wetlands/dome swamps (F09FNA09FLUS).	2009-08-06: 23-94 plants in flower/bud or with elongated flower stalk (F09FNA09FLUS).
SCIUNIGE*125	Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	Ν	Ν	1988-07-28	Cypress Swamp; Mesic Flatwoods.	1988-07-28: B.A. Millsap, GFC, observed 1 adult male.

Florida Natural Areas Inventory

Biodiversity Matrix Report



INVENTORY Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Matrix Unit ID: 32129					
Likely					
Drymarchon couperi Mesic flatwoods Mycteria americana	Eastern Indigo Snake Wood Stork	G3 G4 G4	S2? S4 S2	T N T	FT N FT
Potential					
Agrimonia incisa Antigone canadensis pratensis Asplenium x heteroresiliens Athene cunicularia floridana Carex chapmannii Centrosema arenicola Corynorhinus rafinesquii Dryobates borealis Forestiera godfreyi Gopherus polyphemus Gymnopogon chapmanianus Lithobates capito Matelea floridana Monotropsis reynoldsiae Mustela frenata peninsulae Nemastylis floridana Neofiber alleni Peucaea aestivalis Podomys floridanus Pycnanthemum floridanum Rostrhamus sociabilis Sciurus niger niger	incised groove-bur Florida Sandhill Crane Morzenti's spleenwort Florida Burrowing Owl Chapman's sedge sand butterfly pea Rafinesque's Big-eared Bat Red-cockaded Woodpecker Godfrey's swampprivet Gopher Tortoise Chapman's skeletongrass Gopher Frog Florida spiny-pod pygmy pipes Florida Long-tailed Weasel celestial lily Round-tailed Muskrat Bachman's Sparrow Florida Mouse Florida Mouse Florida mountain-mint Snail Kite Southeastern Fox Squirrel Carter's warea	$\begin{array}{c} G3\\ G5T2\\ G2\\ G4T3\\ G3\\ G2Q\\ G3G4\\ G3\\ G2\\ G3\\ G2\\ G3\\ G2\\ G3\\ G2\\ G2\\ G2\\ G2\\ G2\\ G2\\ G2\\ G2\\ G3\\ G3\\ G3\\ G3\\ G3\\ G4G5\\ G5T5\\ G1\\ \end{array}$	S2 S2 S1 S3 S2 S1 S2 S2 S3 S3 S2 S2 S3 S3 S2 S3 S3 S2 S3 S3 S2 S3 S3 S2 S3 S3 S2 S3 S3 S2 S3 S3 S2 S3 S3 S2 S3 S3 S2 S3 S2 S3 S3 S2 S3 S3 S2 S3 S2 S3 S3 S2 S3 S3 S2 S3 S2 S3 S2 S3 S2 S3 S3 S2 S3 S2 S3 S3 S2 S3 S3 S2 S3 S3 S2 S3 S3 S2 S3 S3 S2 S3 S3 S2 S3 S3 S3 S3 S3 S3 S3 S3 S3 S3 S3 S3 S3	N Z Z N Z Z P E, N C Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	Т S N S T E N F E S N N E E N N N N T F N E
Matrix Unit ID: 32449					
Drymarchon couperi Mesic flatwoods Mycteria americana	 Eastern Indigo Snake Wood Stork 	G3 G4 G4	S2? S4 S2	T N T	FT N FT
Potential					
Agrimonia incisa Antigone canadensis pratensis Asplenium x heteroresiliens Athene cunicularia floridana Centrosema arenicola Dryobates borealis Gopherus polyphemus Gymnopogon chapmanianus Lithobates capito Litsea aestivalis	incised groove-bur Florida Sandhill Crane Morzenti's spleenwort Florida Burrowing Owl sand butterfly pea Red-cockaded Woodpecker Gopher Tortoise Chapman's skeletongrass Gopher Frog pondspice	G3 G5T2 G2 G4T3 G2Q G3 G3 G3 G2G3 G3?	S2 S1 S3 S2 S2 S3 S3 S3 S3 S2	N N N E, PT C N N N	T ST ST E E ST N E

Definitions: Documented - Rare species and natural communities documented on or near this site.

Florida Natural Areas Inventory

Biodiversity Matrix Report



INVENTORY		Global	State	Federal	State
Scientific Name	Common Name	Rank	Rank	Status	Listing
Matelea floridana	Florida spiny-pod	G2	S2	Ν	Е
Monotropsis reynoldsiae	pygmy pipes	G2	S2	Ν	Е
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	Ν	Ν
Nemastylis floridana	celestial lilv	G2	S2	Ν	Е
Neofiber alleni	Round-tailed Muskrat	G2	S2	Ν	Ν
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Podomvs floridanus	Florida Mouse	G3	S3	N	N
Pycnanthemum floridanum	Florida mountain-mint	G3	S3	N	Т
Rostrhamus sociabilis	Snail Kite	G4G5	S2	F	FF
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Matrix Unit ID: 32450					
Likely					
Mesic flatwoods		G4	S4	Ν	Ν
Mycteria americana	Wood Stork	G4	S2	Т	FT
Potential					
Agrimonia incisa	incised groove-bur	G3	S2	Ν	Т
Antigone canadensis pratensis	Florida Šandhill Crane	G5T2	S2	Ν	ST
Asplenium x heteroresiliens	Morzenti's spleenwort	G2	S1	N	Ν
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Centrosema arenicola	sand butterfly pea	G2Q	S2	Ν	Е
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	Т	FT
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Gopherus polyphemus	Gopher Tortoise	G3	S3	Ċ	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	Ν	Ν
Lithobates capito	Gopher Frog	G2G3	S3	Ν	Ν
Litsea aestivalis	pondspice	G3?	S2	Ν	Е
Matelea floridana	Florida spiny-pod	G2	S2	N	Ē
Monotropsis revnoldsiae	pyamy pipes	G2	S2	N	Ē
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lilv	G2	S2	N	F
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Podomys floridanus	Florida Mouse	G3	S3	N	N
Pycnanthemum floridanum	Florida mountain-mint	G3	S3	N	т
Rostrhamus sociabilis	Snail Kite	G4G5	S2	F	FF
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Matrix Unit ID: 32770					
Documented-Historic					
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	Т	FT
Likely					
Mesic flatwoods <i>Mycteria americana</i>	Wood Stork	G4 G4	S4 S2	N T	N FT
Detential					

Potential

Definitions: Documented - Rare species and natural communities documented on or near this site.

Florida Natural Areas Inventory

Biodiversity Matrix Report



INVENTORY		Global	State	Federal	State
Scientific Name	Common Name	Rank	Rank	Status	Listing
Agrimonia incisa	incised groove-bur	G3	S2	Ν	Т
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Asplenium x heteroresiliens	Morzenti's spleenwort	G2	S1	N	Ν
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Centrosema arenicola	sand butterfly pea	G2Q	S2	Ν	E
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Gopherus polyphemus	Gopher Tortoise	G3	S3	С	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	Ν
Lithobates capito	Gopher Frog	G2G3	S3	N	Ν
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae	pygmy pipes	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	Ν
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	Ν
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	Ν
Podomys floridanus	Florida Mouse	G3	S3	N	Ν
Pycnanthemum floridanum	Florida mountain-mint	G3	S3	N	Т
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	Ν	Ν
Matrix Unit ID: 33090					
Documented					
Gopherus polyphemus	Gopher Tortoise	G3	S3	С	ST
Likely					
Drvmarchon couperi	Eastern Indigo Snake	G3	S2?	т	FT
Mesic flatwoods		G4	S4	Ň	N
Mycteria americana	Wood Stork	G4	S2	Т	FT
Potential					
Agrimonia incisa	incised groove-bur	G3	S2	N	т
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ŚT
Asplenium x heteroresiliens	Morzenti's spleenwort	G2	S1	N	N
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Centrosema arenicola	sand butterfly pea	G2Q	S2	Ν	Е
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S1	Ν	Ν
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	Ν
Lithobates capito	Gopher Frog	G2G3	S3	N	Ν
Matelea floridana	Florida spiny-pod	G2	S2	N	Е
Monotropsis reynoldsiae	pygmy pipes	G2	S2	Ν	Е
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	Ν	Ν
Nemastylis floridana	celestial lily	G2	S2	N	Е
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	Ν
Peucaea aestivalis	Bachman's Sparrow	G3	S3	Ν	Ν
Podomys floridanus	Florida Mouse	G3	S3	N	Ν
Pycnanthemum floridanum	Florida mountain-mint	G3	S3	Ν	
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	Ν

Definitions: Documented - Rare species and natural communities documented on or near this site.



Florida Natural Areas Inventory

Biodiversity Matrix Report



INVENTORY Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Matrix Unit ID: 33091					
Likely					
Drymarchon couperi Mesic flatwoods Mycteria americana	Eastern Indigo Snake Wood Stork	G3 G4 G4	S2? S4 S2	T N T	FT N FT
Potential					
Agrimonia incisa Antigone canadensis pratensis Asplenium x heteroresiliens Athene cunicularia floridana Centrosema arenicola Dryobates borealis Gopherus polyphemus Gymnopogon chapmanianus Lithobates capito Matelea floridana Monotropsis reynoldsiae Mustela frenata peninsulae Nemastylis floridana Neofiber alleni Peucaea aestivalis Podomys floridanus Pycnanthemum floridanum Rostrhamus sociabilis Sciurus niger niger	incised groove-bur Florida Sandhill Crane Morzenti's spleenwort Florida Burrowing Owl sand butterfly pea Red-cockaded Woodpecker Gopher Tortoise Chapman's skeletongrass Gopher Frog Florida spiny-pod pygmy pipes Florida Long-tailed Weasel celestial lily Round-tailed Muskrat Bachman's Sparrow Florida Mouse Florida mountain-mint Snail Kite Southeastern Fox Squirrel	G3 G5T2 G2 G4T3 G2Q G3 G3 G3 G2G3 G2 G2 G2 G2 G2 G2 G2 G2 G2 G3 G3 G3 G3 G3 G4G5 G5T5	S2 S1 S3 S2 S3 S3 S3 S2 S2 S2 S2 S3 S3 S3 S3 S3 S3 S3 S3 S3 S3 S3 S3 S3	N N N N N P E, C N N N N N N N N N N N N N N N N N N	Т S N S E E S N N E E N E N N N T E N
Matrix Unit ID: 33411					
Likely Drymarchon couperi Mycteria americana	Eastern Indigo Snake Wood Stork	G3 G4	S2? S2	T T	FT FT
Potential					
Agrimonia incisa Antigone canadensis pratensis Asplenium x heteroresiliens Athene cunicularia floridana Bonamia grandiflora Calamintha ashei Carex chapmannii Centrosema arenicola Coleataenia abscissa Corynorhinus rafinesquii Dryobates borealis Eriogonum longifolium var. gnaphalifolium Gopherus polyphemus Gymnopogon chapmanianus Heterodon simus	incised groove-bur Florida Sandhill Crane Morzenti's spleenwort Florida Burrowing Owl Florida bonamia Ashe's savory Chapman's sedge sand butterfly pea cutthroatgrass Rafinesque's Big-eared Bat Red-cockaded Woodpecker scrub buckwheat Gopher Tortoise Chapman's skeletongrass Southern Hognose Spake	G3 G5T2 G2 G4T3 G3 G3 G3 G2Q G3 G4T3 G3 G4T3 G3 G3 G4T3 G3 G3 G3 G3 G3 G3 G3 G3 G3 G3 G3	\$2 \$1 \$3 \$3 \$3 \$3 \$3 \$3 \$2 \$3 \$1 \$2 \$3 \$3 \$3 \$3 \$3 \$3 \$3 \$3 \$3 \$3 \$3 \$3 \$3	N	T ST N ST E T T E E N FE E ST N N

Definitions: Documented - Rare species and natural communities documented on or near this site.

Florida Natural Areas Inventory

Biodiversity Matrix Report



INVENTORY		Global	State	Federal	State
Scientific Name	Common Name	Rank	Rank	Status	Listing
Lechea cernua	nodding pinweed	G3	S3	Ν	Т
Lithobates capito	Gopher Frog	G2G3	S3	Ν	Ν
Matelea floridana	Florida spiny-pod	G2	S2	Ν	Е
Monotropsis reynoldsiae	pygmy pipes	G2	S2	Ν	Е
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	Ν	Ν
Nemastvlis floridana	celestial lilv	G2	S2	Ν	Е
Neofiber alleni	Round-tailed Muskrat	G2	S2	Ν	Ν
Nolina brittoniana	Britton's beargrass	G3	S3	Е	Е
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	Т	Е
Peucaea aestivalis	Bachman's Sparrow	G3	S3	Ν	Ν
Podomys floridanus	Florida Mouse	G3	S3	Ν	Ν
Polygala lewtonii	Lewton's polygala	G2	S2	Е	Е
Pteroglossaspis ecristata	giant orchid	G2G3	S2	Ν	Т
Pycnanthemum floridanum	Florida mountain-mint	G3	S3	Ν	Т
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Salix floridana	Florida willow	G2	S2	Ν	Е
Sceloporus woodi	Florida Scrub Lizard	G2G3	S2S3	Ν	Ν
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	Ν	Ν
Warea carteri	Carter's warea	G1	S1	Е	Е
Matrix Unit ID: 33412					
Likely					
Drvmarchon couperi	Eastern Indigo Snake	G3	S2?	Т	FT
Mésic flatwoods	Ŭ	G4	S4	Ν	Ν
Mycteria americana	Wood Stork	G4	S2	Т	FT
Potential					
Agrimonia incisa	incised groove-bur	G3	S2	Ν	Т
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	Ν	ST
Asplenium x heteroresiliens	Morzenti's spleenwort	G2	S1	Ν	Ν
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	Ν	ST
Calamintha ashei	Ashe's savory	G3	S3	Ν	Т
Centrosema arenicola	sand butterfly pea	G2Q	S2	Ν	Е
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Gopherus polyphemus	Gopher Tortoise	G3	S3	С	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	Ν
Heterodon simus	Southern Hognose Snake	G2	S2S3	Ν	Ν
Lithobates capito	Gopher Frog	G2G3	S3	Ν	Ν
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae	pygmy pipes	G2	S2	Ν	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	Ν	Ν
Nemastylis floridana	celestial lily	G2	S2	Ν	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	Ν	Ν
Peucaea aestivalis	Bachman's Sparrow	G3	S3	Ν	Ν
Podomys floridanus	Florida Mouse	G3	S3	Ν	Ν
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	Т
Pycnanthemum floridanum	Florida mountain-mint	G3	S3	N	Т
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Sceloporus woodi	Florida Scrub Lizard	G2G3	S2S3	Ν	Ν

Definitions: Documented - Rare species and natural communities documented on or near this site.

Florida Natural Areas Inventory

Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	Ν	Ν
Matrix Unit ID: 33732					
Likely					
Mesic flatwoods		G4	S4	Ν	Ν
Mycteria americana	Wood Stork	G4	S2	Т	FT
Potential					
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	Ν	ST
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	Ν	ST
Bonamia grandiflora	Florida bonamia	G3	S3	Т	Е
Calamintha ashei	Ashe's savory	G3	S3	Ν	Т
Calopogon multiflorus	many-flowered grass-pink	G2G3	S2S3	Ν	Т
Carex chapmannii	Chapman's sedge	G3	S3	Ν	Т
Centrosema arenicola	sand butterfly pea	G2Q	S2	Ν	Е
Chionanthus pygmaeus	pygmy fringe tree	G2	S2S3	Е	Е
Coleataenia abscissa	cutthroatgrass	G3	S3	Ν	Е
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	Т	FT
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	Т	E
Gopherus polyphemus	Gopher Tortoise	G3	S3	С	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Hartwrightia floridana	hartwrightia	G2	S2	N	Т
Heterodon simus	Southern Hognose Snake	G2	S2S3	N	N
Lechea cernua	nodding pinweed	G3	S3	N	
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae	pygmy pipes	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G513?	53?	N	N
Nemastylis fioridana	Celestial IIIy	G2	52	N	E
Neoliber allerii Nelipe stangeorna	Round-tailed Muskrat	G2 C2	52	IN N	
Nolina alupucarpa	Pioliua beargrass	G3	33 62		
Paronychia chartacea var. chartacea	paper like pailwort	C3T3	53		
Peuraea aestivalis	Bachman's Sparrow	G3	53	N	
Plestindon eareaius lividus	Blue-tailed Mole Skink	G5T2	S2	Т	FT
Podomys floridanus	Elorida Mouse	G3	S3	N	N
Polygala lewtonii	l ewton's polygala	G2	S2	F	F
Polygonella basiramia	Florida iointweed	G3	S3	Ē	Ē
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Salix floridana	Florida willow	G2	S2	Ν	Е
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	Ν	Ν
Warea carteri	Carter's warea	G1	S1	Е	Е
Matrix Unit ID: 33733					
Likely					
Mesic flatwoods		G4	S4	Ν	Ν

Definitions: Documented - Rare species and natural communities documented on or near this site.

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Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Mycteria americana	Wood Stork	G4	S2	Т	FT
Potential					
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	Ν	ST
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Bonamia grandiflora	Florida bonamia	G3	S3	Т	Е
Calamintha ashei	Ashe's savory	G3	S3	N	Т
Carex chapmannii	Chapman's sedge	G3	S3	N	Т
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Coleataenia abscissa	cutthroatgrass	G3	S3	N	E
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	Т	FT
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	Т	E
Gopherus polyphemus	Gopher Tortoise	G3	S3	С	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	Ν
Hartwrightia floridana	hartwrightia	G2	S2	N	Т
Heterodon simus	Southern Hognose Snake	🔶 G2	S2S3	N	Ν
Lechea cernua	nodding pinweed	G3	S3	N	Т
Lithobates capito	Gopher Frog	G2G3	S3	N	Ν
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Monotropsis reynoldsiae	pygmy pip <mark>es</mark>	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	Ν
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Nolina brittoniana	Britton's beargrass	G3	S3	E	E
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	Т	E
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Plestiodon egregius lividus	Blue-tailed Mole Skink	G5T2	S2	Т	FT
Podomys floridanus	Florida Mouse	G3	S3	N	N
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	Т
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Salix floridana	Florida willow	G2	S2	N	E
Sceloporus woodi	Florida Scrub Lizard	G2G3	S2S3	N	N
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Warea carteri	Carter's warea	G1	S1	E	E
Matrix Unit ID: 33734					
Likely					
Mesic flatwoods		G4	S4	Ν	Ν
Mycteria americana	Wood Stork	G4	S2	Т	FT
Potential					
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	Ν	ST
Asplenium x heteroresiliens	Morzenti's spleenwort	G2	S1	Ν	Ν
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	Ν	ST
Bonamia grandiflora	Florida bonamia	G3	S3	Т	Е
Calamintha ashei	Ashe's savory	G3	S3	Ν	Т
Carex chapmannii	Chapman's sedge	G3	S3	Ν	Т

Definitions: Documented - Rare species and natural communities documented on or near this site.

Florida Natural Areas Inventory

Biodiversity Matrix Report



Scientific Name Common Name Name Name Name Name Name Name Name Status Listing Centrosema arenicola sand butterfy pea G2Q S2 N E Drynarchon couperi Eastern Indigo Snake G3 S2 F. FT FT Dryobates borealis Gopher Torbise G3 S3 T E Gopherus polyphermus Gopher Torbise G3 S3 N N Hartwrightia floridana hartwrightia G2 S2 N T Heterodon simus Southern Hognose Snake G2 S2 N N Lechea cernua nodding pinweod G3 S3 N N Matelea floridana Florida siny-pod G2 S2 N E Monotropsis reynoldsiae pygmy pipes G2 S2 N N Netter anenisulae Florida Norta G3 S3 N N Necificare aleni Roupt-talield Muskrat	INVENTORY		Global	State	Federal	State
Centrosema arenicolasand butterfly peaG2QS2NEColeataeria abscissacuttinoatyrassG3S3NEDrynbarchon couperiEastern Indigo SnakeG3S2FFTFEFriggonum longfolum var. gnaphellfolumGopher TortoiseG3S3CSTGopherus polythemusGopher TortoiseG3S3NNTFetrogonum longfolum var. gnaphellfolumChapman's skeletongrassG3S3NNNHartwrightaGopher TortoiseG3S3NNNNNLichobates capitoGopher TortoiseG3S3NNN <th>Scientific Name</th> <th>Common Name</th> <th>Rank</th> <th>Rank</th> <th>Status</th> <th>Listing</th>	Scientific Name	Common Name	Rank	Rank	Status	Listing
Coleataenia abscissacutthroatgrassG3S2F.FTDrynbates borealisRed-cockaded WoodpeckerG3S2E.,PTFEGopherus polyphemusGopher TortoiseG3S3TEGopherus polyphemusChapman's skeletongrassG3S3NNArthwighta floridanahartwrightaG2S2NNHeteradon simusSoutherm Hognose SnakeG2S2NNLachea cernuanodding pinweedG3S3NNLathobase capitoGopher FrogG2G3S3NNMatelea fioridanaFlorida spiny-podG2S2NEMontropsis reynoldsiaePygmy pipesG2S2NNNemastylis floridanacelestial lilyG2S2NNNemastylis floridanacelestial lilyG2S2NNNolina brittonianaBachman's baprovG3S3NNPercocea aestivalisBauchman's baprovG3S3NNPetroglosses/se cristategiant orchidG2G3S2NNPetroglosses/se cristategiant orchidG2G3S2NNPodomys floridanusFlorida MouseG3S3NNPetroglosses/se cristategiant orchidG2G3S2NNNolina brittonianaFlorida MouseG3S3NNPotygale lewtoniLewton's polygalaG2 </td <td>Centrosema arenicola</td> <td>sand butterfly pea</td> <td>G2Q</td> <td>S2</td> <td>Ν</td> <td>Е</td>	Centrosema arenicola	sand butterfly pea	G2Q	S2	Ν	Е
Drymarchon couperi Eastern Indigo Snake G3 \$\$22 T FT Drychates borealis Red-cockaded Woodpecker G3 \$\$33 T FE Gropherus polyphemus Gopher Tortoise G3 \$\$3 C S\$T Gymnopogon chapmanianus Chapman's skeletongrass G3 \$\$3 N N Hartwrightia floridana hartwrightia G2 \$\$22 N T Heterodon simus Southern Hognose Snake G2 \$\$22 N T Lithobates capito Gopher Frog G2G3 \$\$3 N N Lithobates capito Gopher Frog G2 \$\$2 N E Montropsis reynoldsize pygmy pipes G2 \$\$2 N E Mostella fioridana celestial lily G2 \$\$2 N N Nolina bittoniana Bitton's beargrass G3 \$3 \$\$<	Coleataenia abscissa	cutthroatgrass	G3	S3	Ν	E
Dryobates borealisRed-cockaded WoodpeckerG3S2E, PTFEGopherus polyphemusGopher TortoiseG3S3CSTGymogogo chapmanianusChapman's skeletongrassG3S3NNHartwrightia floridanahartwrightiaG2S2NTHeterodon simusSouthern Hognese SnakeG2S2S3NNLithobates capitoGopher FrogG2G3S3NNMatelea floridananodding pinveedG2S2NEMonotropsis reprolosiaepygmy pipesG2S2NEMonotropsis reprolosiaepygmy pipesG2S2NEMonotropsis reprolosiaepygmy pipesG2S2NNNemastylis floridanacelestial lillyG2S2NNNentine alleniRound-tailed MuskratG2S2NNNolina brittonianaBarthran's SparrowG3S3TTParonychi chartacea var. chartaceapaper-like nailwortG2S2NNPlestiodon egregius lividusBlue-tailed Mole SkinkG5T2S2TFPadomys floridanusFlorida MouseG3S3NNNPetroglossepsis ecristatagiant orchidG2S2NTPotogale lewtoniLewton's polygalaG2S2NTPotogale lewtoniLewton's polygalaG2S2NNScic	Drymarchon couperi	Eastern Indigo Snake	G3	S2?	Т	FT
Eriogonum longifolium var. gnaphalifoliumscrub buckwheatG473S3TEGopherus polypherusGopher TortoiseG3S3CSTGymnopogon chapmanianusChapman's skeletongrassG3S3NNHartwrightaG2S2SNTHetherodon simusSouthern Hognose SnakeG2S2S3NNLichobates capitoGopher FrogG2G3S3NNLithobates capitoGopher FrogG2G3S3NNMatelea floridanaFlorida spiny-podG2S2NEMontropsis reynoldsiaePygmy pipesG2S2NEMustela frenata peninsulaeFlorida Long-talled WeaselG373S37NNNolina brittonianaBritton's beargrassG3S3TEParonychia chartacea var. chartaceapaper-like naliwortG373S3TEParonychia chartacea var. chartaceapaper-like naliwortG373S3NNPiestodon egregius lividusBlue-tailed MuskratG2S2NFTPodomys floridanusFlorida MuseG2S2NFTPodomys floridanusFlorida MuseG2S2NTPotogala lewtoniLewton's polygalaG2S2NTPotogala lewtoniLewton's polygalaG2S2NTPotogala lewtoniSandhill CraneG575S3NNM	Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Gopherus polyphemusCopher TortoiseG3S3CSTGymnogogon chapmanianusChapman's skeletongrassG3S3NNHartwrightaG2S2NTHattwrightaG2S2S3NNLechea cernuanodding pinweedG3S3NNLithobates capitoGopher FrogG2S2S3NNMatelea floridanaFlorida spiny-podG2S2NEMonotropsis reynoldsiaepygmy pipesG2S2NEMustela fernata peninsulaeFlorida long-tailed WeaselG3737S37NNNemastylis fioridanacelestial lilyG2S2NENolina brittonianaRound-tailed MuskratG3S3TEPercaea aestivalisBachman's SparrowG3S3NNPlestiodon egreguis lividusBlue-tailed Mole SkinkG572S2ZEPlorida foridanaLewton's polygalaG2S2NFPodomys floridanusFlorida Sonub LizardG2G3S3NNPlostodon egreguis lividusBlue-tailed Mole SkinkG572S2NFPodomys floridanusFlorida Sonub LizardG2G3S2NNSeiurus niger nigerSoutheastern Fox SquirrelG575S3NNVood StorkG4S4NNNMycteria americanaMood StorkG4S4N <td>Eriogonum longifolium var. gnaphalifolium</td> <td>scrub buckwheat</td> <td>G4T3</td> <td>S3</td> <td>Т</td> <td>Е</td>	Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	Т	Е
Gymnopogon chapmanianusChapman's skeletongrassG3S3NNHartwrightiaG2S2NTHeterodon simusSouthern Hognose SnakeG2S233NNLechea cernuanodding pinweedG3S3NTLithobates capitoGopher FrogG2263S3NNMatelea floridanaFlorida spiny-podG2S2NEMonotropsis reynoldsiaepygmy pipesG2S2NEMustela frenata peninsulaeFlorida Long-talied WeaselG5T37S37NNNemastylis floridanaBritton's beargrassG3S3TEPacopychia chartacea var. chartaceapaper-like naliwortG3T3S3TEParonychia chartacea var. chartaceapaper-like naliwortG3T3S3NNNolina brittonianaBlue-talied Mole StrikkG5T2S2NFPodomys floridanusFlorida MuseeG3S3NNPelvacea aestivalisBlue-talied Mole StrikkG5T2S2NTPodomys floridanusFlorida MuseeG3S3NNPolygala lewtoniLewton's polygalaG2S2NEPateroglossapis ecristatagiant orchidG2G3S2NNSciutus siger nigerSoutheastern Fox SquirrelG5T5S3NNVarea carteriCater's wareaG1S1EEMatr	Gopherus polyphemus	Gopher Tortoise	G3	S3	С	ST
HartwrightiaC2S2NTHeterodon simusSouthern Hognose SnakeG2S22NTLithobates capitoGopher FrogG2G3S3NNLithobates capitoGopher FrogG2G3S3NNMatelea floridanaGopher FrogG2S2NEMonotropsis reynoldsiaepygmy pipesG2S2NEMusteia frenata peninsulaeFlorida Spiny-podG2S2NEMonotropsis reynoldsiaepygmy pipesG2S2NEMusteia frenata peninsulaeFlorida Long-tailed WeaselG3737S3NNNemastylis floridanacelestial IllyG2S2NENolina brittonianaBritton's beargrassG3S3NNPercoychia chartacea var. chartaceapaper-like nailwortG373S3TEPercoglossaspis ecristataglain torhidG26S2TFTPodomy BiordanusFlorida MouseG3S3NNPolygala lewtoniiLewton's polygalaG2S2NESalt KindanaFlorida Scrub LizardG2G3S3NNSciurus niger nigerSoutheastem Fox SquirrelG515S3NNVarea carteriGarter's wareaG1S1EEMatrix Unit ID:34054LizardG2G3S233NNCalamintha asheiAshe's savonyG3<	Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	Ν
Heteradon simusSouthern Hognose SnakeG2S2S3NNLechae cernuanodding pinweedG3S3NTLithobates capitoGopher FrogG2G3S3NNMatelea findaa aFlorida spiny-podG2S2NEMustela frenata peninsulaeFlorida Long-talled WeaselG5T37S37NNNemast/jis floridanacelestial lilyG2S2NENemast/jis floridanacelestial lilyG2S2NENeofiber alleniRound-talled MuskratG2S2NNNolina brittonianaBritton's beargrassG3S3TEParonychia chartacea var. chartaceapaper-like nailwortG3T3S3NNPiestodon egregius lividusBlue-talled Moles KinkG5T2S2TFTProdomys floridanusFlorida MouseG3S3NNNPolygala lewtoniiLewton's polygalaG2S2NEPateroglossaspis ecristatagiant orchidG2G3S2NNScilurus niger nigerGorida Scrub LizardG2G3S2NNWarea carteriGatter's wareaG1S1EEMatrix Unit ID:34054SaNNNNLikleyMesic flatwoodsG4S4NNTAthene cunicularia floridanaFlorida Sandhill CraneG3S3NT	Hartwrightia floridana	hartwrightia	G2	S2	Ν	Т
Lechea cerrua nodding pinweed G3 S3 N T Lithobates capito Gopher Frog G2G3 S3 N N Matelea floridana Florida spiny-pod G2 S2 N E Mustela floridana Pilorida Long-talled Weasel G5T3? S3? N N Nemastylis floridana celestial Iliy G2 S2 N E Neonber alleni Round-talled Muskrat G2 S2 N E Paronychia chartacea var. chartacea paper-like naliwort G3 S3 N N Plestodon egregus lividus Bachman's Sparrow G3 S3 N N Plestodon egregus lividus Buchman's Sparrow G3 S3 N N Plestodon egregus lividus Buchman's Sparrow G3 S3 N N Plestodon egregus lividus Buchman's Sparrow G3 S3 N N Polygala lewtonii Lewton's polygala G2 S2 E E Pteroglossaspis ecristata giant orchid G2G3 S2 N T Rosthamus sociabilis Snati Kite G4G5 S2 E FE Salix fioridana Florida Scrub Lizard G2G3 S2 N N Warea carteri Cartar Cartace Carter Sparrow G3 S3 N N Polygala lewtonii Lewton's polygala G2 S2 N E Sceloporus woodi Florida Scrub Lizard G2G3 S2 N N Warea carteri Cartar G4 S4 N N Warea carteri Carter's warea G1 S1 E E Calaminta floridana Florida Soruk Carter's warea G1 S1 E E Calaminta floridana Florida Surue Carter's warea G1 S1 E E Calaminta floridana Florida Surue Carter's warea G3 S3 N N Carter's warea G3 S3 N N Carter's warea G3 S3 N T Carter's warea G3 S3 N T Carter chapmanni carteri Chapmanni Second S2 S2 N T FT Drotentia Rovichana Florida Sandhill Crane G5T2 S2 N ST Carter chapmanni carteri Chapmanni Second S3 N T Carter chapmanni carteri Chapmanni Second S3 N T Carter chapmanni carteri Chapmanni Second S3 S3 N T Carter chapmanni carteri Chapmanni Second S3 S3 N T Carter chapmanni carteri Chapmanni Second S3 S3 N T Carter chapmanni candulfora G3 S3 N T Carter chapmanni chappekee G3 S3 N T Carter chapmanni candulfor Sa S3 N T Carter chapmanni carteri Chapman's secleton cass G3 S3 N T Carter chapmanni carteri Chapman's secleton cass G3 S3 N T Carter chapmani secleton cass G3 S3 N T Carter chapmani secleton cass G3 S3 N T E Colotates borealis Chapman's secleton cass G	Heterodon simus	Southern Hognose Snake	G2	S2S3	Ν	Ν
Lithobates capitoGopher FrogG2G3S3NNMatelea floridanaFlorida spiny-podG2S2NEMustela frenata peninsulaeFlorida Long-tailed WeaselG5T37S37NNNemast/jis floridanacelestial iliyG2S2NENemast/jis floridanacelestial iliyG2S2NENemast/jis floridanacelestial iliyG2S2NNNolina brittonianaBritton's beargrassG3S3TEParonychia chartacea var. chartaceapaper-like nailwortG3T3S3TEParonychia chartacea var. chartaceaBachman's SparrowG3S3NNPlestidon egregius lividusBlue-tailed Mole SkinkG5T2S2TFTPodomys floridanusFlorida MouseG3S3NNNPolygala lewtoniiLewton's polygalaG2S2EEPteroglossaspis ecristatagiant orchidG2G3S2NTSaix foridanaFlorida WillowG2S2NESciurus niger nigerCarter's wareaG1S1EEMatrix Unit ID:34054Carter's wareaG1S1ELikelyMesic flatwoodsMycteria americanaFlorida Sandhill CraneG5T2S2NSTAttege canadensis pratensisFlorida Sandhill CraneG3S3NTCCalopogon multiflorus<	Lechea cernua	nodding pinweed	G3	S3	Ν	Т
Matelea floridanaFlorida spiny-podG2S2NEMonotropsis reynoldsiaepygmy pipesG2S2NEMustela frenata peninsulaeFlorida Long-tailed WeaselG5T3?S3?NNNemastylis floridanacelestial lilyG2S2NENeofiber alleniRound-tailed MuskratG2S2NNNolina brittonianaBritton's beargrassG3S3TEParonychia chartacea var. chartaceapaper-like nailwontG31S3NNPlestiodon egregius lividusBlue-tailed Mole SkinkG5T2S2TFTPodomys floridanusFlorida MouseG3S3NNPolygala lewtoniiLewton's polygalaG2S2NEPatropys floridanusFlorida VilleG2G3S2NTPodomys floridanaSnall KiteG4G5S2NTRostrhamus sociabilisSnall KiteG4G5S2NNScieloporus woodiFlorida Scrub LizardG2G3S2S3NNVarea carteriCartier's wareaG1S1EEMatrix Unit ID:34054Moort Carter's wareaG3S3NTCalopogon multifloraFlorida Sandhill CraneG3S3NTCalopogon multiflorusAshe's savoryG3S3NTCalopogon multiflorusAshe's savoryG3S3NT<	Lithobates capito	Gopher Frog	G2G3	S3	Ν	Ν
Monotropsis reynoldsiaepygmy pipesG2S2NEMustela frenata peninsulaeFlorida Long-tailed WeaselG5T3?S3?NNNemastylis floridanacelestial iliyG2S2NENelina brittonianaBritton's beargrassG3S3EEParonychia chartacea var. chartaceapaper-like naliwortG3T3S3TEPeucaea aestivalisBachman's SparrowG3S3NNPetsidoton egregius lividusBlue-tailed Mole SkinkG5T2S2TFTPodomys floridanusFlorida MouseG3S3NNPolygala lewtoniLewton's polygalaG2S2NEPolygala lewtoniiLewton's polygalaG2S2NTPotogala lewtoniiLewton's polygalaG2S2NTPotogala lewtoniiLewton's polygalaG2S2NEPotogala lewtoniiLewton's polygalaG2S2NTPotogal lewtoniiLewton's polygalaG2S2NESciuro sociabilisSnall KiteG4G5S2EFESalix floridanaFlorida VillowG2S2NNSciurus niger nigerVood StorkG4S4NNMaritz Unit ID:34054LikelyS3NTAntigone canadensis pratensisFlorida Sandhill CraneG5T2S2NSTCalopogon multif	Matelea floridana	Florida spiny-pod	G2	S2	Ν	Е
Mustela frenata peninsulaeFlorida Long-tailed WeaselGGT3?S3?NNNemastylis floridanacelestial lilyG2S2NENeofiber alleniRound-tailed MuskratG2S2NNNolina brittonianaBritton's beargrassG3S3EEParonychia chartacea var. chartaceapaper-like naliwortG3T3S3TEPeucaea aestivalisBachman's SparrowG3S3NNPlestiodon egregius lividusBlue-tailed Mole SkinkG5T2S2TFTPodomys floridanusFlorida MuseG3S3NNPolygala lewtoniiLewton's polygalaG2G3S2NTPatroglossaspis ecristatagiant orchidG2G3S2NTSciurus niger nigerSoutheastern Fox SquirrelG5T5S3NNVarea carteriCarter's wareaG1S1EEMatrix Unit ID:34054LikelyVood StorkG4S4NNMycteria americanaFlorida Sandhill CraneG5T2S2NSTPotentialAntigone canadensis pratensisFlorida Sandhill CraneG5T2S2NSTAthene cunicularia floridanaFlorida Sandhill CraneG3S3NTCarleogon multiflorusAshe's savoryG3S3NTCarleogon multiflorusmany-flowered grass-pinkG2G3S2S3NTCal	Monotropsis reynoldsiae	pygmy pipes	G2	S2	Ν	Е
Nemastylis floridana Neofiber allenicelestial lilyG2S2NENeofiber alleniRound-tailed MuskratG2S2NNNolina brittoniana Peucaea aestivalisBritton's beargrassG3S3EEParonychia chartacea var. chartacea peucaea aestivalispaper-like nailwortG3173S3TEPeucaea aestivalisBachman's SparrowG3S3NNPlestiodon egregius lividusBlue-tailed Mole SkinkG5T2S2TFTPodomys floridanusFlorida MouseG3S3NNPolygala lewtoni Polygala lewtoniLewton's polygalaG2S2NTProdomys floridanusFlorida MouseG3S2NTProdomys floridanusShain KiteG4G5S2EFPetroglossaspis ecristatagiant orchidG2G3S2S3NNSciurus niger niger Scutheastern Fox SquirrelG5T5S3NNWarea carteriCarter's wareaG1S1EEMatrix Unit ID:34054LikelyVood StorkG4S2NSTAntigone canadensis pratensisFlorida Sandhill CraneG5T2S2NSTAntene cunicularia floridana Calapogon multifloraFlorida Sandhill CraneG5T2S2NSTCalopogon multiflora Carex chapmanniiChapman's sedgeG3S3NTCalopogon multiflorus Cohapman's sed	Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	Ν	Ν
Neofiber alleniRound-tailed MuskratG2S2NNNolina brittonianaBritton's beargrassG3S3EEParonychia chatacea var. chataceapaper-like nailwortG313S3TEPeucaea aestivalisBachman's SparrowG3S3NNPlestiodon egregius lividusBlue-tailed Moles KinkG5T2S2TFTPodomys floridarusFlorida MouseG3S3NNPolygala lewtoniiLewton's polygalaG2S2EEPteroglossaspis ecristatagiant orchidG2G3S2NTRostrhamus sociabilisSnail KiteG4G5S2EFESalix floridanaFlorida Scrub LizardG2G3S2S3NNSciurus niger nigerSoutheastern Fox SquirrelG5T5S3NNWarea carteriCarter's wareaG1S1EEMatrix Unit ID:34054Vood StorkG4S4NNMycleria americanaPlorida Sandhill CraneG5T2S2NSTPotentialGalaminha asheiAshe's savoryG3S3NTCarex chapmanniChapman's sedgeG3S3NTCarex chapmanniChapman's sedgeG3S3NTCarex chapmanniChapman's sedgeG3S3NTCarex chapmanniiChapman's sedgeG3S3NTCaleate	Nemastylis floridana	celestial lily	G2	S2	Ν	Е
Nolina brittonianaBritton's beargrassG3S3EEParonychia chartacea var. chartaceapaper-like nailwortG3T3S3TEPeucaea aestivalisBachman's SparrowG3S3NNPlestiodon egregius lividusBlue-tailed Mole SkinkG5T2S2TFTPodomys floridanusFlorida MouseG3S3NNPolygala lewtoniiLewton's polygalaG2S2EEPteroglossaspis ecristatagiant orchidG2G3S2NTRostrhamus sociabilisSnail KiteG4G5S2EFESalir floridanaFlorida Scrub LizardG2G3S2S3NNSciurus niger nigerSoutheastern Fox SquirrelG5T5S3NNWarea carteriCarter's wareaG1S1EEMatrix Unit ID:34054EEFlorida Sandhill CraneG4T3S3NTDenamic grandifloraFlorida Sandhill CraneG5T2S2NSTFTAntigone canadensis pratensisFlorida Sandhill CraneG3S3NTECalapogon multiflorusmany-flowered grass-pinkG2G3S2S3NTECalapogon multiflorusmany-flowered grass-pinkG2G3S2S3NTECaleataenia abscissacuthotagrassG3S3NTECaleataenia abscissacuthotagrassG3S3N	Neofiber alleni	Round-tailed Muskrat	G2	S2	Ν	Ν
Paronychia chartacea var. chartacea Peucaea aestivalispaper-like nailwortG313S3TEPeucaea aestivalisBachman's SparrowG3S3NNPlestidon egregius lividusBlue-tailed Mole SkinkG5T2S2TFTPodomys floridanusFlorida MouseG3S3NNPolygala lewtoniiLewton's polygalaG2S2EEPreroglossaspis ecristata giant orchidgiant orchidG2G3S2NTRostrhamus sociabilisSnail KiteG4G5S2EFESalir KindanaFlorida Scrub LizardG2G3S2S3NNSceloporus woodiFlorida Scrub LizardG2G3S2S3NNSoutheastern Fox SquirrelG5T5S3NNWarea carteriCarter's wareaG1S1EEMatrix Unit ID:34054Vood StorkG4S4NNLikelyMesic flatwoods Mycteria americanaFlorida Sandhill CraneG5T2S2NSTAthene cunicularia floridana Bonamia grandflora Calapogon multiflorusFlorida Sandhill CraneG3S3NTECaleopogon multiflorus Coleataenia abseiAshe's savoryG3S3NTECarex chapmanni Chapman's sedgeG3S3NTECaleopogon multiflorus Coleataenia abscissacutthroly grassG3S3NTCaleataenia abscissa <td>Nolina brittoniana</td> <td>Britton's beargrass</td> <td>G3</td> <td>S3</td> <td>E</td> <td>Е</td>	Nolina brittoniana	Britton's beargrass	G3	S3	E	Е
Peucaea aestivalisBachman's SparrowG3S3NNPlestiodon egregius lividusBlue-tailed Mole SkinkG5T2S2TFTPodomys floridanusFlorida MouseG3S3NNPolygala lewtoniiLewton's polygalaG2S2EEPteroglossaspis ecristatagiant orchidG2G3S2NTRostrhamus sociabilisSnail KiteG4G5S2EFESalix floridanaFlorida NillowG2S2NESceloporus woodiFlorida Scrub LizardG2G3S2S3NNSciurus niger nigerSoutheastern Fox SquirrelG5T5S3NNWarea carteriCarter's wareaG1S1EEMatrix Unit ID:34054Vood StorkG4S4NNLikelyMesic flatwoodsG4 S3TFTFTPotentialFlorida Burrowing OwlG4T3S3NSTAnthene cunicularia floridanaFlorida Burrowing OwlG4T3S3NTCalopogon multifloraFlorida Burrowing OwlG3S33NTECalopogon multiflorusmany-flowered grass-pinkG2G3S233NTECalopogon multiflorussand butterfly peaG2QS2NEEChonanniaG3S3NTEEEColeataenia abscissacuthroatgrassG3S3N <t< td=""><td>Paronychia chartacea var. chartacea</td><td>paper-like nailwort</td><td>G3T3</td><td>S3</td><td>Т</td><td>Е</td></t<>	Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	Т	Е
Plestiodon egregius lividusBlue-tailed Mole SkinkG5T2S2TFTPodomys floridanusFlorida MouseG3S3NNPolygala lewtoniiLewton's polygalaG2S2EEPteroglossaspis ecristatagiant orchidG2G3S2NTRostrinamus sociabilisSnail KiteG4G5S2EFESaik KloridanaFlorida WillowG2S2NESceloporus woodiFlorida Scrub LizardG2G3S2S3NNSciurus niger nigerSoutheastern Fox SquirrelG5T5S3NNWarea carteriCarter's wareaG1S1EEMatrix Unit ID:34054KG4S2NSTLikelyMesic flatwoodsG4S2NSTFTPotentialVood StorkG4S2NSTAntigone canadensis pratensisFlorida Sandhill CraneG5T2S2NSTBonamia grandifloraFlorida Burrowing OwlG4T3S3NSTCalamintha asheiAshe's savoryG3S3NTCarex chapmanniiChapman's sedgeG3S3NTCarex chapmanniiChapman's sedgeG3S3NTCalamintha asheiAshe's savoryG3S3NTCarex chapmanniiChapman's sedgeG3S3NTCarex chapmanniiChapman's sedgeG3 <td>Peucaea aestivalis</td> <td>Bachman's Sparrow</td> <td>G3</td> <td>S3</td> <td>Ν</td> <td>Ν</td>	Peucaea aestivalis	Bachman's Sparrow	G3	S3	Ν	Ν
Podomys floridanusFlorida MouseG3S3NNPolygala lewtoniiLewton's polygalaG2S2EEPetroglossaspis ecristatagiant orchidG2G3S2NTRostrhamus sociabilisSnail KiteG4G5S2EFESalix floridanaFlorida WillowG2S2NESceloporus woodiFlorida Scrub LizardG2G3S2S3NNSciurus niger nigerSoutheastern Fox SquirrelG5T5S3NNWarea carteriCarter's wareaG1S1EEMatrix Unit ID:34054Vood StorkG4S4NNMycteria americanaWood StorkG4S2TFTPotentialFlorida Burrowing OwlG4T3S3NSTAntigone canadensis pratensisFlorida Burrowing OwlG3S3TECalamintha asheiAshe's savoryG3S3NTCalopogon multifloraFlorida bonamiaG3S3NTCalopogon multiflorusmany-flowered grass-pinkG2G3S2S3NTCarex chapmanniiChapman's sedgeG3S3NEChionanthus pygmaeuspygmy fringe treeG2S2S3NEChionathus pygnaeusgymaeusgydnodeckerG3S3NEDrymarchon couperiEastern Indigo SnakeG3S3TEDrybates borealis <td>Plestiodon egregius lividus</td> <td>Blue-tailed Mole Skink</td> <td>G5T2</td> <td>S2</td> <td>Т</td> <td>FT</td>	Plestiodon egregius lividus	Blue-tailed Mole Skink	G5T2	S2	Т	FT
PolygalaG2S2EEPteroglossaspis ecristatagiant orchidG2G3S2NTRostrhamus sociabilisSnail KiteG4G5S2EFESalix floridanaFlorida willowG2S2NESceloporus woodiFlorida Scrub LizardG2G3S2S3NNSciurus niger nigerSoutheastern Fox SquirrelG5T5S3NNWarea carteriCarter's wareaG1S1EEMatrix Unit ID:34054Vood StorkG4S2TFTPotentialVood StorkG4S2TFTPotentialFlorida Sandhill CraneG5T2S2NSTAntigone canadensis pratensisFlorida Sandhill CraneG3S3NSTBonamia grandifloraFlorida bonamiaG3S3NTCalapogon multiflorusmany-flowered grass-pinkG2G3S2S3NTCarex chapmanniiChapman's sedgeG3S3NTCarex chapmanniiChapman's sedgeG3S3NTCarex chapmanniiChapman's sedgeG3S3NTColeateenia abscissacutthroatgrassG3S2EFTDrynbates borealisRed-cockaded WoodpeckerG3S2EFTDrynbates borealisGopher TortoiseG3S3NTCarex chapmaniusGopher TortoiseG3S3N<	Podomys floridanus	Florida Mouse	G3	S3	Ν	Ν
Pieroglossaspis ecristata Rostrhamus sociabilisgiant orchidG2G3S2NTRostrhamus sociabilisSnail KiteG4G5S2EFESalix floridanaFlorida WillowG2S2NESceloporus woodiFlorida Scrub LizardG2G3S2S3NNSciurus niger nigerSoutheastern Fox SquirrelG5T5S3NNWarea carteriCarter's wareaG1S1EEMatrix Unit ID:34054Vood StorkG4S2TFTPotentialWood StorkG4S2TFTPotentialFlorida Burrowing OwlG4T3S3NSTAntigone canadensis pratensisFlorida Sandhill CraneG5T2S2NSTAthene cunicularia floridanaFlorida Burrowing OwlG4T3S3NSTBonamia grandifloraFlorida bonamiaG3S3NTCalamintha asheiAshe's savoryG3S3NTCalopogon multiflorusmany-flowered grass-pinkG2Q3S2S3NTCatex chapmanniiChapman's sedgeG3S3NTCaleataenia abscissacutthroatgrassG3S3NEDrymarchon couperiEastern Indigo SnakeG3S2E, PTFTEriogonum longifolium var. gnaphalifoliumGopher TortoiseG3S3NNGopher us polyphemusGopher TortoiseG3S3<	Polvaala lewtonii	Lewton's polygala	G2	S2	Е	Е
Rostrhamus sociabilisŠnail KiteG4G5S2EFESalix floridanaFlorida willowG2S2NESceloporus woodiFlorida Scrub LizardG2G3S2S3NNSciurus niger nigerSoutheastern Fox SquirrelG5T5S3NNWarea carteriCarter's wareaG1S1EEMatrix Unit ID:34054Vood StorkG4S4NNLikelyWood StorkG4S2TFTPotentialVood StorkG4S2TFTPotentialFlorida Sandhill CraneG5T2S2NSTAntigone canadensis pratensisFlorida Sandhill CraneG5T2S2NSTBonamia grandifloraFlorida Burrowing OwlG4T3S3NTCalopogon multiflorusmany-flowered grass-pinkG2G3S2S3NTCalapogon multiflorusmany-flowered grass-pinkG2G3S2S3NTCentrosema arenicolasand butterfly peaG2QS2NEChionanthus pygmaeuspygmy fringe treeG2S2S3EEDrynatchon couperiEastern Indigo SnakeG3S3TFTDrybates borealisRed-ockaded WoodpeckerG3S2FTFTDrybates borealisGopher TortoiseG3S3TEColataenia abscissacultrroatgrassG3S3TFColataenia absci	Pteroglossaspis ecristata	giant orchid	G2G3	S2	Ν	Т
Salix floridanaFlorida willowG2S2NESceloporus woodiFlorida Scrub LizardG2G3S2S3NNSciurus niger nigerSoutheastern Fox SquirrelG5T5S3NNWarea carteriCarter's wareaG1S1EEMatrix Unit ID:34054Vood StorkG4S4NNLikelyMesic flatwoodsG4S2TFTPotentialWood StorkG4S2NSTAntigone canadensis pratensisFlorida Sandhill CraneG5T2S2NSTAthene cunicularia floridanaFlorida Burrowing OwlG4T3S3NSTBonamia grandifloraFlorida bonamiaG3S3TECalamintha asheiAshe's savoryG3S3NTCalopogon multiflorusmany-flowered grass-pinkG2G3S2S3NTCartosema arenicolasand butterfly peaG2S2NEChionanthus pygmaeuspygmy fringe treeG2S2S3EEDrymarchon couperiEastern Indigo SnakeG3S3NEDrymatos borealisRed-oockaded WoodpeckerG3S2F, PTFEEriogonum longifolium var. gnaphalifoliumScub buckwheatG4T3S3TEGopher TortoiseG3S3NFEScub buckwheatG4T3S3NChionanthus pygmaeusChapman's skeletongrass<	Rostrhamus sociabilis	Snail Kite	G4G5	S2	Е	FE
Sceloporus woodi Sciurus niger niger Warea carteriFlorida Scrub Lizard Southeastern Fox Squirrel Carter's wareaG2G3 G5T5 G5T5 G1S2S3 S1N N N N CMatrix Unit ID:34054 Likely Mesic flatwoods Mycteria americanaWood StorkG4 G4S4 S2 TN FTPotentialWood StorkG4 G4S2 S2 TN FTAntigone canadensis pratensis Bonamia grandiflora Calamintha asheiFlorida Sandhill Crane Florida Burrowing OwlG5T2 G4T3 S3 	Salix floridana	Florida willow	G2	S2	Ν	Е
Sciurus niger niger Warea carteriSoutheastern Fox Squirrel Carter's wareaG5T5 G1S3 S1N EN EMatrix Unit ID:34054Carter's wareaG4S1EEMatrix Unit ID:34054Vood StorkG4S2TFTDisc flatwoods Mycteria americanaWood StorkG4S2TFTPotentialFlorida Sandhill Crane Florida Burrowing OwlG5T2S2NSTAntigone canadensis pratensis Bonamia grandiflora Calamintha asheiFlorida Burrowing OwlG4T3S3NSTCalopogon multiflorus Cartex chapmannii ChapmanniiAshe's savoryG3S3NTCalopogon multiflorus Controsema arenicola Dryobates borealisSpigm pringe treeG2QS2NEDryobates borealis Gopherus polyphemus Chapman's skeletongrassG3S3TEColpogon nultiflorum Controsema arenicolaState Indigo SnakeG3S2?TFTDryobates borealis Gopherus polyphemus Chapman's skeletongrassG3S3NN	Sceloporus woodi	Florida Scrub Lizard	G2G3	S2S3	Ν	Ν
Warea carteriCarter's wareaG1S1EEMatrix Unit ID:34054LikelyMesic flatwoods Mycteria americanaG4S4NNPotentialWood StorkG4S2TFTPotentialFlorida Sandhill CraneG5T2S2NSTBonamia grandifloraFlorida Sandhill CraneG3S3TECalopogon multiflorusFlorida bonamiaG3S3NTCalopogon multiflorusmany-flowered grass-pinkG2G3S2S3NTCarex chapmanniiChapman's sedgeG3S3NTCentrosema arenicolasand butterfly peaG2QS2NEColeataenia abscissacutthroatgrassG3S3NEDrynacton couperiEastern Indigo SnakeG3S2E, PTFTDryobates borealisRed-cockaded WoodpeckerG3S2E, PTFEEriogonum longifolium var. gnaphalifolium Gopher TortoiseG3S3NNN	Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Matrix Unit ID: 34054 Likely Mesic flatwoods G4 S4 N N Mycteria americana Wood Stork G4 S2 T FT Potential Antigone canadensis pratensis Florida Sandhill Crane G5T2 S2 N ST Antigone canadensis pratensis Florida Burrowing Owl G4T3 S3 N ST Bonamia grandiflora Florida burrowing Owl G4T3 S3 N ST Calamintha ashei Ashe's savory G3 S3 T E Calopogon multiflorus many-flowered grass-pink G2G3 S2S3 N T Carex chapmannii Chapman's sedge G3 S3 N T Centrosema arenicola sand butterfly pea G2Q S2 N E Chionanthus pygmaeus pygmy fringe tree G2 S2S3 E E Drymachon couperi Eastern Indigo Snake G3 S3 N E Dryobates borealis Red-cockaded Woodpecker G3 S2 E, PT FE	Warea carteri	Carter's warea	G1	S1	E	E
LikelyMesic flatwoods Mycteria americanaG4S4NNMycteria americanaWood StorkG4S2TFTPotentialAntigone canadensis pratensis Athene cunicularia floridanaFlorida Sandhill CraneG5T2S2NSTBonamia grandiflora Calamintha asheiFlorida burrowing OwlG4T3S3NSTCalamintha asheiAshe's savoryG3S3TECalex chapmanniiChapman's sedgeG3S3NTCarex chapmanniiChapman's sedgeG3S3NTColeataenia abscissacutthroatgrassG3S3NEDrymarchon couperiEastern Indigo SnakeG3S2?TFTDryobates borealisRed-cockaded WoodpeckerG3S3TEEriogonum longifolium var. gnaphalifolium Gopher TortoiseG3S3NNNNoStrub buckwheatG4T3S3TECopherus polyphemus Gopher TortoiseG3S3NNN	Matrix Unit ID: 34054					
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Mycteria americanaWood StorkG4S2TFTPotentialAntigone canadensis pratensisFlorida Sandhill CraneG5T2S2NSTAthene cunicularia floridanaFlorida Burrowing OwlG4T3S3NSTBonamia grandifloraFlorida bonamiaG3S3TECalamintha asheiAshe's savoryG3S3NTCalopogon multiflorusmany-flowered grass-pinkG2G3S2S3NTCarex chapmanniiChapman's sedgeG3S3NTCentrosema arenicolasand butterfly peaG2QS2NEChionanthus pygmaeuspygmy fringe treeG2S2S3EEDryobates borealisRed-cockaded WoodpeckerG3S2TFTDryobates borealisRed-cockaded WoodpeckerG3S3TEGopher us polyphemusGopher TortoiseG3S3NNNMuttor of the string polyphemusSteletongrassG3S3NN	Mesic flatwoods		G4	S4	Ν	Ν
PotentialAntigone canadensis pratensisFlorida Sandhill CraneG5T2S2NSTAthene cunicularia floridanaFlorida Burrowing OwlG4T3S3NSTBonamia grandifloraFlorida bonamiaG3S3TECalamintha asheiAshe's savoryG3S3NTCalopogon multiflorusmany-flowered grass-pinkG2G3S2S3NTCarex chapmanniiChapman's sedgeG3S3NTCentrosema arenicolasand butterfly peaG2QS2NEChionanthus pygmaeuspygmy fringe treeG2S2S3NTDrymarchon couperiEastern Indigo SnakeG3S2TFTDryobates borealisRed-cockaded WoodpeckerG3S2E, PTFEEriogonum longifolium var. gnaphalifoliumScrub buckwheatG4T3S3TEGopherus polyphemusGopher TortoiseG3S3NNN	Mycteria americana	Wood Stork	G4	S2	Т	FT
Antigone canadensis pratensisFlorida Sandhill CraneG5T2S2NSTAthene cunicularia floridanaFlorida Burrowing OwlG4T3S3NSTBonamia grandifloraFlorida bonamiaG3S3TECalamintha asheiAshe's savoryG3S3NTCalopogon multiflorusmany-flowered grass-pinkG2G3S2S3NTCarex chapmanniiChapman's sedgeG3S3NTCentrosema arenicolasand butterfly peaG2QS2NEChionanthus pygmaeuspygmy fringe treeG2S2S3EEColeataenia abscissacutthroatgrassG3S3NEDrymarchon couperiEastern Indigo SnakeG3S2F, PTFEEriogonum longifolium var. gnaphalifoliumGopher TortoiseG3S3TEGopherus polyphemusGopher TortoiseG3S3NNN	Potential					
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Bonamia grandifloraFlorida bonamiaG3S3TCalamintha asheiAshe's savoryG3S3NTCalopogon multiflorusmany-flowered grass-pinkG2G3S2S3NTCarex chapmanniiChapman's sedgeG3S3NTCentrosema arenicolasand butterfly peaG2QS2NEChionanthus pygmaeuspygmy fringe treeG2S2S3EEColeataenia abscissacutthroatgrassG3S3NEDrymarchon couperiEastern Indigo SnakeG3S2?TFTDryobates borealisRed-cockaded WoodpeckerG3S2E, PTFEEriogonum longifolium var. gnaphalifoliumscrub buckwheatG4T3S3TEGopherus polyphemusGopher TortoiseG3S3NNN	Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	Ν	ST
Calamintha asheiAshe's savoryG3S3NTCalopogon multiflorusmany-flowered grass-pinkG2G3S2S3NTCarex chapmanniiChapman's sedgeG3S3NTCentrosema arenicolasand butterfly peaG2QS2NEChionanthus pygmaeuspygmy fringe treeG2S2S3EEColeataenia abscissacutthroatgrassG3S3NEDrymarchon couperiEastern Indigo SnakeG3S2?TFTDryobates borealisRed-cockaded WoodpeckerG3S2E, PTFEEriogonum longifolium var. gnaphalifoliumGopher TortoiseG3S3NNNGopherus polyphemusChapman's skeletongrassG3S3NNN	Bonamia grandiflora	Florida bonamia	G3	S3	т	Е
Calopogon multiflorusmany-flowered grass-pinkG2G3S2S3NTCarex chapmanniiChapman's sedgeG3S3NTCentrosema arenicolasand butterfly peaG2QS2NEChionanthus pygmaeuspygmy fringe treeG2S2S3EEColeataenia abscissacutthroatgrassG3S3NEDrymarchon couperiEastern Indigo SnakeG3S2?TFTDryobates borealisRed-cockaded WoodpeckerG3S2E, PTFEEriogonum longifolium var. gnaphalifolium Gopher us polyphemusGopher TortoiseG3S3NNGymnopogon chapmanianusChapman's skeletongrassG3S3NNN	Calamintha ashei	Ashe's savorv	G3	S3	Ň	T
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Centrosema arenicolasand butterfly peaG2QS2NEChionanthus pygmaeuspygmy fringe treeG2S2S3EEColeataenia abscissacutthroatgrassG3S3NEDrymarchon couperiEastern Indigo SnakeG3S2?TFTDryobates borealisRed-cockaded WoodpeckerG3S2E, PTFEEriogonum longifolium var. gnaphalifoliumscrub buckwheatG4T3S3TEGopherus polyphemusGopher TortoiseG3S3NNGymnopogon chapmanianusChapman's skeletongrassG3S3NN	Carex chapmannii	Chapman's sedge	G3	S3	N	Ť
Chionanthus pygmaeuspygmy fringe treeG2S2S3EColeataenia abscissacutthroatgrassG3S3NEDrymarchon couperiEastern Indigo SnakeG3S2?TFTDryobates borealisRed-cockaded WoodpeckerG3S2E, PTFEEriogonum longifolium var. gnaphalifoliumscrub buckwheatG4T3S3TEGopherus polyphemusGopher TortoiseG3S3CSTGymnopogon chapmanianusChapman's skeletongrassG3S3NN	Centrosema arenicola	sand butterfly pea	G2Q	S2	N	Ē
Coleataenia abscissacutthroatgrassG3S3NEDrymarchon couperiEastern Indigo SnakeG3S2?TFTDryobates borealisRed-cockaded WoodpeckerG3S2E, PTFEEriogonum longifolium var. gnaphalifoliumscrub buckwheatG4T3S3TEGopherus polyphemusGopher TortoiseG3S3CSTGymnopogon chapmanianusChapman's skeletongrassG3S3NN	Chionanthus pygmaeus	pyamy fringe tree	G2	S2S3	E	Ē
Drymarchon couperiEastern Indigo SnakeG3S2?TFTDryobates borealisRed-cockaded WoodpeckerG3S2E, PTFEEriogonum longifolium var. gnaphalifoliumscrub buckwheatG4T3S3TEGopherus polyphemusGopher TortoiseG3S3CSTGymnopogon chapmanianusChapman's skeletongrassG3S3NN	Coleataenia abscissa	cutthroatgrass	G3	S3	N	F
Dryobates borealisRed-cockaded WoodpeckerG3S2E, PTFEEriogonum longifolium var. gnaphalifoliumscrub buckwheatG4T3S3TEGopherus polyphemusGopher TortoiseG3S3CSTGymnopogon chapmanianusChapman's skeletongrassG3S3NN	Drymarchon couperi	Eastern Indigo Snake	G3	S27	Т	FT
Eriogonum longifolium var. gnaphalifoliumscrub buckwheatG4T3S3TEGopherus polyphemusGopher TortoiseG3S3CSTGymnopogon chapmanianusChapman's skeletongrassG3S3NN	Drvobates borealis	Red-cockaded Woodpecker	G3	S2	, F PT	FF
Gopherus polyphemusGopher TortoiseG3S3CSTGymnopogon chapmanianusChapman's skeletongrassG3S3NN	Eriogonum longifolium var gnaphalifolium	scrub buckwheat	G4T3	S3	_, · · T	F
<i>Gymnopogon chapmanianus</i> Chapman's skeletongrass G3 S3 N N	Gopherus polyphemus	Gopher Tortoise	G3	S3	Ċ	ST
	Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	Ň	N

Definitions: Documented - Rare species and natural communities documented on or near this site.

Florida Natural Areas Inventory

Biodiversity Matrix Report



INVENTORY		Global	State	Federal	State
Scientific Name	Common Name	Rank	Rank	Status	Listing
Hartwrightia floridana	hartwrightia	G2	S2	Ν	Т
Heterodon simus	Southern Hognose Snake	G2	S2S3	Ν	Ν
Lechea cernua	nodding pinweed	G3	S3	Ν	Т
Lithobates capito	Gopher Frog	G2G3	S3	Ν	Ν
Matelea floridana	Florida spiny-pod	G2	S2	Ν	Е
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	Ν	Ν
Nemastylis floridana	celestial lily	G2	S2	Ν	Е
Neofiber alleni	Round-tailed Muskrat	G2	S2	Ν	Ν
Nolina atopocarpa	Florida beargrass	G3	S3	Ν	Т
Nolina brittoniana	Britton's beargrass	G3	S3	E	Е
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	Т	Е
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	Ν
Plestiodon egregius lividus	Blue-tailed Mole Skink	G5T2	S2	Т	FT
Podomys floridanus	Florida Mouse	G3	S3	N	Ν
Polygala lewtonii	Lewton's polygala	G2	S2	E	Е
Polygonella basiramia	Florida jointweed	G3	S3	E	Е
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	Т
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Salix floridana	Florida willow	G2	S2	N	Е
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	Ν	Ν
Warea carteri	Carter's w <mark>area</mark>	G1	S1	E	Е
Matrix Unit ID: 34055					
Likely					
Mosic flatwoods		64	S 1	N	N
Mycteria americana	Wood Stork	G4 G4	S2		FT
Potential	WOOD STOLK	04	02		
Potential					
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Bonamia grandiflora	Florida bonamia	G3	S3	Т	E
Calamintha ashei	Ashe's savory	G3	S3	N	T
Calopogon multiflorus	many-flowered grass-pink	G2G3	S2S3	N	
Carex chapmannii	Chapman's sedge	G3	S3	N	<u> </u>
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Chionanthus pygmaeus	pygmy tringe tree	G2	5253	E	E
Coleataenia abscissa		G3	53		E
Drymarchon couperi	Eastern Indigo Snake	G3	S2?		
Dryobates porealis	Red-cockaded woodpecker	G3 C4T2	52		
Eriogonum iongitolium var. gnaphalitolium	Scrub buckwheat	G413	53		E
Goprierus polyprierius	Gopher Tonoise	G3 C2	53		51
Gymnopogon cnapmanianus	Chapman's skeletongrass	G3	53	IN N	
Hartwrightia fforidana	nartwrightia Southarn Harmona Snaka	G2	52	IN N	I NI
Heterodon sinus	Southern Hognose Shake	G2	5253	IN N	
Lechea cernua Lithohotoo oonito	Copher Fred	63 C2C2	33 62	IN NI	I N
Liinobales capilo Matelea floridana	Gopher Flog	6263	33 62	IN N	
ivialetta iluliualia Mustela frenata popinsulaa	Florida Long tailed Wessel	GET22	32 620	IN NI	
Nemastulis floridana		G013?	ເວິດ ເບັ	IN N	
ivernasiyns nonuaria	CEIESUAI IIIY	92	32	IN	

Definitions: Documented - Rare species and natural communities documented on or near this site.

Florida Natural Areas Inventory

Biodiversity Matrix Report

Clobal

State



INVENTORY		Global	State	Federal	State
Scientific Name	Common Name	Rank	Rank	Status	Listing
Neofiber alleni	Round-tailed Muskrat	G2	S2	Ν	Ν
Nolina atopocarpa	Florida beargrass	G3	S3	Ν	Т
Nolina brittoniana	Britton's beargrass	G3	S3	E	E
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	Т	E
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	Ν
Plestiodon egregius lividus	Blue-tailed Mole Skink	G5T2	S2	Т	FT
Podomys floridanus	Florida Mouse	G3	S3	N	Ν
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Polygonella basiramia	Florida jointweed	G3	S3	E	E
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	Т
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Salix floridana	Florida willow	G2	S2	N	E
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	Ν
Warea carteri	Carter's warea	G1	S1	E	Е
Matrix Unit ID: 34378					
Documented					
Pteroglossaspis ecristata	giant orchid	G2G3	S2	Ν	Т
Likely					
Mycteria americana	Wood Stork	G4	S2	Т	FT
Potential					
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	Ν	ST
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	Ν	ST
Bonamia grandiflora	Florida bonamia	G3	S3	Т	Е
Calamintha ashei	Ashe's savory	G3	S3	Ν	Т
Calopogon multiflorus	many-flowered grass-pink	G2G3	S2S3	Ν	Т
Carex chapmannii	Chapman's sedge	G3	S3	Ν	Т
Centrosema arenicola	sand butterfly pea	G2Q	S2	Ν	Е
Chionanthus pygmaeus	pygmy fringe tree	G2	S2S3	E	Е
Coleataenia abscissa	cutthroatgrass	G3	S3	Ν	Е
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S1	N	Ν
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	Т	FT
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	Т	E
Gopherus polyphemus	Gopher Tortoise	G3	S3	С	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	Ν
Hartwrightia floridana	hartwrightia	G2	S2	N	Т
Heterodon simus	Southern Hognose Snake	G2	S2S3	N	N
Lechea cernua	nodding pinweed	G3	S3	N	Т
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Mustela frenata penínsulae	Florida Long-tailed Weasel	G513?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Ivolina atopocarpa	Fiorida beargrass	G3	53	N	
ivolina prittoniana	Britton's beargrass	G3	53		E
Paronycnia cnartacea var. chartacea	paper-like naliwort	6313	53	I	E

Definitions: Documented - Rare species and natural communities documented on or near this site.



Scientific Name Peucaea aestivalis

Florida Natural Areas Inventory

Biodiversity Matrix Report



INVENTORY		Global	State	Federal	State
Scientific Name	Common Name	Rank	Rank	Status	Listing
Peucaea aestivalis	Bachman's Sparrow	G3	S3	Ν	Ν
Plestiodon egregius lividus	Blue-tailed Mole Skink	G5T2	S2	Т	FT
Podomys floridanus	Florida Mouse	G3	S3	Ν	Ν
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Polygonella basiramia	Florida jointweed	G3	S3	Е	E
Rostrhamus sociabilis	Snail Kite	G4G5	S2	Е	FE
Salix floridana	Florida willow	G2	S2	Ν	E
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	Ν	Ν
Warea carteri	Carter's warea	G1	S1	Е	Е

Definitions: Documented - Rare species and natural communities documented on or near this site. Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years. Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity. Potential - This site lies within the known or predicted range of the species listed.

Elements and Element Occurrences

An **element** is any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature.

An **element occurrence (EO)** is an area of land and/or water in which a species or natural community is, or was, present. An EO should have practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location.

Element Ranking and Legal Status

Using a ranking system developed by NatureServe and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks for each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element Occurrences (EOs), estimated abundance (number of individuals for species; area for natural communities), geographic range, estimated number of adequately protected EOs, relative threat of destruction, and ecological fragility.

FNAI GLOBAL ELEMENT RANK

G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.

G2 = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.

G3 = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.

G4 = Apparently secure globally (may be rare in parts of range).

- **G5** = Demonstrably secure globally.
- **GH** = Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker).
- **GX** = Believed to be extinct throughout range.

GXC = Extirpated from the wild but still known from captivity or cultivation.

G#? = Tentative rank (e.g., G2?).

G#G# = Range of rank; insufficient data to assign specific global rank (e.g., G2G3).

G#T# = Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1). **G#Q** = Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q).

G#T#Q = Same as above, but validity as subspecies or variety is questioned.

GU = Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).

GNA = Ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).

GNR = Element not yet ranked (temporary).

GNRTNR = Neither the element nor the taxonomic subgroup has yet been ranked.

FNAI STATE ELEMENT RANK

S1 = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.

S2 = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.

S3 = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.

S4 = Apparently secure in Florida (may be rare in parts of range).

S5 = Demonstrably secure in Florida.

SH = Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., ivory-billed woodpecker).

SX = Believed to be extirpated throughout Florida.

SU = Unrankable; due to a lack of information no rank or range can be assigned.

SNA = State ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).

SNR = Element not yet ranked (temporary).

FEDERAL LEGAL STATUS

Legal status information provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant federal agency.

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

C = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.

E = Endangered: species in danger of extinction throughout all or a significant portion of its range.

E, **T** = Species currently listed endangered in a portion of its range but only listed as threatened in other areas

E, **PDL** = Species currently listed endangered but has been proposed for delisting.

E, **PT** = Species currently listed endangered but has been proposed for listing as threatened.

E, **XN** = Species currently listed endangered but tracked population is a non-essential experimental population. **T** = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.

PE = Species proposed for listing as endangered

PS = Partial status: some but not all of the species' infraspecific taxa have federal

PT = Species proposed for listing as threatened

SAT = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.

SC = Not currently listed, but considered a "species of concern" to USFWS.

STATE LEGAL STATUS

Provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant state agency.

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

C = Candidate for listing at the Federal level by the U. S. Fish and Wildlife Service

FE = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service

FT = Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service

FXN = Federal listed as an experimental population in Florida

FT(S/A) = Federal Threatened due to similarity of appearance

ST = State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.

SSC = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. (SSC* for Pandion haliaetus (Osprey) indicates that this status applies in Monroe county only.)

N = Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or see: http://www.doacs.state.fl.us/pi/.

 \mathbf{E} = Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act.

 \mathbf{T} = Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.

 \mathbf{N} = Not currently listed, nor currently being considered for listing.

Element Occurrence Ranking

FNAI ranks of quality of the element occurrence in terms of its viability (EORANK). Viability is estimated using a combination of factors that contribute to continued survival of the element at the location. Among these are the size of the EO, general condition of the EO at the site, and the conditions of the landscape surrounding the EO (e.g. an immediate threat to an EO by local development pressure could lower an EO rank).

- **A** = Excellent estimated viability
- A? = Possibly excellent estimated viability
- **AB** = Excellent or good estimated viability
- AC = Excellent, good, or fair estimated viability
- **B** = Good estimated viability
- **B?** = Possibly good estimated viability
- **BC** = Good or fair estimated viability
- **BD** = Good, fair, or poor estimated viability
- **C** = Fair estimated viability
- **C?** = Possibly fair estimated viability
- **CD** = Fair or poor estimated viability
- **D** = Poor estimated viability
- **D?** = Possibly poor estimated viability
- **E** = Verified extant (viability not assessed)
- F = Failed to find
- H = Historical
- **NR** = Not ranked, a placeholder when an EO is not (yet) ranked.
- **U** = Unrankable
- \mathbf{X} = Extirpated

*For additional detail on the above ranks see: http://www.natureserve.org/explorer/eorankguide.htm

FNAI also uses the following EO ranks:

- **H?** = Possibly historical
- **F?** = Possibly failed to find
- **X?** = Possibly extirpated

The following offers further explanation of the H and X ranks as they are used by FNAI:

The rank of H is used when there is a lack of recent field information verifying the continued existence of an EO, such as (a) when an EO is based only on historical collections data; or (b) when an EO was ranked A, B, C, D, or E at one time and is later, without field survey work, considered to be possibly extirpated due to general habitat loss or degradation of the environment in the area. This definition of the H rank is dependent on an interpretation of what constitutes "recent" field information. Generally, if there is no known survey of an EO within the last 20 to 40 years, it should be assigned an H rank. While these time frames represent suggested maximum limits, the actual time period for historical EOs may vary according to the biology of the element and the specific landscape context of each occurrence (including anthropogenic alteration of the environment). Thus, an H rank may be assigned to an EO before the maximum time frames have lapsed. Occurrences that have not been surveyed for periods exceeding these time frames should not be ranked A, B, C, or D. The higher maximum limit for plants and communities (i.e., ranging from 20 to 40 years) is based upon the assumption that occurrences of these elements generally have the potential to persist at a given location for longer periods of time. This greater potential is a reflection of plant biology and community dynamics. However, landscape factors must also be considered. Thus, areas with more anthropogenic impacts on the environment (e.g., development) will be at the lower end of the range, and less-impacted areas will be at the higher end.

The rank of X is assigned to EOs for which there is documented destruction of habitat or environment, or persuasive evidence of eradication based on adequate survey (i.e., thorough or repeated survey efforts by one or more experienced observers at times and under conditions appropriate for the Element at that location).

APPENDIX C

Standard Protection Measures for the Eastern Indigo

Snake

STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE U.S. Fish and Wildlife Service August 12, 2013

The eastern indigo snake protection/education plan (Plan) below has been developed by the U.S. Fish and Wildlife Service (USFWS) in Florida for use by applicants and their construction personnel. At least **30 days prior** to any clearing/land alteration activities, the applicant shall notify the appropriate USFWS Field Office via e-mail that the Plan will be implemented as described below (North Florida Field Office: jaxregs@fws.gov; South Florida Field Office: verobeach@fws.gov; Panama City Field Office: panamacity@fws.gov). As long as the signatory of the e-mail certifies compliance with the below Plan (including use of the attached poster and brochure), no further written confirmation or "approval" from the USFWS is needed and the applicant may move forward with the project.

If the applicant decides to use an eastern indigo snake protection/education plan other than the approved Plan below, written confirmation or "approval" from the USFWS that the plan is adequate must be obtained. At least 30 days prior to any clearing/land alteration activities, the applicant shall submit their unique plan for review and approval. The USFWS will respond via e-mail, typically within 30 days of receiving the plan, either concurring that the plan is adequate or requesting additional information. A concurrence e-mail from the appropriate USFWS Field Office will fulfill approval requirements.

The Plan materials should consist of: 1) a combination of posters and pamphlets (see **Poster Information** section below); and 2) verbal educational instructions to construction personnel by supervisory or management personnel before any clearing/land alteration activities are initiated (see **Pre-Construction Activities** and **During Construction Activities** sections below).

POSTER INFORMATION

Posters with the following information shall be placed at strategic locations on the construction site and along any proposed access roads (a final poster for Plan compliance, to be printed on 11" x 17" or larger paper and laminated, is attached):

DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

SIMILAR SNAKES: The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

LIFE HISTORY: The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands

and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

PROTECTION UNDER FEDERAL AND STATE LAW: The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

IF YOU SEE A LIVE EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and allow the live eastern indigo snake sufficient time to move away from the site without interference;
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

IF YOU SEE A <u>DEAD</u> EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

Telephone numbers of USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:

North Florida Field Office – (904) 731-3336 Panama City Field Office – (850) 769-0552 South Florida Field Office – (772) 562-3909

PRE-CONSTRUCTION ACTIVITIES

1. The applicant or designated agent will post educational posters in the construction office and throughout the construction site, including any access roads. The posters must be clearly visible to all construction staff. A sample poster is attached.

2. Prior to the onset of construction activities, the applicant/designated agent will conduct a meeting with all construction staff (annually for multi-year projects) to discuss identification of the snake, its protected status, what to do if a snake is observed within the project area, and applicable penalties that may be imposed if state and/or federal regulations are violated. An educational brochure including color photographs of the snake will be given to each staff member in attendance and additional copies will be provided to the construction superintendent to make available in the onsite construction office (a final brochure for Plan compliance, to be printed double-sided on 8.5" x 11" paper and then properly folded, is attached). Photos of eastern indigo snakes may be accessed on USFWS and/or FWC websites.

3. Construction staff will be informed that in the event that an eastern indigo snake (live or dead) is observed on the project site during construction activities, all such activities are to cease until the established procedures are implemented according to the Plan, which includes notification of the appropriate USFWS Field Office. The contact information for the USFWS is provided on the referenced posters and brochures.

DURING CONSTRUCTION ACTIVITIES

1. During initial site clearing activities, an onsite observer may be utilized to determine whether habitat conditions suggest a reasonable probability of an eastern indigo snake sighting (example: discovery of snake sheds, tracks, lots of refugia and cavities present in the area of clearing activities, and presence of gopher tortoises and burrows).

2. If an eastern indigo snake is discovered during gopher tortoise relocation activities (i.e. burrow excavation), the USFWS shall be contacted within one business day to obtain further guidance which may result in further project consultation.

3. Periodically during construction activities, the applicant's designated agent should visit the project area to observe the condition of the posters and Plan materials, and replace them as needed. Construction personnel should be reminded of the instructions (above) as to what is expected if any eastern indigo snakes are seen.

POST CONSTRUCTION ACTIVITIES

Whether or not eastern indigo snakes are observed during construction activities, a monitoring report should be submitted to the appropriate USFWS Field Office within 60 days of project completion. The report can be sent electronically to the appropriate USFWS e-mail address listed on page one of this Plan.



ATTENTION: THREATENED EASTERN INDIGO SNAKES MAY BE PRESENT ON THIS SITE!!!

IF YOU SEE A LIVE EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and allow the eastern indigo snake sufficient time to move away from the site without interference.
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, **and** the appropriate U.S. Fish and Wildlife Service (USFWS) office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

IF YOU SEE A <u>DEAD</u> EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will
 retrieve the dead snake.

USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:

North Florida Field Office – (904) 731-3336 Panama City Field Office – (850) 769-0552 South Florida Field Office – (772) 562-3909

Killing, harming, or harassing indigo snakes is strictly prohibited and punishable under State and Federal Law.

- DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.
- SIMILAR SNAKES: The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

LIFE HISTORY: The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and aboveground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

PROTECTION: The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

IF YOU SEE A <u>LIVE</u> EASTERN INDIGO SNAKE ON THE SITE:

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- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, **and** the appropriate U.S. Fish and Wildlife Service (USFWS) office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

IF YOU SEE A <u>DEAD</u> EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:

North Florida ES Office – (904) 731-3336 Panama City ES Office – (850) 769-0552 South Florida ES Office – (772) 562-3909 DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

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LIFE HISTORY: The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and aboveground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.
Killing, harming, or harassing indigo snakes is strictly prohibited and punishable under State and Federal Law.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

LEGAL STATUS: The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.



August 12, 2013

ATTENTION:

THREATENED EASTERN INDIGO SNAKES MAY BE PRESENT ON THIS SITE!!!



Please read the following information provided by the U.S. Fish and Wildlife Service to become familiar with standard protection measures for the eastern indigo snake.

APPENDIX D

USFWS Effect Determination Keys



United States Department of the Interior

FISH AND WILDLIFE SERVICE South Florida Ecological Services Office 1339 20th Street Vero Beach, Florida 32960



August 1, 2017

Donnie Kinard U.S. Army Corps of Engineers Post Office Box 4970 Jacksonville, Florida 32232-0019

Subject: Consultation Key for the Eastern Indigo Snake - Revised

Dear Mr. Kinard:

This letter revises and replaces the January 25, 2010, and August 13, 2013, letters to the U.S. Army Corps of Engineers (Corps) regarding the use of the eastern indigo snake programmatic effect determination key (Key) for projects occurring within the South Florida Ecological Service's Office (SFESO) jurisdiction. This revision supersedes all prior versions of the Key in the SFESO area. The purpose of this revision is to clarify portions of the previous keys based on questions we have been asked, specifically related to habitat and refugia used by eastern indigo snakes (*Drymarchon corais couperi*), in the southern portion of their range and within the jurisdiction of the SFESO. This Key is provided pursuant to the Service's authorities under the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C.1531 *et seq.*). This Key revision has been assigned Service Consultation Code: 41420-2009-I-0467-R001.

The purpose of this Key is to assist the Corps (or other Federal action agency) in making appropriate effects determinations for the eastern indigo snake under section 7 of the Act, and streamline informal consultation with the SFESO for the eastern indigo snake when the proposed action can be walked through the Key. The Key is a tool available to the Corps (or other Federal action agency) for the purposes of expediting section 7 consultations. There is no requirement to use the Key. There will be cases when the use of the Key is not appropriate. These include, but are not limited to: where project specific information is outside of the scope of the Key or instances where there is new biological information about the species. In these cases, we recommend the Corps (or other Federal action agency) initiates traditional consultation pursuant to section 7 of the Act, and identify that consultation is being requested outside of the Key.

This Key uses project size and home ranges of eastern indigo snakes as the basis for making determinations of "may affect, but is not likely to adversely affect" (NLAA) and "may affect. and is likely to adversely affect" (may affect). Suitable habitat for the eastern indigo snake consists of a mosaic of habitats types, most of which occur throughout South Florida. Information on home ranges for individuals is not available in specific habitats in South Florida. Therefore, the SFESO uses the information from a 26-year study conducted by Layne and Steiner (1996) at Archbold Biological Station, Lake Placid, Florida, as the best available

information. Layne and Steiner (1996) determined the average home range size for a female eastern indigo snake was 46 acres and 184 acres for a male.

Projects that would remove/destroy less than 25 acres of eastern indigo snake habitat are expected to result in the loss of a portion of an eastern indigo snakes home range that would not impair the ability of the individual to feed, breed, and shelter. Therefore, the Service finds that take would not be reasonably certain to occur due to habitat loss. However, these projects have the potential to injure or kill an eastern indigo snake if the individual is crushed by equipment during site preparation or other project aspects. The Service's *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013 or most current version) and the excavation of underground refugia (where a snake could be buried, trapped and/or injured), when implemented, are designed to avoid these forms of take. Consequently, projects less than 25 acres that include the Service's *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013 or most current version) and a commitment to excavate underground refugia as part of the proposed action would be expected to avoid take and thus, may affect, but are not likely to adversely affect the species.

If a proposed project would impact less than 25 acres of vegetated eastern indigo snake habitat (not urban/ human-altered) completely surrounded by urban development, and an eastern indigo snake has been observed on site, the Key should not be used. The Service recommends formal consultation for this situation because of the expected increased value of the vegetated habitat within the individual's home range.

Projects that would remove 25 acres or more of eastern indigo snake habitat could remove more than half of a female eastern indigo snakes home range. This loss of habitat within a home range would be expected to significantly impair the ability of that individual to feed, breed, and shelter. Therefore, the Service finds take through habitat loss would be reasonably certain to occur and formal consultation is appropriate. Furthermore, these projects have the potential to injure or kill an eastern indigo snake if the individual is crushed by equipment during site preparation or other project aspects. The Service's *Standard Protection Measures* for the *Eastern Indigo Snake* (Service 2013 or most current version) and the excavation of underground refugia (where a snake could be buried, trapped and/or injured), when implemented, are designed to avoid these forms of take.

Eastern indigo snakes use a variety of habitat and are difficult to detect. Therefore, site specific information on the land use, observations of eastern indigo snakes within the vicinity, as well as other factors, as appropriate, will all be considered by the Service when making a final recommendation on the appropriate effects determination and whether it is appropriate to conclude consultation with the Corps (or other Federal action agency) formally or informally for projects that will impact 25 acres or more of habitat. Accordingly, when the use of the Key results in a determination of "may affect," the Corps (or other Federal action agency) is advised that consultation may be concluded informally or formally, depending on the project specific effects to eastern indigo snakes. Technical assistance from the Service can assist you in making a determination prior to submitting a request for consultation. In circumstances where the Corps (or other Federal action agency) desires to proceed with a consultation request prior to receiving

additional technical assistance from the Service, we recommend the agency documents the biological rationale for their determination and proceed with a request accordingly.

If the use of the Key results in a determination of "no effect," no further consultation is necessary with the SFESO. If the use of the Key results in a determination of "NLAA," the SFESO concurs with this determination based on the rationale provide above, and no further consultation is necessary for the effects of the proposed action on the eastern indigo snake. For "no effect" or "NLAA" determinations, the Service recommends that the Corps (or other Federal action agency) documents the pathway used to reach your no effect or NLAA determination in the project record and proceed with other species analysis as warranted.

Eastern Indigo Snake Programmatic Effect Determination Key Revised July 2017 South Florida Ecological Service Office

Scope of the Key

This Key should be used only in the review of permit applications for effects determinations for the eastern indigo snake (*Drymarchon corais couperi*) within the South Florida Ecological Service's Office (SFESO) area (Broward, Charlotte, Collier, De Soto, Glades, Hardee, Hendry, Highlands, Lee, Indian River, Martin, Miami-Dade, Monroe, Okeechobee, Osceola, Palm Beach, Polk, Sarasota, and St. Lucie Counties). There is no designated critical habitat for the eastern indigo snake.

This Key is subject to revision as the Corps (or other Federal action agency) and Service deem necessary and in particular whenever there is new information on eastern indigo snake biology and effects of proposed projects.

The Key is a tool available to the Corps (or other Federal action agency) for the purposes of expediting section 7 consultations. There is no requirement to use the Key. There will be cases when the use of the Key is not appropriate. These include, but are not limited to: where project specific information is outside of the scope of the Key or instances where there is new biological information about the species. In these cases, we recommend the Corps (or other Federal action agency) initiates traditional consultation pursuant to section 7 of the Act, and identify that consultation is being requested outside of the Key.

<u>Habitat</u>

Habitat use varies seasonally between upland and wetland areas, especially in the more northern parts of the species' range. In southern parts of their range eastern indigo snakes are habitat generalists which use most available habitat types. Movements between habitat types in northern areas of their range may relate to the need for thermal refugia (protection from cold and/or heat).

In northern areas of their range eastern indigo snakes prefer an interspersion of tortoise-inhabited sandhills and wetlands (Landers and Speake 1980). In these northern regions eastern indigo

snakes most often use forested areas rich with gopher tortoise burrows, hollowed root channels, hollow logs, or the burrows of rodents, armadillos, or land crabs as thermal refugia during cooler seasons (Lawler 1977; Moler 1985a; Layne and Steiner 1996). The eastern indigo snake in the northern region is typically classified as a longleaf pine savanna specialist because here, in the northern four-fifths of its range, the eastern indigo snake is typically only found in vicinity of xeric longleaf pine-turkey oak sandhills inhabited by the gopher tortoise (Means 2006).

In the milder climates of central and southern Florida, comprising the remaining one fifth of its range, thermal refugia such as those provided by gopher tortoise burrows may not be as critical to survival of indigo snakes. Consequently, eastern indigo snakes in these regions use a more diverse assemblage of habitats such as pine flatwoods, scrubby flatwoods, floodplain edges, sand ridges, dry glades, tropical hammocks, edges of freshwater marshes, muckland fields, coastal dunes, and xeric sandhill communities; with highest population concentrations of eastern indigo snakes occurring in the sandhill and pineland regions of northern and central Florida (Service 1999). Eastern indigo snakes have also been found on agricultural lands with close proximity to wetlands (Zeigler 2006).

In south Florida, agricultural sites (e.g., sugar cane fields and citrus groves) are occupied by eastern indigo snakes. The use of sugarcane fields by eastern indigo snakes was first documented by Layne and Steiner in 1996. In these areas there is typically an abundance of wetland and upland ecotones (due to the presence of many ditches and canals), which support a diverse prey base for foraging. In fact, some speculate agricultural areas may actually have a higher density of eastern indigo snakes than natural communities due to the increased availability of prey. Gopher tortoise burrows are absent at these locations but there is an abundance of both natural and artificial refugia. Enge and Endries (2009) reporting on the status of the eastern indigo snake included sugarcane fields and citrus groves in a Global Information Systems (GIS)base map of potential eastern indigo snake habitat. Numerous sightings of eastern indigo snakes within sugarcane fields have been reported within south Florida (Florida Fish and Wildlife Conservation Commission Indigo Snake Database [Enge 2017]). A recent study associated with the Comprehensive Everglades Restoration Plan (CERP) (A-1 FEB Project formerly A-1 Reservoir; Service code: 41420-2006-F-0477) documented eastern indigo snakes within sugarcane fields. The snakes used artificial habitats such as piles of limerock, construction debris, and pump stations. Recent studies also associated with the CERP at the C-44 Project (Service code: 41420-2009-FA-0314), and C-43 Project (Service code: 41420-2007-F-0589) documented eastern indigo snakes within citrus groves. The snakes used artificial habitats such as boards, sheets of tin, construction debris, pipes, drain pipes in abandoned buildings and septic tanks.

In extreme south Florida (*i.e.*, the Everglades and Florida Keys), eastern indigo snakes also utilize tropical hardwood hammocks, pine rocklands, freshwater marshes, abandoned agricultural land, coastal prairie, mangrove swamps, and human-altered habitats. Though eastern indigo snakes have been found in all available habitats of south Florida it is thought they prefer hammocks and pine forests since most observations occur there and use of these areas is disproportionate compared to the relatively small total area of these habitats (Steiner *et al.* 1983).

Even though thermal stress may not be a limiting factor throughout the year in south Florida, eastern indigo snakes still seek and use underground refugia. On the sandy central ridge of central Florida, eastern indigo snakes use gopher tortoise burrows more (62 percent) than other underground refugia (Layne and Steiner 1996). Other underground refugia used include armadillo (*Dasypus novemcinctus*) burrows near citrus groves, cotton rat (*Sigmodon hispidus*) burrows, and land crab (*Cardisoma guanhumi*) burrows in coastal areas (Layne and Steiner 1996; Wilson and Porras 1983). Natural ground holes, hollows at the base of trees or shrubs, ground litter, trash piles, and crevices of rock-lined ditch walls are also used (Layne and Steiner 1996). These refugia are used most frequently where tortoise burrows are not available, principally in low-lying areas off the central and coastal ridges.

Minimization Measures

The Service developed protection measures for the eastern indigo snake "Standard Protection Measures for the Eastern Indigo Snake" (Service 2013) located at: <u>https://www.fws.gov/verobeach/ReptilesPDFs/20130812_EIS%20Standard%20Protection%20M</u> <u>easures_final.pdf</u>. These protections measures (or the most updated version) are considered a minimization measure for projects proposed within eastern indigo snake habitat.

Determinations

If the use of this Key results in a determination of "**no effect**," no further consultation is necessary with the SFESO.

If the use of this Key results in a determination of "NLAA," the SFESO concurs with this determination and no further consultation is necessary for the effects of the proposed action on the eastern indigo snake.

For no effect or NLAA determinations, the Corps (or other Federal action agency) should make a note in the project file indicating the pathway used to reach your no effect or NLAA determination.

If a proposed project would impact less than 25 acres of vegetated eastern indigo snake habitat (not urban/ human-altered) completely surrounded by urban development, and an eastern indigo snake has been observed on site, the subsequent Key should not be used. The Service recommends formal consultation for this situation because of the expected increased value of the vegetated habitat within the individual's home range.

If the use of this Key results in a determination of "**may affect**," <u>consultation may be concluded</u> <u>informally or formally</u> depending on project effects to eastern indigo snakes. Technical assistance from the Service can assist you in making a determination prior to submitting a request for consultation. In circumstances where the Corps desires to proceed with a consultation request prior to receiving additional technical assistance from the Service, we recommend the Corps document the biological rationale for their determination and proceed with a request accordingly.

A.	Project is not located in open water or salt marshgo to B
	Project is located solely in open water or salt marshno effect
В.	Permit will be conditioned for use of the Service's most current guidance for Standard Protection Measures For The Eastern Indigo Snake (currently 2013) during site preparation and project construction
	Permit will not be conditioned as above for the eastern indigo snake, or it is not known whether an applicant intends to use these measures and consultation with the Service is requested
C.	The project will impact less than 25 acres of eastern indigo snake habitat (<i>e.g.</i> , sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive, or abandoned citrus groves], and coastal dunes)
	The project will impact 25 acres or more of eastern indigo snake habitat (<i>e.g.</i> , sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive, or abandoned citrus groves], and coastal dunes)
D.	The project has no known holes, cavities, active or inactive gopher tortoise burrows, or other <u>underground refugia</u> where a snake could be <u>buried</u> , <u>trapped and/or injured</u> during project activitiesNLAA
	The project has known holes, cavities, active or inactive gopher tortoise burrows, or other <u>underground refugia</u> where a snake could be <u>buried</u> , <u>trapped and /or</u> <u>injured</u>
E.	Any permit will be conditioned such that all gopher tortoise burrows, active or inactive, will be excavated prior to site manipulation in the vicinity of the burrow ¹ . If an eastern indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of a particular area, and, if occupied by an eastern indigo snake, no work will commence until the snake has vacated the vicinity of proposed work
	Permit will not be conditioned as outlined abovemay affect

End Key

¹ If excavating potentially occupied burrows, active or inactive, individuals must first obtain state authorization via a Florida Fish and Wildlife Conservation Commission Authorized Gopher Tortoise Agent permit. The excavation method selected should also minimize the potential for injury of an indigo snake. Applicants should follow the excavation guidance provided within the most current Gopher Tortoise Permitting Guidelines found at http://myfwe.com/gophertortoise.

² Please note, if the proposed project will impact less than 25 acres of vegetated eastern indigo snake habitat (not urban/human-altered) completely surrounded by urban development, and an eastern indigo snake has been observed on site, NLAA is not the appropriate conclusion. The Service recommends formal consultation for this situation because of the expected increased value of the vegetated habitat within the individual's home range

Donnie Kinard

Working with the Fish and Wildlife Foundation of Florida, the Service has established a fund to support conservation and recovery for the eastern indigo snake. Any project that has the potential to affect the eastern indigo snake and/or its habitat is encouraged to make a voluntary contribution to this fund. If you would like additional information about how to make a contribution and how these monies are used to support eastern indigo snake recovery please contact Ashleigh Blackford, Connie Cassler, or José Rivera at 772-562-3559.

This revised Key is effective immediately upon receipt by the Corps. Should circumstances change or new information become available regarding the eastern indigo snake and/or implementation of the Key, the determinations herein may be reconsidered and this Key further revised or amended.

Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. If you have any questions or comments regarding this Key, please contact the SFESO at 772-562-3909.

Roxanna Hinzman Field Supervisor South Florida Ecological Services

Sincerely

Cc:

Corps, Jacksonville, Florida (Dale Beter, Muriel Blaisdell, Ingrid Gilbert, Angela Ryan, Irene Sadowski, Victoria White, Alisa Zarbo)
Service, Athens, Georgia (Michelle Elmore)
Service, Jacksonville, Florida (Annie Dziergowski)
Service, Panama City, Florida (Sean Blomquist)

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United States Department of the Interior

FISH AND WILDLIFE SERVICE South Florida Ecological Services Office 1339 20th Street Vero Beach, Florida 32960

May 18, 2010

Donnie Kinard Chief, Regulatory Division Jacksonville District Corps of Engineers Post Office Box 4970 Jacksonville, Florida 32232-0019

> Service Federal Activity Code: 41420-2007-FA-1494 Service Consultation Code: 41420-2007-I-0964

Subject: South Florida Programmatic Concurrence Species: Wood Stork

Dear Mr. Kinard:

This letter addresses minor errors identified in our January 25, 2010, wood stork key and as such, supplants the previous key. The key criteria and wood stork biomass foraging assessment methodology have not been affected by these minor revisions.

The Fish and Wildlife Service's (Service) South Florida Ecological Services Office (SFESO) and the U.S. Army Corps of Engineers Jacksonville District (Corps) have been working together to streamline the consultation process for federally listed species associated with the Corps' wetland permitting program. The Service provided letters to the Corps dated March 23, 2007, and October 18, 2007, in response to a request for a multi-county programmatic concurrence with a criteria-based determination of "may affect, not likely to adversely affect" (NLAA) for the threatened eastern indigo snake (*Drymarchon corais couperi*) and the endangered wood stork (Mycteria americana) for projects involving freshwater wetland impacts within specified Florida counties. In our letters, we provided effect determination keys for these two federally listed species, with specific criteria for the Service to concur with a determination of NLAA.

The Service has revisited these keys recently and believes new information provides cause to revise these keys. Specifically, the new information relates to foraging efficiencies and prey base assessments for the wood stork and permitting requirements for the eastern indigo snake. This letter addresses the wood stork key and is submitted in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 et seq.). The eastern indigo snake key will be provided in a separate letter.

Wood stork

Habitat

The wood stork is primarily associated with freshwater and estuarine habitats that are used for nesting, roosting, and foraging. Wood storks typically construct their nests in medium to tall



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trees that occur in stands located either in swamps or on islands surrounded by relatively broad expanses of open water (Ogden 1991, 1996; Rodgers et al. 1996). Successful colonies are those that have limited human disturbance and low exposure to land-based predators. Nesting colonies protected from land-based predators are characterized as those surrounded by large expanses of open water or where the nest trees are inundated at the onset of nesting and remain inundated throughout most of the breeding cycle. These colonies have water depths between 0.9 and 1.5 meters (3 and 5 feet) during the breeding season.

Successful nesting generally involves combinations of average or above-average rainfall during the summer rainy season and an absence of unusually rainy or cold weather during the winter-spring breeding season (Kahl 1964; Rodgers et al. 1987). This pattern produces widespread and prolonged flooding of summer marshes, which maximize production of freshwater fishes, followed by steady drying that concentrate fish during the season when storks nest (Kahl 1964). Successful nesting colonies are those that have a large number of foraging sites. To maintain a wide range of foraging sites, a variety of wetland types should be present, with both short and long hydroperiods. The Service (1999) describes a short hydroperiod as a 1 to 5-month wet/dry cycle, and a long hydroperiod as greater than 5 months. During the wet season, wood storks generally feed in the shallow water of the short-hydroperiod wetlands and in coastal habitats during low tide. During the dry season, foraging shifts to longer hydroperiod interior wetlands as they progressively dry-down (though usually retaining some surface water throughout the dry season).

Wood storks occur in a wide variety of wetland habitats. Typical foraging sites for the wood stork include freshwater marshes and stock ponds, shallow, seasonally flooded roadside and agricultural ditches, narrow tidal creeks and shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs. Because of their specialized feeding behavior, wood storks forage most effectively in shallow-water areas with highly concentrated prey. Through tactolocation, or grope feeding, wood storks in south Florida feed almost exclusively on fish between 2 and 25 centimeters [cm] (1 and 10 inches) in length (Ogden et al. 1976). Good foraging conditions are characterized by water that is relatively calm, uncluttered by dense thickets of aquatic vegetation, and having a water depth between 5 and 38 cm (5 and 15 inches) deep, although wood storks may forage in other wetlands. Ideally, preferred foraging wetlands would include a mosaic of emergent and shallow open-water areas. The emergent component provides nursery habitat for small fish, frogs, and other aquatic prey and the shallow, open-water areas provide sites for concentration of the prey during seasonal dry-down of the wetland.

Conservation Measures

The Service routinely concurs with the Corps' "may affect, not likely to adversely affect" determination for individual project effects to the wood stork when project effects are insignificant due to scope or location, or if assurances are given that wetland impacts have been avoided, minimized, and adequately compensated such that there is no net loss in foraging potential. We utilize our *Habitat Management Guidelines for the Wood Stork in the Southeast Region* (Service 1990) (Enclosure 1) (HMG) in project evaluation. The HMG is currently under review and once final will replace the enclosed HMG. There is no designated critical habitat for the wood stork.

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The SFESO recognizes a 29.9 kilometer [km] (18.6-mile) core foraging area (CFA) around all known wood stork colonies in south Florida. Enclosure 2 (to be updated as necessary) provides locations of colonies and their CFAs in south Florida that have been documented as active within the last 10 years. The Service believes loss of suitable wetlands within these CFAs may reduce foraging opportunities for the wood stork. To minimize adverse effects to the wood stork, we recommend compensation be provided for impacts to foraging habitat. The compensation should consider wetland type, location, function, and value (hydrology, vegetation, prey utilization) to ensure that wetland functions lost due to the project are adequately offset. Wetlands offered as compensation should be of the same hydroperiod and located within the CFAs of the affected wood stork colonies. The Service may accept, under special circumstances, wetland compensation located outside the CFAs of the affected wood stork nesting colonies. On occasion, wetland credits purchased from a "Service Approved" mitigation bank located outside the CFAs could be acceptable to the Service, depending on location of impacted wetlands relative to the permitted service area of the bank, and whether or not the bank has wetlands having the same hydroperiod as the impacted wetland.

In an effort to reduce correspondence in effect determinations and responses, the Service is providing the Wood Stork Effect Determination Key below. If the use of this key results in a Corps determination of "no effect" for a particular project, the Service supports this determination. If the use of this Key results in a determination of NLAA, the Service concurs with this determination¹. This Key is subject to revisitation as the Corps and Service deem necessary.

The Key is as follows:

¹ With an outcome of "no effect" or "NLAA" as outlined in this key, and the project has less than 20.2 hectares (50 acres) of wetland impacts, the requirements of section 7 of the Act are fulfilled for the wood stork and no further action is required. For projects with greater than 20.2 hectares (50 acres) of wetland impacts, written concurrence of NLAA from the Service is necessary.

² Within the secondary zone (the average distance from the border of a colony to the limits of the secondary zone is 0.76 km (2,500 feet, or 0.47 mi).

³ An active colony is defined as a colony that is currently being used for nesting by wood storks or has historically over the last 10 years been used for nesting by wood storks.

⁴ Consultation may be concluded informally or formally depending on project impacts.

⁵ Suitable foraging habitat (SFH) includes wetlands that typically have shallow-open water areas that are relatively calm and have a permanent or seasonal water depth between 5 to 38 cm (2 to 15 inches) deep. Other shallow non-wetland water bodies are also SFH. SFH supports and concentrates, or is capable of supporting and concentrating small fish, frogs, and other aquatic prey. Examples of SFH include, but are not limited to freshwater marshes, small ponds, shallow, seasonally flooded roadside or agricultural ditches, seasonally flooded pastures, narrow tidal creeks or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs.

Project does not affect SFH	$\dots \dots $
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B. Project impact to SFH is less than 0.20 hectare (one-half acre)⁶......NLAA¹,

Project impact to SFH is greater in scope than 0.20 hectare (one-half acre)......go to C

Project impacts to SFH within the CFA of a colony sitego to E

E. Project provides SFH compensation in accordance with the CWA section 404(b)(1) guidelines and is not contrary to the HMG; habitat compensation is within the appropriate CFA or within the service area of a Service-approved mitigation bank; and habitat compensation replaces foraging value, consisting of wetland enhancement or restoration matching the hydroperiod⁷ of the wetlands affected, and provides foraging value similar

⁶ On an individual basis, SFH impacts to wetlands less than 0.20 hectare (one-half acre) generally will not have a measurable effect on wood storks, although we request that the Corps require mitigation for these losses when appropriate. Wood storks are a wide ranging species, and individually, habitat change from impacts to SFH less than one-half acre are not likely to adversely affect wood storks. However, collectively they may have an effect and therefore regular monitoring and reporting of these effects are important.

⁷ Several researchers (Flemming et al. 1994; Ceilley and Bortone 2000) believe that the short hydroperiod wetlands provide a more important pre-nesting foraging food source and a greater early nestling survivor value for wood storks than the foraging base (grams of fish per square meter) than long hydroperiod wetlands provide. Although the short hydroperiod wetlands may provide less fish, these prey bases historically were more extensive and met the foraging needs of the pre-nesting storks and the early-age nestlings. Nest productivity may suffer as a result of the loss of short hydroperiod wetlands. We believe that most wetland fill and excavation impacts permitted in south Florida are in short hydroperiod wetlands. Therefore, we believe that it is especially important that impacts to these short hydroperiod wetlands within CFAs are avoided, minimized, and compensated for by enhancement/restoration of short hydroperiod wetlands.

⁸ For this Key, the Service requires an analysis of foraging prey base losses and enhancements from the proposed action as shown in the examples in Enclosure 3 for projects with greater than 2.02 hectares (5 acres) of wetland impacts. For projects with less than 2.02 hectares (5 acres) of wetland impacts, an individual foraging prey base analysis is not necessary although type for type wetland compensation is still a requirement of the Key.

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to, or higher than, that of impacted wetlands. See Enclosure 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance⁸......"*NLAA*¹"

Project does not satisfy these elements"may affect⁴"

This Key does not apply to Comprehensive Everglades Restoration Plan projects, as they will require project-specific consultations with the Service.

Monitoring and Reporting Effects

For the Service to monitor cumulative effects, it is important for the Corps to monitor the number of permits and provide information to the Service regarding the number of permits issued where the effect determination was: "may affect, not likely to adversely affect." We request that the Corps send us an annual summary consisting of: project dates, Corps identification numbers, project acreages, project wetland acreages, and project locations in latitude and longitude in decimal degrees.

Thank you for your cooperation and effort in protecting federally listed species. If you have any questions, please contact Allen Webb at extension 246.

Sincerely yours. town Paul Souza

Field Supervisor South Florida Ecological Services Office

Enclosures

cc: w/enclosures (electronic only) Corps, Jacksonville, Florida (Stu Santos) EPA, West Palm Beach, Florida (Richard Harvey) FWC, Vero Beach, Florida (Joe Walsh) Service, Jacksonville, Florida (Billy Brooks)

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APPENDIX E

Sand Skink and Blue-tailed Mole Skink Survey Technical

Report

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION TECHNICAL REPORT COVERSHEET

650-050-38 ENVIRONMENTAL MANAGEMENT 06/17

Sand Skink and Blue-tailed Mole Skink SurveyTechnical Report

Florida Department of Transportation

District One

SR 35 (US 98) PD&E Study

Limits of Project: From North of West Socrum Loop Road to South of CR 54

Polk County, Florida

Financial Management Number: 436673-1-22-01

ETDM Number: 14334

Date: June 2021

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.

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APPENDICES

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- Appendix B Skink Soil Survey Report
- Appendix C Data Sheets

US 98 from W of Socrum Loop Rd to CR 54 FPID 436673-1-22-01

1 PROJECT DESCRIPTION

The Florida Department of Transportation (FDOT) is conducting a Project Development & Environment (PD&E) study to evaluate alternatives for widening US 98 from north of West Socrum Loop Road to south of County Road (CR) 54 from a two-lane undivided highway to a four-lane divided highway in unincorporated Polk County, a distance of 8.7 miles. The proposed project includes accommodations for pedestrian and bicycle traffic, safety improvements, and signage. A project location map is provided in Appendix A (Figure 1).

Certain areas along the mainline of this project are within the U.S. Fish and Wildlife Service (USFWS) consultation area for the sand skink (*Neoseps reynoldsi*) and blue-tailed mole skink (*Plestiodon egregious*). These skinks are listed by the USFWS as threatened species and are under the jurisdiction of the Endangered Species Act of 1973, as amended (ESA). As part of the PD&E study, a survey was conducted in accordance with the USFWS' *Sand Skinks and Blue-tailed Mole Skinks Survey Protocol Peninsular Florida* (updated July 31, 2020) (i.e., Survey Protocol) to determine the presence of these skinks within the project area. The purpose of this report is to summarize the existing conditions within the surveyed areas, the survey methodology, and results.

2 EXISTING CONDITIONS

The project area lies within the consultation area for sand skinks and blue-tailed mole skinks and suitable soils in three small areas totaling 1.06 acres near the southern limits of the proposed project. A sand skink soils investigation was conducted to identify any suitable skink habitat, as defined in the USFWS Survey Protocol, within the project limits. The *Sand Skink Soils Investigation Report* is provided in Appendix B. As a result of the soils investigation, three areas approximately 0.4 mile north of Socrum Loop Road were identified as containing appropriate skink soils and were subsequently named Areas A (0.46 acres), B (0.35 acres), and C (0.25 acres). Elevations within the survey areas are 130 feet above sea level. Soils found in the survey areas belong to the Tavares Soils Series. As noted in the *Sand Skink Soils Investigation Report*, Areas A and B were historically mapped as Sparr sand. Upon the soils investigation, they were found to contain Tavares fine sand, 0-5 percent slope.

US 98 is adjacent to residential and agricultural properties. The western end of the proposed project is less developed with agricultural areas and open lands.

1

Survey areas were located within maintained right-of-way of US 98 that occasionally see off-road traffic, compacting the soil. Other unpaved areas throughout the corridor are used as driveways. Periodically, asphalt millings and trash were found throughout the project area mixed into the soils directly adjacent to the roadway.

Vegetation within the survey areas consisted of flatwoods and ruderal species common to roadway rights-ofway that are routinely mowed. The survey areas were mostly comprised of Bahia grass (*Paspalum notatum*) with patches of open soil. Other vegetation included beggars tick (*Bidens alba*), greenbriar (*Smilax* spp.), chalky bluestem (*Andropogon viginicus*), pineland threeawn (*Aristida stricta*), and tread softly (*Cnidoscolus stimulosus*). Area C also contained slash pine (*Pinus elliotti*) and muscadine (*Vitis rotundifolia*).

3 PEDESTRIAN SURVEY RESULTS

In accordance with the USFWS Survey Protocol, a pedestrian skink survey was conducted on April 14, 2021 within survey areas A, B, and C. No skink tracks were apparent within the project area based on the pedestrian survey. Subsequent pedestrian surveys also occurred during the coverboard survey. Area A contained equal amounts of Bahia grass and open soil. Area B was dominated by Bahia grass with minimal open soil. Area C was equal parts covered in vines, pine cover, and open soil. The survey areas were observed to be moderately disturbed and are within US 98 right-of-way.

4 COVERBOARD SURVEY METHODOLOGY

In accordance with the Survey Protocol, 40 coverboards per acre were deployed. In total, 43 coverboards were deployed on April 14, 2021 in locations shown on Figure 2 in Appendix A. Based on total area 19 coverboards were placed in Area A, 14 coverboards were placed in Area B, and 10 coverboards were placed in Area C. The coverboards measured two feet by two feet and were placed on soil that had been cleared of vegetation with the use of hoes and rakes. The survey period was initiated on April 23, 2021. For four consecutive weeks, environmental scientists lifted coverboards and noted any skink tracks observed before raking the substrate and replacing the coverboards for the following week. Upon completion of the survey, the coverboards were removed from the area.

US 98 from W of Socrum Loop Rd to CR 54

FPID 436673-1-22-01

5 COVERBOARD SURVEY RESULTS

During the survey period of April 23 to May 13, 2021, no skink tracks were observed. No direct observation of sand or blue-tailed mole skinks was encountered while conducting the coverboard survey. Coverboards were picked up on May 13, 2021. Data Sheets are provided in Appendix C.





Appendix A

Figures









Appendix B

Soil Survey Report

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

SAND SKINK SOILS INVESTIGATION REPORT

Florida Department of Transportation

District 1

SR 35 (US 98)

Limits of Project: from North of W. Socrum Loop Road to South of CR 54

Polk County, Florida

Financial Management Number: 436673-1

ETDM Number: 14334

Date: April 2021

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.

SAND SKINK SOILS INVESTIGATION REPORT

SR 35 (US 98) From North of W. Socrum Loop Road to South of CR 54 Polk County, Florida

Financial Project Identification (FPID): 436673-1

Prepared for:



Florida Department of Transportation District One Environmental Management Office 801 North Broadway P.O. Box 1249 Bartow, Florida 33831

Prepared by:

Atkins North America, Inc. 482 South Keller Road Orlando, Florida 32810

March 31, 2021

Field Investigation Dates: March 22, 2021.

Project / Location: Sand Skink (*Neoseps reynoldsi*) Soils Investigation / SR 35 (US 98), Polk County, Florida.

Client: Florida Department of Transportation (FDOT), District One.

Qualifications and Experience: This soils investigation was directed, and the report prepared by, Terry Zable an Atkins soil scientist and project manager. Mr. Zable earned a B.S.A. in Soil Science from the University of Florida and an M.P.A. in Public Administration from the University of Central Florida. He has 35 years of professional experience as a soil scientist which includes 16 years with the State of Florida, three years with the Florida Department of Health performing soils evaluations in the Onsite Sewage Disposal System program; followed by 12 years with the Florida Department of Environmental Protection (FDEP), performing hydric soils jurisdictional investigations for the FDEP's Environmental Resource Program and Jurisdictional Wetlands Team. Mr. Zable joined Atkins in 2001 and has been involved with soils investigations for various projects including hydric soils determinations, seasonal high groundwater evaluations, soil subsidence investigations related to groundwater withdrawals, sand skink suitable soils investigations, and soils evaluations for mitigation projects. He has been accepted as an expert witness in environmental permitting and soil science in administrative hearings (Florida Division of Administrative Hearings) as well as civil cases and criminal court cases.

Project Footprint: The project begins approximately 1,310 feet north of the intersection of SR 35 (US 98) and West Socrum Loop Rd. and continues approximately 8.8 miles northwest along both the north and south right-of-way (ROW) before terminating at the intersection of SR 35 (US 98) and CR 54, Polk County, Florida. The project construction impacts are confined to the project ROW along both sides of SR 35 (US 98), and the ROW varies in width depending upon location. **Exhibit 1** provides the overall project location and project footprint.

Introduction

At the client's request, the project site as described above was investigated to identify areas that have been mapped in the Polk County Soil Survey by the U.S. Department of Agriculture (USDA) - Natural Resources Conservation Service (NRCS) as containing soils that have been determined by the U.S. Fish and Wildlife Service (USFWS) to provide suitable habitat for the sand skink and blue-tailed mole skink. The investigation focused on identifying if the soils mapped exist within the project study areas, and if the soils have been subject to past soil alterations (construction, filling, excavation, or mixing) which may have sufficiently altered the soils such that they no longer exhibit surface or shallow surface characteristics required to meet the NRCS soil map unit criteria for the soil series that have been identified as providing suitable habitat for the sand skink and blue-tailed mole skink. The dominant mapped soil type occurring within much of the ROW of the project area is Pomona Fine Sand, which is classified as a non-suitable sand skink soil. However, the map units identified by the USFWS as potentially providing suitable sand skink habitat soils that have been mapped by the USDA – NRCS and occurring within the ROW of the project area consists of the Basinger, Smyrna and Myakka, Samsula Muck, and Tavares map units. Samsula Muck has been identified in the USFWS Peninsular Florida Species Conservation and Consultation Guide, July 31, 2020, as a "skink soil", however correspondence with USFWS staff have allowed the exclusion of areas supporting this organic, non-mineral soils from this investigation. The suitable sand skink soil series, as described in the NRCS online soil survey for Polk County, are described below:

The Basinger soil series (Siliceous, hyperthermic Spodic Psammaquents) are very poorly drained soils that formed from sandy marine deposits and are often found in low flats, depressions and poorly defined drainageways. Most areas of Basinger soils have been cleared and are used for improved pasture and rangeland. With water control, they are used for winter truck crops and tame pasture. Dominant vegetation: Slash pine (*Pinus elliottii*), longleaf pine (*Pinus palustris*), scattered cypress (*Taxodium sp.*), with an understory dominated by gallberry (*Ilex glabra*), pineland threeawn (*Aristida sp.*), cabbage palm (*Sabal palmetto*), scattered saw palmetto (*Serenoa repens*), St. Johns wort (*Hypericum spp.*), cutthroat grass (*Panicum abscissum*), blue maidencane (*Amphicarpum muehlenbergianum*), low panicum (*Panicum rigidulum*), wax-myrtle (*Morella cerifera*), and sand cordgrass (*Spartina bakeri*).

The Smyrna fine sand and Myakka sand map unit is an association of the Smyrna and Myakka soils that is composed of 41 percent Smyrna, 39 percent Myakka, and similar soils. Approximately 15 percent of this map unit is hydric, and the soils are found on flatwoods and marine terraces. The soil is classified as poorly drained, with an average depth to water table of 6 to 18 inches. Both soils are spodosols, however in the Symrna soil the spodic (Bh) horizon occurs at depths less than 20 inches, whereas in the Myakka soil the Bh horizon is found at a depth of 20-36 inches.

The Smyrna soil series (Sandy, siliceous, hyperthermic Aeric Alaquods) are soils that formed in thick deposits of sandy marine materials and are typically found on nearly level flatwoods areas with slopes of less than 2 percent. Smyrna soils are poorly to very poorly drained. They have slow internal drainage and slow to runoff when ponded. Natural vegetation consists of longleaf and slash pines with an undergrowth of saw palmetto, running oak (*Quercus pumila*), gallberry, wax myrtle, and pineland threeawn. Most areas are used for forest and range.

The Myakka soils series (Sandy, siliceous, hyperthermic Aeric Alaquods) are typically found in flatwoods. Other phases have been mapped on high tidal areas, flood plains, depressional areas and barrier islands. They formed in sandy marine deposits. Slopes range from 0 to 5 percent. Myakka soils are used for commercial forest production or native range. Large areas with adequate water control measures are used for citrus, improved pasture, and truck crops. Native vegetation includes longleaf and slash pine with an undergrowth of saw palmetto, running oak, gallberry, wax myrtle, huckleberry (*Gaylussacia spp.*), chalky bluestem (*Andropogon virginicus*), fetterbush (*Lyonia lucida*), and pineland threeawn.

The Tavares soil series (Hyperthermic, uncoated Typic Quartzipsamments) mainly occurs in South Central Florida Ridge, and to a lesser extent in Southern Florida Flatwoods. These soils consist of very deep, moderately well drained soils that formed in sandy marine or aeolian deposits. Tavares soils are on hills, ridges and knolls of the lower Coastal Plain. Some areas of Tavares soils are used for citrus. A few areas are used for corn, vegetable crops, watermelons, and improved pasture. In most places the natural vegetation consists of slash pine, longleaf pine, a few scattered blackjack oak (*Quercus incana*), turkey oak (*Quercus laevis*), post oak (*Quercus stellata*), and an understory of pineland threeawn.

Methodology

The project area is located within the FDOT ROW of SR 35 (US 98) from approximately 1,310 feet north of the intersection of SR 35 (US 98) and West Socrum Loop Rd. and continuing along both the north and south ROW of SR 35 (US 98) before terminating at the intersection of SR 35 (US 98) and CR 54. The entire project area was field reviewed and soil borings and/or soil probes were collected to both verify the mapped soils, and to determine where soils in particular areas have been previously altered due to excavation (slope cuts, swales/ditches), fill (road beds, driveways, roadway intersections), or mixing due to roadway alterations, stormwater conveyances, underground utilities, signage features, or other underground construction activities. There are three locations within the overall project area where the NRCS and the Polk County Soil Survey has mapped soils identified by the USFWS as sand skink soils, **Exhibit 2.** In these locations additional soil borings or soil probes were collected to verify areas where natural, unaltered suitable soils were mapped, and where road construction activities appear to have not impacted the soil surface. In addition to the soil borings and probes, representative photographs were taken throughout the project area. The photographs are labeled by photo-point and are found in the map and **Photolog 1** of **Exhibit 3**.

The boring locations were selected utilizing the criteria described above regarding suitable soils and through inspections of aerial photographs and field review. Soil borings were conducted for each of the soil map units within the project area utilizing a hand bucket auger and were excavated to a depth of six (6) feet, or refusal. The borings were field analysed as they were conducted for soil texture, soil color, and soil horizonation to confirm that the soil mapped conforms to the mapped soil series criteria. In addition to the hand auger bores, hand soil probes were conducted at regular intervals to determine the limits of natural soil surface characteristics. The hand soil probes all begin at either the project boundary, or in areas supporting natural landscapes and then continue into the project area to the roadway. The soil probes were repeated as required but at intervals not exceeding 2-3 feet in the direction of the roadway until the surface feature characterizing one of the identified sand skink suitable soils were no longer observed because of soil disturbance. The surface disturbance commonly identified included fill material (lime rock, gravel, clay, asphalt, fill dirt), excavation (exposed subsurface horizons, organic material accumulation, evidence of wetness), or structures (driveways, intersecting roads, signage). The location of soil boring and probes was recorded utilizing a Trimble Global Positioning System (GPS) unit. In most locations, numerous hand probes were completed in the process of delineation of the limits of natural soil. The individual probes undertaken to identify the limits of the natural soils were not GPS recorded. Sections supporting natural and unaltered soils (Potential Sand Skink Habitat) are shown in Exhibit 4. These sections are also highlighted in red in Photolog 1 of Exhibit 3. Exhibit 5 contains Photolog 2, which includes soil probe/pit depictions.

Study Area

The project study area of SR 35 (US 98) from north of West Socrum Loop Rd to the intersection of SR 35 (US 98) and CR54, consists of a two-lane rural highway with a four-lane divided section that ends approximately 1,600 ft north of the project beginning. Land use within the project area consists of both rural and suburban uses, with the northern half of the project being rural and composed of pastures and forest with scattered residential housing. The southern half of the project

area is more suburban in use, with several residential developments and golf course communities. Very few structures have been built immediately abutting the project area, with most residences and commercial structures setback from the ROW and accessible by driveways or access roads. The roadway travel lanes and the shoulders have been filled and contoured to facilitate drainage to the adjacent roadside ditch/swale system that vary in depth and slope dependent upon location. In some areas the ditch forms a connected system with culverts located under driveway and roadway crossings, and in other areas it consists of a less formal shallow swale system. The roadside ditch/swales begin at the outside of the roadway shoulder and often extend to the limits of the ROW. Utilities are primarily overhead with the supporting poles located along both east and west edges of the ROW depending upon location. Roadway signage in the study area is minimal. Soil disturbances are attributable to the roadway, shoulders, intersection and driveway construction, excavation for ditch/swales and underground utilities. There are three areas that support sand skink suitable soils and have been labeled Sections A, B, and C (Exhibit 4, 4.1, 4.2, 4.3, 4.4). Sections A and B have been mapped in the Polk County Soil Survey as Sparr sand, 0-5% slope which has not been identified as a USFWS sand skink soil, however, investigation of this area showed that the soils in these two sections appear to be Tavares fine sand, which is similar to the soil type of Section C

Potentially Suitable Soil Areas

Section A is mapped as Sparr sand, 0-5% slope, however, appears to be comprised of Tavares fine sand, 0-5% slope, is approximately 500 ft. in length and encompasses 0.46 acres. Moving from northwest to southeast, the latitude and longitude start/end points for Section A are 81°58'52.27" W, 28°10'14.18" N (Start), 81°58'48.07" W, 28°10'10.89" N (End) (Exhibit 4, 4.1, 4.2, 4.3).

Section B is mapped as Sparr sand, 0-5% slope, however, appears to be comprised of Tavares fine sand, 0-5% slope, is approximately 475 ft. in length and encompasses 0.35 acres. Moving from northwest to southeast, the latitude and longitude start/end points for Section B are 81°58'49.8" W, 28°10'13.82" N (Start), 81°58'45.68" W, 28°10'10.84" N (End) (Exhibit 4, 4.1, 4.2, 4.3).

Section C is comprised of Tavares fine sand, 0-5% slope, is approximately 170 ft. in length and encompasses 0.25 acres. Moving from northwest to southeast, the latitude and longitude start/end points for Section C are 81°58'38.9" W, 28°10'5.99" N (Start), 81°58'37.43" W, 28°10'4.86" N (End) (Exhibit 4, 4.1, 4.4).

Results

From the completed field work and soil borings it can generally be assumed that the areas immediately adjacent to paved road surfaces, depending upon location, have been impacted by the construction of the roadway, roadway shoulders, swales and ditches, and driveways and access roads.

These activities have resulted in paved areas and filled soil profiles, truncated soil profiles from excavation, surface/subsurface alterations and compaction, and organic material accumulation or evidence of wetness from standing water in swales. In some areas the mixing of the natural soils with lime rock, gravel, fine texture materials such as clay or other similar road bedding material and building material was visible at the surface. Often adjacent areas located outside of the project

area (ROW) exhibit intact soil profiles, and suitable habitat soils. However, the natural soil conditions begin to degrade within the ROW closer to the roadside swale and the roadway foundation/ system. The three sections supporting natural soils (Potential Sand Skink Habitat) are shown in **Exhibit 4 (4.1-4.4). Table 1** below details the soil types, map unit identifier and acreages of these sections.

Section ID	Soil ID: Soil Type	Acres
A	Mapped as 14: Sparr sand, 0-5% slope, actually 15: Tavares fine sand, 0-5% slope	0.46
В	Mapped as 14: Sparr sand, 0-5% slope, actually 15: Tayares fine sand 0-5% slope	0.35
C	15: Tavares fine sand, 0-5% slope	0.25

Table 1: Suitable Section Soils & Acreages

Exhibit 1: Location Map



Exhibit 2: Soil Survey Area Maps








Exhibit 3: Photopoint Location Map & Photolog 1









































FDOT D1 - 436673-1 US98 Sand Skink Soils Investigation



Photo 1 – Looking Southeast



Photo 2 – Looking Southeast





Photo 3 - Looking Northwest

Photo 4 - Looking Northwest

FDOT D1 - 436673-1 US98 Sand Skink Solls Investigation



Photo 5 – Looking Southeast



Photo 6 – Looking Southeast



Photo 7 - Looking Northwest



Photo 8 - Looking Northwest



Photo 9 – Looking Southeast



Photo 10 – Looking Southeast



Photo 11 - Looking Southeast (Section A)



Photo 12 - Looking Southeast



Photo 13 – Looking Northwest



Photo 15 - Looking Northwest (Section C)



Photo 14 – Looking Northwest



Photo 16 - Looking Northwest (Section B)

FDOT D1 - 436673-1 US98 Sand Skink Soils Investigation



Photo 17 – Looking Southeast



Photo 19 - Looking Northwest



Photo 18 – Looking Southeast



Photo 20 - Looking Northwest

FDOT D1 - 436673-1 US98 Sand Skink Soils Investigation



Photo 21 – Looking Northwest



Photo 22 – Looking Northwest







Photo 24 - Looking Southeast

FDOT D1 - 436673-1 US98 Sand Skink Soils Investigation



Photo 25 – Looking Northwest



Photo 26 – Looking Southeast

Exhibit 4: Potential Skink Soil Habitat Maps










Exhibit 5: Photolog 2

Exhibit 5: Photolog 2



13: Samsula Muck (Probe – Excluded)



14: Sparr Sand, 0 to 5 percent slopes (Non-skink Soil) (Probe - Potential)



14: Sparr Sand, 0 to 5 percent slopes (Non-skink Soil) (Probe – Potential)



15: Tavares Fine Sand, 0 to 5 percent slopes (Profile - Potential)

Exhibit 5: Photolog 2



17: Smyrna and Myakka Fine Sands (Probe - Excluded)



17: Smyrna and Myakka Fine Sands (Probe - Excluded)



87: Basinger Fine Sand (Probe - Excluded)



87: Basinger Fine Sand (Probe - Excluded)



Appendix C

Data Sheets

US 98 Improvements; FPID 436673-1

Survey Date: 2021, 04-23	Begin Time: 11:30	End Time:	12:30
Weather Conditions			
Average Temperature	: 80°F		
Wind Speed: E	Ilmph		
Wind Direction: 🖉	st		
Visibility: clear	the state of the second		
Precipitation: No	(inin on 4/19+4/20		
Total Number of Skink Tra	icks Observed:		
	None		
	- India		
Coverboard Numbers for	Observed Tracks:		
(include photo-documentation of tra	acks)		
	NA		
Direct Observations of Ski	nks:		
	NA		
Currier Chaff Marray			
survey start Name:			
P.GRIFF	ch1		
1.00			

US 98 Improvements; FPID 436673-1

Survey Date: 4/29/21 Begin Time: 10:00 End Time: 11:30
Weather Conditions
Average Temperature: 87 m
Wind Direction: Sta
Visibility: clear great
Precipitation: NONE
Total Number of Skink Tracks Observed:
O
Coverboard Numbers for Observed Tracks: (include photo-documentation of tracks)
na ·
Direct Observations of Skinks:
novie
Survey Staff Name:
survey start value.
Nia Cubbs, la Norman
Boards 1,2,4,5+7 had been moved +
a la
Stacked up. The original wall weather
this still Cloar It looked like this
Evident and similate
just happened. We replaced the boards

US 98 Improvements; FPID 436673-1

Survey Date. 2021-05-0	Begin Time: 133pm	End Time: 235
Weather Conditions	10000	
Average Temperature	89	
Wind Speed:	W 12mph	
Wind Direction:	West	
Visibility:	CLIEAR	
Precipitation:	NONE	
Total Number of Skink Tra	cks Observed:	
Coverboard Numbers for (Observed Tracks:	
(include photo-documentation of tra	icks) N/A	
(include photo-documentation of tra	nks:	

K:\Environmental\Sand Skinks\Skink Survey Field Data Sheet 4-21.docx

US 98 Improvements; FPID 436673-1

Survey Date: 5/13/21 Begin Time: 9:40 End Time: 11:08
Weather Conditions
Average Temperature: 78°
Wind Speed: 5 mpm
Wind Direction: SE
Visibility: Clear
Precipitation: 🔿
Total Number of Skink Tracks Observed:
\bigcirc
Coverboard Numbers for Observed Tracks:
(include photo-documentation of tracks)
(\cdot)
Direct Observations of Skinks:
0
Survey Staff Name: Allison Blakely
Sam Szatyari

APPENDIX F

Crested Caracara Survey Technical Report

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

Crested Caracara Survey Technical Report

Florida Department of Transportation

District One

SR 35 (US 98) PD&E Study

Limits of Project: From North of West Socrum Loop Road to South of CR 54

Polk County, Florida

Financial Management Number: 436673-1-22-01

ETDM Number: 14334

Date: July 2021

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.

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Table 2 Caracara Survey Dates and Results	
Table 3 Other Species Observed and Protected Status	
Table 4 Carion Observations During Spring 2021 Survey Seaso	n7

APPENDICES

- Appendix A Figures
- Appendix B Survey Data Sheets

1 Project Description

The Florida Department of Transportation (FDOT) is undertaking a Project Development and Environment (PD&E) Study to evaluate alternatives for widening a segment of US 98 (State Road 35/700) in the northwest portion of Polk County. The project study limits extend from West Socrum Loop to south of County Road (CR) 54, a distance of approximately 8.7 miles.

The study area falls within the US Fish and Wildlife Service (USFWS) Consultation Area for the crested caracara (*Caracara cheriway*). The crested caracara is listed by the USFWS threatened under the jurisdiction of the Endangered Species Act of 1973, as amended (ESA). According to the Florida Natural Areas Inventory (FNAI, 2021), the crested caracara has been documented within Polk County, but not within one mile of the project study area. As part of the PD&E study, a survey plan was developed based on the USFWS Crested Caracara Draft Survey Protocol (provided for the 2016-2017 Breeding Season) and was approved by USFWS to begin surveys in January 2021. Seven stations were established and surveyed from January 7, 2021, through April 30, 2021. A description of the survey methodology and results is provided below.

2 METHODOLOGY

Development of the survey plan included analyzing suitable foraging and nesting habitat within 1,500 meters of the study limits via desktop aerial and review of available Geographic Information System (GIS) data. FNAI's Cooperative Land Cover GIS data was cross referenced with USFWS's survey protocol to identify suitable habitat (Table 1) and establish observation blocks and survey stations. Proposed observation blocks and survey stations were further verified with field reviews. It was noted during these verification field reviews that cabbage palms (*Sabal palmetto*) were remarkably absent from the landscape. Canopy-level vegetation included oaks (*Quercus* spp.), pines (*Pinus* spp.), and cypress (*Taxodium* spp.). Suitable habitats present within the study area are listed in the Table 1 below.

Suitable Habitat Description	FNAI Cover Code and
per USFWS Survey Protocol	Description
Lightly wooded areas	1500 – shrub and bushland
Scrub oaks	1200 – high pine and scrub
Cypress	2211 – cypress
Wet prairie	2100 – freshwater non-
	forested wetlands
	2110 – prairies and bogs
	2120 – marshes
	2121 – isolated freshwater
	marsh
Improved pasture	183313 – improved pasture
Unimproved pasture	1830 – rural
	18331 – cropland/pasture
Woodland pasture	18331 – cropland/pasture
Sod farm	1 <mark>83</mark> 31 – cropland/pasture
Row crops	18331 – cropland/pasture
Rangeland	See improved, unimproved,
	and woodland pastures

Table 1 Suitable Habitat Types within the Project Study Area

Seven observation blocks were selected based on the above habitat types and field reviews (**Appendix A**, Figure 1). Within those blocks, seven survey stations were established based on presence of suitable habitat and vantage points that provide expansive views that can easily observe suitable habitat with binoculars and scopes. All seven stations were observed every other week by four qualified biologists starting on January 7, 2021, and ending April 30, 2021. Surveys began 15 minutes before sunrise and continued for three hours afterwards, totaling 189 survey hours during the entire season.

Species activities were monitored by vehicle at each station. Cabbage palms and oak trees located within sight distance of the project corridor were monitored during each field visit for nesting, roosting, and foraging activity. During each survey, caracara presence/absence was noted in addition to other animal species observed. Observations were also made during transit from one station to the next, noting any species observed along the way, including carcasses located on the side of the road.

3 RESULTS

No crested caracara individuals or caracara nesting activity were observed within the survey area during the 2021 survey. Also, no caracaras were observed at any time during the additional wildlife surveys that were being conducted within the project limits during the same timeframe. Survey data sheets are located in **Appendix B.**

In addition to the 189 hours of crested caracara survey time, approximately 23 hours were spent in the field conducting sand and blue-tailed mole skink surveys to the east of Station 1 in the eastern limits of the project. Of all hours in the field from January through May 2021, no caracaras were observed at any time along the project study area. Table 2 lists dates and results of the caracara survey.

Field Dates	Caracara Observed
January 7-10, 2021	No
January 19-22, 2021	No
February 2-5, 2021	No
February 16-19, 2021	No
March 1-5, 2021	No
March 16-19, 2021	No
March 31-April 2, 2021	No
April 14-16, 2021	No
April 28-30, 2021	No

Table 2 Caracara Survey Dates and Results

Other Species Observed

While no caracara were observed throughout the duration of the survey season, the following 41 birds and one mammal were observed between January and April 2021. Table 3 provides a list of observed species and their federal and state status.

Common Name	Scientific Name	Federal Status	State Status
Florida Sandhill Crane	Grus canadensis	NL	Т
Great Blue Heron	Ardea herodias	NL	NL
American Crow	Corvus brachyrhynchos	NL	NL
Warbler, Yellow-rumped	Setophaga coronata	NL	NL
Hawk, Red Shouldered	Buteo lineatus	NL	NL
Cattle Egret	Bubulcus ibis	NL	NL
Limpkin	Aramus guarauna	NL	NL
Mourning Dove	Zenaida macroura	NL	NL
Eastern Phoebe	Sayornis phoebe	NL	NL
Eastern Meadowlark	Sturnella magna	NL	NL
Southeastern American	Falco sparverius paulus		Т
Kestrel (see note below)	or	NL	
	F. sparverius sparverius		
Wood Stork	Mycteria americana	Т	Т
White Ibis	Eudocimus albus	NL	NL
Northern Mockingbird	Mimus polyglottos	NL	NL
Eastern Bluebird	Sialia sialis	NL	NL
Great Egret	Ardea alba	NL	NL
Vireos	Vireo spp.	NL	NL
Turkey Vulture	Cathartes aura	NL	NL
Boat-tailed Grackle	Quiscalus major	NL	NL
Killdeer	Charadrius vociferus	NL	NL
Woodpecker, Red Bellied	M <mark>el</mark> anerpes carolinus	NL	NL
Little Blue Heron	Egretta caerulea	NL	Т
Bald Eagle (see note	Haliaeetus	NU	Р
below)	leucocephalus	INL	
Black Vulture	Coragyps atratus	NL	NL
Osprey	Pandion haliaetus	NL	NL
Red-tail Hawk	Buteo jamaicensis	NL	NL
Cormorant	Phalacrocorax spp.	NL	NL
Sparrow	Passeridae spp.	NL	NL
Anhinga	Anhinga anhinga	NL	NL
Northern Cardinal	Cardinalis cardinalis	NL	NL
Swallow Tail Kite	Elanoides forficatus	NL	NL
Muscovy Duck	Cairina moschata	NL	NL
Tri-colored Heron	Egretta tricolor	NL	Т
American Robin	Turdus migratorius	NL	NL
Barn Swallow	Hirundo rustica	NL	NL
Woodpecker, Pileated	Dryocopus pileatus	NL	NL
Black-bellied Whistling Duck	Dendrocygna autumnalis	NL	NL
Belted Kingfisher	Megaceryle alcyon	NL	NL

Table 3 Other Species Observed and Protected Status

Snowy Egret	Egretta thula	NL	NL
Gnatcatcher	Polioptilidae spp.	NL	NL
Wild Turkey	Meleagris gallopavo	NL	NL
Blue Jay	Cyanocitta cristata	NL	NL
Southern fox squirrel (see note below)	Sciurus niger niger	NL	NL

Southeastern American Kestrel

There are two subspecies of the American kestrel (*Falco sparverius*) found in Florida: *F. sparverius sparverius* and *F. sparverius Paulus*. The former, a northern subspecies, winters here between September and April. The latter, the southeastern American kestrel is a year-round non-migratory subspecies. Kestrels seen in Florida during May-June are resident southeastern American kestrels (FWC, 2011).

Bald Eagle

A bald eagle's nest was observed off of SR 471 from Station 7 in the northern tree line outside of the project limits. Both adult and juvenile eagles were observed throughout the survey. The nest is located more than 660 feet from the project study area.

Southern fox squirrel

The southern fox squirrel (*Sciurus niger niger*) is one of four subspecies of fox squirrel found in Florida. It was previously classified as the Sherman's Fox Squirrel, *S. n. shermani* and was listed as a species of special concern. However, it was delisted in Florida Fish and Wildlife Conservation Commission's (FWC) 2016-2026 Imperiled Species Management Plan (ISMP). Currently, the only subspecies of fox squirrel listed as state threatened in the ISMP is the Big Cypress fox squirrel (*S. n. avicennia*) found in southwestern peninsular Florida, outside of the project study area.

Carrion Observed

FWC's "Recommended Management Practices for Crested Caracaras" state that caracara can often be observed foraging on carrion along roadways. They have been known to feed with other raptors, such as vultures and bald eagles. Multiple foraging opportunities (i.e., carrion) for caracara were observed within the project study area during the January 2021 to April 2021 caracara survey. During this time, black vultures and turkey vultures were observed $_6$ foraging on carrion, but no caracara individuals were observed. Table 4 below lists the animal carcasses observed throughout the survey timeframe.

Date	Location	Carrion Observed	
January 7, 2021	Station 2 – Keen Rd.	Hog and white-tailed	
		deer	
February 2, 2021	Station 3	Opossum, raccoon, and	
		cat	
April 29, 2021	Station 4	White-tailed deer	

Table 4 Carion Observations Durin	ng Spring 2021 Survey Season
-----------------------------------	------------------------------

4 EFFECTS DETERMINATION

No caracaras were documented within the project limits during the previous field reviews or the spring 2021 survey season. Therefore, it has been determined that the proposed project will have "no effect" on the crested caracara for the entirety of the proposed project limits. Each segment should be resurveyed during design and permitting if the results of the 2021 survey are more than one year old.

5 REFERENCES

Florida Fish and Wildlife Conservation Commission (FWC). (n.d.) *Imperiled Species Management Plan 2016-2026*. <u>https://myfwc.com/wildlifehabitats/wildlife/plan/</u>

FWC. (n.d.). *Big Cypress fox squirrel*. <u>https://myfwc.com/wildlifehabitats/profiles/mammals/land/big-cypress-fox-squirrel/</u>

FWC. (n.d.). Southern fox squirrel.

https://myfwc.com/wildlifehabitats/profiles/mammals/land/southern-fox-squirrel/

- FWC. (n.d.). Fox squirrel. https://myfwc.com/wildlifehabitats/profiles/mammals/land/fox-squirrel/
- FWC. (n.d.). American kestrel.

<u>https://myfwc.com/wildlifehabitats/profiles/birds/raptors-and-vultures/american-kestrel/</u>

H:\64800\T&E Species Surveys\Caracara Survey 2021\Survey Report\436673_1_US 98 W Socrum Loop Rd to CR 54_Caracara Report_rev3.docx



Appendix A Figures







Appendix B

Survey Data Sheets

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long:

1	Da	te	Start Time	Stop Time	Observer Name(s	s) and Experience Level(s)
1	B	21	7:00	10'.04	Shannen	Lado
Sur	vey b	egins 1	5 min prior to sunr	ise, lasting 3 hrs.		

Weather

Weather								
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog			
Start: 7,04	52°F	D	25%	attocumulus	some low tog in pastu	LV es		
Finish:	63.F	W 13 mph	LOD 1/.	City us amusu	e no			

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

maintained residential roadway shoulder;
low density residential + pasture lang
great equete in fright ; wood since in right in si
Ured-skeuldered Nawk perched on utility pold

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location / Observation Block/Lat-Long: 3/20/4: 62 28.242446 -82.06770

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)			
01/08 7:00		10:10	R.GRIFFIN Primari		1	
urvey begins 1	5 min prior to su	nrise, lasting 3 hrs.				
		V	Veather			
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog	
Start:	55°	2mph mill	45%	stratus	low fog	
Finish:	63"	11mph W	<50%	stratus		

General Site and Habitat Conditions; Other Activities in the Area

pasture w/ cypress/pine breaks

wood stork, red shaddered hawk, crow, sendfull granes, red the lod hawk

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long:

Date		te	Start Time Stop Time		Observer Name(s) and Experience Level(s)
1	17	21	7:010	10:06	Shannon Ladd

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 700	44 F	0	75 %	Stratocumulus	ND
Finish: DO	SOF	ESMPN	90 %	Stratus tatus	nd

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area	
grassed vood side median wil adjacent farmlands	
would stork in flight to N" crewin in flight + Derched of	1 util
CATTLE DOVETS IN DASTINES; GRH IN TIMAT TO E BACK	,
multiple delr & hog carcasses on Keen kg	

Observations

Observer Location	Age A/Im	Time	• Description of behavior, flight path, etc

Plovical sandrilli crarus in Tilgrit 10 VV & in pasture white libis in pasture to N common dove perched on wire nocking bird perched on wire castern blue birds perched on wire great egret in Alignt to S Narblers an ground I fence a viveos too lastern proved perched on fence id-Shoulderdhawk pair perched in pine a in Tright -Urium rutture in flight

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)			
1721	7:05 m	10:06 AM	Niki Cribbs	Qualified Observo		

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather								
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog			
Start:	48°	Calm	25%	Stratecumulus	none			
Finish:	58°	Calm	75%	Cimis sinte-	none			

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site	eneral Site and Habitat Conditions; Other Activities in the Area						
Actively farm + edges	grazed, improved postures w/ cypies wotlands, horse residence, slash pines are prominent along cypness						

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			162-2



Other spp: FSC GBH Meadow larks Kestrel American Crow Walkelers Jellowrumped Hauk-unt spip red shoulder or Cattle egret red tribed Limpkin Eastern Philobe

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Station +						
Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)			
117/21	7:06	10:06	Sam Szatyari (Iseason) + Allison (new)			

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather Cloudy

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 7:00	477	Omph	80.1	Whispy Cirrus	
Finish: 10-06	56°F	Smph W	957.	whispy/cirrus	

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area							
poistures, pine trees, cypress trees, paims							

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
othe	ecies	A	Heron, crow, wood stork, Baid Eagle White Heron, cattle egret, cormorant, red should or hawk, black vulture

Scanned

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location	/ Observation	The Brocky Eac	Long.	
Date	Start Time	Stop Time	Observer Name(s) an	nd Experience Level(s)
1 7 21	7:05 m	10:06 AM	Niki Cribbs	Qualified Observa

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	48°	Calm	25%	Stratucumulus	none
Finish:	58°	Calm	75%	cimus sinto-lus	none

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site	General Site and Habitat Conditions; Other Activities in the Area						
Actively Farm + edges	grazed, improved pastures w/ cypres wotlands, horse residence, slash pines are prominent along cypress						

Observations

Observer Age Location A/Im		Time	Description of behavior, flight path, etc		
			Harry All		

Scanned

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)		
1721	7:05 m	10:06 AM	Niki Cribbs	Qualified Observa	

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	48°	Calm	25%	Stratecumulus	none
Finish:	58°	calm	75%	Cimus strate-lus	none

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area	
---	--

Actively	grazed, impr	roued pastures w/ cypies wotlands, horse
farm +	residence,	slash pines are promivent along cypness
edges		

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Hite And
			and the second se
			and the second sec

Other spip: FSC GBH Moadow larks Kestrel Awerican crow Walkelers Jellowrumped Hauk-unt spip red shootder or Cattle egnet red tailed Limpkin Eastern phoebe Mourning dove



Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long: 540, 100 55

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
118/ZI	7:06	10:06	Sam Statyari (Isenson) (Wew)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather							
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog		
Start: 7:06	52°F	Omph	50%	cumulus	Fog(ground)		
Finish: 10:06	61°F	IOMANE	&D'/.	cumulus	NIA		

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area Cypress trees, pastures residential houses, pine trees, moved + maintained Row

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
e			wood stork, Cuttle egret, snowy egret, awk
			Bald Eugle, Belted Kingfisher
			10 miles in contring parte, while 2010

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location / Observation Block / Lat-Long:

Location	observatio	in blocky Edi	Longi lonor	i.,
Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)	
1-10	700	1020	PGRIFFIN PRIMARY	

Survey begins 15 min prior to sunrise, lasting 3 hrs.

		V	Veather		
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 700	35°	NNE 3 mph	425%	strutus	-
Finish: 1020	51"	NE 7 mpt	<25%	stratus	-

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

(10w, red shoulder hank, red tould hank, woodstork, 1515, greater agreet, 1.1the blue heren, kelplear

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			×

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s	
2021-01-19	700	1010	PGRIFFIN - PRIMARY	

Ti	ne	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	700	35°	NNE Zuph	0	~	freet
Finish:	1010	61°	ENE Sigh	0	-	

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area Pasture w/ cypress and pine breaks red shevider powle, crow, black withere

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Locaciony	Obscivat	Torr Brock/ Eur	Long						
Date	te Start Time Stop Time Observer Name(s) and Experience Level(s)								
1202	7:05	10:05	Shannen Ladd (Exp. Observer)						
Survey begins 1	5 min prior to sur	nrise, lasting 3 hrs.	Veather						
[
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog				
Start: 7:05 39'F		D	0	clear-no clouds	low fog in pastives				
Finish:	OS LOD.F	D	0	clear					
Survey should n	ot be conducted	when rainy, foggy, or i	in wind exceedir	ng 15 mph.					
		Observation	Point Info	rmation					
General Sit	e and Habit	at Conditions; O	ther Activi	ties in the Area					
mainta	ined R	-IN adj T	n us o	18 j suneun	ding				
land u	aver w	rel. wet	land r	aftereland					
Ane									

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
	6		

(184 reat equet fryouer to W Pock of lias) new fryouer perched on util. + eating traish voodsidp invenile bald lagle fryover foraging in lawik audible (red shouldered or failed) voodpeener audible ed shouldered hawk perched in appress lastern proele perched on lence Nood stork foraging in metland on E side 55 78

Scowood

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Date Start Time		Stop Time	Observer Name(c) and Experience Level(c)	
Ļ	Dale	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
	1/21/21	7:05	10:05	Nicole Cribbs, aun. OBS.

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	410F	0	\bigcirc		هميريناسيسي
Finish:	62°F	W 5mph	0	<u> </u>	

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Ruval nighborhood-ranchettes, adjacent to MHP

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

Additional Guidance (2016-2017 Breeding Season) N. Cell tower - no activity Sperovous on wink Turkey - Cattle Red bellied wood pecker - on wood pole w/cavity Cattle egiots Ayovor red shouldered harok, perching on wooden fifil pole Vitture Fly Dool Ducks Alying out of MAPZ to N. great equat " . Bis flying Guaddles Sty, peuch on OE Eastern bluebirds, foragi Sandhill chave flyovor to N Blue jays Pheobe in gress, Ence Anhinga FLY Am. Crows - Fly over Killder Mourning deve - perching

USFWS Crested Caracara Draft Survey Protocol –

Bezuguallow Northern Candsing (

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long: Storman 2

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
1/2/21	7:05	(0:06	SS of AB

Survey begins 15 min prior to sunrise, lasting 3 hrs.

		V	Veather		
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 7:05	41°F	omph	0°/.	NA	NA
Finish: (0 . 05	59°F	Omph	0%	NIA	W/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and I	Habitat C	onditions; O	ther Activiti	es in the A	rea
Cypress,	open	Fields,	mount	rined	row,
pine 1004	hak	ntat, v	vhite	heror	2

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Blue Heron, Crows, woodstork, FSHIC × Z,

1

USFWS Crested Caracara Draft Survey Protocol – Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long: States 5

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
1/22/20	7:05	10:05	AB + SS

Survey begins 15 min prior to sunrise, lasting 3 hrs.

	Weather								
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog				
Start: 7:05	55°F	7mph N	07.	NA	N/A				
Finish: \ 0:05	6 5°F	GMPH NE	15%	Circos	N/A				

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area	
Maintained ROW, Cypress, Pine, passture land	

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
Station 5			Crow, Cattle ex ret, Grey Heron, Mocking bird Wood stork, White heron, Red bellied wood Recker Sandhill Cranes, Sher Munis Tox Se virrel
			Red shouldered Hawk, White I bis, Turkey, Vulture

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

	Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
1	2221	7:05	10:05	Nicole Cribbs Qual. Obsu.

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	548	calm	20%	Cimis	
Finish:	65°F	Sw 6 mph	_		

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Actualy grazed cattle pastures

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
	-		



Bald eagle (mature) flew from N -> perch in snag by US 98 Medowlarks in paofure nest in treeline to N Wood storks foraging in ag pond Wading birds- egets OSprey flyorer- ag pond. pasture GBH, antingn on island in pond

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/	Observatio	n Block/Lat	-Long: Black 4
Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021.01.22	700	1010	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

			v	Veather		
Time Air Tem		Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	100	54°	SW 5mph	0		low fog
Finish:	1010	68°	WSW 10 mph	0		_

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area white ibis, crow, red shalder howk, forkey vulture, ospray

US98 and pasture of pine \$ express

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
212121	6:59	9:59	Sam Szettyairi (1 sea.san)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

		V	Veather		
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6.59	44°F	SW 12mph	1007.	ALOUD STRATUS	NIA
Finish: 9-59	440F	NW 17mph	57.	Cinnus	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

open pasture, cypness damest

Observation Point Information

habitat

and

General Site and Habitat Conditions; Other Activities in the Area

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			(Mying w from SE), block vultures, need-bellied rolain, red should enhantly
			Roadkillipostum, raocoon, + cat

Feb 2x0 Sunrise Tilloam

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/	ocation/Observation Block/Lat-Long: <u>BLOCK (o</u>					
Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)			
2021-02-02	700	1015	PBRIFFIN			

Survey begins 15 min prior to sunrise, lasting 3 hrs.

		v	Veather		
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 700	43°	NNW 15mph	50%	stratus	
Finish: 1015	46°	NW 15mph	0	-	

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

pasture w/ cypress + pine cloups

crow, block & turkey vulture, woodstock

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc.

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long: 4

	Da	te	Start Time	Stop Time	Observer Name	(s) and Experi	ence Level(s)
2	3	21	6.59	9:59	Channon	Ladd	Qualitreo

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 12:59	3715	D	clear	none	
Finish:9'.59	48:F	8 mpn N	clear	none	

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and H	abitat Conditions; Other Activities in the Area	
maintaineo metrands	& vaaway elw wladjacer & pasture wl cattle	nt

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
6			



i.e

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/	UDServat	ION BIOCK/Lat	c-Long:	Sterrona	
Date	Start Time	Stop Time	Observe	r Name(s) and Expe	rience Level(s)
8/4	2/4 6:59 9:59		AB	and NC	
Survey begins 15	5 min prior to sur	nrise, lasting 3 hrs.			
		V	Veather	· · · · · · · · · · · · · · · · · · ·	
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:5	29 32°	0	15%	Cirrus	N/A
Finish: 9;	59 470	4 mph W	30%	Cirrus	N/A
Survey should no	ot be conducted	when rainy, foggy, or i	in wind exceedir	ng 15 mph.	
		Observation	Point Info	rmation	
General Site and Habitat Conditions; Other Activities in the Area					
Maint	ained	ROW, S	lash pin	le, Cypress,	Wax myr
Give Oa	K			ζ	

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			White Ibis, crow, wood stork Sandhill Crane, Tricolored Heron Mourning Dove

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/	Observatio	n Block/La	t-Long: BLOCK /
Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021-02-05	700	1000	PGRIFFIN
4021-02-03	100	1000	FARIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

			v	Veather		
Ti	me	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	700	46.	5 Lomph	10%	status	_
Finish:	1000	66	55W lluph	10%	stratus	

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

rural residential / agricultural

soudhill cranes, cows, egret, grackle, dove, blue bird, vulture, blue, oy

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

2

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Staton 5						
Date	Start Time	Stop Time	Observer Name(s) and Experience Level(
2/5/21	10:59	9:59	Sam	Stamar. Co	valified obs.)	
Survey begins 15	5 min prior to sur	nrise, lasting 3 hrs.	Veather	2.1 di	1	
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog	
Start: 0.5	1 43	4mph N	\°/۵	Cirros	NA	
Finish 9:59 04 DMONN 5%. CURVES N/A				NIA		
Survey should no	ot be conducted	when rainy, foggy, or i Observation	in wind exceedir Point Info	ng 15 mph. rmation		
General Sit	e and Habit	at Conditions; O	ther Activit	ties in the Area		
pasture, cypress, pine, mowed Row						

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
F	yovers		black/turkey vultures
P	erando	e L	red should ered hawik
FC	volgin	lg."	snowy egnet, cattle egnet
Otv	ler an w	mals:	shermon fox squirrel

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long:

Date	Start Time	Stop Time	Observer	Name(s) and Experie	ence Level(s)
	4:59	9:59	Shan	nen Ladd	qualit
Survey begins 1	5 min prior to sum	rise, lasting 3 hrs.	Veather		1
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	5942F	4mons	25%	CIVIUS	
Finish: 9	59104·F	10 mon s	30'/.	cumulys tuc	1
Survey should n	ot be conducted w	when rainy, foggy, or i Observation	n wind exceedin Point Info	ng 15 mph. rmation	
General Si	te and Habita	at Conditions; O	ther Activit	ies in the Area	
maint	ained	RW W	adio	icent past	uveland
w ca	the o	lvainage	dife	hes, I TOI	reald
udlal	nds			1 L .	

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

great equets flyover Daid lagie, adult, perched on shag crow perched on tree + toraging on growne Bet tiyover snews lgred perched on tree in OFFSiff pond in pasture meadowlanc audible + toraging in pusture baid eagle, adult, perched in offsito nest hawk (red - Shewidered or red-tailed) audible warber, yellow numbed perched on fince killder foraging in pasture turkey nitture typer

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54. Polk County / FPID 436673-1-22-01

Location/	Observatio	n Block/Lat	t-Long: BLack 7
Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021-02-19	645	9 50	PGRIFFIN

Manthan

Survey begins 15 min prior to sunrise, lasting 3 hrs.

ті	me	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	645	72°	SSW 8mph	50%	low stratus	-
Finish:	950	77*	SW 13mph	75%	loc strautos	-

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

pasture of pine + oak

bald eagle, great blue heron, woodstork

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: BLock Lo

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021-02-16	6:45	1000	PGRIFFIN
0		1	

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 645	62°	WNW 10	100 %	stratocomulus	_
Finish: 955	640	WNW 10	100%	statocomolos	_

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

agrindate posture w/ express pine

redtaled bank, black vulture, turkey withere, turkey, crow

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long: Station

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
217121	6:50	9:50	SS (one season)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather					
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 0 SD	56°F	swlemph	99%	stratus	hain off
Finish: 9:51	59°F	s 7mph	100%	stratus	Rainorto

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Residential houses, ope r, fine habitat

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
FI	Nover		Woodstork (NE) My THUI, great egret, black vulture, crow
P-	oroned		Dove, eastern bluebird, crow.
Fr	Iragu	g-	Sparrows, eastern bleveberd

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long: 2

Date	Star	t Time	Stop Time	Observer	Name(s) and Exper	ience Level(s)
2 17 21	le.	5D	9'.5D	Shann	ien Ladd	experien
Survey begins 1	5 min pr	ior to sun	rise, lasting 3 hrs. V	Veather		De L K
Time	1	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 10.5	DE	J0F	NW Lemph	95%	nimbostran	us N
Finish: 9'.5	50 5	59'F	NETMAN	100-1.	+ arostrarus	the Y
Survey should n	ot be co	nducted	when rainy, foggy, or i Observation	n wind exceedin Point Info	ng 15 mph. r mation	light vai
General Sit	te and	Habit	at Conditions; O	ther Activit	ies in the Area	
mainta lew d	ine	d k Lity	tw w a	that	· pasture	u and

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

neeking bud perch to trudover Nanders perched on tence + toraging in pasturo imerican volum toraging in pasturo great caret tryover tores perched on utrilities killdur toraging in pasture word stork tryover imercan even flyprer

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long: 4

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
21821	6:50	9:50	Allison Blakely, Niki Cirbbs

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather Air Wind Speed % Cloud **Cloud Type** Time Rain/Fog Temp and Direction Cover 100% cinus 8mph S Start: none aunulus Finish: none 10 mich SSE

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area open pastures

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
	-		
			1000



Great egret Turkey vulture Eagle fly infrom w, perched on power pole Meadow lark anhinga Woodstock flying over 9

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long: 5

Date	Start Time	Stop Time	Observe	erver Name(s) and Experience Level(s)		
2 18 21	1821 49 9:49		mann	on Lo	idd (Jualitia
Survey begins 15	i min prior to sur	nrise, lasting 3 hrs.	Veether			
		V	veather	1	12 III.	
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud	d Type	Rain/Fog
Start: 0 40	71.F	812 mpn	100'/.	Stratus	altran	<u> </u>
Finish: q' _4	-9 71·F	SIDMPN	5D%.	oum	ung	
Survey should no	ot be conducted	when rainy, foggy, or i	n wind exceedi	ng 1 <mark>5 m</mark> ph.		
		<u>Observation</u>	Point Info	rmation		
General Sit	e and Habit	at Conditions; O	ther Activi	ties in the	Area	
mainte	ained 1	RIW, WI C	aface	nt a	etwe	pasturelan
(cours	a her	ses), up	land <	porut	red, U	ienand
Forest	ed 9	len dei	vity	Veli	deit	al

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
	Ĩ.		

21000 flypoler Navaers perched on lench West level trypoler & toraging in roadside unitiand Sprey flypoler a perched on next in cell tower snowy egret foroging in roadside diten ed snowidered hawk perched in bak black mitures circling FSC pair toraging in oddsite pasture

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2/19/21	6:49	9;49	AB: Trainer NC: Qualified observe

Survey begins 15 min prior to sunrise, lasting 3 hrs.

	Weather						
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog		
Start:	72.	7moh N	952	Circus	N/A		
Finish:	TB	Woungh S	951	Cumulue	NA		

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and	Habitat Conditions; C	Other Activities in	the Area
maintained	Kolu, Cypress,	Sweet gum	Pasture, Slash The

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			American Crow, Cuttle Egred Sandhill crane Pair, wood Stork Mendow Lurk, ecotem phoebae Kullder, Bobio
			larnswallows, turley without Little Blue Horon Baild Eagle
			Redshoulded hawk

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: BLock 7

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021-03-01	645	1000	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

			V	Veather		
Time		Air Wind Speed Temp and Direction		% Cloud Cover	Cloud Type	Rain/Fog
Start:	645	69°	ENE 3mph	50%	stratus	-
Finish:	1000	73°	ESE Suph	5%	strutos	

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

improved posture w/ oals sypress pine

beld eagle; greater egret, red should red hank, wood stork

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: BLOCK Lo

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)		
2021.03.01	645	1000	PGRIFFIN		

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Time		Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	645	72°	55 mph	56%	low status	
Finish:	1000	780	SSW 10mph	50%	low stratos	

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph. Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

improved pastore w/ pine and cypress

sed tailed hawle, black villare, crow

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long:

Date Start Time		Stop Time Observer Name(s) an		e(s) and Expe	nd Experience Level(s)		
2	2	21	6:37	9:37	Shannon	Ladd	Qualitite

Survey begins 15 min prior to sunrise, lasting 3 hrs.

		v	veatner			
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Typ	е	Rain/Fog
Start: 637	TOF	STMP	1007.	altostrati	N	NO
Finish: 9:37	71'F	NE 4 mph	8870	Cumulus		NO
Survey should not be	conducted	when rainy, foggy, or i	n wind exceedin	ig 15 mph.	stva	nes

14/ - - Al- - ----

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

maintained KIV	v wl	ad gacent	ion	density
residemal T	catt	e pasture		×.

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			3

Ved shouldered hawk perched on Util. love perched on util. cathe egret in pasture + showl egrets Noud stark trybrer castern bluebird perched on util. Macking bird perched on util. macking bird perched on util. Now trybrer dack mittine tryprer aprest egret trybrer while Ibis toraging in pasture Sandhill crane Prybrer washers perched on ence

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)			
3221	6:37	9:37	Niki Gribbs Qual-Obs,			

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather							
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog		
Start:	70°F	Elemph	100	overcast	none		
Finish:	71°F	NF 4 mph	90	overcast	hono		

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

active pastures, Low density residential ranchettes Scattered cypress domes in open pastures laurel ooks + pine, church

Observations

Red shoulder Hawk perching on 7 Am. CVOW, mourning dove	Description of behavior, flight path, etc	Age A/Im Time
	Rodshoulder Hawk perching on por Am. CVOW, mourning dove	
Mocking birds perchang white ibis - flying + landing behin	Mocking birds perchange white ibis - flying + landing behind,	
Cattle egret fly aver meadow tark perching Rebring in participant	Meadow tark perching Relative in perching	
Pair of Eagle Flyover W > E	pair of eagle flyover W > E	

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long:

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
3/3/21	6:36	9:36	SS (one sen) AB

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather							
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog		
Start: 6:36	70°F	10mph E	100%	Cumulanimbus	Rain		
Finish: 9:30	70	6	98%	IL	A/A		

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

compastives, cypness domes, mowed/maintaina ROW

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Crow, Red shouldered haw k Centre caret
			Δ.
		144	

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Eocuciony	reaction, observation brock, Eat Long.						
Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)				
3/5/21	6:35	9:35	SS (are season)				

... ..

Survey begins 15 min prior to sunrise, lasting 3 hrs.

		V	veatner		
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6 35	46°F	5mph-South	5%	Cirris	NIA
Finish: $9:35$	61.F	5mph-Sound	0%		NA

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area open pastire, pine habitat, 4 cypress domes

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Flyovers: American Crow, black vulture
			Perched: Red Shouder hawk

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Observation Block /Lat.Long 8

Location / Observation Block / Lat-Long.							
Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)				
3 5 21	6:35	9:35	N. Cibbs- Qualified Allison				
urvey begins 15	min prior to sunris	e, lasting 3 hrs.	Pickel				

Weather							
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog		
Start:	440	10 mph	10%	high circus	light ground the		
Finish:	610	NNE SMPH	10'10		Clear		

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

pastures	whanches	and SI	mallerr	uval res	idences
live oaks	, lourd, cur	sven a	all ag p	ands	
nue cares	i iaccer, cyr	svera, Si	maliagp	over S	

Observations

Age A/Im	Time	Description of behavior, flight path, etc
		Osprey @ N cell towar, Osprey bring u
		CBH flyour to south matchattone
		IBis in presture
		Mall Vulles, ibis Flock
		robin in pasture
		meadow larks perching on wires
		Kingt (Atolia
		Swellow for kite over a show
		o wantow that cite ever pasime
	Age A/Im	Age A/Im Time
Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: BLOCK 7				
Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)	
3/19/2021	715	1030	PGRIFFIN	
Cuprent hearing di	ante malemán avende	a lasting 0 has	1 21 11 11 11	

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Tir	ne	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	715	60°	NW Triph	50%	stratus	
Finish:	1030	65°	NW 11 moh	50%	stratos	

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

pasture, pine/oak/cypress

woodstork, bald eagle, voltore, prow, redsholderhawk,

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
3/10	7:21	10:21	SS(one season) + AB (new)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather						
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog	
Start: 7:21	63°F	NYMPH	0%	NIA	NIA	
Finish: 10:21	74.4	N 8MpH	10%	Cumutus	NIA	

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Pasture, cypness domes, noned maintained R/W

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Porched: Robin, Limpkin
			Flyover: Crow, white ibis Great Blue Heron i WOODSTONE, builture



Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long:

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)		
3/17/21	7:20	10:20	Nicole Cribbs	Qualified	

Survey begins 15 min prior to sunrise, lasting 3 hrs.

+ homes, buildings

Weather						
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog	
Start:	63	SE 5 MPH	0	0	hone	
Finish:	74	S IO MPH	10%	Cimus	hone	

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area Rural residential nighbor hood, small pastures

Observations

(flight data, perching, preening, courtship, feeding, nest building, incubation, head throwback, diving, reaction to passing planes/traffic/pedestrians, other bird species, etc)

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			grackles
			anhunga flying - uses pond in Pront & how
			FSC (4) flying to N
			incorning doves on wire
			attle equets in pasture
			Suallaw teil lites - 4 over pasture
			REH ELINE N-S Wilhis
			ODH HYING H- OTINIS

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Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long: 51-4-60 4

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
3/17/21	7:20	10:20	SS and AB

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather					
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	63°F	0	0	NA	NA
Finish:	74	(0 mgh N	10%	Cirros	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
	Flyor	rers:	Crous, wood stork x2 Mourning dove, Meadowlark Warr withing for the
			Cattle Egrep

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/	Location/Observation Block/Lat-Long: BLOCK Lo						
Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)				
3/18/2021	715	1015	PGRIFFIN				

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather							
Time		Air Temp	Wind Speed and Direction	nd Speed % Cloud Direction Cover	Cloud Type	Rain/Fog	
Start:	715	670	5 8mph	100%	status	-	
Finish:	1015	75°	SSWI 10 mph	100%	stratus		

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

postore / pine and cypress hammeoles

furlicy, vulture, crows, red fooled hank

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
	$\boldsymbol{\langle}$		

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long:

	Date Start Time		Stop Time	Observer Name(s) and Experience Level(s)	
3	19:	21	7:18	10:18	Nicole Cribbs Qualified

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather							
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog		
Start:	60°F	Ð	25	cumulus	Ð		
Finish:	638F	WNW 14	90	t.	Ø		

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area					

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			mourning doves
			cattle egret
			modering biods
			Wood Stork tlying TO South
			Red shoulder hawk
			forkey valture
		25	
1			1

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: Section 5						
Start Time	Stop Time	Observer Name(s) and Experience Level(s)				
7:18	10:18	SS Lone seeson)				
	/Observation Start Time	/Observation Block/LatStart TimeStop Time7.1810.18				

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather								
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog			
Start: 7.18	58°F	OMPH	30%	CUMULUS	NM			
Finish: 10:18	63°F	14mph E	75%	cumulus	NA			

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

pasture, pine look habitat, cypness domes, mowed/ maintained verw

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
	Fhov	era	Woodstork (N), crow, FSHC (S), great eguet (N), ibises swallowtail Kite, black withe
	Percha	d:	Crow, pileated woodpecter

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long:

Date	Start Time	Ston Time	Observer Name(s) and Experience Level(s)
	oture mile		
3/3/2	7:04	10:04	55 and AB
0 1 1 4			

....

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Time Air Temp		Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 720	4 69°	4 mph ESE	40%	Cirros	N/A
Finish: 10,04	78	7mph SSE	502	Cirrus	N/A

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area					
Maintained	KOW, Small Slosh Pines, open land.				
Pasture,	roadway				

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
		Flyover	Red Shouldered hawk, Crow Great Egret, Vulture
		Perchin	8

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long:

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)		
4/2/2021	715	1015	PGRIFFIN		

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Time	е	Air Temp	Wind Speed % Cloud and Direction Cover			Cloud Type	Rain/Fog
Start: 1	115	44	N	9 mph	0		-
Finish: /	015	55°	N	15mph	0		-

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph. Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

pastures, oak pine cypress

wood storks great live heron, cuttle egrets, bald eagle, red shoulder hawk

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long:

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
44/1/21	7:03	10:03	SS (one season) + AB (training)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather						
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog	
Start: 7:03	66'F	OMPH	100%		Fog 100%.	
Finish: 10:03	70'F	8 MPH NNW	35 %	Cirrus	N/A	

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

appress trees, pasture, mowed Row

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Flyovers: crow, morning dove, FStIC
			Perched: cattle egrets

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: STATION Le

Date Star	t lime Stop lim	Observer Name(s) and Experience Level(s)		
4/01/21 71	15 1015	PGRIFFIN		

Manthan

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Ti	me	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	715	ldo"	calm	100%	Log /stratus	light fog
Finish:	1015	72-	NWI 10	100%	stratos	internition sprinkle

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Pastore w/ cypress & pine

Intermitten sprinkles

torkey, crow, greater egret, volture

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

INTJ-A

1STJ-T

ENFJ

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long:

	Date Start Time		Start Time	Stop Time	Observer Name(s) and Experience Level(s)		
4	1	21	7:03	10:64	Niki Cribbs Qualified		

Survey begins 15 min prior to sunrise, lasting 3 hrs.

		V	Veather		
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	66°F	Calm	50	cumulus	light fog
Finish:	70°F	NNW 8mph	60%	11	hone

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area				

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc	
			white ibis traging in residential p	enD
			Blue iay (mu)	
			SHC in pasture-walking (adult)	
			meadowlark	

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long:

I	Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4	22	7:02	10:02	Niki Cubbs Qualified

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	430F	Calm	Û	C	· Constitution
Finish:	520F	NNE 15mph	Ö	C	

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area			

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			white ibis
			meadowhile
			turkey vultures
			macking bird
			GBH flying over
			Crows

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long:

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
412121	7:02	10:02	SS (one season)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather						
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog	
Start: 7:62	44'F	10 MPH S	δ7.	NIA	N/A	
Finish: 10:02	52.F	15 MPHSW	07.	N/A	N/A	

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

pastine, append trees, oaks, mowed kow

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Flyovers: crows, ibis, great blue heron, black vulture
			Penched: Novin

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: STATION 7					
Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)		
4/16/2021	645	1000	PGRIFFIN		

Survey begins 15 min prior to sunrise, lasting 3 hrs.

			V	Veather		
Ti	me	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	445	65°	colm	-	-	thick fog
Finish:	1000	70°	NES	90%	stratacountus	-

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Pasture w/oak, pine + cypress

grookle, crow, wood stork, balel pagle, black volture

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/Observation Block/Lat-Long: STATION 5

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/13/2021	650	10:1D	PGRIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather						
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog	
Start: 650	56°	N/ Imph	-	-	Hin Fog	
Finish: 1010	73°	NINE Tuch	-	-		

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Pasturempine cypress

crows, bold eagle, greater egiet, black wilture

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
		~	

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long:

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/14/21	6:48	9:48	SS (are season)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather						
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog	
Start: 6:48	59 F	0 MPH	NIA	NIA	Fog 100%.	
Finish: $7:48$	72:F	9 MPH NW	30 1.	anus	NA	

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and H	labitat Conditions; Other	Activities in th	e Area	
residential	houses, moved	pastine,	oans, 4	pine

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Flyovers: itis, morning doves, muscovy duchs, great egret
			Perched: cardinal
			Foraging: catter egret

E853

USFWS Crested Caracara Draft Survey Protocol – Additional Guidance (2016-2017 Breeding Season)

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location, observation block, Eat Long					
	Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)	
4	142	6:48	9:48	Niki Cridos, Qualified	

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	6005-	NNE bingh	0	0	light fog
Finish:	72°F	ESE 9mph	25%	high civrus	clear

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area Active pasture, cypres dome wetlands

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc	
			movining dove - peuching on off whe	Pence
			meadow lank	
			white this	
			Great paret	
			Swallow tailed Kite	
			GBH	
			Snowy Egret @ Cerluert	

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

....

Location/Observation Block/Lat-Long: STADOH Ce Date Start Time Stop Time Observer Name(s) and Experience Le

Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/14/21	6:45	1000	PGRIFFIN
Survey begins 15	5 min prior to sunris	se, lasting 3 hrs.	

Woathor

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 6:45	58.	N 5mph	25%	cirros /status	theplow for
Finish: 10:00	720	SE 9 uph	25%	cirus + stratus	

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Pastore w/ cypress + pine

crow, red shoulder, black vulture + to key vulture

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location	obscivatio	SIT DIOCK/ Eur	Long. Option -
Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4/16	6:48	9:48	SS (one reason)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

	Weather							
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog			
Start: (2', 4 8	65F	O MPH	N/A	N /14	F07100%			
Finish: 9:48	69.F	OMPH	100%.	Stratus	W/A			

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

Marred Pow spastine, appress treet, pine, oaks

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Perched: Chow, Morning dere, northern medningbrid
			Flyover: libis, spanow, crow
			Hanagug: Ibis

E8 54

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long: 4

	Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4	162	1 6:48	9:48	Nicole Cribbs Qualified

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	\$5°F	Calm	Q	0	It. fog
Finish:	70°F	Calm	75	Gemelus	clear

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area				

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
			Verden lerk Hurkey vulture Swallow tail lite
Ð			mover ving dove

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Date	Start Time	Stop Time	Observer	Name(s) and Exper	ience Level(s)
2021-04-28	635	935	PBRIF	FIN	
urvey begins 15	min prior to sun	rise, lasting 3 hrs.			
		v	Veather		1
Time Air Temp		Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 63	5 58°	N@ 3mph	-		
Finish: 93	5 75°	EQ 9mph	-	—	_
survey should no	t be conducted	when rainy, foggy, or i	n wind exceeding	15 mph.	
General Site	e and Habit:	at Conditions: 0	ther Activitie	nation es in the Area	
		/			
great black	perchina, pre	vood slock, p	servations	, turky + block	volfore
(flight data, throwback, d	perching, pre-	veod s fork, s on to passing plan	servations feeding, nest nes/traffic/ped	building, incubation	n, head
(flight data, throwback, d Observer Location	perching, pre living, reaction Age A/Im	vood s fork , p observing, courtship, on to passing plan Time	servations feeding, nest hes/traffic/ped Description o	building, incubation estrians, other bird	n, head species, etc) path, etc

8

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/	Observatio	-Long: STATION 5	
Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
2021.04.26	635	935	TGIZIFFIN]

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 635	55'	CALM	-		low fog
Finish: 935	720	NE Lomph	-	-	

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph. Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

rural pasture w/ pine, oak, cypress

block veltore, red shoulder, crow, eagle

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc.

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01 Location/Observation Block/Lat-Long: Statute 1

Location/	Obset vat	IOII DIOCK/ Lat	-Long			
Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)			
4127 (0000)		(D03D0)	SS Can	e seaton)		
Survey begins 15	5 min prior to sur	nrise, lasting 3 hrs.	Veather			
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog	
Start:	0 108 F	WOMPH	45%	Cirrus	NIA	
Finish: 🐚 🏹	:3075F	W9MRH	15.1	11	NA	
Survey should no	ot be conducted	when rainy, foggy, or i Observation	in wind exceedin Point Info	ng 15 mph. r mation		
General Sit	e and Habit	at Conditions; 0	ther Activit	ies in the Area		
pasture	, when t	nels, oak, n	esidentia	al houses		

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
		Perchid	. red bellied wood peoper, FSHC, Orow
		Flyovers	:/bis,manning daves, blue, joy, black bird (grackle), muscary ducks sublicentail kites, osprey, Black withre

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

	Location/	Observatio	n Block/Lat	-Long: Station Lo
	Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
20	21_04_27	630	945	FORIFFIN

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Pastore of pine owel cypress

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 630	62°	NE Juph		_	
Finish: 945	75	NE 9mph	(

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

voltore, red tailed hank, forkes

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

lodation	UDUITALI	on broady had	
Date	Start Time	Stop Time	Observer Name(s) and Experience Level(s)
4128	6:36	9:36	SS (ane season)

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather

Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start: 12:36	59.F	S4 MPH	1.7	Cirrus	FUg (minimal)
Finish: $9:36$	72'F	WEMPH	1%	17	NA

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Conditions; Other Activities in the Area

pasture, cypress, pines, cabbage parmit, mowed kow

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
		Perched:	morning doves, normern mocking build
		Fhover:	crow, cattle egret, ibis, great blue heron, great egret, black vulture

Caracara Survey Form (updated 12/9/2016)

Project Name: US 98 (SR 35/700) from W. Socrum Loop Rd to S. of CR 54, Polk County / FPID 436673-1-22-01

Location/	Observatio	DI BIOCK/La	t-Long:	
Date	Start Time	Stop Time	Observer Name(s) a	nd Experience Level(s)
4/29/21	6:32A	9:35 A	Tia Norman	experienced

Survey begins 15 min prior to sunrise, lasting 3 hrs.

Weather % Cloud Air Wind Speed Cloud Type Rain/Fog Time Temp and Direction Cover 670 0% Start: none o moh min. graind 770 Finish: 10% cumulus m none

Survey should not be conducted when rainy, foggy, or in wind exceeding 15 mph.

Observation Point Information

General Site and Habitat Con	nditions; Other Activities in the Area

Observations

Age A/Im	Time	Description of behavior, flight path, etc
		meadopolarks (audible) perched on low ve boat tail grackles (perched/flyover) w - white ibis (Flyover) NW - great blue heron (Flyover)-NE
		- Sandhill Cranes (Foraging) - mourning dove (Flyouer - NE) - Swallow tail Kite circling block - cattle egrets (Flyouer - SE)
	12:309	Vultures observed foraging on dear carcass on east side of
	Age A/Im	Age A/Im Time

Caracara Survey Form (updated 12/9/2016)

Date	Start Time	Stop Time	Observer	Name(s) and Exper	ience Level(s)
4/30	6:34A	9:34A	Tia No	(man/experi	encod
urvey begins 1	5 min prior to sur	rise, lasting 3 hrs.			
		V	Veather		
Time	Air Temp	Wind Speed and Direction	% Cloud Cover	Cloud Type	Rain/Fog
Start:	(05°	Omph	20%	cirrus	none
Finish:	770	Comph WNW	50%	cumulus	none
urvey should n	ot be conducted	when rainy, foggy, or in Observation	n wind exceedin Point Infor	g 15 mph. mation	
General Sit	e and Habit	at Conditions: O	ther Activit	ies in the Area	

Observations

Observer Location	Age A/Im	Time	Description of behavior, flight path, etc
3			- crow (Flyarer - E) - black-bellied whistler ducks (flyover-s) - meadawlarks (audible, foraging, perdud)
			- white ibis (Flyover-W) - great egret (flyover-E) - cattle egrets (flyover-SW) + foraging - ved-bellied wordpecter (audible) - cardinals (audible)

APPENDIX G

Wood Stork Foraging Analysis

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

Wood Stork Foraging Analysis

Florida Department of Transportation

District One

SR 35 (US 98) PD&E Study

Limits of Project: From North of West Socrum Loop Road to South of CR 54

Polk County, Florida

Financial Management Number: 436673-1-22-01

ETDM Number: 14334

Date: October 2021

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.



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US 98 from W of Socrum Loop Rd to CR 54 FPID 436673-1-22-01

1 INTRODUCTION

The Florida Department of Transportation (FDOT) is conducting a Project Development & Environment (PD&E) study to evaluate alternatives for widening US 98 from north of West Socrum Loop Road to south of County Road (CR) 54 from a two-lane undivided highway to a four-lane divided highway in unincorporated Polk County, a distance of 8.7 miles. The proposed project includes accommodations for pedestrian and bicycle traffic, safety improvements, and signage. A project location map is provided in **Figure 1-1** below.



Figure 1-1 Project Location Map

In an effort to gather the information needed for the US Fish and Wildlife Service (USFWS) to initiate Section 7 Consultation as part of the PD&E Study, a Wood Stork Foraging Analysis has been prepared per the USFWSapproved "Wood Stork Foraging Habitat Assessment Methodology" dated July 12, 2012 (herein referred to as the "Methodology". The following sections outline the methodology and calculation of prey-base analysis, the assessment of loss of suitable foraging biomass, and potential mitigation alternatives. The goal of the exercise was to determine the amount of compensation required to offset the loss of suitable wood stork foraging habitat associated with the Proposed Project.

2 FORAGING ASSESSMENT METHODOLOGY

Wood stork foraging biomass calculations were conducted for all wetlands impacted by the proposed project that can be considered potential wood stork foraging habitat. The proposed project will result in a total of 23.48 acres of impact to potential wood stork foraging habitat. **Table 2-1** below lists the acreage of proposed impact, by wetland number and classification, to suitable wood stork foraging habitat within the project limits. The locations of individual wetlands are depicted on **Figure A-9** of the Natural Resources Evaluation Report that was prepared as part of the PD&E Study. These wetlands are located within existing right-of-way of US 98. Only temporary impacts to existing other surface waters (i.e., ditches) may occur to accommodate the proposed project as they are proposed to be replaced in-kind; therefore, no net loss of wood stork suitable foraging habitat is anticipated as a result of proposed impacts to other surface waters.

Wetland ID	FLUCFCS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres
WL 1	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.31
WL 2	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.07
WL 3	617 — Mixe <mark>d</mark> Wetland Hardwoods	PFO1C	Withlacoochee River	0.08
WL 4	617 – Mixed Wetland Hardwoods/641 – Freshwater Marsh	PFO1C/PEM1C	Withlacoochee River	0.51
WL 5	631 – Wetland Scrub	PSS1C	Withlacoochee River	<0.01
WL 6	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.05
WL 7	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.81
WL 8	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.70
WL 9	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.60
WL 10	630 – Forested Wetland Mix	PFO1/2C	Withlacoochee River	0.26
WL 11	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.03
WL 12	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.56
WL 13	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.76
WL 14	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.24
WL 15	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.31
WL 16	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.43
WL 17	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.15

 Table 2-1
 Proposed Impacts to Suitable Wood Stork Foraging Habitat

Watland ID	land ID ELLICECS Code and Description		Watershed/ERP	Acros	
wettand ID	FLOCFUS Code and Description	Classification	Basin	Acres	
WL 18	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.22	
WL 19	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.58	
WL 20	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.43	
WL 21	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05	
WL 22	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.27	
WL 23	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.12	
WL 24	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.15	
WL 25	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.21	
WL 26	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.30	
WL 27	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.47	
WL 28	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.09	
WL 29	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.25	
WL 30	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.01	
WL 31	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.56	
	617 – Mixed Wetland	PFO1C	Hillsborough River		
WL 32	Hardwoods			1.27	
WL 33	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.29	
WL 34	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05	
WL 35	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.09	
WL 36	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.03	
WL 37	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.25	
WL 38	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.21	
WL 39	641 – Fr <mark>esh</mark> water Marsh	PEM1C	Hillsborough River	0.30	
WL 40	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.13	
WL 41	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.05	
WL 42	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.67	
WL 43	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.33	
WL 44	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.45	
WL 45	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.38	
WL 46	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.41	
WL 47	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.35	
	617 – Mixed Wetland	PFO1C	Hillsborough River		
WL 48	Hardwoods			0.53	
WL 49	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.46	
	617 – Mixed Wetland	PFO1C	Hillsborough River	0.15	
WL 50	Hardwoods	PEO1C	Hillsborough River	0.15	
WL 51	Hardwoods	FIOIC	Thisborough Kiver	0.28	
WL 52	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.48	
WL 53	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.11	
WL 54	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.49	
WL 55	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.68	
WL 56	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.78	
WL 57	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.34	

Wetland ID	FLUCFCS Code and Description	USFWS Classification	Watershed/ERP Basin	Acres
WL 58	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.73
WL 59	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.52
WL 60	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.58
WL 61	641 – Freshwater Marsh	PEM1C	Hillsborough River	0.85
WL 62	621 – Cypress	PFO2C	Hillsborough River	0.87
WL 63	630 – Forested Wetland Mix	PFO1/2C	Hillsborough River	0.09
WL 64	631 – Wetland Scrub	PSS1C	Withlacoochee River	0.28
WL 65	641 – Freshwater Marsh	PEM1C	Withlacoochee River	0.42
			TOTAL	23.48

Sources: FDOT, 1999; Cowardin et al., 1979; FDA, 2021.

Wetlands were evaluated based on four parameters in accordance with the Methodology: the density of the vegetation within suitable wood stork foraging habitat, the hydroperiod of each impacted wetland, the size of available prey, and potential competition from other wading bird species.

To calculate the wood stork foraging biomass potentially lost as a result of the proposed project, each impacted wetland was assigned an appropriate hydroperiod class based on data collected during field reviews. Hydroperiod classes range from Class 1, which includes inundation for 0-60 days, to Class 7, which includes inundation for 330-365 days per year. The USFWS defines wetlands that are inundated for 0 to 180 days per year as having a "short hydroperiod" and includes Classes 1 through 3. Wetlands inundated for 180 days to 360 days per year are considered as having a "long hydroperiod" and include Classes 4 through 7 (as provided in Parameter 2- Wetland Hydroperiod of the Methodology). All wetlands included in the foraging analysis for the proposed project have short hydroperiods and determined to be within the hydroperiod Class 2 (inundated 60-120 days). The hydroperiod class table is found in Table WSM 4 of the Methodology.

Prior to conducting biomass calculations, the acreage of impact to each wetland was converted to square meters (m²). The conversion of 23.48 acres of total direct wetland impacts equates to 95,020 m².

The total biomass per hydroperiod class was established using Table WSM 11 in the Methodology. Each wetland was assigned a total biomass number based on class according to Table WSM 11. Using Table WSM 3 from the Methodology, each wetland was assigned a Wood Stork Foraging Suitability Index ranging from 1.00 for exotic coverage between 0-25 percent cover, 0.64 for exotic coverage between 26-50 percent, 0.37 for exotic coverage between 51-75 percent, and 0.03 for exotic coverage between 76-100 percent. The values used to determine the forage biomass loss is provided in **Table 2** below.

4

Hydroperiod Class ¹	Area (m²)	Average Percent Nuisance/Exotic Vegetation	Foraging Suitability Index	Total Biomass ²	Forage Biomass Lost (Kilograms) ³
Class 2	95,020	26-50	0.64	0.2015 gram/m ²	12.25

Table 2-2 Forage Biomass Lost

¹As defined by the USFWS Wood Stork Foraging Habitat Assessment Methodology dated July 12, 2012 (Table WSM 4). ² As defined by the USFWS Wood Stork Foraging Habitat Assessment Methodology dated July 12, 2012 (Table WSM 11). ³ Calculations based on total direct impact area (m2) multiplied by the total biomass hydroperiod and the exotic suitability foraging index. The total was divided by 1000 to convert to kilograms.

According to Kahl's estimate (1964), 201 kilograms of forage is required for a successful wood stork nest. Based on the proposed project's total biomass loss of 12.25 kilograms, this represents the loss of 0.06 nest.

3 CONCLUSION

To compensate for the loss of wood stork foraging habitat, the FDOT is committed to purchasing USFWSapproved wood stork credits from a mitigation bank that, at a minimum, offset 12.25 kilograms of short hydroperiod forage biomass losses. There are several private wetland mitigation banks available that service the Hillsborough River and Withlacoochee Watersheds, are state and federally permitted, and provide wood stork foraging habitat. Each wetland impact will be mitigated dependent on the watershed it occurs in to satisfy state and federal mitigation requirements. **Table 3-1** below lists the current permitted mitigation banks servicing the Hillsborough River and Withlacoochee River Watersheds. It is anticipated that the FDOT will purchase wetland credits from one or more of the banks listed below to offset the loss of the wetland functions and wood stork foraging habitat resulting from the proposed project.
Mitigation Bank	Watershed	Forested (F)/ Herbaceous (H) Credits
Hilochee	Withlacoochee River	F/H
Withlacoochee River	Withlacoochee River	F/H
Fox Branch	Hillsborough River	F/H
Hillsborough River	Hillsborough River	F/H
Two Rivers	Hillsborough River	F/H
Boarshead Ranch	Withlacoochee/Hillsborough River	F/H
Crooked River	Withlacoochee River	F/H
Wiggins Prairie	Hillsborough River	F/H
North Tampa	Hillsborough River	F
Green Swamp	Withlacoochee River	F

Table 3-1 Current Wetland Mitigations Bank Options

Conversion factors for the short hydroperiod will be dependent on the mitigation bank from which the FDOT chooses to purchase credits. As part of the PD&E Study, wetland impacts were assessed using the Uniform Mitigation Assessment Methodology (UMAM), Chapter 62-345, Florida Administrative Code. Based on the UMAM analyses performed, construction of the proposed project will result in the functional loss of approximately 14.93 credits (includes permanent and secondary wetland impacts).

Pursuant to the 2010 USFWS Wood Stork Effect Determination Key the Proposed Project is not located within 2,500 feet (0.47 mile) of an active nesting wood stork colony, and suitable foraging habitat will be compensated in accordance with Section 404(b) of the Clean Water Act and the USFWS Habitat Management Guidelines for the Wood Stork in the Southeast Region through purchase of federal credits at a federally approved mitigation bank. Based on this information, it has been determined that the proposed project "may affect, but is not likely to adversely affect" the Wood Stork.

APPENDIX H

Wetland Descriptions and Photos

APPENDIX H.1

Wetland Descriptions

Wetland 1 Watershed: Withlacoochee River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 1 is located within the northbound US 98 right-of-way approximately 0.3 mile northwest of Hall Road/West Socrum Loop Road. Wetland 1 consists of a primrose willow (*Ludwigia peruviana*)-dominated freshwater marsh that extends outside of the right-of-way into a forested wetland system. A pipe culvert that runs underneath US 98 connects Wetland 16 to other offsite wetland systems. Other vegetation present within Wetland 1 includes smartweed (*Polygonom* spp.), maidencane (*Panicum hemitomon*), bulrush (*Scirpus* sp.), and torpedo grass (*Panicum repens*). Dominant vegetation within the adjacent forested wetland system includes red maple (*Acer rubrum*) and water oak (*Quercus nigra*). During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 2

Watershed: Withlacoochee River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 2 is located within the northbound US 98 right-of-way approximately 0.6 mile northwest of Hall Road/West Socrum Loop Road. Wetland 2 is a maidencane-dominated freshwater marsh that extends outside of the right-of-way into a forested wetland system. Other vegetation present within Wetland 2 includes primrose willow, west Indian marshgrass (*Hymenachne amplexicaulis*), and smartweed. Vegetation observed within the wetland outside of the right-of-way consists of buttonbush (*Cephalanthus occidentalis*), Carolina willow (*Salix caroliniana*), and red maple. During the 2021 field reviews, the soils observed within Wetland 2 were saturated at the surface and comprised of organic matter indicating a dark surface. In addition to the saturation, hydrological indicators observed within this wetland system included water-stained leaves. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 3

Watershed: Withlacoochee River FLUCFCS: 617 – Mixed Wetland Hardwoods

USFWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 3 is located within the northbound US 98 right-of-way approximately 0.7 mile northwest of Hall Road/West Socrum Loop Road. Wetland 3 is a forested wetland that connects to other off-site wetlands via a cross drain that runs underneath US 98. Dominant vegetation within the canopy of Wetland 3 consists of red maple and water oak. Dominant groundcover species consists of primrose willow, beggarticks (*Bidens* sp.), limpograss (*Hemarthria altissima*), and elderberry (*Sambucus candadensis*). During the 2021 field reviews, the soils observed within Wetland 3 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 3 included a high water table, saturation, aquatic mosses/liverworts, elevated lichen lines, hummocks, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species that is routinely mowed with no hydrological indicators present.

Wetland 4

Watershed: Withlacoochee River FLUCFCS: 617 – Mixed Wetland Hardwoods/641 – Freshwater Marsh USFWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 4 is located within the northbound US 98 right-of-way approximately 0.2 mile southeast of the entrance to Gator Creek Preserve and extends outside of the project area. Wetland 4 is comprised of both a forested and herbaceous system and is connected to wetland systems outside of the project area via a cross drain that runs underneath US 98. Dominant vegetation within the canopy of the forested portion of Wetland 4 consists of red maple, water oak, and sweetbay (*Magnolia virginiana*). The subcanopy and groundcover of the forested portion of the wetland predominantly consists of elderberry, buttonbush, bushy bluestem (*Andropogon glomeratus*), Virginia chain fern (*Woodwardia virginica*), primrose willow, blackberry (*Rubus* sp.). The freshwater marsh portion of Wetland 4 is dominated with cattail (*Typha* sp.). During the 2021 field reviews, the soils observed within the wetland consisted of a dark surface with muck present. Hydrological indicators observed included elevated lichen lines, saturation, high water table, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 5

Watershed: Withlacoochee River

FLUCFCS: 631 – Wetland Scrub

USFWS: PSS1C – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 5 is a scrub-shrub wetland located within the northbound US 98 right-of-way less than 0.1 mile southeast of the entrance to Gator Creek Preserve that extends outside of the right-of-way. Wetland 5 predominantly consists of red maple saplings, buttonbush, redroot (*Lachnanthes caroliana*), sand cordgrass (*Spartina bakeri*), coinwort (*Centella erecta*), and Virginia chain fern. During the 2021 field reviews, the soils observed within Wetland 5 consisted of a dark surface and oxidized rhizophores. Hydrological indicators observed included elevated lichen lines, water-stained leaves, and water marks. The adjacent uplands within the right-of-way consist of pine saplings (*Pinus* sp.), chalky bluestem, and redroot with sandy soils and no hydrological indicators present.

Wetland 6

Watershed: Withlacoochee River FLUCFCS: 630 – Wetland Forested Mixed USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 6 is a forested wetland located within the northbound US 98 right-of-way approximately 0.2 mile northwest of the entrance to Gator Creek Preserve. Wetland 6 extends outside of the right-of-way into a larger wetland system. The dominant vegetation within the canopy of this wetland consists of red maple and bald cypress (*Taxodium distichum*). The subcanopy and groundcover is comprised of cabbage palm (*Sabal palmetto*), wax myrtle (*Morella cerifera*), persimmon (*Diospyros virginiana*), and elderberry. During the 2021 field reviews, the soils observed within Wetland 6 consisted of a dark surface with muck present. Hydrological indicators observed included aquatic mosses/liverworts, elevated lichen lines, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material and sandy soils with no hydrological indicators present.

Wetland 7 Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 7 is located within the northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Within the right-of-way, Wetland 7 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland community. Dominant vegetation within Wetland 7 includes primrose willow, bulrush, false hop sedge (*Carex lupuliformis*), smartweed, Virginia chain fern, netted chain fern (*Woodwardia areolate*), St. Augustine grass (*Stenotaphrum secundatum*), and red maple saplings. The canopy of the forested wetland adjacent to the right-of-way is comprised of cypress and water oak. During the 2021 field reviews, the soils observed within Wetland 7 included water-stained leaves, saturation, adventitious rooting, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 8

Watershed: Hillsborough River FLUCFCS: 630 – Wetland Forested Mixed USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 8 is located directly northwest of Pioneer Drive within the northbound US 98 right-of-way. Wetland 8 is a forested wetland community that extends beyond the right-of-way into a larger system and connects to other wetland systems via a cross drain that runs underneath US 98. Dominant vegetation within the canopy of Wetland 8 consists of red maple, sweetbay, sweet gum (*Liquidambar styraciflua*), and bald cypress. Groundcover species predominantly consists of wild taro (*Colocasia esculenta*), primrose willow, and maidencane. During the field reviews, the soils observed within Wetland 8 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 8 included aquatic mosses/liverworts, elevated lichen lines, crayfish burrows, buttressing, hummocks, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 9

Watershed: Withlacoochee River

FLUCFCS: 630 – Wetland Forested Mixed

USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 9 is located less than 0.1 mile southeast of the entrance to Gator Creek Campground within the northbound US 98 right-of-way. Wetland 9 is a forested wetland system that extends beyond the right-of-way. Dominant vegetation within the canopy consists of bald cypress, red maple, water oak, and laurel oak (*Q. laurefolia*). The subcanopy and groundcover predominately consists of wax myrtle, primrose willow, Virginia chain fern, bluestem, bulrush, and paragrass (*Urochloa mutica*). During the 2021 field reviews, the soils observed within Wetland 9 consisted of a dark surface within muck present. Hydrological indicators observed within Wetland 9 included high water table, elevated lichen lines, buttressed trunks, water-stained leaves, saturation, hummocks, water marks, and adventitious rooting. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 10 Watershed: Withlacoochee River FLUCFCS: 630 – Wetland Forested Mixed USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 10 is located directly north of the entrance to the Gator Creek Campground within the northbound US 98 right-of-way. This forested wetland system extends beyond the right-of-way and connects to other wetlands via a cross drain that runs underneath US 98. Dominant vegetation within the canopy of Wetland 10 consists of red maple, bald cypress, sweet bay, and red bay (*Persea borbonia*). The subcanopy and groundcover predominantly consists of primrose willow, paragrass, and torpedo grass. During the field reviews, the soils observed within Wetland 10 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 10 included saturation, high water table, adventitious rooting, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 11

Watershed: Withlacoochee River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 11 is located approximately 0.1 mile southeast of Earnest Road within the northbound US 98 right-of-way. This herbaceous wetland extends into a forested wetland system beyond the right-of-way and connects to other wetlands via a cross drain that runs underneath US 98. Dominant vegetation within Wetland 11 consists of alligatorweed (*Alternanthera philoxeroides*), torpedo grass, sesban (*Sesbania* sp.), maidencane, smartweed, barnyard grass (*Echinochloa* sp.), and primrose willow. Adjacent to the right-of-way, this wetland system consists of red maple. During the 2021 field reviews, this wetland was inundated throughout. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 12

Watershed: Withlacoochee River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 12 is located directly northwest of Earnest Road within the northbound US 98 right-of-way. This herbaceous wetland extends into a forested wetland system beyond the right-of-way into a forested wetland system. Dominant vegetation within Wetland 12 consists of Carolina willow, red maple saplings, primrose willow, smartweed, barnyard grass, fireflag (*Thalia geniculata*), golden canna (*Canna flacida*), soft rush (*Juncus effusus*), Virginia chain fern, lizard's tail (*Saururus cernuus*), and bulrush. Adjacent to the right-of-way, this wetland system consists of red maple and cypress. During the 2021 field reviews, this wetland was inundated throughout with water levels ranging from six to 12 inches. In addition to surface water presence, hydrological indicators observed within Wetland 12 included water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 13 Watershed: Withlacoochee River

FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 13 is located approximately 0.1 mile southeast of Perkle Road within the northbound US 98 rightof-way. This wetland extends into a forested wetland system outside of the right-of-way and is connected to other wetland systems via a cross drain that runs underneath US 98. Dominant vegetation within Wetland 13 consists of Carolina willow, saltbush (*Baccharis halimifolia*), caesarweed (*Urena lobata*), Mexican primrose willow (*Ludwigia octovalvis*), and shield fern (*Thelypteris* sp.). The forested wetland community adjacent to the right-of-way consists of cypress and red maple. During the 2021 field reviews, the soils observed within Wetland 13 consisted of a dark surface with muck present. Hydrological indicators observed included aquatic mosses/liverworts and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 14

Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh

USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 14 is located within the northbound US 98 right-of-way approximately 0.1 mile northwest of Perkle Road. Within the right-of-way, Wetland 14 is comprised of an herbaceous wetland community that connects to a small forested system outside of the right-of-way. Dominant vegetation within Wetland 14 consists of red maple saplings, barnyard grass, primrose willow, water pennywort (*Hydrocotyle umbrellata*), coinwort, smartweed, and soft rush. Adjacent to the right-of-way, the forested canopy consists of red maple and cypress. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 12 inches. Evidence of wildlife observed included small fish and crayfish burrows. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 15

Watershed: Hillsborough River

FLUCFCS: 641 – Freshwater Marsh

USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 15 is located approximately 0.4 mile northwest of Perkle Road within the northbound US 98 right-of-way. Within the right-of-way, Wetland 15 is comprised of an herbaceous wetland community that connects to a small forested system outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 15 to other offsite wetland systems. Dominant vegetation within this wetland consists of Carolina willow, primrose willow, cattail, Virginia chain fern, and west Indian marshgrass. Adjacent to the right-of-way, the forested canopy consists of cypress and water oak. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 12 inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 16 Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 16 is located approximately 0.1 mile southeast of Keen Road within the northbound US 98 rightof-way. Within the right-of-way, Wetland 16 is comprised of a primrose willow-dominated freshwater marsh that connects to a small forested system outside of the right-of-way. A pipe culvert that runs underneath US 98 connects Wetland 16 to other offsite wetland systems. Other vegetation present includes smartweed, and loosestrife (*Lythrum alatum*). Adjacent to the right-of-way, the forested canopy consists of cypress and red maple. During the 2021 field reviews, this wetland was inundated throughout with water levels reaching greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 17

Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh

USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 17 is located approximately 0.1 mile southeast of Lakeland Acres Road within the northbound US 98 right-of-way. Wetland 17 is comprised of an herbaceous wetland community dominated with torpedo grass that extends into a small forested system outside of the right-of-way. Other vegetation present includes primrose willow and smartweed. Upland habitat consisting of pine and oak species occurs outside of the right-of-way adjacent to the wetland. During the 2021 field reviews, the soils observed within Wetland 17 consisted of a dark surface. Hydrological indicators observed included surface water ranging in depths of one to four inches deep and a high water table. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 18

Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 18 is located directly across from Lakeland Acres Road within the northbound US 98 right-ofway. This wetland is an herbaceous system dominated by torpedo grass that extends into a forested wetland system outside of the right-of-way. Other vegetation present include sand cordgrass, primrose willow, and sesban. The forested wetland community adjacent to the right-of-way consists of cypress and red maple. During the 2021 field reviews, the soils observed within Wetland 18 consisted of a dark surface with muck present. Hydrological indicators observed included saturation and a high water table. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 19 Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 19 is located approximately 0.5 mile northwest of Lakeland Acres Road within the northbound US 98 right-of-way. Within the right-of-way, Wetland 19 is comprised of an herbaceous wetland community that connects to a forested system outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 19 to other offsite wetland systems. Dominant vegetation within this wetland consists of torpedo grass, primrose willow, foxtail (*Setaria parviflora*), loosestrife, cattail, Virginia chain fern, buttonbush, and pickerelweed (*Pontederia cordata*). Adjacent to the right-of-way, the forested canopy consists of cypress and red maple. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. Evidence of wildlife observed included a great egret (*Ardea alba*) foraging in Wetland 19 during the 2021 field review. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 20

Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 20 is located at the Duke Energy utility easement within the northbound US 98 right-of-way. Within the right-of-way, Wetland 20 is comprised of an herbaceous wetland community dominated by primrose willow that connects to a larger wetland system outside of the right-of-way. A pipe culvert runs underneath US 98 connects Wetland 20 to other offsite wetland systems. Other vegetation present includes of foxtail, cattail, loosestrife, Virginia chain fern, bulrush, and pickerelweed. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 21

Watershed: Hillsborough River

FLUCFCS: 641 – Freshwater Marsh

USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 21 is located approximately 0.1 mile northwest of the Duke Energy utility easement within the northbound US 98 right-of-way. Within the right-of-way, Wetland 21 is comprised of a torpedo-grass dominated freshwater marsh that extends outside of the right-of-way. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrological indicators observed within Wetland 21 on or near the fence posts included elevated lichen lines, hummocks, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 22 Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 22 is located within the northbound US 98 right-of-way approximately 0.2 mile northwest of the Duke Energy utility easement. Within the right-of-way, Wetland 22 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 22 includes maidencane, barnyard grass, and sesbania. Adjacent to the right-of-way, the forested canopy consists of cypress and red maple. During the 2021 field reviews, the soils observed within Wetland 22 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 22 included surface water and a high water table. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 23 Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 23 is located within the northbound US 98 right-of-way approximately 0.3 mile northwest of the Duke Energy utility easement. Within the right-of-way, Wetland 23 is comprised of freshwater marsh habitat that extends outside of the right-of-way. Dominant vegetation within Wetland 23 includes torpedo grass, maidencane, buttonweed (*Diodia virginiana*), foxtail grass, arrowhead (*Sagittaria graminea*), coinwort, and natal grass (*Melanis repens*). Adjacent to the right-of-way, the freshwater marsh continues approximately 25 feet north before abutting mesic pine forest with saw palmetto. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than four inches. In addition to surface water and aquatic vegetation, hydrological indicators observed within Wetland 23 on or near the fence posts included water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 24

Watershed: Hillsborough River

FLUCFCS: 641 – Freshwater Marsh

USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 24 is located within the northbound US 98 right-of-way approximately 0.6 mile northwest of the Duke Energy utility easement. This wetland is comprised of a freshwater marsh that extends into a forested wetland system outside of the right-of-way and is connected to other wetland systems via a cross drain that runs underneath US 98. Dominant vegetation within Wetland 24 includes torpedo grass and maidencane with foxtail grass, Virginia chain fern, sesbania, and primrose willow. Adjacent to the right-of-way, the freshwater marsh continues approximately 25 feet north before abutting a forested wetland dominated by red maple and cypress. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrological indicators observed within Wetland 24 on or near the fence posts included water marks and elevated lichen lines. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 25 Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 25 is located within the northbound US 98 right-of-way approximately 0.7 mile northwest of the Duke Energy utility easement. Within the right-of-way, Wetland 25 is comprised of maidencanedominated freshwater marsh. Adjacent to the right-of-way is upland planted pine. During the 2021 field reviews, the soils observed within Wetland 25 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 25 included surface water and a high water table. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 26

Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 26 is located within the northbound US 98 right-of-way approximately 1.0 mile northwest of the Duke Energy utility easement. Within the right-of-way, Wetland 26 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a scrub-shrub wetland. Dominant vegetation within Wetland 26 includes torpedo grass and maidencane with barnyard grass, primrose willow, bulrush. Adjacent to the right-of-way, the scrub-shrub wetland consists predominantly of buttonbush. During the 2021 field reviews, the soils observed within Wetland 26 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 26 included surface water, water marks on the fence posts, and a high water table. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 27

Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 27 is located within the northbound US 98 right-of-way approximately 0.75 mile southeast of SR 471. Within the right-of-way, Wetland 27 is comprised of freshwater marsh habitat that extends outside of the right-of-way. Dominant vegetation within Wetland 27 includes maidencane with torpedo grass, barnyard grass, arrowhead, and buttonweed. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 28 Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 28 is located within the northbound US 98 right-of-way approximately 0.6 mile southeast of SR 471. Within the right-of-way, Wetland 28 is comprised of a maidencane-dominated freshwater marsh that

extends outside of the right-of-way. Additional vegetation present includes primrose willow and red maple saplings along the right-of-way fence. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 29

Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 29 is located within the northbound US 98 right-of-way approximately 0.4 mile southeast of SR 471. Within the right-of-way, Wetland 29 is comprised of freshwater marsh habitat that extends outside of the right-of-way and connects to a forested wetland system. Dominant vegetation within Wetland 29 includes maidencane and alligatorweed. Additional vegetation present along the right-of-way includes primrose willow and saltbush. Adjacent to the right-of-way, herbaceous wetland habitat consists of pickerelweed, and the forested canopy is dominated by cypress and red maple. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrological indicators observed included water marks on the fence posts. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 30

Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 30 is located within the northbound US 98 right-of-way approximately 0.3 mile southeast of SR 471. Within the right-of-way, Wetland 30 is comprised of freshwater marsh habitat that extends outside of the right-of-way. Dominant vegetation within Wetland 30 includes maidencane, arrowhead, buttonweed, coinwort, sand cordgrass, and bahiagrass (*Paspalum notatum*). During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water and aquatic vegetation, hydrological indicators observed included water marks on the fence posts. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 31 Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 31 is located within the northbound US 98 right-of-way directly northwest of SR 471. Within the right-of-way, Wetland 31 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. A cross drain that runs underneath US 98 connects Wetland 31 to other offsite wetland systems. Dominant vegetation within Wetland 31 includes paragrass and torpedo grass with barnyard grass, and primrose willow. The forested wetland outside of the right-of-way consists of cypress, red maple, and fireflag. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. Evidence of wildlife observed within Wetland 31 included frogs.

The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 32

Watershed: Hillsborough River FLUCFCS: 617 – Mixed Wetland Hardwoods USFWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 32 is located on the east side of SR 471, north of US 98. Within the right-of-way, Wetland 32 is comprised of a forested wetland. Dominant vegetation within Wetland 32 includes red maple, water oak, Carolina willow, and persimmon. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than three inches and littered with trash. Adjacent land cover outside of the right-of-way consists of planted pine. In addition to surface water, hydrological indicators observed liverworts, elevated lichen lines, hummocks, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 33 Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 33 is located within the southbound US 98 right-of-way approximately 260 feet southeast of CR 54. Within the right-of-way, Wetland 33 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland system. Dominant vegetation within Wetland 33 includes alligatorweed and torpedo grass with primrose willow, bahiagrass, smartweed, and maidencane. Adjacent to the right-of-way, the forested wetland canopy consists of cypress and red maple. During the 2021 field reviews, the soils observed within Wetland 33 consisted of a dark surface with muck present. Hydrological indicators observed included surface water and a high water table. The majority of Wetland 33 appeared to be disturbed by truck and equipment rutting throughout the right-of-way. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 34

Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 34 is located within the southbound US 98 right-of-way approximately 0.1 mile southeast of Old Dade City Road. Within the right-of-way, Wetland 34 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 34 includes torpedo grass, maidencane, and smartweed. The forested wetland adjacent to the right-of-way consists of cypress. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrological indicators observed included cypress knees. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 35 Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 35 is located within the southbound US 98 right-of-way approximately 0.4 mile southeast of Old Dade City Road. Within the right-of-way, Wetland 35 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 35 includes torpedo grass with some bulrush. The forested wetland adjacent to the right-of-way consists of red maple and Chinese tallow (*Triadica sebifera*). During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 36

Watershed: Hillsborough River

FLUCFCS: 641 – Freshwater Marsh

USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 36 is located within the southbound US 98 right-of-way approximately 0.5 mile southeast of Old Dade City Road. Within the right-of-way, Wetland 36 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 36 includes torpedo grass with maidencane, foxtail grass, arrowhead, dogfennel (*Eupatorium capillifolium*), and bahiagrass. The forested wetland adjacent to the right-of-way consists of red maple, water oak, and Chinese tallow. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water and aquatic vegetation, hydrologic indicators observed included liverworts, and algal mats. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 37

Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 37 is located within the southbound US 98 right-of-way approximately 0.4 mile northwest of SR 471. Within the right-of-way, Wetland 37 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 37 includes maidencane, alligatorweed, and pickerelweed. The forested wetland adjacent to the right-of-way consists of red maple, water oak, cypress, and wax myrtle. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 38 Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 38 is located within the southbound US 98 right-of-way approximately 0.1 mile northwest of SR 471. Within the right-of-way, Wetland 38 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. A cross drain that runs underneath US 98 connects Wetland 38 to other offsite wetland systems. Dominant vegetation within Wetland 38 includes torpedo grass, smartweed, pickerelweed, maidencane, foxtail grass, primrose willow, Mexican primrose (*Ludwigia octovalvis*), elderberry, and red maple saplings. The forested wetland adjacent to the right-of-way consists of red maple, water oak, and cypress. During the 2021 field reviews, the soils observed within Wetland 38 included liverworts, high water table, and water marks. Evidence of wildlife observed within Wetland 38 included small fish and tadpoles. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 39

Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 39 is located within the southbound US 98 right-of-way approximately 0.4 mile southeast of SR 471. Within the right-of-way, Wetland 39 is comprised of freshwater marsh habitat that extends outside of the right-of-way. Dominant vegetation within Wetland 39 includes foxtail, sesban, beakrush (*Rhynchospora* spp.), primrose willow, and blue maidencane (*Amphicarpum muehlenbergianum*). During the 2021 field reviews, the soils observed within Wetland 39 consisted of a dark surface with muck present. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 40

Watershed: Hillsborough River

FLUCFCS: 641 – Freshwater Marsh

USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 40 is located within the southbound US 98 right-of-way approximately 0.5 mile southeast of SR 471. Within the right-of-way, Wetland 40 is comprised of freshwater marsh habitat that extends outside of the right-of-way. Dominant vegetation within Wetland 40 includes West Indian marshgrass, alligatorweed, torpedo grass, maidencane, and soft rush. Adjacent to the right-of-way, the freshwater marsh continues approximately 25 feet south before abutting a forested wetland dominated by red maple and cypress. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 12 inches. In addition to surface water, hydrologic indicators observed included elevated lichen lines and water marks on the fence posts. Evidence of wildlife observed within the wetland included frogs. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 41 Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 41 is located within the southbound US 98 right-of-way approximately 0.6 mile southeast of SR 471. Within the right-of-way, Wetland 41 is comprised of freshwater marsh habitat that extends outside of the right-of-way. Dominant vegetation within Wetland 41 includes torpedo grass with red maple saplings, arrowhead, maidencane, alligatorweed, and soft rush. Adjacent to the right-of-way, the freshwater marsh continues approximately 25 feet south before abutting a forested wetland dominated by red maple and cypress. During the 2021 field reviews, the soils observed within Wetland 41 included of a dark surface with muck present. Hydrologic indicators observed within Wetland 41 included liverworts, elevated lichen lines and water marks on the fence posts, surface water, and high water table. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 42

Watershed: Hillsborough River

FLUCFCS: 641 – Freshwater Marsh

USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 42 is located within the southbound US 98 right-of-way approximately 0.8 mile southeast of SR 471. Within the right-of-way, Wetland 42 is comprised of a primrose willow-dominated freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 42 includes primrose willow with cattail, and pickerelweed. The forested wetland adjacent to the right-of-way consists of red maple and cypress. During the 2021 field reviews, the soils observed within Wetland 42 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 42 included elevated lichens and waters marks on the fence posts, and surface water. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 43

Watershed: Hillsborough River

FLUCFCS: 641 – Freshwater Marsh

USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 43 is located within the southbound US 98 right-of-way approximately 0.9 mile southeast of SR 471. Within the right-of-way, Wetland 43 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 43 includes torpedo grass and alligatorweed with pickerelweed, soft rush, and spatterdock (*Nuphar advena*). The forested wetland adjacent to the right-of-way consists of cypress. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 12 inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 44 Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 44 is located within the southbound US 98 right-of-way approximately 0.9 mile northwest of the Duke Energy utility easement. Within the right-of-way, Wetland 44 is comprised of freshwater marsh habitat that extends outside of the right-of-way. Dominant vegetation within Wetland 44 includes alligatorweed, torpedo grass, primrose willow, maidencane, buttownwood, arrowhead, and water hyssop (*Bacopa* sp.). Adjacent to the right-of-way, the freshwater marsh continues beyond 25 feet south before abutting a forested wetland dominated by red maple and cypress. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 45

Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 45 is located within the southbound US 98 right-of-way approximately 0.2 mile northwest of the Duke Energy utility easement. Within the right-of-way, Wetland 45 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 45 includes primrose willow, pickerelweed, maidencane, barnyard grass, and alligatorweed. The forested wetland adjacent to the right-of-way consists of red maple, cypress, dahoon holly (*llex cassine*), buttonbush, and soft rush. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 10 inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 46

Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 46 is located within the southbound US 98 right-of-way approximately 0.1 mile northwest of the Duke Energy utility easement. Within the right-of-way, Wetland 46 is comprised of freshwater marsh habitat that extends outside of the right-of-way into a forested wetland. Dominant vegetation within Wetland 46 includes maidencane, barnyard grass, sand cordgrass, buttonweed, Virginia chain fern, and primrose willow. The forested wetland adjacent to the right-of-way consists of red maple, cypress, and buttonbush. During the 2021 field reviews, the soils observed within Wetland 46 included a high water table and surface water. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 47 Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 47 is located within the southbound US 98 right-of-way at the Duke Energy utility easement. Within the right-of-way, Wetland 47 is comprised of a cattail-dominated freshwater marsh habitat that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 47 to other offsite wetland systems. Other vegetation present includes Carolina willow, pickerelweed, primrose willow, and torpedo grass. The forested wetland adjacent to the right-of-way consists of red maple and cypress. During the 2021 field reviews, the soils observed within Wetland 47 consisted of a dark surface with muck present. Hydrological indicators observed within Wetland 47 included surface water presence. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 48

Watershed: Hillsborough River FLUCFCS: 617 – Mixed Wetland Hardwoods USFWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 48 is located within the southbound US 98 right-of-way directly southeast of the Duke Energy utility easement. Wetland 48 is comprised of a forested wetland system that extends outside of the right-of-way. Dominant vegetation within the canopy of Wetland 48 includes water oak, swamp bay (*Persea palustris*), laural oak (*Quercus laurifolia*), and red maple. The understory and groundcover predominantly consist of wax myrtle, Virginia chain fern, and maiden fern (*Thelyptris* sp.). During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrologic indicators observed included mosses, elevated lichen lines, hummocks, water marks, and adventitious rooting. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 49

Watershed: Hillsborough River

FLUCFCS: 630 – Wetland Forested Mixed

USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 49 is located within the southbound US 98 right-of-way approximately 0.4 mile northwest of Lakeland Acres Road. Wetland 49 is comprised of a forested wetland system that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 49 to other offsite wetland systems. Dominant vegetation within the canopy of Wetland 49 includes cypress, Chinese tallow, and red maple. The understory and groundcover predominantly consist of Carolina willow, primrose willow, soft rush, and maidencane. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrologic indicators observed included elevated lichen lines and cypress knees. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 50 Watershed: Hillsborough River FLUCFCS: 617 – Mixed Wetland Hardwoods USFWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 50 is located within the southbound US 98 right-of-way approximately 0.5 mile northwest of Lakeland Acres Road. Wetland 50 is comprised of a forested wetland system that extends outside of the right-of-way. Dominant vegetation within the canopy of Wetland 50 includes red maple and water oak. The understory and groundcover predominantly consist of primrose willow, whitetop sedge (*Rhynchospora colorata*), creeping oxeye (*Sphagneticola trilobata*), Virginia chain fern, wax myrtle, and bahia grass. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. In addition to surface water, hydrologic indicators observed included water-stained leaves and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 51

Watershed: Hillsborough River FLUCFCS: 617 – Mixed Wetland Hardwoods USFWS: PFO1C – Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 51 is located within the southbound US 98 right-of-way approximately 0.2 mile northwest of Lakeland Acres Road. Wetland 51 is comprised of a forested wetland system that extends outside of the right-of-way. Dominant vegetation within the canopy of Wetland 51 includes red maple and water oak. The understory and groundcover predominantly consist of primrose willow, Virginia chain fern, and elderberry. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. In addition to surface water, hydrologic indicators observed included water-stained leaves, hummocks, and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 52

Watershed: Hillsborough River

FLUCFCS: 630 – Wetland Forested Mixed

USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 52 is located within the southbound US 98 right-of-way approximately 0.1 mile southeast of Keen Road. Wetland 52 is comprised of a forested wetland system that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 52 to other offsite wetland systems. Dominant vegetation within the canopy of Wetland 52 includes cypress, red maple, and water oak. The understory and groundcover predominantly consist of primrose willow and Virginia chain fern. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 12 inches. In addition to surface water, hydrologic indicators observed included water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 53 Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 53 is located within the southbound US 98 right-of-way approximately 0.5 mile southeast of Keen Road. Wetland 53 is comprised of a primrose willow-dominated freshwater marsh that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 53 to other offsite wetland systems. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. In addition to surface water, hydrologic indicators observed included water-stained leaves and water marks. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 54

Watershed: Hillsborough River FLUCFCS: 630 – Wetland Forested Mixed USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 54 is located within the southbound US 98 right-of-way approximately 0.4 mile northwest of Perkle Road. Wetland 54 is comprised of a forested wetland system that extends outside of the right-ofway. A cross drain that runs underneath US 98 connects Wetland 54 to other offsite wetland systems. Dominant vegetation within the canopy of Wetland 54 includes cypress, red maple, and water oak. The understory and groundcover predominantly consist of primrose willow. During the 2021 field reviews, this wetland was inundated throughout. In addition to surface water, hydrologic indicators observed included water marks, elevated lichen lines, moss, and adventitious rooting. The adjacent uplands within the rightof-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 55

Watershed: Hillsborough River

FLUCFCS: 630 – Wetland Forested Mixed

USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 55 is located within the southbound US 98 right-of-way adjacent to the east side of Old Soldier Road. Wetland 55 is comprised of a forested wetland system that extends outside of the right-of-way. Dominant vegetation within the canopy of Wetland 55 includes cypress, red maple, and water oak. The understory and groundcover predominantly consist of Virginia chain fern, netted chain fern, maiden fern, pickerelweed, and cattail. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 56 Watershed: Hillsborough River FLUCFCS: 630 – Wetland Forested Mixed USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 56 is located within the southbound US 98 right-of-way less than 0.1 mile southeast of Perkle Road. Wetland 56 is comprised of a forested wetland system that extends outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland 56 to other offsite wetland systems. Dominant vegetation within the canopy of Wetland 56 includes cypress, red maple, and water oak. The understory and groundcover predominantly consist of Virginia chain fern and primrose willow. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 57

Watershed: Hillsborough River FLUCFCS: 630 – Wetland Forested Mixed USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 57 is located within the southbound US 98 right-of-way approximately 0.2 mile northwest of Earnest Road. Wetland 57 is comprised of a forested wetland system that extends outside of the right-of-way. Dominant vegetation within the canopy of Wetland 57 includes cypress and red maple. The understory and groundcover predominantly consist of primrose willow. During the 2021 field reviews, surface water was observed throughout the wetland with water levels greater than six inches and soils observed indicated a dark surface with muck present. In addition to surface water, hydrologic indicators observed included water-stained leaves. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 58

Watershed: Hillsborough River

FLUCFCS: 630 – Wetland Forested Mixed

USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 58 is located within the southbound US 98 right-of-way across from Earnest Road. Wetland 58 is comprised of a forested wetland system that extends outside of the right-of-way. Dominant vegetation within the canopy of Wetland 58 includes cypress and red maple. The understory and groundcover predominantly consist of Virginia chain fern and primrose willow. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. In addition to surface water, hydrologic indicators observed included water-stained leaves, moss, and elevated lichen lines. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 59 Watershed: Hillsborough River FLUCFCS: 630 – Wetland Forested Mixed USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 59 is located within the southbound US 98 right-of-way approximately 0.1 mile southeast of Earnest Road. Wetland 59 is comprised of a forested wetland system that extends outside of the right-of-way. A pipe culvert that runs underneath US 98 connects Wetland 59 to other offsite wetland systems Dominant vegetation within the canopy of Wetland 59 includes cypress and red maple. The understory and groundcover predominantly consist of Virginia chain fern, buttonbush, wild taro, bulrush, swamp fern (*Blechnum serrulatum*), lizard's tail, and primrose willow. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water, hydrologic indicators observed included water marks and elevated lichen lines. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 60

Watershed: Hillsborough River

FLUCFCS: 641 – Freshwater Marsh

USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 60 is located within the southbound US 98 right-of-way adjacent to the east side of Rockridge Road. Wetland 60 is comprised of a freshwater marsh dominated by primrose willow and Carolina willow that extends outside of the right-of-way into a forested wetland. Additional species observed includes Virginia chain fern, red root, and caesarweed. The forested wetland community adjacent to the right-of-way consists of cypress and red maple. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 61

Watershed: Hillsborough River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 61 is located within the southbound US 98 right-of-way approximately 0.2 mile southeast of Rockridge Road. Wetland 61 is comprised of a primrose-willow dominated freshwater marsh that extends outside of the right-of-way into a forested wetland. Additional vegetation observed within Wetland 61 includes redroot, Virginia chain fern, and Carolina willow with few red maple and cypress trees encroaching into the right-of-way. The forested wetland adjacent to the right-of-way consists of red maple and cypress. During the 2021 field reviews, surface water was observed throughout the wetland and soils observed indicated a dark surface with muck present. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 62 Watershed: Hillsborough River FLUCFCS: 621 - Cypress USFWS: PFO2C – Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded

Wetland 62 is located within the southbound US 98 right-of-way directly west of Big Cypress Boulevard. Wetland 62 is comprised of a forested wetland that extends outside of the right-of-way. Dominant vegetation within Wetland 62 consists of cypress, primrose willow, Mexican primrose, pickerelweed, Carolina willow, buttonbush, and smartweed. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 12 inches. In addition to surface water, hydrologic indicators observed included moss, water marks, and buttressing. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 63

Watershed: Hillsborough River FLUCFCS: 630 – Wetland Forested Mixed USFWS: PFO1/2C – Palustrine, Forested, Broad-Leaved/Needle-Leaved Deciduous, Seasonally Flooded

Wetland 63 is located within the southbound US 98 right-of-way approximately 0.3 mile southeast of Big Cypress Boulevard. Wetland 63 is comprised of a forested wetland system that extends outside of the right-of-way. Dominant vegetation within the canopy of Wetland 63 includes cypress, swamp bay, and red maple. The understory and groundcover predominantly consist of Virginia chain fern, swamp fern, and buttonbush. During the 2021 field reviews, this wetland was inundated throughout. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 64

Watershed: Withlacoochee River FLUCFCS: 631 – Wetland Scrub USFWS: PSS1C – Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded

Wetland 64 is located within the southbound US 98 right-of-way approximately 0.3 mile northwest of West Socrum Loop Road. Wetland 64 is comprised of a scrub-shrub wetland that extends outside of the right-of-way into a forested wetland. A pipe culvert that runs underneath US 98 connects Wetland 64 to other offsite wetland systems. Dominant vegetation within Wetland 64 includes red maple, Carolina willow, primrose willow, and smartweed. The forested wetland adjacent to the right-of-way consists of red maple and cypress. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

Wetland 65 Watershed: Withlacoochee River FLUCFCS: 641 – Freshwater Marsh USFWS: PEM1C – Palustrine, Emergent, Persistent, Seasonally Flooded

Wetland 65 is located within the southbound US 98 right-of-way directly west of West Socrum Loop Road. Wetland 65 is comprised of a primrose-willow dominated freshwater marsh that extends outside of the right-of-way into a forested wetland. A cross drain that runs underneath US 98 connects Wetland 65 to other offsite wetland systems. Additional vegetation observed within Wetland 65 includes Carolina willow, red maple, wild taro, cattail, Virginia chain fern, and buttonbush. The forested wetland adjacent to the right-of-way consists of red maple and sweet bay. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. The adjacent uplands within the right-ofway consist of mowed and maintained ruderal species overlaying fill material with no hydrological indicators present.

APPENDIX H.2

Wetland Photos



Wetland 1 facing east.



Wetland 2 facing northeast.





Wetland 4 facing east.



Wetland 5 facing east, outside of right-of-way.



Wetland 6 facing north.



Wetland 7 facing north.



Wetland 8 facing north.



Wetland 9 facing east.



Wetland 10 facing north.



Wetland 11 facing north.



Wetland 12 facing east.



Wetland 13 facing east.



Wetland 14 facing south.



Wetland 15 facing north.



Wetland 16 facing east.



Wetland 17 facing east.



Wetland 18 facing north.



Wetland 19 facing east.



Wetland 20 facing north.


Wetland 21 facing north.



Wetland 22 facing southeast.



Wetland 23 facing north.



Wetland 24 facing east.



Wetland 25 facing north.



Wetland 26 facing west.



Wetland 27 facing east.



Wetland 28 facing south.



Wetland 29 transitioning into upland facing south.



Wetland 30 extending beyond the right-of-way facing north.



Wetland 31 transitioning into upland facing south.



Wetland 32 facing east.



Wetland 33 facing south.



Wetland 34 facing south.



Wetland 35 facing west.



Wetland 36 facing west.



Wetland 37 facing east.



Wetland 38 facing south.



Wetland 39 facing south.



Wetland 40 facing southwest.



Wetland 41 facing west.



Wetland 42 facing west.



Wetland 43 facing west.



Wetland 44 facing south.



Wetland 45 facing south.



Wetland 46 facing south.



Wetland 47 facing west.



Wetland 48 facing south.



Wetland 49 facing west.



Wetland 50 facing northwest.



Wetland 51 facing south.



Wetland 52 facing southeast.



Wetland 53 facing southwest.



Wetland 54 facing west.



Wetland 55 facing southwest.



Wetland 56 facing south.



Wetland 57 facing south.



Wetland 58 facing south.



Wetland 59 facing south, southwest.



Wetland 60 facing south.



Wetland 61 facing south, southwest.



Wetland 62 facing south.



Wetland 63 facing south, southwest.



Wetland 64 facing west.



Wetland 65 facing west.



APPENDIX I

UMAM Worksheets

APPENDIX I.1

UMAM Worksheets – Mainline Direct Impacts

Site/Project Name	ite/Project Name Assessment Area Name or Number				or Number		
US 98 from W Socrum Loop Rd to Cl	R 54 (FPID 436673-1)		Wetland 1			and 1	
FLUCCs code	Further classifica	ation (optional)	Impact or Mitigation Site? Assessment				
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed	·	Impact	Size (in acres) 0.31	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	n (i.e. C	DFW, AP, other local/state/federa	al designation of importance)	
Withlacoochee River	III				None		
Geographic relationship to and hydr	ologic connection with	wetlands, other s	urface water, upland	ds			
Within the US 98 northbound right	of-way, the assessm	ent area is an her forested wetlar	baceous wetland th nd system.	at ext	tends beyond the right-	of-way into an offsite,	
Assessment area description							
The assessment area consists of a system. Other vege	a primrose willow-dom tation present within V	inated freshwater Vetland 1 includes	marsh that extends smartweed, maide	outsi encane	de of the right-of-way ir e, bulrush, and torpedo	nto a forested wetland grass.	
Significant nearby features			Uniqueness (con landscape.)	sideri	ng the relative rarity in	relation to the regional	
The assessment area is located within the northbound US 98 right-of-way approximately 0.3 mile north of Hall Road/West Socrum Loop Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for previ	ious p	permit/other historic use)	
Natural water storage and conve improvement;	yance; foraging habita flood attenuation	t; water quality	None				
Anticipated Wildlife Utilization Based that are representative of the assess be found)	d on Literature Review sment area and reason	(List of species hably expected to	Anticipated Utilizat classification (E, T assessment area)	tion b , SSC	y Listed Species (List s), type of use, and inte	pecies, their legal nsity of use of the	
Amphibians, wading bir	ds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or	other signs such as	track	s, droppings, casings,	nests, etc.):	
No evidence of wildlife utilitzation observed.							
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date(s):			
T. Norman			6/28/2021				

Site/Project Name	e Application Number Assessment Are					
US 98 from W Socrum Loop F	m W Socrum Loop Rd to CR 54 (FPID 436673-1)			Wetland 1		
Impact or Mitigation		Assessment conducted by:	Assessn	Assessment date:		
Impa	act	T. Norman 6/28/2021				
<u> </u>		ļ				
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each	Condition is ontimal and fully	Condition is less than	Minimal level of su	port of Condition is insufficient		
would be suitable for the	supports wetland/surface	maintain most	wetland/surface	water provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		functions				
.500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite for system to the north. The assessment area is located within the northbound US 98 right-of-way. Resi commercial development is located west and northwest of the assessment area. Wetland and upland available outside of the assessment area; however, wildlife access to and from habitats outside of the area is limited by the presence of right-of-way fencing, US 98, and residential/commercial developmen of the plant community composition in the assessment area. .500(6)(b)Water Environment (n/a for uplands) During the 2001 field reviewe, surface uptor upposition up of more different to access the accessent to access the accessent area.						
w/o pres or current with 7 0	with					
.500(6)(c)Community structure						
 Vegetation and/or Benthic Community w/o pres or 	desirable species. The const resulted in habitat alteration. the righ	ruction of US 98 and its assoc Land management practices t-of-way may affect natural rec comm	iated stormwater mai are generally appropi ruitment or regeneral unity.	ragement facilities (i.e., ditches) have a solution of the sol		
current with	4					
4 0						
Score = sum of above scores/30 (uplands, divide by 20) current or w/o pres 0.57	f If preservation as mitig Preservation adjustmen Adjusted mitigation del	ation, nt factor = ta =	For impa FL = 0.57 、	ct assessment areas = delta x acres = (0.31 = 0.18		
	If mitigation					
Delta = [with-current]	Time lag (t-factor) =		For mitigat	ion assessment areas		
-0.57	Risk factor =		RFG = delta/(t	-factor x risk) =		

Site/Project Name	Application Number Assessment Area Name or Number				or Number		
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)		Wetland 2			and 2	
FLUCCs code	Further classifica	ation (optional)	Impact or Mitigation Site? Assessment				
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.07	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificatio	on (i.e. C	DFW, AP, other local/state/federa	l designation of importance)	
Withlacoochee River	III				None		
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplan	ds			
Within the US 98 northbound rig	ht-of-way, the assessme	ent area is an her forested wetlar	baceous wetland th nd system.	at ext	ends beyond the right-o	of-way into an offsite,	
Assessment area description							
The assessment area consists system. Oth	of a maidencane-domin er vegetation present ir	nated freshwater m ncludes primrose v	narsh that extends o willow, west Indian i	outside marsh	e of the right-of-way int grass, and smartweed.	o a forested wetland	
Significant nearby features			Uniqueness (con landscape.)	sideri	ng the relative rarity in	relation to the regional	
The assessment area is located within the northbound US 98 right-of-way approximately 0.6 mile north of Hall Road/West Socrum Loop Road. Greek Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for prev	ious p	permit/other historic use)	
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			None				
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, T assessment area)	tion by , SSC	y Listed Species (List s), type of use, and inte	pecies, their legal nsity of use of the	
Amphibians, wading b	uirds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such as	s track	s, droppings, casings, ı	nests, etc.):	
No evidence of wildlife utilitzation observed.							
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date((s):			
T. Norman 6/28/2021							

Site/Project Name	Site/Project Name Assessment Are			ssment Area Name or Number	
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)		Wetland 2		
Impact or Mitigation		Assessment conducted by:	te:		
Impa	ct	T. Norman		6/28/2021	
<u> </u>		ļ			
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)	
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal level of support of	f Condition is insufficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface	
type of wetland or surface	water functions	wetland/surface water	functions	water functions	
water assessed		lunctions			
.500(6)(a) Location and Landscape Support	The assessment area is wetland system to the north. development and improved available outside of the asse area is limited by the preser	an herbaceous wetland that e The assessment area is local pasture is located northeast o essment area; however, wildlif nce of right-of-way fencing, US	ttends beyond the right-of-w ted within the northbound US f the assessment area. Wet e access to and from habita 5 98, and residential/pasture	ay into an off-site forested 5 98 right-of-way. Residential land and upland habitats are ts outside of the assessment use. Invasive exotic species	
w/o pres or	are present th	hat may adversely affect the fu	nctions provided by the ass	essment area.	
current with	-				
6 0					
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or	During the 2021 field revie indicators and soil moisture a by the adjacent US 98 and indicates alterations in poin Majority of the plant cover species present. The constr resulted in habitat alteration. and routine maintenance	ews, soils were saturated at the appeared appropriate consider its associated stormwater mants of discharge resulting from from U from U and presence is comprised of uction of US 98 and its associ Land management practices within the right-of-way that mar comm	desirable wetland species w ated stormwater management of unclude the installation of a p y affect natural recruitment of unity.	vith minimal invasive, exotic with cilities (i.e., ditches) has objec culvert within the wetland receives runoff	
current with	4				
6 0					
<u> </u>	•				
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.63	If preservation as mitig Preservation adjustmer Adjusted mitigation del	ation, nt factor = ta =	For impact asse FL = delta 0.63 x 0.0	essment areas x acres = 7 = 0.04	
Delta = [with-current]	If mitigation Time lag (t-factor) =		For mitigation as	sessment areas	
-0.63	Risk factor =		RFG = delta/(t-factor	x risk) =	
3.00					

Site/Project Name		Application Number	Dication Number Assessment Area Name or Number				
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)		Wetland 3			and 3	
FLUCCs code	Further classifica	ition (optional)		Impac	t or Mitigation Site?	Assessment Area	
617 - Mixed Wetland Hardwood	ds PFO1C - Palu Decidu	ustrine, Forested, ious, Seasonally I	Broad-Leaved Flooded		Impact	Size (in acres) 0.08	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e.	OFW, AP, other local/state/federa	Il designation of importance)	
Withlacoochee River	111				None		
Geographic relationship to and hyc	Irologic connection with	wetlands, other s	urface water, uplan	nds			
Within the US 98 northbound righ	nt-of-way, the assessme	nt area is forested runs undernea	d wetland that conn ith US 98.	nects t	to other off-site wetlands	s via a crossdrain that	
Assessment area description							
Dominant vegetation within the c groundcover species consists	anopy of the assessme of primrose willow (<i>Luc</i> elde	nt area consists o dwigia peruviana <u>)</u> erberry (<i>Sambucu</i>	f red maple (<i>Acer i</i> , beggarticks (<i>Bide</i> is <i>candadensis</i>).	rubrur ns sp	n) and water oak (Q <i>uer</i> .), limpograss (<i>Hemarth</i>	cus nigra). Dominant nria altissima), and	
Significant nearby features			Uniqueness (cor landscape.)	nsider	ing the relative rarity in	relation to the regional	
The assessment area is located within the northbound US 98 right-of-way approximately 0.7 mile north of Hall Road/West Socrum Loop Road. Gator Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for prev	/ious	permit/other historic use)	
Natural water storage and conv improvement; flo	t; water quality	None					
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, 1 assessment area)	ation b F, SS()	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the	
Amphibians, wading birds, turtl m	es, s <mark>nake</mark> s, song bir <mark>ds</mark> , nammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such as	s tracl	ks, droppings, casings,	nests, etc.):	
No evidence of wildlife utilitzation observed.							
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	(s):			
T. Norman			6/28/2021				

Site/Project Name		Application Number	Ass	Assessment Area Name or Number		
US 98 from W Socrum Loc			Wetland 3			
Impact or Mitigation Assessment c			Ass	Assessment date:		
h	npact	T. Norman 6/28/2021				
ļ						
Scoring Guidance	Optimal (10)	Moderate(7)	Minima	al (4)	Not Present	(0)
The scoring of each	Condition is ontimal and fully	Condition is less than	Minimal level (of support of	Condition is insuff	icient to
would be suitable for the	supports wetland/surface	maintain most	wetland/surf	face water	provide wetland/s	surface
type of wetland or surface	water functions	wetland/surface water	functi	ions	water functio	ns
water assessed		TUNCTIONS				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> wi 6 C	The assessment area is a for US 98. The assessment area and east of the assessment habitats are available outsi assessment area is limited groundcover composition	prested wetland that connects to a is located within the northbourarea; Upland forest habitat is lo de of the assessment area; ho by the presence of right-of-way n in the assessment area consi functions provided by t	to off-site wetlan und US 98 right- ocated north of ti wever, wildlife ar f encing, US 98, sts of invasive e he assessment	nds via a cross -of-way. Impro- the assessmen cccess to and fr a, and active pa exotic species area.	drain that runs und ved pasture is locat tt area. Wetland an rom habitats outside astures. The majorit that adversely affec	lerneath ted west d upland e of the ty of the tt the
.500(6)(D)Water Environme (n/a for uplands) w/o pres or	Water level indicators Hydrological indicators of mosses/liverworts, elevate adjacent US 98 and its asso alterations in points of disch	and soil moisture appeared so observed within the assessmen ed lichen lines, hummocks, and ociated stormwater manageme large resulting from the constru	mewhat appropr t area included a l water marks. H nt facilities (i.e., iction of US 98.	riate considerir a high water ta lydrologic cond ditches). Soil The wetland r	ng seasonal variatic able, saturation, aqu ditions are affected erosion observed in receives runoff from	on. uatic by the ndicates n US 98.
current wi	h					
7 0						
.500(6)(c)Community struct 1. Vegetation and/or 2. Benthic Community	Majority of the groundcove species. Desirable plant stormwater management fa	er is comprised of invasive exot species are present within the scilities (i.e., ditches) has result	ic plant species canopy. The cor ed in habitat alte	; (primrose wilk instruction of U eration. Land i	ow) and undesirable IS 98 and its associ management practi	e plant iated ces are
	generally appropriate, but	routine maintenance within the	e right-of-way an	nd installation on the plant corr	of pipe culverts and	cross
w/o pres or			. egonoration II			
current wi	h					
5 0						
Score = sum of above scores/30 uplands, divide by 20) current or w/o pres wi 0.60 0.0	(if If preservation as mitig Preservation adjustme Adjusted mitigation de	nt factor =	For 0.6	impact assess FL = delta x a 60 x 0.08	acres = = 0.05	
	If mitigation		For m	nitigation asse	ssment areas	
Delta = [with-current]	i ime lag (t-factor) =		REG = da	elta//t-factor v	risk) =	
-0.60	Risk factor =			ena/(t-idClUFX I	ior <i>)</i> –	

Site/Project Name	Application Number Assessment Area Name or Number				or Number		
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)		Wetland 4			and 4	
FLUCCs code	Further classification	ation (optional)		Impac	t or Mitigation Site?	Assessment Area	
617 - Mixed Wetland Hardwood	s PFO1C - Palu Decidu	ustrine, Forested, Jous, Seasonally F	Broad-Leaved ⁻ looded		Impact	Size (in acres) 0.39	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e. (OFW, AP, other local/state/federa	l designation of importance)	
Withlacoochee River	III				None		
Geographic relationship to and hydr	ologic connection with	wetlands, other s	urface water, uplan	nds			
Within the US 98 northbound righ	t-of-way, the assessme nnects to other offsite	ent area is the fore wetlands via a cro	ested portion of a w oss drain that runs	/etland under	d that extends outside o neath US 98.	f the right-of way and	
Assessment area description							
Dominant vegetation within the car groundcover of the forested portion	nopy of the forested po of the wetland predom	ntion of Wetland 4 ninantly consists o willow, blac	l consists of red ma f elderberry, buttor kberry.	aple, v 1bush,	vater oak, and sweetbay bushy bluestem, Virgin	y. The subcanopy and nia chain fern, primrose	
Significant nearby features			Uniqueness (cor	nsider	ing the relative rarity in	relation to the regional	
The assessment area is located w approximately 0.2 mile southeast o Green Swamp WMA and Gator Cre L	thin the northbound US f the entrance to Gator ek Reserve located on JS 98.	S 98 right-of-way Creek Preserve. I northeast side of	Not unique				
Functions			Mitigation for prev	/ious p	permit/other historic use)	
Natural water storage and conve improvement; floo	None						
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment <mark>area and</mark> reasor	List of species	Anticipated Utiliza classification (E, 1 assessment area)	ation b F, SS()	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the	
Amphibians, wading birds, turtle ma	es, s <mark>nake</mark> s, song bir <mark>ds</mark> , ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):	
No evidence of wildlife utilitzation observed.							
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	(s):			
T. Norman			6/28/2021				

Site/Project Name		Application Number	Assessment A	rea Name or Number	
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 4	
Impact or Mitigation		Assessment conducted by:	Assessment d	ate:	
Impa	ct	T. Norman		6/28/2021	
<u> </u>					
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)	
The scoring of each		Condition is less than			
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level of support	of Condition is insufficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface	
water assessed	water functions	functions	Tunctions	water functions	
water assessed		Turiotions			
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 600	The assessment area is the f underneath US 98. The asse residential land use is located assessment area; howeve prese	forested portion of a wetland the ssment area is located within a d east of the assessment area r, wildlife access to and from he ance of right-of-way fencing, U	hat connects to offsite wetla the northbound US 98 right ; Wetland and upland habit abitats outside of the asse S 98, and pasture/resident	nds via a cross drain that runs -of-way. Improved pasture and ats are available outside of the ssment area is limited by the al use.	
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seas Hydrological indicators observed within the assessment area included elevated lichen lines, sat table, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its asso management facilities (i.e., ditches), Soil erosion observed indicates alterations in points of disc the construction of US 98. The wetland receives runoff from US 98.					
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species prostruction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted alteration. Land management practices are generally appropriate, but routine maintenance within the routine mainten					
w/o pres or					
current with					
7 0]				
Score = sum of above scores/30 (if	If preservation as mitig	ation,	For impact ass	essment areas	
uplands, divide by 20)	Descent II II I		FL = delta	x acres =	
current	Preservation adjustmer	nt factor =			
or w/o pres with	Adjusted mitigation del	ta =	0.67 x 0.	39 = 0.26	
0.67 0.00	, lujuotoa miligation del	~			
	J				
	If mitigation				
			For mitigation as	sessment areas	
Delta = [with-current]	I ime lag (t-factor) =				
-0.67	Risk factor =		RFG = delta/(t-facto	r x risk) =	

Site/Project Name		Application Number	<u>ə</u> r	Assessment	Area Name (or Number
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)		Wetland 4			and 4
	Further classifica	tion (ontional)				
			in A Dansistant	ipact or miligation	Sile?	Size (in acres)
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed	Impact		0.12
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	(i.e. OFW, AP, other lo	ocal/state/federa	al designation of importance)
Withlacoochee River	111			No	ne	
Geographic relationship to and hydr	ologic connection with	wetlands, other s	urface water, upland	S		
Within the US 98 northbound right-co	of-way, the assessment nnects to other offsite v	t area is the herba wetlands via a cro	aceous portion of a w oss drain that runs ur	etland that extended of the state of the second sec	nds outside	of the right-of way and
Assessment area description						
The assessment area consists of	a cattail-dominated fre	eshwater marsh th	nat extends outside o	f the right-of-way	y into a fore	ested wetland system.
Significant nearby features			Uniqueness (cons landscape.)	idering the relati	ve rarity in	relation to the regional
The assessment area is located wi	thin the northbound US	S 98 right-of-way				
approximately 0.2 mile southeast of Green Swamp WMA and Gator Cre	t the entrance to Gator ek Reserve located on	Creek Preserve. northeast side of		Not ur	nique	
U U	IS 98.					
Functions			Mitigation for previo	ous permit/other	historic use)
Natural water storage and conve	yance; foraging habita	t; wat <mark>er</mark> quality		No	20	
improvement	flood attenuation		None			
Anticipated Wildlife Utilization Based	d on Literature Review	(List of species	Anticipated Utilizati	on by Listed Spe	ecies (List s	pecies, their legal
that are representative of the assest be found)	sment area and reasor	hably expected to	classification (E, I, assessment area)	SSC), type of us	se, and inte	nsity of use of the
,			,			
Amphihiana, wading hi	de turtles emell men	mala	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging);			
Amphibians, wading bi	us, turties, smail mam	mais	Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ctly observed, or	other signs such as t	racks, dropping	s, casings, I	nests, etc.):
	No evi	dence of wildlife u	itilitzation observed.			
Additional relevant factors:						
		None				
			I a	<u></u>		
Assessment conducted by:			Assessment date(s):		
I. Norman			0/28/2021			

Site/Project Name	Application Number	/	Assessment Area Name or Number			
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)		Wetland 4			
Impact or Mitigation	npact or Mitigation Assessment co			cted by: Assessment date:		
Impad	ct	T. Norman 6/28/202			6/28/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present (0)	
The scoring of each	O	Condition is less than	Mission al Las			
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/surface	
type of wetland or surface	water functions	wetland/surface water	fur	nctions	water functions	
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is the runs underneath US 98. pasture and residential land outside of the assessment limited by th During the 2021 field revio moisture appeared appropr	herbaceous portion of a wetla The assessment area is locate use is located east of the asse area; however, wildlife access e presence of right-of-way fen ews, the assessment area was iate considering seasonal vari	nd that conne ed within the r essment area s to and from cing, US 98, US 98, s inundated th ation. Hydrolo	ects to offsite wet northbound US 9 a; Wetland and up habitats outside and pasture/reside hroughout. Water ogic conditions an	lands via a cross drain that 8 right-of-way. Improved oland habitats are available of the assessment area is dential use.	
w/o pres or current with 7 0	in points of discharge r	esulting from the construction	of US 98. Th	he wetland receiv	es runoff from US 98.	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The plant cover is entir management facilities (i.e., appropriate, but routine ma	ely comprised of cattail. The o ditches) has resulted in habita intenance within the right-of-w plant com	construction o at alteration. ay may affec nmunity.	of US 98 and its a Land manageme t natural recruitm	associated stormwater ent practices are generally ent or regeneraltion in the	
w/o pres or						
current with						
3 0						
Score = sum of above scores/30 (if uplands, divide by 20) (if uplands, divide by 20) current with or w/o pres 0.00	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, nt factor = ia =	F	For impact assess FL = delta x a 0.53 x 0.12	sment areas acres = = 0.06	
Delta = [with-current]	If mitigation Time lag (t-factor) =		Fo	or mitigation asse	ssment areas	
0.50			RFG =	= delta/(t-factor x	risk) =	
-0.53	RISK factor =					

Site/Project Name		Application Numbe	nber Assessment Area Name or Number				
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)		Wetland 5			and 5	
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area	
631 - Wetland Scrub	PSS1C - Palus Decidu	stine, Scrub-shrub lous, Seasonally F	, Broad-leaved Flooded		Impact	Size (in acres) 0.003	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e. (OFW, AP, other local/state/federa	designation of importance)	
Withlacoochee River	111				None		
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplan	ıds			
Within the US 98 northbound rig	nt-of-way, the assessme	nt area is a scrub Gator Creek	-shrub wetland tha Reserve.	it exte	nds outside of the right-	of way adjacent to the	
Assessment area description							
Dominant vegetation within the as	sessment area consists	of red maple sap fern	lings, buttonbush, i	redroo	ot, sand cordgrass, coin	wort, and Virginia chain	
Significant nearby features			Uniqueness (cor	nsider	ing the relative rarity in r	relation to the regional	
The assessment area is located within the northbound US 98 right-of-way approximately 0.1 mile southeast of the entrance to Gator Creek Preserve. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for prev	ious p	permit/other historic use		
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.			None				
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reasor	(List of species ably expected to	Anticipated Utiliza classification (E, 1 assessment area)	ition b Γ, SS()	y Listed Species (List s C), type of use, and inter	pecies, their legal nsity of use of the	
Amphibians, wading birds, turtl m	es, sn <mark>ake</mark> s, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or o	other signs such as	s track	ks, droppings, casings, r	nests, etc.):	
No evidence of wildlife utilitzation observed.							
Additional relevant factors:							
		None) .				
Assessment conducted by:			Assessment date(s):				
T. Norman			6/28/2021				
Site/Project Name		Application Number	a Name or Number				
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US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 5			
Impact or Mitigation		Assessment conducted by:	Assessment date				
Impa	ct	T. Norman		6/28/2021			
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)			
I he scoring of each indicator is based on what	Condition is optimal and fully	optimal but sufficient to	Minimal level of support of	Condition is insufficient to			
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface water			
type of wetland or surface	water functions	wetland/surface water	functions	functions			
walel assessed		lunctions					
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is a Preserve. The assessment available outside of the asse	scrub shrub weltand that exte area is located within the north ssment area; however, wildlife is limited by the presence of t	nds outside of the right-of-way nbound US 98 right-of-way. W e access to and from habitats right-of-way fencing and US 9	v adjacent to the Gator Creek etland and upland habitats are outside of the assessment area 8.			
current with	4						
6 0							
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 0 0 0 0 0 0 0 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 0	invironment ands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. indicators observed within the assessment area included elevated lichen lines, water-stained leaves, and Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management fa ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of wetland receives runoff from US 98. with 0 nity structure nand/or mmunity Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species pr construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted alteration. Land management practices are generally appropriate, but routine maintenance within the righ affect natural recruitment or regeneraltion in the plant community.						
	, <u> </u>						
Score = sum of above scores/30 (if uplands, divide by 20)	If preservation as mitigation	ation,	For impact asse	essment areas			
current	Preservation adjustmer	nt factor =	FL = delta	x acres =			
or w/o pres with	Adjusted mitigation delta = $0.67 \times 0.003 = 0.002$						
0.67 0.00							
	If mitigotion						
			For mitigation assessment areas				
Deita = [with-current]	i ime iag (t-factor) =						
-0.67	Risk factor =		RFG = delta/(t-factor x	risk) =			

Site/Project Name Application Number				er Assessment Area Name or Number		
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)				Wetland 6	
FLUCCs code	Further classifica	ition (optional)		Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	d leaved/Needl	- Palustine, Fores e-leaved Deciduo Flooded	ted, Broad- us, Seasonally		Impact	Size (in acres) 0.05
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e.	OFW, AP, other local/state/federa	l designation of importance)
Withlacoochee River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplar	nds		
Within the US 98 northbound righ	t-of-way, the assessmer wetland syste	nt area is a foreste m associated with	ed wetland system the Gator Creek F	that e Reserv	xtends outside of the rig /e.	ght-of-way into a larger
Assessment area description						
The dominant vegetation within th	e canopy of this wetland of cabbage pa	l consists of red m alm, wax myrtle, p	naple and bald cyp ersimmon, and eld	ress. Ierber	The subcanopy and gro ry.	undcover is comprised
Significant nearby features			Uniqueness (con	nsider	ing the relative rarity in	relation to the regional
The assessment area is located within the northbound US 98 right-of-way approximately 0.2 mile northwest of the entrance to Gator Creek Preserve. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious	permit/other historic use	9
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.			None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	by Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtl m	es, s <mark>nakes</mark> , song bir <mark>ds</mark> , nammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	1.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
T. Norman			6/28/2021			

Site/Project Name	Application Number	Assessment Area Name or Number				
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)		Wetland 6			
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impao	ct	T. Norman		6/28/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)
The scoring of each		Condition is less than			0 111 1 1 1	
would be suitable for the	supports wetland/surface	optimal, but sufficient to maintain most	wetland/	surface water	provide wetland/s	surface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a system associated with the G of-way. Wetland and upland from habitats outside of Water level indicators as Hydrological indicators obs lines, and water marks. Hy	forested wetland system that of Sator Creek Reserve. The asso habitats are available outside the assessment area is limited and soil moisture appeared so erved within the assessment a varologic conditions are affected	extends outs sesment area of the asses d by the pres d by the pres mewhat appri	ide of the right-of- a is located within sement area; how sence of right-of-w ropriate consideri l aquatic mosses/ acent US 98 and	-way into a larger w the northbound US ever, wildlife access vay fencing and US ng seasonal variatio liverworts, elevated its associated storm	etland \$ 98 right- s to and 98. on. I lichen hwater
w/o pres or current with 7 0	management facilities (i.e., c	litches). Soil erosion observed construction of US 98. The we	indicates alt	terations in points	: of discharge result 98.	ing from
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 0	Majority of plant cover is by construction of US 98 and alteration. Land manageme may a	appropriate and desirable plai its associated stormwater mai ent practices are generally app iffect natural recruitment or reg	nt species. M nagement fa ropriate, but generaltion ir	finimal invasive/e cilities (i.e., ditche routine maintena n the plant commu	xotic species prese es) has resulted in h nce within the right- unity.	nt. The nabitat -of-way
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.67 0.00	If preservation as mitiga Preservation adjustmer Adjusted mitigation dell	ation, nt factor = ta =		For impact assess FL = delta x 0.67 x 0.05	sment areas acres = = 0.03	
Delta = [with-current]	Time lag (t-factor) =		Fo	or mitigation assessment areas		
			RFG =	= delta/(t-factor x	risk) =	
-0.67	Risk factor =	-0.67 Risk factor = RFG = delta/(t-factor x risk) =				

Site/Project Name	Application Number	hber Assessment Area Name or Number				
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)			Wetland 7		
FLUCCs code	Further classification	ation (optional)	Ir	npact or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, Impact		Size (in acres) 0.81	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	I (i.e. OFW, AP, other local/state/f	ederal designation of importance)	
Hillsborough River	111			None		
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, upland	S		
Within the US 98 northbound rig	ht-of-way, the assessm	ent area is an her forested wetlar	baceous wetland thand system.	it extends beyond the rig	ght-of-way into an offsite,	
Assessment area description						
Dominant vegetation within the h	erbaceous portion of W fern, netted chain f	/etland 7 includes ern, St. Augustine	primrose willow, bul grass, and red map	rush, false hop sedge, s le saplings.	martweed, Virginia chain	
Significant nearby features			Uniqueness (cons landscape.)	idering the relative rarit	y in relation to the regional	
The assessment area is located within the northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for previo	ous permit/other historic	use	
Natural water storage and conv improvemen	eyance; foraging habita t; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asset be found)	ed on Literature Review ssment <mark>area an</mark> d reasor	(List of species nably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such as	tracks, droppings, casin	gs, nests, etc.):	
No evidence of wildlife utilitzation observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date(s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number	ber Assessment Area Name or Number			
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 7		
Impact or Mitigation		Assessment conducted by:	Assessme	Assessment date:		
Impa	ct	T. Norman	T. Norman		6/28/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present	(0)	
I he scoring of each	Condition is optimal and fully	condition is less than	Minimal level of supr	port of Condition is insuffi	cient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/surface w	ater provide wetland/s	urface	
type of wetland or surface	water functions	wetland/surface water	functions	, water function	าร	
water assessed		functions				
.500(6)(a) Location and Landscape Support	The assessment area is an h system to the north. The	erbaceous wetland that extend assessment area is located v	ds beyond the right-of- vithin the northbound L	way into an offsite forested JS 98 right-of-way. Residen	wetland tial	
w/o pres or	development and improved available outside of the assu area is limited by the presen are present th	pasture is located northwest o essment area; however, wildlif nee of right-of-way fencing, US nat may adversely affect the fu	f the assessment area e access to and from h 98, and residential/pa nctions provided by the	 Wetland and upland habits habitats outside of the assess asture use. Invasive exotic s e assessment area. 	ats are ssment pecies	
6 0						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 7 0 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	It Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologics indicators observed within the assessment area included water-stained leaves, saturation, adventitious rooting water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater manage facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. n re Majority of the plant cover is comprised of invasive, exotic species (primrose willow) with some desirable plaspecies present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches resulted in habitat alteration. Land management practices include the installation of a pipe culvert within the within the within the within the within the work in the species present.					
w/o pres or		commi	unity.			
current with						
4 0						
	,					
Score = sum of above scores/30 (if	If preservation as mitig	ation,	For impac	t assessment areas		
uplands, divide by 20)	Preservation adjustment	nt factor =	FL =	delta x acres =		
current			0.57 v	0.81 - 0.46		
	0.57 X	5.01 - 0.40				
0.00	<u></u>					
	If mitigation		–			
Delta = [with-current]	Time lag (t-factor) =		For mitigatio	on assessment areas		
-0.57	Risk factor =		RFG = delta/(t-f	actor x risk) =		
L	」 └─────					

Site/Project Name	Application Number	ber Assessment Area Name or Number			or Number	
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 8	
FLUCCs code	Further classifica	ition (optional)		Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixe	d leaved/Needl	- Palustine, Fores e-leaved Deciduo Flooded	ted, Broad- us, Seasonally		Impact	Size (in acres) 0.70
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e.	OFW, AP, other local/state/federa	l designation of importance)
Hillsborough River					None	
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplar	nds		
Within the US 98 northbound righ wetland sys	t-of-way, the assessmer tem and connects to oth	nt area is a foreste ner wetland systen	ed wetland system ns via a cross drair	that e 1 that	extends outside of the rig runs underneath US 98	ght-of-way into a larger
Assessment area description						
Dominant vegetation within the	canopy consists of red consists of v	maple, sweetbay, vild taro, primrose	sweet gum, and b willow, and maide	ald cy ncane	rpress. Groundcover spo	ecies predominantly
Significant nearby features			Uniqueness (cor landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located within the northbound US 98 right-of-way directly northwest of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	/ious	permit/other historic use)
Natural water storage and conv improvement; flo	eyance; foraging habita ood attenuation; refuge.	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, ⁻ assessment area	ation b T, SS()	by Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turt n	es, s <mark>nakes</mark> , song birds, nammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Util	zation (List species dire	ectly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
	Evidence of	wildlife observed i	ncludes crayfish b	urrow	S.	
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 8		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impa	ct	T. Norman			6/28/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present (0)	
I he scoring of each	Condition is optimal and fully	Condition is less than optimal, but sufficient to	Minimal lev	el of support of	Condition is insufficient	t to
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/surfac	ce
type of wetland or surface	water functions	wetland/surface water	fui	nctions	water functions	
water assessed	water assessed tunctions					
.500(6)(a) Location and Landscape Support w/o pres or <u>current with</u> 6 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a system. The assessment ar use. Wetland and upland h from habitats outside of Water level indicators and so indicators observed inclu	forested wetland system that of ea is located within the northb abitats are available outside of the assessment area is limited bil moisture appeared somewho ided aquatic mosses/liverwort	extends outsi ound US 98 of the assess d by the pres d by the pres	ide of the right-of- right-of-way and a ment area; howe ence of right-of-w ence of right-of-w	way into a larger wetland adjacent to residential lar ver, wildlife access to and ray fencing and US 98.	d nd d
w/o pres or current with 7 0	hummocks, and water n stormwater management fa resulting fro	narks. Hydrologic conditions a cilities (i.e., ditches). Soil eros m the construction of US 98.	re affected b sion observed The wetland	y the adjacent US I indicates alterat receives runoff fr	8 98 and its associated ions in points of discharg om US 98.	je
.500(6)(c)Community structure						
1. Vegetation and/or Plant cover within the canopy is appropriate and desirable plant species. Invasive/exotic species are dominant with the understory. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but routine maintenance with the right-of-way and installation of pipe culverts and cross drains may affect natural recruitment or regeneraltion in the plant community. w/o pres or the right-of-way and installation of pipe culverts and cross drains may affect natural recruitment or regeneraltion in the plant community.						thin as hin in
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.63	If preservation as mitigation are mitigation adjustmer Adjusted mitigation delt	ation, nt factor = a =	F	For impact assess FL = delta x a 0.63 x 0.70	sment areas acres = = 0.44	
Delta = [with-current]	If mitigation Time lag (t-factor) =		Fo	or mitigation asse	ssment areas	
			RFG =	= delta/(t-factor ×	risk) =	
-0.63 Risk factor = RFG = delta/(t-factor x risk) =					,	

Site/Project Name	Application Number	ber Assessment Area Name or Number			or Number	
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)		We		Wetl	and 9
FLUCCs code	Further classifica	ation (optional)		Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	PF01/2C leaved/Needl	- Palustine, Fores e-leaved Deciduo Flooded	ted, Broad- us, Seasonally		Impact	Size (in acres) 0.60
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e. (OFW, AP, other local/state/federa	l designation of importance)
Withlacoochee River					None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplar	nds		
Within the US 98 northbour	nd right-of-way, the ass	essment area is a	forested wetland	systen	n that extends beyond t	he right-of-way.
Assessment area description						
Dominant vegetation within th predominately c	e canopy consists of ba consists of wax myrtle, p	ald cypress, red m primrose willow, Vi	aple, water oak, ai rginia chain fern, b	nd lau olueste	rel oak. The subcanopy m, bulrush, and paragr	and groundcover ass.
Significant nearby features			Uniqueness (con	nsider	ing the relative rarity in	relation to the regional
The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground within the northbound US 98 right-of- way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious p	permit/other historic use)
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.			None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review assment area and reasor	List of species	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading birds, turtle m	es, s <mark>nak</mark> es, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ectly observed, or	other signs such a	s tracł	ks, droppings, casings,	nests, etc.):
	Evidence of	wildlife observed i	ncludes crayfish b	urrows	5.	
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
, T. Norman			6/28/2021	、 /		

Site/Project Name Application Number			ŀ	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 9		
Impact or Mitigation		Assessment conducted by:	ļ	Assessment date:		
Impao	ct	T. Norman			6/28/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present	(0)
I he scoring of each	Condition is optimal and fully	Condition is less than optimal, but sufficient to	Minimal lev	el of support of	Condition is insuffi	cient to
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/s	urface
type of wetland or surface	water functions	wetland/surface water	fur	nctions	water function	าร
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 0	The assessment area is a fo located within the northbo habitats are available outsio assessme	rested wetland system that ext und US 98 right-of-way and ac de of the assessment area; how ent area is limited by the prese	tends outside Jjacent to a R wever, wildlife nce of right-o	e of the right-of-wa V park/campgrou e access to and f f-way fencing an	ay. The assessment und. Wetland and up rom habitats outside d US 98.	area is bland e of the
 .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed included high water table, elevated lichen lines, buttressed trunks, water-stail leaves, saturation, hummocks, water marks, and adventitious rooting. Hydrologic conditions are affected by ta adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indic alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 					n. tained by the dicates US 98.	
7 0						
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover within the canopy the understory. The constru- resulted in habitat alteration.	/ is appropriate and desirable iction of US 98 and its associa Land management practices	plant species. ated stormwat are generally	. Invasive/exotic : ter management appropriate, but	species are dominar facilities (i.e., ditche routine maintenance	nt within s) has e within
	the right-of-wa	ay may affect natural recruitme	ent or regener	altion in the plan	t community.	
w/o pres or						
current with						
6 0						
II						
Seere = sum of shours seeres/20 /if	If propertyption as mitig	ation		For impact access	amont aroas	
uplands, divide by 20)	ii preservation as mitiga					
current	Preservation adjustment factor =				auto -	
or w/o pres with	with Adjusted mitigation delta = 0.63 x 0.60 = 0.38					
0.63 0.00						
<u> </u>	د 					
	If mitigation		Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.63	Risk factor =		RFG =	e delta/(t-factor x	risk) =	

Site/Project Name	Application Number	ber Assessment Area Name or Number			or Number	
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)			Wetland 10		and 10
FLUCCs code	Further classification	ition (optional)		Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	PFO1/2C leaved/Needl	C - Palustine, Forested, Broad- dle-leaved Deciduous, Seasonally Flooded			Impact	Size (in acres) 0.26
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	I designation of importance)
Withlacoochee River	III				None	
Geographic relationship to and hydr	rologic connection with	wetlands, other s	urface water, uplar	nds		
Within the US 98 northbound righ	t-of-way, the assessme other wetlands	ent area is a fores via a cross drain t	ted wetland syster that runs undernea	n exte ith US	nds beyond the right-of 98.	-way and connects to
Assessment area description						
Dominant vegetation within th grour	e canopy of Wetland 1 ndcover predominantly	0 consists of red r consists of primro	maple, bald cypres ose willow, paragra	s, swe ss, an	eet bay, and red bay. Th d torpedo grass.	e subcanopy and
Significant nearby features			Uniqueness (co landscape.)	nsider	in <mark>g the</mark> relative rarity in	relation to the regional
The assessment area is located directly north of the entrance to Gator Creek Campground within the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for pre-	vious	permit/other historic use)
Natural water storage and conve improvement; floo	eyance; foraging habita od attenuation; refuge.	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	by Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtle ma	es, snakes, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ctly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
	Evidence of	wildlife observed i	ncludes crayfish b	urrow	S.	
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number	A	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 10		
Impact or Mitigation		Assessment conducted by:	A	Assessment date:		
Impac	ot	T. Norman	Norman		6/28/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Mini	imal (4)	Not Present	(0)
The scoring of each	Condition is optimal and fully	Condition is less than optimal, but sufficient to	Minimal leve	el of support of	Condition is insuff	icient to
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/s	surface
type of wetland or surface	water functions	wetland/surface water	fun	ictions	water functio	ns
water assessed		tunctions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a f wetlands via a cross drain th 98 right-of-way and adjacer assessment area; howeve	forested wetland system that e nat runs underneath US 98 T It to a RV park/campground. V r, wildlife access to and from h presence of right-of-wa	xtends outsid he assessmer Vetland and u abitats outsid by fencing and	e of the right-of- nt area is located pland habitats a le of the assess i US 98.	way and connects to d within the northbo re available outside nent area is limited	o other und US of the by the
6 0						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed included saturation, high water table, adventitious rooting, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US The wetland receives runoff from US 98.					on. arks. ies (i.e., US 98. US 98. nt within s) has
2. Benthic Community w/o pres or current with	resulted in habitat alteration. the right-of-way and installa	Land management practices tion of pipe culverts and cross the plant co	are generally drains may a ommunity.	appropriate, but ffect natural recr	routine maintenanc	e within altion in
6 0						
	1					
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.63	If preservation as mitig: Preservation adjustmer Adjusted mitigation del	ation, nt factor = ta =	Fi	FL = delta x a FL = delta x a 0.63 x 0.26	sment areas acres = = 0.16	
Delta = [with-current]	If mitigation Time lag (t-factor) =		For	r mitigation asse	ssment areas	
	Pick factor -		RFG =	delta/(t-factor x	risk) =	
-0.03	RISK lactor =			•		

Cite/Draiget Norma		Annie stien Numbe				an Numahan
Site/Project Name		Application Numbe				or Number
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)				Wetla	and 11
FLUCCs code	Further classifica	tion (optional)		mpact	or Mitigation Site?	Assessment Area
		DEM1C Palustring Emergent		mpaor	er magaaen ener	Size (in acres)
641 - Freshwater Marsh		Seasonally Flooded			Impact	0.03
		_				
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	n (i.e. C	DFW, AP, other local/state/federa	l designation of importance)
Withlacoochee River	111				None	
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, upland	ds		
Within the US 98 northbound rig forested wet	ht-of-way, the assessme and system and connec	ent area is an herl cts to other wetlan	baceous wetland th ds via a cross drain	at ext 1 that	ends beyond the right- runs underneath US 98	of-way into an offsite, 3.
Assessment area description						
Dominant vegetation within vvetia	nd 11 consists of alligati	orweea, torpeao g willow	grass, sesban, maid /	lencal	ne, smartweed, barnya	rd grass, and primrose
Significant nearby features			Uniqueness (con landscape.)	sideri	ng the relative rarity in	relation to the regional
The assessment area is located	within the northbound U	S 98 right-of-way				
approximately 0.1 mile southeast	of Earnest Road. Gree	n Swamp WMA			Not unique	
and Gator Creek Reserve lo	ocated on northeast side	e of US 98.				
Functions			Mitigation for previ	ious p	ermit/other historic use	
Natural water storage and conv	eyance; foraging habita	t; wat <mark>er</mark> quality			None	
improvemen	t; flood attenuation					
Anticipated Wildlife Utilization Base	ed on Literature Review	(List of species	Anticipated Utilizat	tion b	y Listed Species (List s	pecies, their legal
that are representative of the asses	ssment area and reasor	ably expected to	classification (E, T, SSC), type of use, and intensity of use of the			
be found)			assessment area)			
		•	Little Blue Herei	n (ST	forgaing): Tricolorod I	Horon (ST foraging):
Amphibians, wading b	irds, turtles, small mam	mals	Florida Sandhill	Cran	e (ST, foraging); Wood	Stork (FT, foraging);
			E	Evergl	lade Snail Kite (FE, for	aging)
		-44		4		
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	other signs such as	таск	s, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed.			
Additional relevant factors:						
None						
			1			
Assessment conducted by:			Assessment date(s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number	A	Assessment Area	a Name or Number
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			N N	Wetland 11
Impact or Mitigation		Assessment conducted by:	A	Assessment date	:
Impa	ct	T. Norman			6/28/2021
Scoring Guidance	Optimal (10)	Moderate(7)	Mini	imal (4)	Not Present (0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal lov	ol of support of	Condition is insufficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/surface
type of wetland or surface	water functions	wetland/surface water	fun	nctions	water functions
water assessed		functions			
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 500	The assessment area is an h system to the north. The ass consists of residential and pa however, wildlife access to a way fencing, US 98, and res	erbaceous wetland that extensessment area is located within asture. Minimal weltand and up and from habitats outside of th sidential/pasture use. Invasive functions provided by t	ds beyond the n the northbot pland habitat i e assessmen exotic specie the assessme	e right-of-way into und US 98 right- is available outsi it area is limited l ss are present tha ant area.	o an offsite forested wetland of-way. Adjacent land uses de of the assessment area; by the presence of right-of- at may adversely affect the
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and s reviews, this wetland was in associated stormwater man discharge resultin	oil moisture appeared appropr nundated throughout. Hydrolog agement facilities (i.e., ditches ng from the construction of US	riate consideri gic conditions s). Soil erosior g 98. The wet	ing seasonal var are affected by t n observed indic: land receives rur	iation. During the 2021 field he adjacent US 98 and its ates alterations in points of noff from US 98.
w/o pres or					
current with					
7 0					
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of the plant cover construction of US 98 and alteration. Land manageme culverts and cross dr	is comprised of invasive, exoti its associated stormwater mai nt practices include routine ma ains that may affect natural rec	c species with nagement fac aintenance wit cruitment or re	h few desirable p ilities (i.e., ditche thin the right-of-v egeneraltion in th	lant species present. The es) has resulted in habitat way and installation of pipe ne plant community.
w/o pres or					
current with	4				
4 0					
Score = sum of above scores/30 (if	If preservation as mitig	ation	F	or impact assess	sment areas
uplands, divide by 20)	n S	, 		FL = delta x a	acres =
current	Preservation adjustmen			0.52 0.02	- 0.00
	Adjusted mitigation del	ta =	, i	0.53 X 0.03	= 0.02
0.00					
	If mitigation		F	r mitigation as	coment erece
Delta = [with-current]	Time lag (t-factor) =		F01	mugation asse	soment areas
-0.53	Risk factor =		RFG =	delta/(t-factor x	risk) =
L	J L				

Site/Project Name		Application Number	er	/	Assessment Area Name o	or Number
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)				Wetla	and 12
FLUCCs code	Further classification	ation (optional)	h	mpact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.56
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	n (i.e. C	FW, AP, other local/state/federa	l designation of importance)
Withlacoochee River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, upland	ds		
Within the US 98 northbound rig	nt-of-way, the assessme	ent area is an herl forested wetlar	baceous wetland thand system.	at exte	ends beyond the right-o	of-way into an offsite,
Assessment area description						
Dominant vegetation within Wet	land 12 consists of Car golden canna, soft	olina willow, red m rush, Virginia cha	naple saplings, prim in fern, lizard's tail, a	rose v and b	willow, smartweed, barr ulrush.	nyard grass, fireflag,
Significant nearby features			Uniqueness (cons landscape.)	siderii	ng the relative rarity in	relation to the regional
The assessment area is located within the northbound US 98 right-of-wa directly northwest of Earnest Road. Green Swamp WMA and Gator Cree Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for previ	ious p	ermit/other historic use)
Natural water storage and conve improvemen	eyance; foraging habita t; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading b	irds, tu <mark>rtles</mark> , small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ectly observed, or	other signs such as	track	s, droppings, casings, ı	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date(s	s):		
I. Norman			6/28/2021			

Site/Project Name		Application Number	Ass	sessment Area	Name or Number	
US 98 from W Socrum Loop I	Rd to CR 54 (FPID 436673-1)			V	Vetland 12	
Impact or Mitigation		Assessment conducted by:	Ass	sessment date	:	
Imp	act	T. Norman			6/28/2021	
ļ		ļ				
Scoring Guidance	Optimal (10)	Moderate(7)	Minim	al (4)	Not Present (0))
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal level	of support of	Condition is insufficie	ent to
would be suitable for the	supports wetland/surface	maintain most	wetland/sur	face water	provide wetland/sur	rface
type of wetland or surface	water functions	wetland/surface water	functi	ions	water functions	6
water assessed		lunctions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is an h system to the north. The as consists of residential deve area; however, wildlife acces of-way fencing, US 98, and r	nerbaceous wetland that exten sessment area is located withi lopment. Minimal wetland and s to and from habitats outside esidential/pasture use. Invasiv functions provided by t	ds beyond the ri n the northboun upland habitats of the assessm e exotic species he assessment	ight-of-way into d US 98 right-o s are available o ent area is limi s are present th area.	o an offsite forested we of-way. Adjacent land outside of the assessr ted by the presence o nat may adversely affe	etland uses ment of right- ect the
5 0						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 4	Water level indicators and s reviews, this wetland was Hydrologic conditions are af ditches). Soil erosion obser Majority of the plant cover construction of US 98 and alteration. Land manageme culverts that	toil moisture appeared appropri inundated throughout. Other I fected by the adjacent US 98 a ved indicates alterations in poin The wetland receives is comprised of invasive, exoti its associated stormwater mai int practices include routine mai may affect natural recruitmen	iate considering hydrological indi- ints of discharge runoff from US	g seasonal vari cators observe ed stormwater i resulting from 9 98. ew desirable pl ties (i.e., ditche in the right-of-w n in the plant c	ation. During the 2021 ad included water mark management facilities the construction of US lant species present. ^a s) has resulted in hab vay and installation of community.	1 field ks. s (i.e., S 98. The Ditat
Score - cum of above coores/20	if	ation	For	impact assoss	mont areas	
uplands, divide by 20)			- 101	FL = delta x a	acres =	
current	Preservation adjustment	nt factor =				
pr w/o pres With	Adjusted mitigation del	ta =	0.5	od x 0.56	= 0.30	
0.00			8		<u> </u>	
	If mitigation					
Delta = [with-current]	Time lag (t-factor) =		For m	nitigation asses	ssment areas	
-0.53	Risk factor =		RFG = de	elta/(t-factor x r	risk) =	

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)				Wetla	and 13
FLUCCs code	Further classifica	tion (optional)	1	Impact	t or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	llustrine, Emerger Seasonally Floode	ent, Persistent, Impact 0.76			Size (in acres) 0.76
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	0 n (i.e. C	DFW, AP, other local/state/federa	al designation of importance)
Withlacoochee River	III				None	
Geographic relationship to and hyd	ologic connection with	wetlands, other s	urface water, uplan	ds		
Within the US 98 northbound right the right-of-wa	-of-way, the assessmer y and is connected to c	nt area is an herba other wetland syst	aceous wetland tha ems via a cross dra	at exte ain tha	nds into a forested wet at runs underneath US	land system outside of 98
Assessment area description						
Dominant vegetation within	Wetland 13 consists of	Carolina willow, s	altbush, caesarwee	ed, Me	exican primrose willow,	and shield fern.
Significant nearby features			Uniqueness (con landscape.)	nsideri	ng the relative rarity in	relation to the regional
The assessment area is located w approximately 0.1 mile southeast o Gator Creek Reserve loca	ithin the northbound Us f Perkle Road. Green S ted on northeast side o	S 98 right-of-way Swamp WMA and If US 98.	X		Not unique	
Functions			Mitigation for prev	vious p	permit/other historic use)
Natural water storage and conve improvement	eyance; foraging habita ; flood attenuation	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading bi	rds, tu <mark>rtles</mark> , small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ctly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date((s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number	Assessmen	t Area Name or Number
US 98 from W Socrum Loop	Rd to CR 54 (FPID 436673-1)			Wetland 13
Impact or Mitigation		Assessment conducted by:	Assessmen	t date:
Im	pact	T. Norman		6/28/2021
<u></u>		ļ		
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each	Condition is ontimal and fully	Condition is less than	Minimal level of suppo	art of Condition is insufficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/surface wat	er provide wetland/surface
type of wetland or surface	water functions	wetland/surface water	functions	water functions
water assessed		lunctions		
.500(6)(a) Location and Landscape Support w/o pres or <u>current with</u> 6 0	The assessment area is an h system to the north. The as consists of residential dev however, wildlife access to way fencing, US 98, and r	nerbaceous wetland that extens sessment area is located within elopment. Wetland and upland and from habitats outside of th esidential land use. Invasive e functions provided by t	ds beyond the right-of-w n the northbound US 98 habitats are available o e assessment area is lir xotic species are preser he assessment area.	ay into an offsite forested wetland right-of-way. Adjacent land uses utside of the assessment area; nited by the presence of right-of- it that may adversely affect the
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hy indicators observed included aquatic mosses/liverworts and water marks. Hydrologic conditions are a adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion obser alterations in points of discharge resulting from the construction of US 98. The wetland receives runc				asonal variation. Hydrological gic conditions are affected by the . Soil erosion observed indicates tland receives runoff from US 98.
w/o pres or				
current with	_			
7 0				
.500(6)(c)Community structu 1. Vegetation and/or 2. Benthic Community	e Some desirable and app construction of US 98 and alteration. Land manageme culverts and cross dr	ropriate plant species are pres its associated stormwater mai int practices include routine ma rains that may affect natural rea	ent. Invasive, exotic spe nagement facilities (i.e., intenance within the rig cruitment or regeneraltic	cies present throughout. The ditches) has resulted in habitat ht-of-way and installation of pipe on in the plant community.
w/o pres or				
current with				
5 0				
Score - sum of above scores/30	/if If preservation as mitig	ation	For impact a	assessment areas
uplands, divide by 20)			FL = de	elta x acres =
current	Preservation adjustment	nt factor =		
or w/o pres with	Adjusted mitigation del	ta =	0.60 x	0.76 = 0.46
0.60 0.00				
	If mitigation		– 10 – 21	
Delta = [with-current]	Time lag (t-factor) =		For mitigation	assessment areas
-0.60	Risk factor =		RFG = delta/(t-fac	ctor x risk) =

Site/Droject Name		Application Number			Accessment Area Name	ar Numbar
Site/Project Name		Application Number	÷1		Assessment Area Name (
US 98 from W Socrum Loop Rd to CR 54	FPID 436673-1)				Wetla	and 14
FLUCCs code	Further classifica	tion (optional)		mpac	t or Mitigation Site?	Assessment Area
		lustrino Emorgor	nt Porsistant	mpuo	or magaaon ono.	Size (in acres)
641 - Freshwater Marsh	FLWIG-Fa	Seasonally Floode	ed		Impact	
Basin/Watershed Name/Number Affect	ed Waterbody (Clas	ss)	Special Classificatio	n (i.e. 0	OFW, AP, other local/state/federa	I designation of importance)
Hillsborough River	Ш				None	
Geographic relationship to and hydrologi	c connection with	wetlands, other s	urface water, uplan	ds		
Within the US 98 northbound right-of-w	ay, the assessme	ent area is an herb outside of the ri	paceous wetland co ight-of-way	ommu	nity that connects to a s	small forested system
Assessment area description						
Dominant vegetation within Wetland 14	l consists of most	ly primrose willow smartweed, and	with red maple sands and soft rush.	olings	, barnyard grass, water	pennywort, coinwort,
Significant nearby features			Uniqueness (con landscape.)	sider	ing the relative rarity in	relation to the regional
The assessment area is located within the northbound US 98 right-of-way approximately 0.1 mile northwest of Perkle Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	ious p	permit/other historic use	9
Natural water storage and conveyanc improvement; floor	e; foraging habita d attenuation	t; water quality	None			
Anticipated Wildlife Utilization Based on I that are representative of the assessmen be found)	Literature Review t area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading birds, t	urtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utilization	(List species dire	ctly observed, or	other signs such as	track	s, droppings, casings,	nests, etc.):
. Evidence of wildlife observed included small fish and crayfish burrows.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date(s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number	Assessme	ent Area Name or Number	
US 98 from W Socrum Loop	Rd to CR 54 (FPID 436673-1)			Wetland 14	
Impact or Mitigation		Assessment conducted by:	Assessme	ent date:	
Im	pact	T. Norman		6/28/2021	
<u> </u>					
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)	
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal level of supr	port of Condition is insufficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/surface wa	ater provide wetland/surface	
type of wetland or surface	water functions	wetland/surface water	functions	water functions	
water assessed		functions			
.500(6)(a) Location and Landscape Support w/o pres or current with 5 0	The assessment area is an I system to the north. The as consists of improved pastu wildlife access to and from h US 98, and improved pastu	nerbaceous wetland that exten sessment area is located withi re. Mlnimal wetland and uplan abitats outside of the assessm re. Invasive exotic species are by the assess	ds beyond the right-of- n the northbound US 9 d habitats are available ent area is limited by th present that may adve sment area.	way into an offsite forested wetland 8 right-of-way. Adjacent land uses e outside of the assessment area; he presence of right-of-way fencing provided	
.500(6)(b)Water Environmer (n/a for uplands) w/o pres or current witt	t Water level indicators and s reviews, this wetland was i associated stormwater mar discharge resulti	soil moisture appeared appropri nundated throughout. Hydrolog nagement facilities (i.e., ditches ng from the construction of US	iate considering seaso jic conditions are affect). Soil erosion observe 98. The wetland rece	nal variation. During the 2021 field ted by the adjacent US 98 and its d indicates alterations in points of ives runoff from US 98.	
7 0					
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. To construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habita alteration. Land management practices include routine maintenance within the right-of-way that may affect nature community.					
w/o pres or					
current with	_				
4 0					
· · ·	•				
Score = sum of above scores/30 uplands, divide by 20) current or w/o pres 0.53	(if If preservation as mitig Preservation adjustme Adjusted mitigation del	ation, nt factor = ta =	For impac FL = 0 0.53 x	t assessment areas delta x acres = 0.00 = 0.00	
Delta = [with-current]	If mitigation Time lag (t-factor) =		For mitigation	on assessment areas	
-0.53	Risk factor =		RFG = delta/(t-f	actor x risk) =	

Site/Project Name		Application Number	er	/	Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)				Wetla	and 15
FLUCCs code	Further classification	ation (optional)	I	Impact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	ent, Persistent, Impact 0.31			Size (in acres) 0.31
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificatio	on (i.e. C	FW, AP, other local/state/federa	l designation of importance)
Hillsborough River	Ш				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplan	ds		
Within the US 98 northbound rig outside of the right-of-w	nt-of-way, the assessme ay. A cross drain that re	ent area is an hert uns underneath U	baceous wetland co S 98 connects Wet	ommur tland 1	nity that connects to a s 5 to other offsite wetla	small forested system nd systems.
Assessment area description						
Dominant vegetation within this	wetland consists of Ca	rolina willow, prim	rose willow, cattail,	Virgin	ia chain fern, and west	Indian marshgrass.
Significant nearby features			Uniqueness (con landscape.)	nsiderii	ng the relative rarity in	relation to the regional
The assessment area is located w approximately 0.4 mile northwest of Gator Creek Reserve loca	vithin the northbound U If Perkle Road. Green S Ited on northeast side c	S 98 right-of-way Swamp WMA and of US 98.	X		Not unique	
Functions			Mitigation for prev	ious p	ermit/other historic use)
Natural water storage and conv improvemen	eyance; foraging habita t; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review esment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such as	s track	s, droppings, casings, l	nests, etc.):
	Ν	lo evidence of wild	llife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date((s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number		Assessment Area	a Name or Number
US 98 from W Socrum Loop R	d to CR 54 (FPID 436673-1)			,	Wetland 15
Impact or Mitigation		Assessment conducted by:		Assessment date):
Impa	act	T. Norman			6/28/2021
<u></u>					
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present (0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal Io	val of aupport of	Condition is insufficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/surface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water functions
water assessed		functions			
.500(6)(a) Location and Landscape Support w/o pres or current with 5 0	The assessment area is an h system to the north. The as consists of improved pastu wildlife access to and from ha US 98, and improved pastur	erbaceous wetland that exten sessment area is located withi re. Mlnimal wetland and uplan abitats outside of the assessm re. Invasive exotic species are by the asses	ds beyond th n the northbo d habitats are ent area is lin present that sment area.	e right-of-way into ound US 98 right- e available outsid mited by the prese may adversely a	o an offsite forested wetland of-way. Adjacent land uses le of the assessment area; ence of right-of-way fencing, ffect the functions provided
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During t reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations discharge resulting from the construction of US 98. The wetland receives runoff from US 98.				iation. During the 2021 field the adjacent US 98 and its ates alterations in points of noff from US 98.	
current with	-				
7 0					
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is cor construction of US 98 and alteration. Land manageme cross drains and pipe c	mprised of invasive, exotic spe its associated stormwater mai ent practices include routine m ulverts that may affect natural	ecies with few nagement fa aintenance v recruitment o	v desirable/approj cilities (i.e., ditche vithin the right-of- or regeneraltion in	priate species present. The es) has resulted in habitat way and the installation of n the plant community.
w/o pres or					
current with					
4 0					
	1				
0	If pressurvation as mitig	ation			amont areas
uplands, divide by 20)		auon,		FI = delta v	
current	Preservation adjustmer	nt factor =			
or w/o pres with	Adjusted mitigation del	ta =		0.53 x 0.31	= 0.17
0.53 0.00					
	If mitigation				
Delta = [with-current]	Time lag (t-factor) =		Fo	or mitigation asse	ssment areas
			RFG =	= delta/(t-factor x	risk) =
-0.53	Risk factor =				,

Site/Project Name		Application Number	er	Assessment Area Name	or Number	
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)			Wetl	and 16	
FLUCCs code	Further classification	ation (optional)	1	mpact or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed	Impact	Size (in acres) 0.43	
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classificatio	n (i.e. OFW, AP, other local/state/feder	al designation of importance)	
Hillsborough River	III			None		
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, uplan	ds		
Within the US 98 northbound righ small forested system outside of t	nt-of-way, the assessmer he right-of-way. A pipe c	nt area is comprise ulvert that runs un	ed of a primrose will iderneath US 98 co	ow-dominated freshwater minects Wetland 16 to other	narsh that connects to a offsite wetland systems.	
Assessment area description						
In add	ition to primrose willow, o	other vegetation p	resent includes sma	artweed, and loosestrife.		
Significant nearby features			Uniqueness (con landscape.)	sidering the relative rarity in	relation to the regional	
The assessment area is located within the northbound US 98 right-of-w approximately 0.1 mile southeast of Keen Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for previ	ous permit/other historic us	e	
Natural water storage and con improveme	veyance; foraging habita nt; flood attenuation	t; water quality	None			
Anticipated Wildlife Utilization Bas that are representative of the asso be found)	ed on Literature Review essment area and reaso	(List of species nably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading	birds, tu <mark>rtles</mark> , small mam	imals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Uti	lization (List species dire	ectly observed, or	other signs such as	tracks, droppings, casings,	nests, etc.):	
	Ν	lo evidence of wild	dlife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date/	s).		
T. Norman			6/28/2021	<i></i>		

Site/Project Name			Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Lo	oop Rd	to CR 54 (FPID 436673-1)			,	Wetland 16	
Impact or Mitigation			Assessment conducted by:		Assessment date):	
	Impac	t	T. Norman			6/28/2021	
<u></u>					ļ		
Scoring Guidance		Optimal (10)	Moderate(7)	Mi	nimal (4)	Not Present	(0)
The scoring of each		Condition is ontimal and fully	Condition is less than	Minimal le	evel of support of	Condition is insuf	ficient to
would be suitable for the		supports wetland/surface	maintain most	wetland	/surface water	provide wetland/	surface
type of wetland or surface		water functions	wetland/surface water	fu	unctions	water function	ons
waler assessed			TUTICUOTS				
.500(6)(a) Location and Landscape Support w/o pres or <u>current v</u> 5 .500(6)(b)Water Environm	d with 0	The assessment area is an h system to the north. The ass consists of improved past outside of the assessment ar presence of right-of-way fen that ma	erbaceous wetland that extensessment area is located within ture and residential developmetea; wildlife access to and from cing, US 98, and improved party adversely affect the function	ds beyond ti n the northb ent. Minimal n habitats ou sture/reside s provided t	ne right-of-way into ound US 98 right- wetland and uplat tside of the asses ntial use. Invasive by the assessmen	o an offsite forestec of-way. Adjacent la nd habitats are ava sment area is limite exotic species are t area.	l wetland nd uses ilable ed by the present
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2 reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in discharge resulting from the construction of US 98. The wetland receives runoff from US 98.				iation. During the 2 the adjacent US 98 ates alterations in p noff from US 98.	021 field and its points of		
w/o pres or	with						
7	0						
1	0						
.500(6)(c)Community strue	cture	Majority of plant covor is cor	noricad of invaciva, avatic spa	cios with for	v dosirable/appro	priato specios pross	ant Tho
 Vegetation and/or Benthic Community 	/	alteration. Land manageme cross drains and pipe c	its associated stormwater mai ent practices include routine m ulverts that may affect natural	nagement fa aintenance recruitment	w desirable approp acilities (i.e., ditche within the right-of- or regeneraltion in	es) has resulted in h way and the installant the plant commun	nabitat ation of nity.
w/o pres or	with						
4	U						
Score = sum of above scores/	'30 (if	If preservation as mitiga	ation,		For impact asses	sment areas	
uplands, divide by 20)		Preservation adjustmer	nt factor =		FL = delta x	acres =	
or w/o pres v	with	Adjusted mitigation dolt			0.53 x 0.43	= 0.23	
0.53 0	0.00	Adjusted miligation den	la –				
		l					
		If mitigation		F	or mitigation asse	ssment areas	
Delta = [with-current]		Time lag (t-factor) =					
-0.53		Risk factor =		RFG	= delta/(t-factor x	risk) =	

Site/Project Name		Application Number	er	ŀ	Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetla	and 17
FLUCCs code	Further classifica	tion (optional)	h	Impact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	llustrine, Emerger Seasonally Floode	ent, Persistent, Impact 0.15			Size (in acres) 0.15
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	n (i.e. O	FW, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, upland	ds		
Within the US 98 northbound rig small forested system	nt-of-way, the assessme outside of the right-of-w	nt area is compris /ay. Adjacent fore:	ed of a torpedo gras sted wetland lies wit	iss-doi thin th	minated freshwater ma e boundary of the Gree	rsh that connects to a en Swamp.
Assessment area description						
In add	ition to torpedo grass, of	ther species prese	ent include primrose	e willow	w and smartweed.	
Significant nearby features			Uniqueness (cons landscape.)	siderir	ng the relative rarity in	relation to the regional
The assessment area is located within the northbound US 98 right-of-wa approximately 0.1 mile southeast of Lakeland Acres Road. Green Swam WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for previ	ious p	ermit/other historic use	•
Natural water storage and conv improvement	veyance; foraging habitant t; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Bas that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading b	birds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such as	tracks	s, droppings, casings, l	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment data/	c).		
T. Norman			6/28/2021	3).		

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Rd	to CR 54 (FPID 436673-1)		Wetland 17			
Impact or Mitigation		Assessment conducted by:		Assessment date):	
Impac	ot	T. Norman			6/28/2021	
<u></u>						
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal le	vel of support of	Condition is insuff	ficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/	/surface water	provide wetland/	surface
type of wetland or surface	water functions	wetland/surface water	fu	Inctions	water function	ons
water assessed		lunctions				
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is an h system to the north. The ass consists of improved pastu wildlife access to and from ha US 98, and improved pastu	The assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite forested wetland system to the north. The assessment area is located within the northbound US 98 right-of-way. Adjacent land uses consists of improved pasture. Minimal wetland and upland habitats are available outside of the assessment area; vildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided				
current with						
5 0						
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 9 associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in discharge resulting from the construction of US 98. The wetland receives runoff from US 98.					iation. During the 2 the adjacent US 98 ates alterations in p noff from US 98.	021 field and its points of
current with						
7 0						
.500(6)(c)Community structure	Majority of plant cover is con	nprised of invasive, exotic spe	cies with fev	v desirable/approj	priate species prese	ent. The
2. Benthic Community	alteration. Land manageme	nt practices include routine ma recruitment or regeneraltio	aintenance w n in the plan	vithin the right-of-	way that may affect	natural
w/o pres or			- 1.20			
current with						
4 0						
a () (a) (a) (a)	la e e			- · ·		
uplands, divide by 20)	in preservation as miliga	auon,		For impact asses		
current	Preservation adjustmer	nt factor =			40,63 -	
or w/o pres with	Adjusted mitigation del	ta =		0.53 x 0.15	= 0.08	
0.53 0.00			L			
	If mitigation				1	
Delta = [with-current]	Time lag (t-factor) =		Fo	or mitigation asse	essment areas	
			REC	= delta/(t-factor v	risk) =	
-0.53 Risk factor = RFG = delta/(t-factor x risk) =					115K) -	

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)			Wetland 18		
FLUCCs code	Further classifica	ition (optional)	1	Impact	t or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.22
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	0n (i.e. C	DFW, AP, other local/state/federa	I designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplan	ds		
Within the US 98 northbound righ small forested system	-of-way, the assessme outside of the right-of-w	nt area is compris /ay. Adjacent fore:	ed of a torpedo gra sted wetland lies wi	ass-do ithin th	minated freshwater mane boundary of the Gree	rrsh that connects to a en Swamp.
Assessment area description						
In addition to t	orpedo grass, other sp	ecies present incl	ude sand cordgrass	s, prim	nrose willow, and sesba	ın.
Significant nearby features			Uniqueness (con landscape.)	nsideri	ng the relative rarity in	relation to the regional
The assessment area is located within the northbound US 98 right-of-way directly across from Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious p	permit/other historic use	;
Natural water storage and convo improvemen	eyance; foraging habita ;; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading b	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ctly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date((s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)		Wetland 18			
Impact or Mitigation		Assessment conducted by: Assessment da):	
Impac	ot	T. Norman			6/28/2021	
<u></u>		ļ				
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal lev	vel of support of	Condition is insuf	ficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/	surface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	ons
water assessed		lunctions				
.500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way into an offsite forest system to the north. The assessment area is located within the northbound US 98 right-of-way. Adjacen consists of improved pasture. Minimal wetland and upland habitats are available outside of the assessment area is limited by the presence of right-of- US 98, private fencing, and improved pasture. Invasive exotic species are present that may adversely functions provided by the assessment area. w/o pres or current with 5 0					o an offsite forested of-way. Adjacent la le of the assessmer ence of right-of-way t may adversely affe	I wetland nd uses nt area; / fencing, ect the
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators a indicators observed include US 98 and its associated sto in points of discharge r	Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrological indicators observed included saturation and a high water table. Hydrologic conditions are affected by the adjacent S 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.				
w/o pres or						
current with						
7 0						
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is cor construction of US 98 and alteration. Land manageme	nprised of invasive, exotic spe its associated stormwater ma ent practices include routine ma recruitment or regeneraltio	cies with few nagement fa aintenance w n in the plant	v desirable/appro cilities (i.e., ditche vithin the right-of- t community.	priate species prese es) has resulted in h way that may affect	ent. The nabitat natural
w/o pres or						
current with						
4 0						
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.53 0.00	If preservation as mitig Preservation adjustmen Adjusted mitigation del	ation, nt factor = ta =	5	For impact asses: FL = delta x 0.53 x 0.22	sment areas acres = = 0.12	
Delta = [with_ourrent]	If mitigation		Fo	or mitigation asse	essment areas	
			RFG =	= delta/(t-factor x	risk) =	
-0.53 Risk factor =					,	

Site/Project Name		Application Number	er	Ass	essment Area Name o	or Number	
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)				Wetland 19		
FLUCCs code	Further classification	ation (optional)	In	mpact or I	Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.58	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	ו (i.e. OFW,	, AP, other local/state/federal	l designation of importance)	
Hillsborough River	III				None		
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, upland	ls			
Within the US 98 northbound rig outside of the right-of-v	ht-of-way, the assessm /ay. A cross drain that r	nent area is compr runs underneath U	rised of a freshwater IS 98 connects Wetl	⁻ marsh t land 19 t	that connects to a sn to other offsite wetlar	nall forested system nd systems	
Assessment area description							
Dominant vegetation within th	is wetland consists of to	orpedo grass and buttonbush, and p	primrose willow with bickerelweed.	ı foxtail, l	loosestrife, cattail, V	′irginia chain fern,	
Significant nearby features			Uniqueness (cons landscape.)	sidering t	the relative rarity in r	relation to the regional	
The assessment area is located within the northbound US 98 right-of-way approximately 0.5 mile northwest of Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for previo	ous pern	mit/other historic use		
Natural water storage and conv improvemen	eyance; foraging habita t; flood attenuation	t; wat <mark>er</mark> quality	None				
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review esment area and reason	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such as	tracks, d	droppings, casings, r	nests, etc.):	
Evidence of wildlife observed included a great egret foraging within the assessment area.							
Additional relevant factors:							
	None.						
Assessment conducted by:			Assessment date(s	s):			
T. Norman			6/28/2021				

Site/Project Name		Application Number		Assessment Area Name or Number			
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 19			
Impact or Mitigation		Assessment conducted by:		Assessment date	:		
Impac	ct	T. Norman		6/28/2021			
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present (0)		
The scoring of each		Condition is less than					
indicator is based on what would be suitable for the	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to	Minimal lev	vel of support of	condition is insufficient	t to ce	
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water functions	50	
water assessed		functions	functions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is an h system to the north. The ass consists of the Duke Energy of the assessment area; hou the presence of right-of-way may	herbaceous wetland that extensessment area is located within facility that is bounded with fe wever, wildlife access to and fr y fencing, US 98, and the Duke adversely affect the functions	ds beyond th n the northbo ncing. Wetla om habitats e Energy faci provided by t	e right-of-way into ound US 98 right- ind and upland ha outside of the ass ility. Invasive exot the assessment a	o an offsite forested wetla of-way. Adjacent land use Ibitats are available outsi sessment area is limited t ic species are present tha rea.	and ies ide by iat	
5 0				•			
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure	with 0 with 0						
1. Vegetation and/or 2. Benthic Community w/o pres or current with 4 0	Majority of plant cover is cor construction of US 98 and alteration. Land manageme right-of-way th	mprised of invasive, exotic spe its associated stormwater ma nt practices include the installa at may affect natural recruitme	ecies with few nagement fa ation of a cro ent or regene	v desirable/approp cilities (i.e., ditche ss drain and rout eraltion in the plan	oriate species present. Th ss) has resulted in habitat ine maintenance within th t community.	he ₁t he	
			_				
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.53 0.00	If preservation as mitig: Preservation adjustmen Adjusted mitigation del	ation, nt factor = ta =		For impact assess FL = delta x 0.53 x 0.58	sment areas acres = = 0.31		
Delta = [with-current]	Time lag (t-factor) =		Fo	or mitigation asse	ssment areas		
			REG	= delta/(t-factor v	risk) =		
-0.53	Risk factor =	RFG = delta/(t-factor x risk) =					

Site/Project Name		Application Number	er		Assessment Area Name	or Number	
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)			Wetland 20			
FLUCCs code	Further classification	ation (optional)		Impac	t or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.43	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e. (DFW, AP, other local/state/federa	Il designation of importance)	
Hillsborough River	111				None		
Geographic relationship to and hyd Within the US 98 northbound right	rologic connection with -of-way, the assessmer	wetlands, other so nt area is comprise	urface water, uplar ed of an herbaceou	nds us wet	and community domina	ated by primrose willow	
that connects to a larger wetland	a system outside of the	offsite wetland	l systems	sunde	rneath US 98 connects	vvetland 20 to other	
Assessment area description							
Dominant vegetation within this w	etland consists of primm	ose willow with fo	ktail, cattail, looses	trife, \	/irginia chain fern, bulru	sh, and pickerelweed.	
Significant nearby features			Uniqueness (con landscape.)	nsider	ing the relative rarity in	relation to the regional	
The assessment area is located within the northbound US 98 right-of-way at the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for prev	vious p	permit/other historic use)	
Natural water storage and conv improvemen	eyance; foraging habita t; flood attenuation	t; water quality	None				
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the	
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such a	s tracł	s, droppings, casings,	nests, etc.):	
No evidence of wildlife observed.							
Additional relevant factors:							
None.							
Assessment conducted by:			Assessment date	(s):			
T. Norman			6/28/2021				

Site/Project Name		Application Number	/	Assessment Area Name or Number		
US 98 from W Socrum Loop Rd	I to CR 54 (FPID 436673-1)			Wetland 20		
Impact or Mitigation		Assessment conducted by: Asse		Assessment date:		
Impac	ct	T. Norman			6/28/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)
The scoring of each		Condition is less than				
indicator is based on what would be suitable for the	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to maintain most	Minimal lev	/el of support of	provide wetland/	ficient to
type of wetland or surface	water functions	wetland/surface water	fur	nctions	water function	ons
water assessed		functions				
F						
.500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way into the Duke Energy tacility that is bounded with fencing. Wetland and upland habitats are available outside of the Duke Energy facility that is bounded with fencing. Wetland and upland habitats are available outside of assessment area; however, wildlife access to and from habitats outside of the assessment area is limited to assessment area; however, wildlife access to and from habitats outside of the assessment area is limited to assessment area; however, wildlife access to and from habitats outside of the assessment area is limited to assessment area; however, wildlife access to and from habitats outside of the assessment area is limited to assessment area; however, wildlife access to and from habitats outside of the assessment area is limited to assessment area; however, wildlife access to and from habitats outside of the assessment area is limited to assessment area; however, wildlife access to and from habitats outside of the assessment area is limited to assessment area; however, wildlife access to and from habitats outside of the assessment area. w/o pres or current with 5 0						y utility onsists of of the by the hat may
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and s reviews, the assessment are and its associated stormwa points of discharge re	oil moisture appeared approprea was inundated throughout. ater management facilities (i.e. sulting from the construction o	iate consider Hydrologic co , ditches). So f US 98. The	ring seasonal var onditions are affe oil erosion observ e wetland receive	iation. During the 2 cted by the adjacer red indicates alterat s runoff from US 9	021 field at US 98 ions in 8.
w/o pres or						
current with						
7 0						
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is cor construction of US 98 and alteration. Land managemen right-of-way th	nprised of invasive, exotic spe its associated stormwater man nt practices include the installa	cies with few nagement fac ation of a pipe	/ desirable/approj cilities (i.e., ditche e culvert and rout	priate species prese s) has resulted in h ine maintenance w t community	ent. The nabitat ithin the
w/o pres or	nght-or-way th	at may anoot natural roordiante	int of regene		it community.	
current with						
4 0						
			-			
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	F	or impact asses	sment areas	
upianus, uiviue by 20)	Preservation adjustmer	nt factor =		FL = delta x	acres =	
or w/o pres with	Adjusted mitigation date	ta =		0.53 x 0.43	= 0.23	
0.53 0.00	Aujusted miligation den	iu –				
	۱ 		_			
	If mitigation		Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.53	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Site/Project Name		Application Number	۲		Assessment Area Name	or Number	
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)	7.pp.iodion Numbe			Wetland 21		
FLUCCs code	Further classifica	ition (optional)		Impac	t or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.05	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificatio	on (i.e. 0	DFW, AP, other local/state/federa	l designation of importance)	
Hillsborough River	III				None		
Geographic relationship to and hydr	ologic connection with	wetlands, other s	urface water, uplan	ds			
Within the right-of-way, Wetlan	d 21 is comprised of a	torpedo-grass do	minated freshwater	mars	h that extends outside	of the right-of-way.	
Assessment area description							
	Dominant vegetation v	vithin this wetland	consists of solely o	of torp	edo grass.		
Significant nearby features			Uniqueness (con	isideri	ng the relative rarity in	relation to the regional	
The assessment area is located approximately 0.1 mile northwest of the Duke Energy utility easement within the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side o US 98.			Not unique				
Functions			Mitigation for prev	ious p	permit/other historic use)	
Natural water storage and conve improvement	yance; foraging habita ; flood attenuation	t; water quality	None				
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Amphibians, wading bi	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Utiliz	ation (List species dire	ctly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):	
No evidence of wildlife observed.							
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date((s):			
T. Norman			6/28/2021				

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 21		
Impact or Mitigation		Assessment conducted by: Assess		Assessment date	ssessment date:	
Impad	ct	T. Norman	6/28/2021		6/28/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present (0)	
The scoring of each	Condition is optimal and fully	Condition is less than	Minimalla	al of our next of	Condition is insufficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/surface	
type of wetland or surface	water functions	wetland/surface water	fui	nctions	water functions	
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is an easement. The assessment are available outside of assessment area is limited exotic species are pr Water level indicators and s reviews, the assessment observed within Wetland 21	herbaceous wetland that exte area is located within the nort the assessment area; howeve by the presence of right-of-wa esent that may adversely affect oil moisture appeared appropria area was inundated througho on or near the fence posts incl	nds beyond t hbound US 9 er, wildlife acr y fencing, US ct the function riate consider ut. In addition luded elevate	the right-of-way no 86 right-of-way. W cess to and from 5 98, and the Duk ns provided by the ring seasonal varion to surface water ed lichen lines, hu	ear the Duke Energy utility letland and upland habitats habitats outside of the ce Energy facility. Invasive e assessment area. ation. During the 2021 field , hydrological indicators mmocks, and water marks	
w/o pres or current with 7 0	Hydrologic conditions are aff ditches). Soil erosion observ	ected by the adjacent US 98 a red indicates alterations in poin The wetland receives	and its associ nts of dischar s runoff from	iated stormwater rge resulting from US 98.	management facilities (i.e., the construction of US 98.	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Nearly all of plant cover is stormwater management include the routine mainter	comprised of invasive, exotic facilities (i.e., ditches) has res nance within the right-of-way th plant com	species. The ulted in habit nat may affec nmunity.	e construction of l at alteration. Land t natural recruitm	JS 98 and its associated d management practices ent or regeneraltion in the	
w/o pres or						
current with	-					
3 0						
p # #	-					
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.53 0.00	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, nt factor = ia =	F	For impact assess FL = delta x a 0.53 x 0.05	sment areas acres = = 0.03	
Delta = [with-current]	If mitigation		Fc	or mitigation asse	ssment areas	
			PEC -	= delta//t.factor x	rick) =	
-0.53	Risk factor =		RFG =	- uena/(i-iaciur X	iisk) =	

Site/Project Name		Application Number	er	A	ssessment Area Name o	or Number
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)			Wetland 22		
FLUCCs code	Further classification	ation (optional)	1	Impact of	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.27
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classificatio	on (i.e. Of	FW, AP, other local/state/federa	l designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hyd	ologic connection with	wetlands, other s	urface water, uplan	ıds		
Wetland 22 is comprised of freshwa	ater marsh habitat that the forested	extends outside c canopy consists c	of the right-of-way in of cypress and red r	nto a fo maple.	rested wetland. Adjac	ent to the right-of-way,
Assessment area description						
Within the right-of-w	ay, dominant vegetatio	n within Wetland 2	22 includes maiden	icane, I	barnyard grass, and se	esbania.
Significant nearby features			Uniqueness (con landscape.)	nsiderin	ng the relative rarity in	relation to the regional
Wetland 22 is located within the northbound US 98 right-of-way approximately 0.2 mile northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side US 98.			Not unique			
Functions			Mitigation for previ	vious pe	ermit/other historic use)
Natural water storage and conve improvement	yance; foraging habita ; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utilizat classification (E, T assessment area)	ition by Γ, SSC))	Listed Species (List s), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading bi	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or	other signs such as	s tracks	s, droppings, casings, r	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
None.						
Assessment conducted by:			Assessment date((s):		
S. Szatyari			9/24/2021			

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Rd	I to CR 54 (FPID 436673-1)			Wetland 22		
Impact or Mitigation		Assessment conducted by:	ent conducted by: Assessme		ssessment date:	
Impac	st	S. Szatyari	S. Szatyari 9/24		9/24/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal Io	val of support of	Condition is insuf	ficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/	surface
type of wetland or surface	water functions	wetland/surface water functions water funct				ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is an easement. The assessment are available outside of assessment area is limited vegetation species are Water level indicators and s reviews, the soils observed w observed within Wetland 22 adjacent US 98 and its asso	herbaceous wetland that exte area is located within the nort the assessment area; howeve by the presence of right-of-way present that may adversely af oil moisture appeared appropr ithin Wetland 22 consisted of included surface water and a h	nds beyond hbound US s er, wildlife ac y fencing, US fect the func iate conside a dark surfa high water ta facilitas (i	the right-of-way n 98 right-of-way. W cess to and from 5 98, and the Duk tions provided by ring seasonal var ce with muck pres ble. Hydrologic co e ditches) The 2	ear the Duke Energ /etland and upland habitats outside of the Energy facility. N the assessment ar- itation. During the 2 sent. Hydrological in onditions are affected wetland receives m	gy utility habitats the uisance ea. 021 field ndicators ed by the noff from
w/o pres or current with 7 0	US 98. A pipe culvert th	nat runs underneath US 98 col	nnects Wetla	and 22 to other of	fsite wetland syster	ns.
.500(6)(c)Community structure			t invesive o	votio anacion. The	o construction of LIG	2 09 and
 Vegetation and/or Benthic Community 	its associated stormwater m practices include the routine	anagement facilities (i.e., ditch maintenance within the right-c in the plant c	of invasive, e. nes) has result of-way that m community.	ulted in habitat alt	teration. Land mana recruitment or rege	agement neraltion
w/o pres or						
current with						
5 0						
						
Score = sum of above scores/30 (if uplands divide by 20)	It preservation as mitiga	ation,		⊢or impact asses	sment areas	
ourropt	Preservation adjustmer	nt factor =		FL = delta x	acres =	
pr w/o pres with				0.60 x 0.27	= 0.16	
0.60 0.00	Aujusteu mitigation dell	la –				
	1					
	If mitigation		E,	or mitigation acco	esment aroos	
Delta = [with-current]	Time lag (t-factor) =		F	or milliyation asse		
-0.60	Risk factor =		RFG :	= delta/(t-factor x	risk) =	

Site/Project Name		Application Number	er	/	Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)			Wetland 23		and 23
FLUCCs code	Further classification	ation (optional)		Impact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	ine, Emergent, Persistent, onally Flooded		Impact	Size (in acres) 0.12
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	0N (i.e. 0	FW, AP, other local/state/federa	Il designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplan	nds		
Within the right-of-way, Wetland 23 the freshwater ma	is comprised of freshv Irsh continues approxin	vater marsh habita nately 25 feet nort	at that extends outs h before abutting n	side of nesic p	the right-of-way. Adjac bine forest with saw pal	ent to the right-of-way, metto
Assessment area description						
Dominant vegetation within Wetl	and 23 includes torped	o grass, maidenca	ane, buttonweed, fo	oxtail g	rass, arrowhead, coinv	vort, and natal grass.
Significant nearby features			Uniqueness (cor landscape.)	nsiderii	ng the relative rarity in	relation to the regional
Wetland 23 is located within the northbound US 98 right-of-way approximately 0.3 miles northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			, Not unique			
Functions			Mitigation for prev	vious p	ermit/other historic use)
Natural water storage and conve improvement	eyance; foraging habita ;; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, 1 assessment area)	ation by T, SSC)	y Listed Species (List s ;), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading b	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ectly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
None.						
Assessment conducted by:			Assessment date	(s):		
S. Szatyari			9/24/2021			
Site/Project Name		Application Number	Assessment Ar	ea Name or Number		
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US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 23		
Impact or Mitigation		Assessment conducted by:	ucted by: Assessment date:			
Impa	ct	S. Szatyari		9/24/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each		Condition is less than				
indicator is based on what would be suitable for the	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to maintain most	wetland/surface water	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		functions				
	1					
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is an easement. The assessment are available outside of assessment area is limited vegetation species are	herbaceous wetland that exte area is located within the nort the assessment area; howeve by the presence of right-of-way present that may adversely af	nds beyond the right-of-way hbound US 98 right-of-way. er, wildlife access to and from fencing, US 98, and the Du fect the functions provided b	near the Duke Energy utility Wetland and upland habitats n habitats outside of the uke Energy facility. Nuisance by the assessment area.		
6 0						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 5 0	Water level indicators and s reviews, this wetland was water and aquatic vegeta included water marks. Hy managen	oil moisture appeared appropri nundated throughout with wat ation, hydrological indicators of drologic conditions are affected nent facilities (i.e., ditches). The omprised of a mix of native and anagement facilities (i.e., ditch maintenance within the right-or in the plant of	iate considering seasonal v er levels greater than four in bserved within Wetland 23 of d by the adjacent US 98 and e wetland receives runoff fro d invasive, exotic species. T hes) has resulted in habitat a of-way that may affect natura community.	ariation. During the 2021 field ches. In addition to surface on or near the fence posts l its associated stormwater om US 98.		
Score = sum of above scores/30 (if	If preservation as mitig	ation,	For impact asse	essment areas		
upianus, uiviue by 20)	Preservation adjustmen	nt factor =	FL = delta	x acres =		
pr w/o pres with			0.60 x 0.1	2 = 0.07		
0.60 0.00	Aujusted mitigation del	a –				
	J					
	If mitigation		For mitigation as	sessment areas		
Delta = [with-current]	Time lag (t-factor) =					
-0.60	Risk factor =		RFG = delta/(t-factor	x risk) =		

Site/Project Name		Application Number	er	,	Assessment Area Name	or Number	
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetla	and 24	
FLUCCs code	Further classification	ation (optional)		Impact	or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	ed Size (in acre			Size (in acres)	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	ON (i.e. C	FW, AP, other local/state/federa	I designation of importance)	
Hillsborough River	111				None		
Geographic relationship to and hyd Wetland 24 is comprised of a free wetland systems via a cross drain	drologic connection with shwater marsh that exte that runs underneath U north before abutting a t	wetlands, other so nds into a forested S 98. Adjacent to forested wetland d	urface water, uplan d wetland system o the right-of-way, th lominated by red m	nds outside ie fresh na <mark>ple</mark> a	of the right-of-way and water marsh continues ind cypress.	l is connected to other s approximately 25 feet	
Assessment area description Dominant vegetation within Wet	land 24 includes torped	o grass and maide willow	encane with f <mark>ox</mark> tail	grass,	Virginia chain fern, ses	sbania, and primrose	
Significant nearby features			Uniqueness (cor landscape)	nsideri	ng the relative rarity in	relation to the regional	
Wetland 24 is located within approximately 0.6 miles northwe Green Swamp WMA and Gator Cr	the northbound US 98 est of the Duke Energy u eek Reserve located on US 98.	right-of-way utility easement. n northeast <mark>side</mark> of	Not unique				
Functions			Mitigation for prev	vious p	ermit/other historic use)	
Natural water storage and conv improvemen	eyance; foraging habitant; flood attenuation	t; water quality	None				
Anticipated Wildlife Utilization Bas that are representative of the asse be found)	ed on Literature Review ssment area and reaso	List of species	Anticipated Utiliza classification (E, 1 assessment area)	ation by T, SSC)	y Listed Species (List s ;), type of use, and inte	pecies, their legal nsity of use of the	
Amphibians, wading t	birds, turtles, small mam	imals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Util	ization (List species dire	ectly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):	
	No evidence of wildlife observed.						
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	(s):			
S. Szatyari			9/24/2021				

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 24		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impa	ct	S. Szatyari			9/24/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Mii	nimal (4)	Not Present (0)	
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal la	val of support of	Condition is insufficien	at to
would be suitable for the	supports wetland/surface	maintain most	wetland	/surface water	provide wetland/surfa	ace
type of wetland or surface	water functions	wetland/surface water	fu	inctions	water functions	
water assessed		functions				
.500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way near the Duke easement. The assessment area is located within the northbound US 98 right-of-way. Wetland and are available outside of the assessment area; however, wildlife access to and from habitats out assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy fact vegetation species are present that may adversely affect the functions provided by the assessment area; however, wildlife access to and from habitats out assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy fact vegetation species are present that may adversely affect the functions provided by the assessment area; however, wildlife access to and from habitats out assessment area is limited by the presence of right-of-way fencing, US 98, and the Duke Energy fact vegetation species are present that may adversely affect the functions provided by the assessment area; however, with a figure of the assessment area is a non-transpecies are present that may adversely affect the functions provided by the assessment area; however, with a second that may adversely affect the functions provided by the assessment area; however, within the figure of the assessment area; however, with a second that the presence of right-of-way fencing. .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. Durin reviews, this wetland was inundated throughout with water levels greater than six inches. In additive water, hydrological indicators observed within Wetland 24 on or near the fence posts included water elevated lichen lines. Hydrologic conditions are affected by the adjacent US 98 and its associated management facilities (i.e., ditches). The wetland receives runoff from US 98. A cross drain that					ear the Duke Energy util fetland and upland habit habitats outside of the e Energy facility. Nuisan the assessment area. the assessment area. In addition to surface ncluded water marks an s associated stormwater ain that runs underneath	lity tats nce field se nd rr n US
current with						
.500(6)(c)Community structure						
1. Vegetation and/or Nearly all of plant cover is comprised of a mix of native and invasive, exotic species. The construction of US its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land mana practices include the routine maintenance within the right-of-way that may affect natural recruitment or reger in the plant community. w/o pres or current with 5 0						and ient Ition
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.60	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, nt factor = ta =		For impact assess FL = delta x 0.60 x 0.00	sment areas acres = = 0.00	
	If mitigation		F	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =		DEC	= delta//t factor v	risk) =	
-0.60 Risk factor = RFG = delta/(t-factor x risk) =					Hor/ -	

Site/Project Name		Application Number	٥r	4	Assessment Area Name	or Number
LIS 08 from W Socrum Loop Pd to (Application Numbe		,	Wate	and 25
	SK 54 (FFID 450075-1)				Wella	anu 25
FLUCCs code	Further classification	ation (optional)		Impact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	ent, Persistent, Impact Size (in acres 0.21			
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	ON (i.e. O	FW, AP, other local/state/federa	l designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hyc	Irologic connection with	wetlands, other s	urface water, uplan	nds		
Within the right-of-way,	Wetland 25 is compris	ed of a freshwater	marsh. Adjacent to	o the ri	ght-of-way is upland p	lanted pine.
Assessment area description						
	Dominant ve	egetation within W	etland 25 is maider	ncane.		
Significant nearby features			Uniqueness (con landscape.)	nsiderir	ng the relative rarity in	relation to the regional
Wetland 25 is located within the northbound US 98 right-of-way approximately 0.7 miles northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side US 98.			Not unique			
Functions			Mitigation for prev	ious p	ermit/other historic use)
Natural water storage and conv improvemen	eyance; foraging habita t; flood attenuation	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, T assessment area)	ation by T, SSC)	/ Listed Species (List s), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such as	s tracks	s, droppings, casings,	nests, etc.):
	Ν	lo evidence of wild	dlife observed.			
Additional relevant factors:						
		N1.				
		None				
Assessment conducted by:			Assessment date((s):		
S. Szatyari			9/24/2021			

Site/Project Name		Application Number	Assessment	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 25		
Impact or Mitigation		Assessment conducted by:	Assessment	Assessment date:		
Impac	ct	S. Szatvari		9/24/2021		
·		,				
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each		Condition is less than				
indicator is based on what would be suitable for the	supports wetland/surface	optimal, but sufficient to maintain most	wetland/surface wate	of Condition is insufficient to		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current with 6 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is an easement. The assessment are available outside of assessment area is limite adjacent uplands within the Water level indicators and s reviews, the soils observed w	herbaceous wetland that exter area is located within the nort the assessment area; however ad by the presence of right-of-to- right-of-way consist of mower oil moisture appeared appropri vithin Wetland 25 consisted of included surface water and a f	nds beyond the right-of-w hbound US 98 right-of-wa er, wildlife access to and f way fencing, US 98, and t d and maintained ruderal s iate considering seasona a dark surface with muck high water table. Hydrolog	ay near the Duke Energy utility y. Wetland and upland habitats rom habitats outside of the ne Duke Energy facility. The species overlaying fill material.		
w/o pres or current with 7 0 .500(6)(c)Community structure	adjacent US 98 and its assoc	isted of native maidencane. T	t facilities (i.e., ditches). 7 38. ne construction of US 98 a	he wetland receives runoff from		
1. Vegetation and/or 2. Benthic Community w/o pres or current with	managem <mark>ent</mark> facilities (i.e routine maintenance wit	:., ditches) has resulted in hab thin the right-of-way that may a comm	tat alteration. Land mana Iffect natural recruitment o unity.	gement practices include the or regeneraltion in the plant		
6 0						
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	For impact as	sessment areas		
uplands, divide by 20)	Preservation adjustmer	nt factor =	FL = del	a x acres =		
pr w/o pres with	Adjusted mitigation dat		0.63 x	0.21 = 0.13		
0.63 0.00	Adjusted mitigation del	ia =				
	J					
	If mitigation		For mitigation a	assessment areas		
Delta = [with-current]	Time lag (t-factor) =					
-0.63	Risk factor =		RFG = delta/(t-fact	or x risk) =		
P	a L		L			

Site/Project Name Application Number Assessment Area Name or Number				or Number		
US 98 from W Socrum Loop Rd to CF	R 54 (FPID 436673-1)				Wetla	and 26
FLUCCs code	Further classification	ation (optional)		Impact	t or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed Impact Size (in acres 0.30			Size (in acres) 0.30
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	ON (i.e. C	DFW, AP, other local/state/federa	al designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hydro	ologic connection with	wetlands, other s	urface water, uplar	nds		
Within the right-of-way, Wetland 26 Adjacen	is comprised of fresh t to the right-of-way, th	water marsh habit ne scrub-shrub we	tat that extends out tland consists prec	tside o domina	of the right-of-way into a antly of buttonbush	a scrub-shrub wetland.
Assessment area description						
Dominant vegetation withi	n Wetland 26 includes	s torpedo grass an	d maidencane with	n barny	yard grass, primrose wi	llow, bulrush.
Significant nearby features			Uniqueness (cor landscape.)	nsideri	ng the relative rarity in	relation to the regional
Wetland 26 is located within th approximately 1.0 mile northwest Green Swamp WMA and Gator Cree U	ne northbound US 98 of the Duke Energy u ek Reserve located on S 98.	right-of-way tility easement. n northeast side of	f Not unique			
Functions			Mitigation for prev	vious p	permit/other historic use	9
Natural water storage and conver improvement;	vance; foraging habita flood attenuation	t; water quality	None			
Anticipated Wildlife Utilization Based that are representative of the assess be found)	I on Literature Review sment area and reaso	List of species	Anticipated Utiliza classification (E, T assessment area)	ation by T, SSC)	y Listed Species (List s C), type of use, and inte	pecies, their legal Insity of use of the
Amphibians, wading bir	ds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliza	ation (List species dire	ectly observed, or o	other signs such as	s track	s, droppings, casings,	nests, etc.):
	Ν	lo ovidonco of wild	llife observed			
			ine observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
S. Szatyari			9/24/2021			

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 26		
Impact or Mitigation		Assessment conducted by:		Assessment date	2:	
Impao	ct	S. Szatyari			9/24/2021	
Scoring Guidanco	Ontimal (10)	Modorato(7)	Mi	nimal (4)	Not Present (0)	
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most Minimal (4) Not Present withing (4) Condition is less than optimal, but sufficient to maintain most Minimal (4) Not Present wetland/surface water functions Minimal (4) Condition is insuff				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is an easement. The assessment are available outside of assessment area is limite adjacent uplands within the	herbaceous wetland that exte area is located within the nort the assessment area; howeve ed by the presence of right-of-v right-of-way consist of mower	nds beyond hbound US er, wildlife ac way fencing, i and mainta	the right-of-way n 98 right-of-way. W cess to and from US 98, and the D ined ruderal spec	ear the Duke Energy utility /etland and upland habitats habitats outside of the Juke Energy facility. The cies overlaying fill material.	
				•		
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the reviews, the soils observed within Wetland 26 consisted of a dark surface with muck present. Hydrological observed within Wetland 26 included surface water, water marks on the fence posts, and a high water Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facil ditches). The wetland receives runoff from US 98.					iation. During the 2021 field sent. Hydrological indicators , and a high water table. management facilities (i.e.,	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover consists of a co and its associated storr management practices include	mbination of native, nuisance, nwater management facilities de the routine maintenance wi receneration in the	and invasiv (i.e., ditches thin the right plant comm	e, exotic species.) has resulted in h t-of-way that may unity	The construction of US 98 nabitat alteration. Land affect natural recruitment or	
N/o pros or		regeneration in the		lunity.		
current with 5 0						
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.57 0.00	If preservation as mitigation are mitigation adjustmer Adjusted mitigation delt	ation, nt factor = ta =		For impact asses FL = delta x 0.57 x 0.30	sment areas acres = = 0.17	
· · · · · · · · · · · · · · · · · · ·	If mitigation		F	or mitigation asse	essment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.57	Risk factor =		RFG	= delta/(t-factor x	risk) =	

Site/Project Name		Application Number	hber Assessment Area Name or Number				
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)			Wet	land 27		
FLUCCs code	Further classification	ation (optional)		Impact or Mitigation Site?	Assessment Area		
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	ent, Persistent, Impact Size (in acres Ied 0.47				
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classification	DN (i.e. OFW, AP, other local/state/fede	ral designation of importance)		
Hillsborough River				None			
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplar	nds			
Within the right-of-w	ay, Wetland 27 is com	prised of freshwate	er marsh habitat th	at extends outside of the rig	nt-of-way.		
Assessment area description							
Dominant vegetation with	in Wetland 27 includes	s maidencane with	torpedo grass, ba	rnyard grass, arrowhead, an	d buttonweed.		
Significant nearby features			Uniqueness (cor landscape.)	nsidering the relative rarity in	relation to the regional		
Wetland 27 is located within approximately 0.75 mile southea Gator Creek Reserve loca	the northbound US 98 st of SR 471. Green Sw ted on northeast side c	right-of-way vamp WMA and of US 98.	Not unique				
Functions			Mitigation for prev	vious permit/other historic us	e		
Natural water storage and convo improvemen	eyance; foraging habita t; flood attenuation	it; wat <mark>er</mark> quality	None				
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review ssment area and reason	(List of species nably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Amphibians, wading b	irds, turtles, small mam	nmals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Utiliz	zation (List species dire	ectly observed, or	other signs such as	s tracks, droppings, casings,	nests, etc.):		
	Ν	lo evidence of wild	dlife observed.				
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	(s):			
S. Szatyari			9/24/2021				

Site/Project Name		Application Number Assessment Area Name or Number				
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 27		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impa	ct	S. Szatyari			9/24/2021	
ļ				<u></u>		
Scoring Guidance	Optimal (10)	Moderate(7)	Mini	mal (4)	Not Present (0)	
ine scoring of each	Condition is optimal and fully	optimal but sufficient to	Minimal leve	el of support of	Condition is insufficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/s	urface water	provide wetland/surface	
type of wetland or surface	water functions	wetland/surface water	fun	ctions	water functions	
water assessed		functions				
.500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way near S area is located within the northbound US 98 right-of-way. Wetland and upland habitats are assessment area; however, wildlife access to and from habitats outside of the assessmen presence of right-of-way fencing, US 98, and SR 471. The adjacent uplands within the right- and maintained ruderal species overlaying fill material. .500(6)(b)Water Environment (n/a for uplands) .500(6)(b)Water Environment					ar SR 471. The assessmen are available outside of the nent area is limited by the ght-of-way consist of mowed	
w/o pres or current with 7 0	reviews, this wetland was in affected by the adjacent U	undated throughout with water S 98 and its associated storm receives runof	• levels greate water manage f from US 98.	r Than six inches ement facilities (i	s. Hydrologic conditions are .e., ditches). The wetland	
.500(6)(c)Community structure						
 Vegetation and/or Benthic Community 	Plant cover consists primarily of US 98 and its associated management practices includ	y or native species with nuisan stormwater management facil de the routine maintenance wi regeneraltion in the	ce and invasiv ities (i.e., ditch thin the right-c plant commu	ve, exotic specie hes) has resulted of-way that may inity.	Present. The construction d in habitat alteration. Land affect natural recruitment or	
w/o pres or						
current with	4					
6 0						
Score = sum of above scores/30 (if	If preservation as mitiga	ation,	Fo	or impact asses	sment areas	
uplands, divide by 20)				FL = delta x	acres =	
current	Preservation adjustmer	nt factor =				
pr w/o pres with	pres with Adjusted mitigation delta = 0.60 x 0.47 = 0.28					
0.60 0.00						
	If mitigation					
Dolto - Invitte averanti	Time log /t faster) -		For	r mitigation asse	ssment areas	
	i ime iag (t-tactor) =		PEC -	dolta//t factor v	rick) –	
-0.60	Risk factor =	= RFG = delta/(t-factor x risk) =				

Site/Project Name	Application Number	ber Assessment Area Name or Number			or Number		
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetla	and 28	
FLUCCs code	Further classification	ation (optional)		Impact	or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.09	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	0 n (i.e. O	FW, AP, other local/state/federa	l designation of importance)	
Hillsborough River	111				None		
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplan	nds			
Within the right-of-way, Wetla	and 28 is comprised of a	a maidencane-don	ninated freshwater	marsh	that extends outside o	f the right-of-way.	
Assessment area description							
Additional vege	etation present includes	primrose willow a	nd red maple sapli	ings ald	ong the right-of-way fer	nce.	
Significant nearby features			Uniqueness (cor landscape.)	nsiderir	ng the relative rarity in	relation to the regional	
Wetland 28 is located within approximately 0.6 mile southeas Gator Creek Reserve loc	the northbound US 98 st of SR 471. Green Swa ated on northeast side c	right-of-way amp WMA and of US 98.	Not unique				
Functions			Mitigation for prev	vious p	ermit/other historic use)	
Natural water storage and conv improvemer	eyance; foraging habita t; flood attenuation	t; wat <mark>er</mark> quality	None				
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	List of species	Anticipated Utiliza classification (E, 1 assessment area)	ation by T, SSC)	/ Listed Species (List s), type of use, and inte	pecies, their legal nsity of use of the	
Amphibians, wading b	uirds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Util	zation (List species dire	ectly observed, or	other signs such as	s tracks	s, droppings, casings, ı	nests, etc.):	
	No evidence of wildlife observed.						
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	(s):			
S. Szatyari			9/24/2021				

Site/Project Name		Application Number	Assessme	ent Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 28		
Impact or Mitigation		Assessment conducted by:	Assessme	Assessment date:		
Impac	ct	S. Szatyari		9/24/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each		Condition is less than				
indicator is based on what would be suitable for the	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to maintain most	wetland/surface w	ater provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with	The assessment area is an h area is located within the no assessment area; however presence of right-of-way fenc	erbaceous wetland that exten- orthbound US 98 right-of-way. r, wildlife access to and from h ing, US 98, and SR 471. The and maintained ruderal spec	ds beyond the right-of- Wetland and upland ha abitats outside of the a adjacent uplands within ies overlaying fill mate	way near SR 471. The assessmer abitats are available outside of the assessment area is limited by the n the right-of-way consist of mowe arial.		
5 0				•		
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 6 0	Water level indicators and s reviews, this wetland was in affected by the adjacent U Plant cover consists primaril US 98 and its associated s management practices inclue	oil moisture appeared appropr undated throughout with water S 98 and its associated storm receives runof	iate considering seaso levels greater than six vater management fac from US 98.	onal variation. During the 2021 fiel (inches. Hydrologic conditions are ilities (i.e., ditches). The wetland exotic species. The construction o esulted in habitat alteration. Land at may affect natural recruitment o		
	, <u> </u>					
Score = sum of above scores/30 (if uplands divide by 20)	If preservation as mitigation	ation,	For impac	t assessment areas		
current	Preservation adjustmer	nt factor =	FL =	delta x acres =		
or w/o pres with	ith Adjusted mitigation delta = $0.60 \times 0.09 = 0.05$					
0.60 0.00	, lajuotoa miligation dell					
	J					
	If mitigation		For mitigatio	on assessment areas		
Delta = [with-current]	Time lag (t-factor) =					
-0.60	Risk factor =		RFG = delta/(t-f	actor x risk) =		

Site/Project Name	Application Number Assessment Area Name or Number				or Number		
US 98 from W Socrum Loop Rd to Cl	R 54 (FPID 436673-1)				Wetla	and 29	
FLUCCs code	Further classifica	tion (optional)	1	Impact	or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	llustrine, Emerger Seasonally Floode	ed Size (in acre 0.25			Size (in acres) 0.25	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificatio	n (i.e. O	FW, AP, other local/state/federa	l designation of importance)	
Hillsborough River	111				None		
Geographic relationship to and hydr	ologic connection with	wetlands, other s	urface water, uplan	ds			
Within the right-of-way, Wetland 2	9 is comprised of fresh	water marsh habi wetland sy	tat that extends out stem.	tside o	f the right-of-way and o	connects to a forested	
Assessment area description							
Dominant vegetation within Wetla primrose willow and saltbush. Ac	nd 29 includes maider ljacent to the right-of-v don	ncane and alligato vay, herbaceous v ninated by cypress	orweed. Additional v vetland habitat cons s and red maple.	vegeta sists o	tion present along the f pickerelweed, and the	right-of-way includes forested canopy is	
Significant nearby features			Uniqueness (con landscape.)	isiderii	ng the relative rarity in	relation to the regional	
Wetland 29 is located within the northbound US 98 right-of-way approximately 0.4 mile southeast of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for prev	ious p	ermit/other historic use	•	
Natural water storage and conve improvement	yance; foraging habita flood attenuation	t; wat <mark>er</mark> quality	None				
Anticipated Wildlife Utilization Based that are representative of the assess be found)	d on Literature Review sment area and reasor	(List of species ably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Amphibians, wading bir	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Utiliz	ation (List species dire	ctly observed, or	other signs such as	s tracks	s, droppings, casings,	nests, etc.):	
	No evidence of wildlife observed.						
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date(s):			
S. Szatyari			9/24/2021				

Site/Project Name	Application Number		Assessment Area Name or Number			
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 29		
Impact or Mitigation		Assessment conducted by:		Assessment date	:	
Impao	ot	S. Szatyari	S. Szatyari		9/24/2021	
	0					(0)
Scoring Guidance The scoring of each	Optimal (10)	Condition is less than	Min	nimal (4)	Not Present	(0)
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal lev	vel of support of	Condition is insuffic	cient to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/s	urface
water assessed	water functions	functions water functions water function				
.500(6)(a) Location and Landscape Support w/o pres or current with 6 0	The assessment area is an wetland system. The asses habitats are available outsic assessment area is limited b the right-of-way	herbaceous wetland that exte ssment area is located within t le of the assessment area; ho y the presence of right-of-way y consist of mowed and mainta	nds beyond t he northbour wever, wildlif fencing, US ained ruderal	the right-of-way n nd US 98 right-of- e access to and f 98, and SR 471. species overlayir	ear SR 471 into a fo way. Wetland and u rom habitats outside The adjacent upland ng fill material.	rested pland of the s within
				•		
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 5 0	Water level indicators and s reviews, this wetland was water, hydrological indicators by the adjacent US 98 and Plant cover consists of a m stormwater management include the routine mainter	oil moisture appeared appropr inundated throughout with wa s observed included water man its associated stormwater man runoff fron ix of native and invasive, exoti facilities (i.e., ditches) has resi nance within the right-of-way th plant con	iate conside ter levels gre rks on the fer n gement fa n US 98.	ring seasonal vari eater than six inch nce posts. Hydrol cilities (i.e., ditche distriction of the construction of tat alteration. Land t natural recruitm	iation. During the 20 es. In addition to sur ogic conditions are a es). The wetland rec s). The wetland rec f US 98 and its asso d management pract ent or regeneraltion	21 field fface affected eives ciated tices in the
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.60 0.00 Delta = [with-current]	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt If mitigation Time lag (t-factor) = Rick factor =	ation, ht factor = ta =	Fc RFG =	For impact assess FL = delta x a 0.60 x 0.25 or mitigation asse = delta/(t-factor x	sment areas acres = = 0.15 ssment areas risk) =	
-0.00	RISK IACTOF =					

Site/Project Name		Application Numbe	er	A	Assessment Area Name	or Number	
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)				Wetla	and 30	
FLUCCs code	Further classification	ation (optional)		Impact	or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.01	
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classification	ON (i.e. Ol	FW, AP, other local/state/federa	l designation of importance)	
Hillsborough River	III				None		
Geographic relationship to and hyd	ologic connection with	wetlands, other s	urface water, uplan	nds			
Within the right-of-wa	ay, Wetland 30 is comp	orised of freshwate	er marsh habitat tha	at exter	nds outside of the right	t-of-way.	
Assessment area description							
Dominant vegetation within Wetl	and 30 includes maide	ncane, arrowhead notatun	l, buttonweed, coin n).	wort, s	and cordgrass, and ba	hiagrass (Paspalum	
Significant nearby features			Uniqueness (cor landscape.)	nsiderir	ng the relative rarity in	relation to the regional	
Wetland 30 is located within the northbound US 98 right-of-way approximately 0.3 mile southeast of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for prev	/ious pe	ermit/other historic use)	
Natural water storage and conve improvement	eyance; foraging habita ; flood attenuation	t; wat <mark>er</mark> quality	None				
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species nably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Amphibians, wading bi	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or	other signs such as	s tracks	s, droppings, casings,	nests, etc.):	
No evidence of wildlife observed.							
Additional relevant factors:							
None.							
Assessment conducted by:			Assessment date	(s):			
S. Szatyari			9/24/2021				

Site/Project Name		Application Number		Assessment Area Name or Number			
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 30			
Impact or Mitigation		Assessment conducted by:		Assessment date	2		
Impao	ct	S. Szatyari		9/24/2021			
Scoring Guidance	Ontimal (10)	Moderate(7)	Mi	nimal (1)	Not Present (0)		
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimital (4) Not Present (o Minimal level of support of wetland/surface water functions Condition is insuffic provide wetland/surface water function				
.500(6)(a) Location and Landscape Support w/o pres or current with 5 0	The assessment area is an h area is located within the no assessment area; however presence of right-of-way fenc	The assessment area is an herbaceous wetland that extends beyond the right-of-way near SR 471. The assessment area is located within the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and SR 471. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material.					
				•			
 .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2 reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surfar and aquatic vegetation, hydrological indicators observed included water marks on the fence posts. Hydro conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., d The wetland receives runoff from US 98. 					iation. During the 2021 field In addition to surface water fence posts. Hydrologic lent facilities (i.e., ditches).		
7 0							
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover primarily consists and its associated storr management practices inclue	s of native with minimal preser nwater management facilities de the routine maintenance wi regeneraltion in the	nce of invasi (i.e., ditches thin the right plant comm	ve, exotic species) has resulted in f t-of-way that may nunity.	5. The construction of US 98 nabitat alteration. Land affect natural recruitment or		
w/o pres or							
current with							
6 0							
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.60	If preservation as mitiga Preservation adjustmer Adjusted mitigation dell	ation, ht factor = ta =		For impact assess FL = delta x 0.60 x 0.01	sment areas acres = = 0.01		
	If mitigation		F	or mitigation asse	essment areas		
Delta = [with-current]	Time lag (t-factor) =						
-0.60	Risk factor =		RFG	= delta/(t-factor x	risk) =		

Site/Project Name Application N			mber Assessment Area Name or Number			or Number
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)			Wetland 31		
FLUCCs code	Further classification	ation (optional)		Impact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.56
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	ON (i.e. O	FW, AP, other local/state/federa	l designation of importance)
Hillsborough River					None	
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, uplan	nds		
Within the right-of-way, Wetland cross dr	l 31 is comprised of fres ain that runs underneat	hwater marsh hab า US 98 connects	itat that extends ou Wetland 31 to othe	utside c er offsit	of the right-of-way into a wetland systems.	a forested wetland. A
Assessment area description						
Dominant vegetation within Wet	tland 31 includes paragr adjacent to the right-	ass and torpedo g of-way consists o	rass with barnyard f cypress, red map	d grass, ble, and	and primrose willow. ⁻ fireflag.	The forested wetland
Significant nearby features			Uniqueness (cor landscape.)	nsiderir	ng the relative rarity in	relation to the regional
Wetland 31 is located within the northbound US 98 right-of-way directly northwest of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious p	ermit/other historic use)
Natural water storage and conv improvement	veyance; foraging habitant; flood attenuation	t; water quality	None			
Anticipated Wildlife Utilization Bas that are representative of the asse be found)	ed on Literature Review essment area and reason	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading l	birds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Util	ization (List species dire	ectly observed, or	other signs such as	s tracks	s, droppings, casings, l	nests, etc.):
Frogs were observed during field reviews.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
S. Szatyari			9/24/2021			

Site/Project Name		Application Number	Assessment Area Name or Number			
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 31		
Impact or Mitigation		Assessment conducted by:		Assessment date	:	
Impac	ot	S. Szatyari			9/24/2021	
						(*)
Scoring Guidance	Optimal (10)	Moderate(7)	MII	nimal (4)	Not Present	(0)
indicator is based on what	Condition is optimal and fully	optimal but sufficient to	Minimal le	vel of support of	Condition is insuffi	cient to
would be suitable for the	supports wetland/surface	maintain most	wetland	/surface water	provide wetland/s	urface
type of wetland or surface	water functions	wetland/surface water	fu	inctions	water function	าร
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with	The assessment area is an h adjacent to SR 471. The ass habitats are available outsic assessment area is limited b the right-of-way	erbaceous wetland that exten essment area is located withir le of the assessment area; hor y the presence of right-of-way v consist of mowed and mainte	ds beyond th n the northbo wever, wildlit fencing, US nined ruderal	ne right-of-way into ound US 98 right-of fe access to and f 98, and SR 471. I species overlayir	o a forested wetland of-way. Wetland and rom habitats outside The adjacent upland ng fill material.	system upland of the s within
5 0				•		
.500(6)(b)Water Environment (n/a for uplands) w/o pres or	ors and soil moisture appeared appropriate considering seasonal variation. During the 2021 field nd was inundated throughout with water levels greater than six inches. Hydrologic conditions are djacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.					
current with						
7 0						
I						
.500(6)(c)Community structure						
 Vegetation and/or Benthic Community 	Plant cover within the right-o its associated stormwater m practices include the routine	f-way is nearly all comprised of anagement facilities (i.e., ditch maintenance within the right-or in the plant of	of invasive, e nes) has resu of-way that m community.	exotic species. The ulted in habitat alt nay affect natural	e construction of US eration. Land manag recruitment or regen	98 and gement eraltion
w/o pres or						
current with						
4 0						
Score - sum of above scores/30 (if	If preservation as mitig	ation		For impact assess	sment areas	
uplands, divide by 20)	in preservation as millige					
Preservation adjustment factor =				FL = delta x	acres =	
or w/o pres with					= 0.30	
Adjusted mitigation delta = 0.53 X 0.56 =					- 0.00	
0.53 0.00			<u>.</u>			
	-					
	If mitigation		F	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
· .			REG	= delta/(t-factor x	risk) =	
-0.53 Risk factor = RFG = delta/(t-factor x risk) =						

Site/Project Name	nber Assessment Area Name or Number			or Number			
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)			Wetland 32			
FLUCCs code	Further classification	ition (optional)		Impac	t or Mitigation Site?	Assessment Area	
617 - Mixed Wetland Hardwood	ds PFO1C - Palu Decidu	ustrine, Forested, ious, Seasonally I	Broad-Leaved Flooded		Impact	Size (in acres) 1.27	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e. (OFW, AP, other local/state/federa	l designation of importance)	
Hillsborough River					None		
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplar	nds			
Within the right-of-way, Wetland	32 is comprised of a for	ested wetland. Ac	ljacent land cover o	outsid	e of the right-of-way co	nsists of planted pine.	
Assessment area description				7			
Dominant vegetation within Wet	land 32 includes red ma	aple, water oak, C littered with trash	arolina willow, and and debris.	persir	nmon. During the field i	review, this area was	
Significant nearby features		Uniqueness (cor landscape.)	nsider	ing the relative rarity in	relation to the regional		
Wetland 32 is located on the east side of SR 471, north of US 98. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for prev	/ious p	permit/other historic use)	
Natural water storage and conv improvement; flo	eyance; foraging habita ood attenuation; refuge.	t; water quality	None				
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, 1 assessment area)	ation b F, SS()	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the	
Amphibians, wading birds, turtl m	es, sn <mark>ake</mark> s, song bir <mark>ds</mark> , ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	other signs such as	s tracł	ks, droppings, casings,	nests, etc.):	
No evidence of wildlife utilitzation observed.							
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	(s):			
T. Norman			9/21/2021				

Site/Project Name	Application Number		Assessment Area Name or Number			
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 32		
Impact or Mitigation		Assessment conducted by:		Assessment date	sment date:	
Impac	ct	T. Norman		9/21/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present ((0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal Io	vol of support of	Condition is insuffic	ciont to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/su	urface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	ıs
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current with</u> 5 0	The assessment area is a di north of US 98. Adjacacent upland habitats are available of the assessmen	sturbed, forested wetland. The land use includes planted pin outside of the assessment a t area is limited by the present	e assessmen e, pasturelar rea; however ce of right-of-	nt area is located of nd and Colt Creek , wildlife access t -way fencing, US	on the east side of S State Park. Wetland o and from habitats o 98, and SR 471.	R 471, d and butside
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure	.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. During 2021 field reviews, this wetland was inundated throughout with water levels greater than three inches and litter with trash. In addition to surface water, hydrological indicators observed liverworts, elevated lichen lines, hummor and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting the construction of US 98. The wetland receives runoff from US 98. .500(6)(c)Community structure .500(6)(c)Community structure					
1. Vegetation and/or 2. Benthic Community w/o pres or current vith 0	wetland during the field associated stormwater mai practices are generally app may a	review. Minimal invasive/exoti nagement facilities (i.e., ditche ropriate, but installation of pipe ffect natural recruitment or rec	c species pre- s) has resulte e culvert and generaltion in	esent. The constr ed in habitat alter routine maintena n the plant commu	uction of US 98 and i ation. Land manage nce within the right-c unity.	its ement of-way
	1					
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.63 0.00	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, ht factor =	F	For impact assess FL = delta x a 0.63 x 1.27	sment areas acres = = 0.80	
Delta = [with_current]	Time lac (t-factor) =		Fo	or mitigation asse	ssment areas	
			PEC -	= delta/(t.factor x	rick) =	
-0.63	Risk factor =	RFG = delta/(t-factor x risk) =				

Site/Project Name Application			nber Assessment Area Name or Number			or Number
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)			Wetland 33		
FLUCCs code	Further classification	ition (optional)		Impac	t or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.29
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	ON (i.e. (DFW, AP, other local/state/federa	I designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, uplan	nds		
Within the right-of-way, Wetlan system. A	d 33 is comprised of fre cross drain that runs ur	shwater marsh ha derneath US 98 c	bitat that extends o connects this wetlar	outside	e of the right-of-way into other wetland systems.	o a forested wetland
Assessment area description						
Dominant vegetation within Wetla Adjacent to the right-of-way, the fo	nd 33 includes alligator rested wetland canopy by truck and e	weed and torpedo consists of cypres quipment rutting t	grass with primros s and red maple. T hroughout the right	e willo he ma t-of-wa	ow, bahiagrass, smartw ajority of Wetland 33 ap <mark>ay.</mark>	eed, and maidencane. peared to be disturbed
Significant nearby features		Uniqueness (cor landscape.)	nsideri	ing the relative rarity in	relation to the regional	
Wetland 33 is located within the southbound US 98 right-of-way approximately 260 feet southeast of CR 54. Green Swamp WMA and Gate Creek Reserve located on northeast side of US 98.			r Not unique			
Functions			Mitigation for prev	/ious p	permit/other historic use)
Natural water storage and conv improvemer	reyance; foraging habitant; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reason	(List of species hably expected to	Anticipated Utiliza classification (E, 1 assessment area)	ation b F, SSC)	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading t	pirds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):
	No ev	idence of wildlife u	utilization observed			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
S. Szatyari			9/24/2021			

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Re	d to CR 54 (FPID 436673-1)			Wetland 33		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impa	ct	S. Szatyari	tyari		9/24/2021	
Questing Quildenes	Ontine al (40)	Madausta (7)	M-		Not Decout (0)	
The scoring of each	Optimai (10)	Condition is less than	IVIII	himai (4)	NOT Present (U)	
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal le	vel of support of	Condition is insufficient	to
would be suitable for the	supports wetland/surface	maintain most	wetland/	/surface water	provide wetland/surfac	ce :
type of wetland or surface	water functions	wetland/surface water	fu	Inctions	water functions	
water assessed		functions				
.500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way into a forested adjacent to CR 54. The assessment area is located within the southbound US 98 right-of-way. Weth habitats are available outside of the assessment area; however, wildlife access to and from habitat assessment area is limited by the presence of right-of-way fencing, US 98, and CR 54. The adjacent the right-of-way consist of mowed and maintained ruderal species overlaying fill mater the right-of-way consist of mowed and maintained ruderal species overlaying fill mater the right-of-way consist of most are appeared appropriate considering seasonal variation. Duri reviews, the soils observed within Wetland 33 consisted of a dark surface with muck present. Hydro observed included surface water and a bind water table. Hydrologic conditions are affected by the					o a forested wetland syste of-way. Wetland and uplar rom habitats outside of th The adjacent uplands with ng fill material. iation. During the 2021 fie sent. Hydrological indicato ted by the adjacent US 9	em nd ne nin eld cors 28
w/o pres or	and its associated storm	water management facilities (i	.e., ditches).	The wetland rece	eives runoff from US 98.	
current with						
7 0						
.500(6)(c)Community structure						
 Vegetation and/or Benthic Community 	Plant cover within the right-o The construction of US 98 au alteration. Land managen	f-way is comprised of primarily nd its associated stormwater n nent practices include the routi natural recruitment or regenera	r invasive, ex nanagement ine maintena altion in the p	cotic species with facilities (i.e., dito ance within the rig plant community.	presence of native specie hes) has resulted in habi ht-of-way that may affect	es. itat
w/o pres or						
current with						
4 0						
Score = sum of above scores/30 (if	f If preservation as mitigation	ation,		For impact asses	sment areas	
uplands, divide by 20)	Proconvotion adjustment	at factor -		FL = delta x	acres =	
current	Freservation adjustmen	11 140101 -				
or w/o pres with	with Adjusted mitigation delta = $0.53 \times 0.29 = 0.15$					
0.53 0.00			L			
• <u>•</u>						
	If mitigation		F	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =			For mitigation assessment areas		
· · ·			RFG :	= delta/(t-factor x	risk) =	
-0.53	Risk factor =	-0.53 Risk factor = RFG = delta/(t-factor x risk) =				

Site/Project Name	Application Number			Assessment Area Name or Number				
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 34			
FLUCCs code	Further classification	ation (optional)		Impact	or Mitigation Site?	Assessment Area		
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.05		
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	0N (i.e. O	FW, AP, other local/state/federa	al designation of importance)		
Hillsborough River	111				None			
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplar	nds				
Within the US 98 southbound rig way in	ht-of-way, the assessme to a forested wetland. T	ent area is compri he wetland outsid	sed of a freshwate e the right-of-way i	er marsl is domi	n habitat that extends on habitat that extends on a habitat by cypress.	outside of the right-of-		
Assessment area description								
Dominant	vegetation within this w	etland consists of	torpedo grass, ma	aindenc	ane, and smartweed.			
Significant nearby features			Uniqueness (cor landscape.)	nsiderir	ng the relative rarity in	relation to the regional		
The assessment area is located within the southbound US 98 right-of-wa approximately 0.1 mile southeast of Old Dade City Road. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique					
Functions			Mitigation for prev	vious p	ermit/other historic use	9		
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			None					
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)					
Amphibians, wading b	birds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)					
Observed Evidence of Wildlife Util	zation (List species dire	ectly observed, or	other signs such as	s tracks	s, droppings, casings,	nests, etc.):		
No evidence of wildlife observed.								
Additional relevant factors:								
		None						
Assessment conducted by:			Assessment date	e(s):				
A. Blakely			9/21/2021					

Site/Project Name	Application Number	,	Assessment Area Name or Number			
US 98 from W Socrum Loop Rd	to CR 54 (FPID 436673-1)		Wetland 34			
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impac	t	A. Blakely			9/21/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)
The scoring of each	Condition is ontimal and fully	Condition is less than	Minimalla	al of our nort of	Condition is insuit	ficientte
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland	surface
type of wetland or surface	water functions	wetland/surface water	fui	nctions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is an assessment area is located of facilities that are bounded w however, wildlife access to a way fencing, US 98, and r	The assessment area is an herbaceous wetland that extends beyond the right-of-way into a forested wetland. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of the residential facilities that are bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and residential facilities. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.				
current with						
5 0						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 4 0	3 0 .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2 reviews, the assessment area was inundated throughout with water levels greater than six inches and c knees. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater manage facilities (i.e., ditches) Soil erosion observed indicates alterations in points of discharge resulting from construction of US 98. The wetland receives runoff from US 98. 1/0 pres or current 0 1. Vegetation and/or 2. Benthic Community Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species pres construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in alteration. Land management practices include routine maintenance within the right-of-way that may affect recruitment or regeneraltion in the plant community.					021 field /press ment the ent. The habitat t natural
	· · · · · · · · · · · · · · · · · · ·				1	
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	F	For impact assess	sment areas	
autropt	Preservation adjustmer	nt factor =		FL = delta x a	acres =	
or w/o pres with	A diverte d' 10 10 10			0.53 x 0.05	= 0.03	
0.53 0.00 Adjusted mitigation delta =						
	l					
	If mitigation		Ec	or mitigation acco	esment aroas	
Delta = [with-current]	Time lag (t-factor) =		FC	or milligation asse	Sourch aleas	
-0.53	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Site/Project Name	Application Number	ber Assessment Area Name or Number			or Number	
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)			Wetland 35		
FLUCCs code	Further classification	ation (optional)	h	mpact or N	litigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.09
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	n (i.e. OFW, A	AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, upland	ds		
Within the US 98 southbound righ way into a fores	nt-of-way, the assessme sted wetland. The wetla	ent area is compri Ind outside the rig	sed of a freshwater ht-of-way consists o	marsh ha of red map	bitat that extends o ble and chinese tall	outside of the right-of- ow.
Assessment area description						
Dominant veç	getation within this wetla	and consists of tor	pedo grass with sor	me bulrus	h mixed throughou	t.
Significant nearby features			Uniqueness (cons landscape.)	sidering th	ne relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way approximately 0.4 mile southeast of Old Dade City Road. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for previ	ious perm	it/other historic use	
Natural water storage and conve improvement	eyance; foraging habita ;; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review ssment area and reason	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading b	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ectly observed, or	other signs such as	tracks, dr	roppings, casings, r	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date(s	s):		
A. Blakely			9/21/2021			

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Rd	to CR 54 (FPID 436673-1)		Wetland 35			
Impact or Mitigation		Assessment conducted by:		Assessment date	:	
Impac	ct	A Blakely			9/21/2021	
		,				
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each		Condition is less than				
indicator is based on what would be suitable for the	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to maintain most	Minimal le	vel of support of	provide wetland	ficient to
type of wetland or surface	water functions	wetland/surface water	fu	Inctions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with	The assessment area is an assessment area is located of facilities that are bounded w however, wildlife access to way fencing, US 98, and b	The assessment area is an herbaceous wetland that extends beyond the right-of-way into a forested wetland. The ssessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of the residential acilities that are bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of- way fencing, US 98, and residential facilities. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.				
5 0				•		
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During reviews, the assessment area was inundated throughout with water levels greater than six inches. conditions are affected by the adjacent US 98 and its associated stormwater management facilities is Soil erosion observed indicates alterations in points of discharge resulting from the construction of wetland receives runoff from US 98. w/o pres or current with 7 0 .500(6)(c)Community structure Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate specie: construction of US 98 and its associated stormwater management facilities (i.e., ditches) has result alteration. Land management practices include routine maintenance within the right-of-way that may recruitment or regeneraltion in the plant community.					iation. During the 2 an six inches. Hydro ent facilities (i.e., d nstruction of US 98 priate species pres ss) has resulted in l way that may affect	021 field ologic litches). 3. The ent. The habitat t natural
Score = sum of above scores/30 (if	If preservation as mitigation	ation,		For impact asses	sment areas	
current	Preservation adjustmer	nt factor =		FL = delta x	acres =	
or w/o pres with	Adjusted mitigation dol	a =		0.53 x 0.09	= 0.05	
0.53 0.00	najustea mitigation dell					
	J		_			
	If mitigation		F	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =			-		
-0.53	Risk factor =		RFG :	= delta/(t-factor x	risk) =	

Site/Project Name	Application Number	hber Assessment Area Name or Number			or Number	
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)				Wetland 36	
FLUCCs code	Further classification	ation (optional)	I	Impact of	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.03
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	ON (i.e. OF	W, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplan	nds		
Within the US 98 southbound rig way into a fore	nt-of-way, the assessme ested wetland. The fore	ent area is compri sted wetland cons	sed of a freshwater isted of red maple,	r marsh , water o	habitat that extends o bak, and Chinese tallo	outside of the right-of- w.
Assessment area description						
Dominant vegetation within th	is wetland consists of to	orpedo grass with	aidencane, foxtail	grass, a	arrowhead, bahia gras	s, and dogfennel,
Significant nearby features			Uniqueness (con landscape.)	nsiderin	g the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way approximately 0.5 mile southeast of Old Dade City Road. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	/ious pe	ermit/other historic use	•
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review esment area and reason	(List of species hably expected to	Anticipated Utiliza classification (E, T assessment area)	ation by T, SSC))	Listed Species (List s , type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such as	s tracks	, droppings, casings, l	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date((s):		
A. Blakely			9/21/2021			

Site/Project Name		Application Number	Assessment Area Name or Number			
US 98 from W Socrum Loop F	d to CR 54 (FPID 436673-1)		Wetland 36			
Impact or Mitigation		Assessment conducted by:	r: Assessment		sessment date:	
Impa	act	A. Blakely			9/21/2021	
			·			
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)
The scoring of each		Condition is less than				
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal lev	vel of support of	Condition is insuf	ficient to
would be suitable for the	supports wetland/surface	maintain most	surface water	provide wetland/	surface	
type of wetland of sunace	water functions	functions	ncuons	water function	ons	
water assessed						
.500(6)(a) Location and Landscape Support	The assessment area is an assessment area is located facilities that are bounded w however, wildlife access to way fencing, US 98, and	herbaceous wetland that exte within the southbound US 98 r ith fencing. Wetland and uplar and from habitats outside of th residential facilities. Invasive ex functions provided by t	nds beyond t ight-of-way. A nd habitats an e assessmen kotic species he assessme	the right-of-way in Adjacent land use re available outsi nt area is limited are present that ent area	nto a forested wetla es consists of the re de of the assessme by the presence of may adversely affe	nd. The esidential ent area; right-of- ect the
with		functions provided by t	ne assessme	ent alea.		
	-					
5 0						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 4	.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the reviews, the assessment area was inundated throughout with water levels greater than six inches, live algal mats. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater mater facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting to construction of US 98. The wetland receives runoff from US 98. 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community 2. Benthic Community Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species in construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulte alteration. Land management practices include routine maintenance within the right-of-way that may a recruitment or regeneraltion in the plant community.					021 field rts, and gement the ent. The habitat t natural
Score = sum of above scores/30 (f If preservation as mitig	ation,	F	For impact asses	sment areas	
uplands, divide by 20)		at factor -		FL = delta x	acres =	
current	Preservation adjustmen	it lactor =				
or w/o pres with	Adjusted mitigation del	ta =		0.53 x 0.03	= 0.02	
0.53 0.00						
	_ _					
	If mitigation					
			Fo	or mitigation asse	ssment areas	
Delta = [with-current]	l ime lag (t-factor) =					
-0.53	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Site/Project Name	Application Number	ber Assessment Area Name or Number				
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)	(FPID 436673-1)			Wetland 37	
FLUCCs code	Further classification	ation (optional)	I	mpact or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed	Impact	Size (in acres) 0.25	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificatio	ר (i.e. OFW, AP, other local/state	e/federal designation of importance)	
Hillsborough River	III			None		
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplan	ls		
Within the US 98 southbound rig way into a forest	nt-of-way, the assessme ed wetland. The foreste	ent area is compri ed wetland consist	sed of a freshwater ed of red maple, wa	marsh habitat that exte ter oak, cypress, and w	ends outside of the right-of- vax myrtle.	
Assessment area description						
Dominant	vegetation within this w	etland consists of	maidencane, alligat	orweed, and pickerelwo	eed.	
Significant nearby features			Uniqueness (con landscape.)	sidering the relative rar	ity in relation to the regional	
The assessment area is located within the southbound US 98 right-of-way approximately 0.4 mile northwest of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for previ	ous permit/other histori	ic use	
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			None			
Anticipated Wildlife Utilization Base that are representative of the asset be found)	ed on Literature Review esment area and reason	(List of species nably expected to	Anticipated Utilizat classification (E, T assessment area)	ion by Listed Species (, SSC), type of use, and	List species, their legal d intensity of use of the	
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such as	tracks, droppings, casi	ings, nests, etc.):	
No evidence of wildlife observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date(s):		
A. Blakely			9/21/2021			

Site/Project Name			Application Number	As	Assessment Area Name or Number		
US 98 from W Socrur	n Loop Ro	to CR 54 (FPID 436673-1)			Wetland 37		
Impact or Mitigation			Assessment conducted by:	As	Assessment date:		
	Impac	ot	A. Blakely			9/21/2021	
-							
Scoring Guidance		Optimal (10)	Moderate(7)	Minin	nal (4)	Not Present	(0)
The scoring of each			Condition is less than				
indicator is based on wh	at	Condition is optimal and fully	optimal, but sufficient to	Minimal level	l of support of	Condition is insuffi	cient to
would be suitable for the	е	supports wetland/surface	maintain most	wetland/su	irface water	provide wetland/s	urface
type of wetland or surface	ce	water functions	wetland/surface water	func	tions	water function	ns
waler assessed			lunctions				
.500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way assessment area is located within the southbound US 98 right-of-way. Adjacent land us facilities that are bounded with fencing. Wetland and upland habitats are available out however, wildlife access to and from habitats outside of the assessment area is limited way fencing, US 98, and residential facilities. Invasive exotic species are present that functions provided by the assessment area. w/o pres or current with 5 0					e right-of-way in jacent land use available outsic area is limited l re present that t area.	to a forested wetlan is consists of the res de of the assessmer by the presence of ri may adversely affec	d. The sidential nt area; ight-of- t the
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 20 reviews, the assessment area was inundated throughout with water levels greater than six inches. Hydro conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., di Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98 wetland receives runoff from US 98.					iation. During the 20 an six inches. Hydrol ent facilities (i.e., dit nstruction of US 98.	21 field ogic ches). The	
.500(6)(c)Community	structure	Plant cover is comprise	d of invasive, exotic species w	ith some desira	able/appropriate	e species present. T	he
1. Vegetation and 2. Benthic Commu	a/or unity	construction of US 98 and alteration. Land manageme	its associated stormwater main nt practices include routine ma recruitment or regeneraltio	nagement facili aintenance with n in the plant c	ities (i.e., ditche nin the right-of-v community.	es) has resulted in ha way that may affect r	abitat natural
w/o pres or							
current	with						
	0	1					
5	U						
a	10			_			
Score = sum of above sco	ores/30 (if 20)	it preservation as mitiga	auon,	Fo	r impact assess	sment areas	
, uplatius, uiviue by	20)	Preservation adjustment	nt factor =		FL = delta x a	acres =	
current	14/ith			~	E7 V 0.05	- 011	
or w/o pres	with	Adjusted mitigation del	ia =	0.	57 X U.25	≓ U.14	
0.57	0.00			L			
		■ 					
. <u></u>		If mitigation		For	mitigation asso	ssment areas	
Delta = [with-curre	ent]	Time lag (t-factor) =		101	magaaon asse		
	,	3()			elta//t_factor v	risk) =	
-0.57		-0.57 Risk factor = RFG = delta/(t-factor x risk) =					

Site/Project Name	Application Number	nher Assessment Area Name or Number			or Number	
LIS 09 from W Secrum Lean Ed to					Wotle	
US 98 Irom W Socrum Loop Ra to	GR 54 (FPID 430073-1)				weuz	and 38
FLUCCs code	Further classification	urther classification (optional)		Impac	t or Mitigation Site?	Assessment Area
044 Engelsunder March	PEM1C - Pa	lustrine, Emerger	nt, Persistent,		lucu e et	Size (in acres)
641 - Freshwater Marsh	5	Seasonally Floode	ed		Impact	0.21
Basin/Watershed Name/Number	Affected Waterbody (Clas	ected Waterbody (Class) Sp			DFW, AP, other local/state/federa	I designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, uplan	ds		
Within the US 98 southbound rig way into a forested wet	Within the US 98 southbound right-of-way, the assessment area is comprised of a freshwater marsh habitat that extends outside of the right-of- way into a forested wetland. A cross drain that runs underneath US 98 connects Wetland 38 to other offsite wetland systems.					
Assessment area description						
Dominant vegetation within this we primrose, elderberry, and red ma	etland consists of torped aple saplings. The fores	o grass, smartwe ted wetland adjac	ed, pickerelweed, n ent to the right-of-w	naider vay co	ncane, forxtail grass, pr nsists of red maple, wa	imrose willow, Mexican ter oak, and cypress.
Significant nearby features			Uniqueness (con landscape.)	nsideri	ing the relative rarity in	relation to the regional
The assessment area is located w	vithin the southbound U	S 98 right-of-way				
approximately 0.1 mile northwest	of SR 471. The Green S	Swamp WMA and			Not unique	
Galor Greek Reserve loc		100 90.				
Functions			Mitigation for prev	vious p	permit/other historic use)
Natural water storage and conv improvemer	eyance; foraging habita it; flood attenuation	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
			Little Dhue Lleve		fananian). Taisalanad I	
Amphibians, wading b	pirds, turtles, small mam	mals	Little Blue Heron (S1, foraging); Tricolored Heron (S1, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging);			
			1	Everg	lade Snail Kite (FE, for	aging)
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):
Evidence of wildlife observed were small fish and tadpoles.						
Additional relevant factors:						
None.						
Assessment conducted by:			Assessment date((s):		
A. Blakely			9/21/2021			

Site/Project Name	Application Number	Assessment Area Name or Number				
US 98 from W Socrum Loop Rd	to CR 54 (FPID 436673-1)		Wetland 38			
Impact or Mitigation		Assessment conducted by:	ducted by: Assessmer		sessment date:	
Impac	t	A. Blakely			9/21/2021	
<u></u>		<u> </u>				
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal Io	vol of support of	Condition is insuf	ficient to
would be suitable for the	supports wetland/surface	maintain most	surface water	provide wetland/	surface	
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support	The assessment area is an assessment area is located of facilities that are bounded w however, wildlife access to way fencing, US 98, and	herbaceous wetland that exte within the southbound US 98 ri ith fencing. Wetland and uplar and from habitats outside of th improved pasture. Invasive ex	nds beyond t ight-of-way. / nd habitats an e assessmen totic species	the right-of-way in Adjacent land use re available outsion nt area is limited are present that r	nto a forested wetla as consists of the re de of the assessme by the presence of may adversely affect	nd. The esidential ent area; right-of- ct the
w/o pres or		functions provided by t	he assessme	ent area.		
current with						
5 0						
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During 'reviews, the assessment area showed high water table, dark surfaces, liverworts, and water marks. conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i Soil erosion observed indicates alterations in points of discharge resulting from the construction of U wetland receives runoff from US 98. w/o pres or current with 7 0 .500(6)(c)Community structure Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulte alteration. Land management practices include routine maintenance within the right-of-way that may a recruitment or regeneraltion in the plant community.					iation. During the 2 water marks. Hydr ent facilities (i.e., d nstruction of US 98 priate species prese s) has resulted in I way that may affect	021 field ologic itches). 3. The ent. The habitat r natural
					. 1	
Score = sum of above scores/30 (if uplands, divide by 20)	If preservation as mitig	ation,	F	For impact assess	sment areas	
current	Preservation adjustmer	nt factor =		FL = delta x a	acres =	
or w/o pres with	Adjusted mitigation del	ta =		0.53 x 0.21	= 0.11	
0.53 0.00						
·	- 16 16 10					
			Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.53	-0.53 RFG = delta/(t-factor x risk) =				risk) =	

Site/Project Name	Application Number	ber Assessment Area Name or Number			or Number	
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)			Wetland 39		
FLUCCs code	Further classification	tion (optional)	1	Impact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	llustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.30
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificatio	0n (i.e. C	DFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplan	ds		
Within the US 98 southbound righ	t-of-way, the assessme	ent area is compri way.	sed of a freshwater	mars	h habitat that extends o	outside of the right-of-
Assessment area description						
Dominant vegetatior	n within this wetland cor	nsists of foxtail, se	esban, beakrush, pr	imros	e willow, and blue maid	encane.
Significant nearby features			Uniqueness (con landscape.)	nsideri	ng the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way approximately 0.4 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	ious p	permit/other historic use	•
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, T assessment area)	tion by , SSC	y Listed Species (List s), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading b	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ctly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date((s):		
A. Blakely			9/21/2021			

Site/Project Name		Application Number		Assessment Area Name or Number			
US 98 from W Socrum Loop Rd	I to CR 54 (FPID 436673-1)		Wetland 39				
Impact or Mitigation		Assessment conducted by:		Assessment date):		
Impac	ot	A. Blakely	A. Blakely		9/21/2021		
<u></u>							
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)	
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal le	vel of support of	Condition is insuf	ficient to	
would be suitable for the	supports wetland/surface	maintain most wetland/surface water provide wet				surface	
type of wetland or surface	water functions	wetland/surface water	tland/surface water functions water function				
water assessed		functions					
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 0 .500(6)(b)Water Environment	The assessment area is a located within the southbour with fencing. Wetland and up and from habitats outside improved pasture. Invasiv	n herbaceous wetland that ext ad US 98 right-of-way. Adjacer oland habitats are available ou of the assessment area is limi re exotic species are present t assessme	tends beyond tit land uses tiside of the a ted by the pr hat may adv ent area.	d the right-of-way. consists of improv assessment area; esence of right-of rersely affect the f	The assessment a ved pasture that is b however, wildlife a -way fencing, US 9 unctions provided b	urea is bounded ccess to 8, and 8, and y the	
(n/a for uplands)	Water level indicators and s reviews, the assessment are US 98 and its associated stor in points of discharge r	oil moisture appeared appropries showed dark surfaces and mwater management facilities esulting from the construction	tiate conside muck. Hydro (i.e., ditche of US 98. T	ering seasonal var ologic conditions a s). Soil erosion ot he wetland receiv	iation. During the 2 are affected by the a oserved indicates al res runoff from US 9	021 field adjacent Iterations 98.	
w/o pres or							
7 0							
.500(6)(c)Community structure	Majority of plant cover is cor	nprised of invasive, exotic spe	cies with fev	w desirable/approj	priate species prese	ent. The	
2. Benthic Community	alteration. Land manageme	nt practices include routine ma recruitment or regeneraltio	aintenance v n in the plan	within the right-of- at community.	way that may affect	natural	
w/o pres or		č		•			
current with							
4 0							
	1						
Score = sum of above scores/30 (if	If preservation as mitiga	ation,		For impact asses	sment areas		
uplands, divide by 20)	Preservation adjustmer	nt factor =		FL = delta x	acres =		
current or w/o pres with				0.53 x 0.30	= 0.16		
0.53 0.00	Adjusted mitigation del	ia =					
	1						
	If mitigation		F	or mitigation asse	ssment areas		
Delta = [with-current]	Time lag (t-factor) =			<u> </u>			
-0.53	Risk factor =		RFG	= delta/(t-factor x	risk) =		

Site/Project Name	Application Number	ber Assessment Area Name or Number			or Number	
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)	기D 436673-1)			Wetland 40	
FLUCCs code	Further classification	ition (optional)		Impac	t or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.13
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	ON (i.e. (OFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplan	lds		
Within the US 98 southbound righ way approx	nt-of-way, the assessme imately 25 feet before a	ent area is compri abutting a forested	sed of a freshwater I wetland dominate	r mars d by r	sh habitat that extends or ed maple and cypress.	outside of the right-of-
Assessment area description						
Dominant vegetation within the	his wetland consists of N	West Indian marsl	ngrass, alligatorwe	ed, to	rpedo grass, maidencai	ne, and soft rush.
Significant nearby features			Uniqueness (cor landscape.)	nsideri	ing the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way approximately 0.5 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious p	permit/other historic use	•
Natural water storage and conve improvement	eyance; foraging habita t; flood attenuation	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, T assessment area)	ition b F, SS()	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading b	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ctly observed, or	other signs such as	s track	ks, droppings, casings, l	nests, etc.):
Evidence of wildlife observed within the wetland included frogs.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
A. Blakely			9/21/2021			

Site/Project Name		Application Number	Assessment A	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 40		
Impact or Mitigation		Assessment conducted by:	Assessment d	ate:		
Impa	ct	A. Blakely		9/21/2021		
		,				
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each	Condition is ontined and fully	Condition is less than	Minimal lavel of support	of Condition in insufficient to		
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		functions				
F						
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is a located within the southbour with fencing. Wetland and up and from habitats outside of t pasture. Invasive exotic sp	n herbaceous wetland that ext ad US 98 right-of-way. Adjacer bland habitats are available ou the assessment area is limited ecies are present that may ad are	tends beyond the right-of-w til and uses consists of imp tside of the assessment ar by the presence of right-or versely affect the functions a.	ay. The assessment area is roved pasture that is bounded ea; however, wildlife access to -way fencing, US 98, improved provided by the assessment		
current with						
6 0						
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the reviews, the assessment area was inundated throughout, displayed elevated lichen lines, and high wat fence posts. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater in facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting the compared to the adjacent US 98 and its associated stormwater in facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting the compared indicates alterations in points of discharge resulting the compared indicates alterations in points of discharge resulting the compared indicates alterations in points of discharge resulting the compared indicates alteration of US 98. The wetland receives runoff from US 98. w/o pres or Plant cover is comprised of both desirable and invasive, exotic species. The construction of US 98 associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land ma practices include routine maintenance within the right-of-way that may affect natural recruitment or regiting the plant community.						
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.60	If preservation as mitig Preservation adjustmer Adjusted mitigation del	ation, nt factor = ta =	For impact ass FL = delta 0.60 x 0.	essment areas x acres = 13 = 0.08		
Delta = [with-current]	Time lag (t-factor) =		For mitigation as	ssessment areas		
			RFG = delta/(t-facto	r x risk) =		
-0.60	Risk factor =			,		

Site/Project Name		Application Number	۹r		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)				Wetla	and 41
		e (e))	1			
FLUCCs code	Further classifica	Further classification (optional)		mpact	t or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	0.05
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	n (i.e. 0	DFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	ologic connection with	wetlands, other s	urface water, upland	ds		
Within the US 98 southbound righ way approximately	t-of-way, the assessme / 25 feet abutting a fore	ent area is compri ested wetland. The	sed of a freshwater e forested wetland c	mars	h habitat that extends o sts of red maple and cy	outside of the right-of- press.
Assessment area description						
Dominant vegetation within this we	tland consists of torped	do grass with red	maple saplings, arro	owhea	ad, maidencane, alligat	orweed, and soft rush.
Significant nearby features			Uniqueness (con landscape.)	sideri	ng the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way approximately 0.6 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for previ	ious p	permit/other historic use)
Natural water storage and conve improvement	eyance; foraging habita ; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utilizat classification (E, T assessment area)	tion b , SSC	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading bi	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or	other signs such as	track	s, droppings, casings,	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
None.						
Assessment conducted by:			Assessment date(s):		
A. Blakely			9/21/2021			
Site/Project Name		Application Number	Number Assessment Area Name or Number			
---	--	---	--	--	--	--
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 41		
Impact or Mitigation		Assessment conducted by:	Assessment date		:	
Impac	ct	A. Blakely			9/21/2021	
<u> </u>		<u> </u>	Į			
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each	Condition is optimal and fully	Condition is less than optimal, but sufficient to	Minimal lev	vel of support of	Condition is insuffi	cient to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/s	surface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	ns
water assessed		functions				
.500(6)(a) Location and Landscape Support	The assessment area is an h assessment area is locate pasture that is bounded wit however, wildlife access to way fencing LIS 98 improve	The assessment area is an herbaceous wetland that extends beyond the right-of-way abutting a foreted wetland. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of improved pasture that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-				
w/o pres or	way renoing, 66 56, improve	affect the functions provide	d by the asse	essment area.	present that may a	aversery
current with						
6 0						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 4 0	Water level indicators and s reviews, the assessment are fence posts. Hydrologic con facilities (i.e., ditches). con Majority of plant cover is cor construction of US 98 and alteration. Land manageme	oil moisture appeared appropr aa was inundated throughout, ditions are affected by the adja Soil erosion observed indicates instruction of US 98. The wetla mprised of invasive, exotic spe its associated stormwater man int practices include routine man recruitment or regeneraltio	iate conside displayed ele acent US 98 s alterations and receives eccies with few nagement fa aintenance w n in the plan	ring seasonal var evated lichen line: and its associate in points of disch runoff from US 9 v desirable/approj cilities (i.e., ditche vithin the right-of-n t community.	iation. During the 20 s, and high water ma d stormwater manag arge resulting from t 8. priate species prese as) has resulted in h way that may affect t	021 field arks on gement he nt. The abitat natural
Score = sum of above scores/30 (if	If preservation as mitig	ation.		For impact asses	sment areas	
uplands, divide by 20)	Proponyation adjustment	at factor -		FL = delta x	acres =	
current	Preservation adjustmen	nt factor =				
o 57	Adjusted mitigation del	ta =		0.57 X 0.05	= 0.03	
0.00]					
	If mitigation					
Delta = [with-current]	Time lag (t-factor) =		Fo	or mitigation asse	ssment areas	
0.57	Piek feeter -		RFG =	= delta/(t-factor x	risk) =	
-0.57	RISK TACTOR =			•	,	

Site/Project Name		Application Number	er	ļ	Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)				Wetla	and 42
FLUCCs code	Further classifica	tion (optional)	1	mpact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa S	llustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.67
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificatio	n (i.e. C	DFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplane	ds		
Within the US 98 southbound r extends outside of	ight-of-way, the assessr he right-of-way into a fo	ment area is comp prested wetland. T	prised of a primrose The forested wetland	willow	w-dominated freshwate sists of red maple and c	r marsh habitat that cypress.
Assessment area description						
Dominant	vegetation within this w	etland consists of	primrose willow wit	th catt	ail, and pickerelweed	
Significant nearby features	Uniqueness (con landscape.)	sideri	ng the relative rarity in	relation to the regional		
The assessment area is located within the southbound US 98 right-of-way approximately 0.8 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for previ	ious p	ermit/other historic use	9
Natural water storage and conv improvemen	eyance; foraging habita t; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	other signs such as	track	s, droppings, casings,	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
None.						
Assessment conducted by:			Assessment date(s):		
A. Blakely			9/21/2021			

Site/Project Name			Application Number		Assessment Area Name or Number		
US 98 from W Socrum Lo	.oop Rd	to CR 54 (FPID 436673-1)			Wetland 42		
Impact or Mitigation			Assessment conducted by:		Assessment date:		
	Impac	t	A. Blakely			9/21/2021	
L					I		
Scoring Guidance		Optimal (10)	Moderate(7)	Mi	nimal (4)	Not Present	(0)
I ne scoring of each indicator is based on what		Condition is optimal and fully	condition is less than optimal, but sufficient to	Minimal le	evel of support of	Condition is insuffic	cient to
would be suitable for the		supports wetland/surface	maintain most	wetland	/surface water	provide wetland/s	urface
type of wetland or surface		water functions	wetland/surface water	fu	unctions	water functior	าร
water assessed			TUTICIIONS			1	
.500(6)(a) Location an Landscape Support	nd	The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of improved pasture that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, improved pasture, and forested wetland. Invasive exotic species are present that may adversely affect the functions provided					
w/o pres or	with		by the assess	sment area.			
0	U						
.500(6)(b)Water Environn (n/a for uplands) w/o pres or current 7 .500(6)(c)Community stru 1. Vegetation and/or 2. Benthic Community w/o pres or current v	.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 20 reviews, the assessment area displayed elevated lichen lines, surface water, dark surfaces, and high water m fence posts. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater manage facilities (i.e., ditches), Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. o pres or current with 1. Vegetation and/or 2. Benthic Community Nearly all of plant cover is comprised of invasive, exotic species with few desirable/appropriate species prese construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in he alteration. Land management practices include routine maintenance within the right-of-way that may affect r recruitment or regeneration in the plant community.						21 field harks on ement he ent. The abitat hatural
Score = sum of above scores/	s/30 (if	If preservation as mitiga	ation,		For impact asses	sment areas	
uplands, divide by 20)	、	Droponyction odłusta	at factor -		FL = delta x	acres =	
	with	Preservation adjustmen			0.50	- 0.00	
0.52		Adjusted mitigation delt	a =		0.53 X 0.67	= 0.36	
0.00	0.00						
		If mitigation		–	·		
Delta = [with-current]]	Time lag (t-factor) =		F	or mitigation asse	essment areas	
-0.53		Risk factor =		RFG	= delta/(t-factor x	risk) =	
L							

Site/Project Name		Application Number	er	1	Assessment Area Name o	or Number	
US 98 from W Socrum Loop Rd to Cl	R 54 (FPID 436673-1)				Wetland 43		
FLUCCs code	Further classifica	ition (optional)	l	Impact	or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	ent, Persistent, Impact 0.33			Size (in acres) 0.33	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	n (i.e. O	FW, AP, other local/state/federa	l designation of importance)	
Hillsborough River	111				None		
Geographic relationship to and hydr	ologic connection with	wetlands, other s	urface water, upland	ds			
Within the US 98 southbound right	t-of-way, the assessme way into a forested	ent area is compri wetland. The fores	sed of a freshwater sted wetland consis	marsl ts of c	h habitat that extends o sypress.	outside of the right-of-	
Assessment area description							
Dominant vegetation within	this wetland consists c	of torpedo grass a	nd alligatorweed wit	th pick	kerelweed, soft rush, ar	nd spatterdock.	
Significant nearby features			Uniqueness (con landscape.)	siderii	ng the relative rarity in	relation to the regional	
The assessment area is located within the southbound US 98 right-of-way approximately 0.9 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for previ	ious p	ermit/other historic use		
Natural water storage and conve improvement;	yance; foraging habita flood attenuation	t; water quality	None				
Anticipated Wildlife Utilization Based that are representative of the assess be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Amphibians, wading bir	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Utiliz	ation (List species dire	ctly observed, or	other signs such as	track:	s, droppings, casings, ı	nests, etc.):	
No evidence of wildlife observed.							
Additional relevant factors:							
None.							
Assessment conducted by:			Assessment date(s):			
A. Blakely			9/21/2021				

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Rd	I to CR 54 (FPID 436673-1)			Wetland 43		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impac	st	A. Blakely		9/21/2021		
		,				
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)
The scoring of each		Condition is less than				
Indicator is based on what would be suitable for the	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to maintain most	Minimal lev	vel of support of	provide wetland/si	cient to
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	IS
water assessed		functions	ns			
[
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is a located within the southbour with fencing. Wetland and up and from habitats outside improved pasture. Invasio	The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of improved pasture that is bounded with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.				
current with						
5 0						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 7 0 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	onment Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. with 0 structure Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habit alteration. Land management practices include routine maintenance within the right-of-way that may affect nat					21 field US 98 ons in
w/o pres or						
current with						
4 0						
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.53	If preservation as mitiga Preservation adjustmen Adjusted mitigation del	ation, nt factor = ta =	F	For impact assess FL = delta x 0.53 x 0.33	sment areas acres = = 0.18	
Delta = [with-current]	If mitigation Time lag (t-factor) =		Fo	or mitigation asse	essment areas	
-0.53	Risk factor =		RFG =	= delta/(t-factor x	risk) =	
1. Vegetation and/or 2. Benthic Community w/o pres or current with 4 0 Score = sum of above scores/30 (if uplands, divide by 20) current with or 0.53 Delta = [with-current] -0.53	Majority of plant cover is cor construction of US 98 and alteration. Land management If preservation as mitige Preservation adjustment Adjusted mitigation del If mitigation Time lag (t-factor) = Risk factor =	nprised of invasive, exotic spe its associated stormwater maint practices include routine maint recruitment or regeneraltio	rcies with few nagement fac aintenance w n in the plant	v desirable/approp cilities (i.e., ditche vithin the right-of-t t community. For impact assess FL = delta x = 0.53 x 0.33 or mitigation asse = delta/(t-factor x	priate species preseres) has resulted in ha way that may affect r sment areas acres = = 0.18 risk) =	nt. T labita natur

Site/Project Name		Application Number	۶r	L.	Assessment Area Name	or Number	
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)	, ppilouion rumbe		,	Wetland 44		
FLUCCs code	Further classifica	tion (optional)	Ir	mpact	or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed	I	Impact	Size (in acres) 0.45	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	n (i.e. O	FW, AP, other local/state/federa	l designation of importance)	
Hillsborough River	111				None		
Geographic relationship to and hydr	ologic connection with	wetlands, other s	urface water, upland	ds			
Within the US 98 southbound righ way. The freshwater marsh o	t-of-way, the assessme continues beyond 25 fe	ent area is compri et south before al	sed of a freshwater butting a forested we	marsl etland	h habitat that extends o I dominated by red ma	outside of the right-of- ple and cypress.	
Assessment area description							
Dominant vegetation within this w	etland consists of allig	atorweed, torpedo water hys	o grass, primrose wil sop.	llow, r	maidencane, buttownw	ood, arrowhead, and	
Significant nearby features			Uniqueness (consulandscape)	siderii	ng the relative rarity in	relation to the regional	
The assessment area is located within the southbound US 98 right-of-way approximately 0.9 mile northwest of the Duke Energy utility easement. The Green Swamp WMA and Gator Creek Reserve located on northeast side o US 98.			F Not unique				
Functions			Mitigation for previo	ous p	ermit/other historic use)	
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			None				
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Amphibians, wading bi	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Utiliz	ation (List species dire	ctly observed, or	other signs such as	track	s, droppings, casings,	nests, etc.):	
No evidence of wildlife observed.							
Additional relevant factors:							
None.							
Assessment conducted by:			Assessment date(s	s):			
A. Blakely			9/21/2021				

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)		Wetland 44			
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impac	ot	A. Blakely			9/21/2021	
<u></u>						
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal laval of sumport of		Condition is insuf	ficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/	surface
type of wetland or surface	water functions	wetland/surface water	functions		water function	ons
water assessed		iuncions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a located within the southbou Wetland and upland habita habitats outside of the ass pasture. Invasive exotic sp	The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located within the southbound US 98 right-of-way. Adjacent land uses consists of undeveloped land with fencing. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.				
6 0						
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 f reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.						021 field tt US 98 tions in 8.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is cor construction of US 98 and alteration. Land manageme	nprised of invasive, exotic spe its associated stormwater man nt practices include routine ma recruitment or regeneraltio	ccies with few nagement fac aintenance w n in the plant	v desirable/approp cilities (i.e., ditche vithin the right-of-v t community.	priate species prese s) has resulted in h way that may affect	ent. The nabitat natural
w/o pres or						
	1					
4 0						
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.57 0.00	If preservation as mitig Preservation adjustmer Adjusted mitigation del	ation, nt factor = ta =	F	For impact assess FL = delta x 0.57 x 0.45	sment areas acres = = 0.26	
Delta = [with-current]	It mitigation Time lag (t-factor) =		Fo	or mitigation asse	ssment areas	
			RFG =	= delta/(t-factor ×	risk) =	
-0.57 Risk factor = RFG = delta/(t-factor x risk) =						

Site/Project Name		Application Number	r		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)			Wetland 45		
FLUCCs code	Further classifica	ition (optional)	1	Impact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	ent, Persistent, ed		Impact	Size (in acres) 0.38
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificatio	on (i.e. C	DFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplan	ds		
Within the US 98 southbound rig way into a forested we	nt-of-way, the assessme land. The forested wetl	ent area is compri and consists of re	sed of a freshwater d maple, cypress, c	[.] mars dahoo	h habitat that extends o n holly, buttonbush, an	outside of the right-of- d soft rush.
Assessment area description						
Dominant vegetation within	this wetland consists o	f primrose willow,	pickerelweed, maio	denca	ne, barnyard grass, and	d alligatorweed.
Significant nearby features			Uniqueness (con landscape.)	isideri	ng the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way approximately 0.2 mile northwest of the Duke Energy utility easement. The Green Swamp WMA and Gator Creek Reserve located on northeast side out US 98.			R Not unique			
Functions			Mitigation for prev	ious p	permit/other historic use)
Natural water storage and convo improvemen	eyance; foraging habita t; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ectly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
None.						
Assessment conducted by:			Assessment date(s):		
A. Blakely			9/21/2021			

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 45		
Impact or Mitigation		Assessment conducted by:	Assessment date:		:	
Impa	ct	A. Blakely			9/21/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal Io	val of support of	Condition is insuff	ficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/	/surface water	provide wetland/s	surface
type of wetland or surface	water functions	wetland/surface water	fu	inctions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way. The allocated within the southbound US 98 right-of-way. Adjacent land uses consists of undevelop. Wetland and upland habitats are available outside of the assessment area; however, wildlife habitats outside of the assessment area is limited by the presence of right-of-way fencing, US land. Invasive exotic species are present that may adversely affect the functions provided by the formation of the fourtheast of the assessment area is limited by the presence of right-of-way fencing, US land. Invasive exotic species are present that may adversely affect the functions provided by the fourtheast of the functions provided by the presence of right-of-way fencing, US land. Invasive exotic species are present that may adversely affect the functions provided by the fourtheast of the functions provided by the presence of right-of-way fencing, US land. Invasive exotic species are present that may adversely affect the functions provided by the fourtheast of the functions provided by the presence of right-of-way fencing. .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation reviews the assessment area was injuncted throughout. Hydrologic conditions are affected by the presence of the assessment area was injuncted to provide the presence of					. The assessment a veloped land with fe vildlife access to an g, US 98, and unde d by the assessme	rea is encing. d from veloped nt area.
w/o pres or current with 7 0	reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.					it US 98 ions in 3.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is cor construction of US 98 and alteration. Land manageme	nprised of invasive, exotic spe its associated stormwater ma nt practices include routine ma recruitment or regeneraltio	ccies with fev nagement fa aintenance w n in the plan	v desirable/approp cilities (i.e., ditche vithin the right-of-v t community.	priate species prese ss) has resulted in h way that may affect	ent. The nabitat natural
w/o pres or						
current with	4					
4 0						
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.57 0.00	If preservation as mitig Preservation adjustmer Adjusted mitigation del	ation, nt factor = ta =		For impact assess FL = delta x 0.57 x 0.38	sment areas acres = = 0.22	
Delta = [with-current]	Time lag (t-factor) =		F	or mitigation asse	ssment areas	
-0.57	Risk factor =		RFG :	= delta/(t-factor x	risk) =	
-0.57 Risk lactor =						

Site/Project Name		Application Number	er		Assessment Area Name o	or Number
US 98 from W Socrum Loop Rd to CF	8 54 (FPID 436673-1)				Wetla	and 46
FLUCCs code	Further classification	ation (optional)	Ir	mpact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.41
Basin/Watershed Name/Number A	ffected Waterbody (Cla	ss)	Special Classification	n (i.e. C	FW, AP, other local/state/federa	I designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hydro	logic connection with	wetlands, other s	urface water, uplanc	ds		
Within the US 98 northbound right into a fores	of-way, the assessme ted wetland. A pipe c	ent area comprise ulvert is constructe	d of freshwater mars ed within a ditch that	rsh ha it coni	bitat that extends outsinects to this wetland.	de of the right-of-way
Assessment area description						
Dominant vegetation within this wet	land consists of maid	encane, barnyard willow	grass, sand cordgra	ass, b	outtonweed, Virginia cha	ain fern, and primrose
Significant nearby features			Uniqueness (consulandscape)	sideri	ng the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way approximately 0.1 mile northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for previ	ious p	ermit/other historic use)
Natural water storage and convey improvement;	rance; foraging habita flood attenuation	t; water quality	None			
Anticipated Wildlife Utilization Based that are representative of the assess be found)	on Literature Review ment area and reasor	List of species	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading bird	ds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliza	ition (List species dire	ectly observed, or	other signs such as	track	s, droppings, casings, ı	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
inone.						
Assessment conducted by:			Assessment date(s	s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number	ŀ	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 46		
Impact or Mitigation		Assessment conducted by:	Assessment date:		:	
Impad	ct	T. Norman		6/28/2021		
ļ		ļ				
Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present (0))
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal lev	el of support of	Condition is insufficier	nt to
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/surfa	face
type of wetland or surface	water functions	wetland/surface water	fur	nctions	water functions	
water assessed		functions				
.500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way into a forested wetlan and is located within the southbound US 98 right-of-way. Adjacent land uses includes residential develop Wetland and upland habitats are available outside of the assessment area; however, wildlife access to ar habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, reside development, and the Duke Energy utility easement. Invasive exotic species are present that may adverse the functions provided by the assessment area. .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture ameaged appropriate considering seasonal variation. During the 2					o a forested wetland sy residential developmer vildlife access to and fro icing, US 98, residentia t that may adversely af	rstem nt. om al ffect
w/o pres or current with 7 0	with 0 wi					S 98 s in
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is co construction of US 98 and alteration. Land manageme right-of-way th	mprised of desirable/appropria its associated stormwater ma nt practices include the installa iat may affect natural recruitme	ite species wi nagement fac ation of a pipe ent or regener	ith few invasive/e cilities (i.e., ditche e culvert and rout raltion in the plan	exotic species present. ss) has resulted in habit ine maintenance within it community.	The itat n the
w/o pres or						
current with	4					
6 0						
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.60 0.00	If preservation as mitig: Preservation adjustmer Adjusted mitigation del	ation, nt factor = ta =	F	For impact assess FL = delta x a 0.60 x 0.41	sment areas acres = = 0.25	
Delta = [with_ourrent]	Time lag (t-factor) -		Fo	or mitigation asse	ssment areas	
				delta//t-factor v	rick) =	
-0.60	0 Risk factor = RFG = delta/(t-factor x risk) =				110K) -	

Site/Project Name		Application Number	er	Assessment Area Name	or Number	
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)			Wet	land 47	
FLUCCs code	Further classification	ation (optional)	In	npact or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	ent, Persistent, Impact Size (in ac ded 0.35			
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	(i.e. OFW, AP, other local/state/fede	ral designation of importance)	
Hillsborough River	III			None		
Geographic relationship to and hydr	ologic connection with	wetlands, other s	urface water, upland	s		
Within the US 98 northbound right the right-of-way. A	-of-way, the assessme cross drain that runs u	nt area comprised nderneath US 98	l of cattail-dominated connects Wetland 4	l freshwater marsh habitat 7 to other offsite wetland s	that extends outside of ystems.	
Assessment area description						
Dominant vegetation within this we	tland consists of cattai	il. Other vegetation torpedo g	n present includes C rass.	arolina willow, pickerelwee	ed, primrose willow, and	
Significant nearby features	Uniqueness (cons landscape.)	idering the relative rarity in	n relation to the regional			
The assessment area is located within the southbound US 98 right-of-way at the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for previo	ous permit/other historic us	se	
Natural water storage and conve improvement	yance; foraging habita ; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Based that are representative of the asses be found)	d on Literature Review sment area and reason	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading bi	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or	other signs such as	tracks, droppings, casings	, nests, etc.):	
No evidence of wildlife observed.						
Additional relevant factors:						
None.						
Assessment conducted by:			Assessment date(s):		
T. Norman			9/21/2021			

Site/Project Name	Application Number	Α	Assessment Area Name or Number			
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 47		
Impact or Mitigation		Assessment conducted by:	A	Assessment date:		
Impa	ct	T. Norman			9/21/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Mini	imal (4)	Not Present (0)	
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal lov	ol of support of	Condition is insufficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/surface	
type of wetland or surface	water functions	wetland/surface water	fun	nctions	water functions	
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current with</u> 5 0	The assessment area is a southbound US 98 right-of- easement. Wetland and up and from habitats outsid residential development, ad	In herbaceous wetland that ex way. Adjacent land uses inclu- and habitats are available out: e of the assessment area is lin and the Duke Energy utility ea versely affect the functions pro	tends beyond des residentia side of the ass nited by the p usement. Inva- wided by the s	the right-of-way al development a sessment area; i presence of right- sive exotic speci assessment area	and is located within the ind the Duke Energy utility however, wildlife access to of-way fencing, US 98, ies are present that may a.	
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and s reviews, the assessment are and its associated stormwa points of discharge re	ter level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field ews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 d its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.				
w/o pres or						
current with						
7 0						
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of the plant cove species. The construction of in habitat alteration. Land m within the right-of-w	er and presence is comprised of US 98 and its associated stor nanagement practices include ray that may affect natural recr	of invasive exo mwater mana the installation uitment or reç	otic plant specie: agement facilities n of a cross drair generaltion in the	s with minimal desirable s (i.e., ditches) has resulted n and routine maintenance s plant community.	
w/o pres or						
current with						
4 0						
Score = sum of above scores/20 /if	If preservation as mitig	ation		or impact assoc	sment areas	
uplands, divide by 20)				FL = delta x	acres =	
current	Preservation adjustmer	nt factor =				
pr w/o pres with	Adjusted mitigation del	ia =	(0.53 x 0.35	= 0.19	
0.53 0.00]		L			
	If mitigation		-			
Delta = [with-current]	Time lag (t-factor) =		Foi	r mitigation asse	ssment areas	
-0.53	Risk factor =		RFG =	delta/(t-factor x	risk) =	

Site/Project Name		Application Number	er	Assessment Area Name	or Number	
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)			Wetl	and 48	
FLUCCs code	Further classification	ition (optional)	Ir	npact or Mitigation Site?	Assessment Area	
617 - Mixed Wetland Hardwood	ls PFO1C - Palı Decidu	ustrine, Forested, ious, Seasonally F	Broad-Leaved Impact 0.53			
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	1 (i.e. OFW, AP, other local/state/feder	ral designation of importance)	
Hillsborough River	III			None		
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplanc	ls		
Within the US 98 southbound righ	t-of-way, the assessme nderneath the adjacent	nt area is a forest driveway connect	ed system that exten ing this wetland to a	nds outside of the right-of-w djacent wetlands.	vay. A pipe culvert runs	
Assessment area description						
Dominant vegetation within the can	opy of Wetland 48 inclu predominantly consis	udes water oak, sv t of wax myrtle, Vi	wamp bay, l <mark>aural oa</mark> rginia chain fern, an	k, and red maple. The unde d maiden fern.	erstory and groundcover	
Significant nearby features			Uniqueness (cons landscape.)	sidering the relative rarity in	relation to the regional	
The assessment area is located within the southbound US 98 right-of-way directly southeast of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			. Not unique			
Functions			Mitigation for previ	ous permit/other historic us	e	
Natural water storage and conve improvement; flo	eyance; foraging habita od attenuation; refuge.	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utilizati classification (E, T, assessment area)	ion by Listed Species (List s SSC), type of use, and inte	species, their legal ensity of use of the	
Amphibians, wading birds, turtle m	es, s <mark>nak</mark> es, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ectly observed, or o	other signs such as	tracks, droppings, casings,	nests, etc.):	
	No evi	dence of wildlife u	tilitzation observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date(s	3):		
T. Norman			9/21/2021			

Site/Project Name		Application Number	/	Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 48		
Impact or Mitigation		Assessment conducted by:	/	Assessment date	:	
Impa	ct	T. Norman		9/21/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present (0)	
The scoring of each		Condition is less than				
indicator is based on what would be suitable for the	supports wetland/surface	optimal, but sufficient to maintain most	wetland/s	/el of support of surface water	provide wetland/surface	
type of wetland or surface	water functions	wetland/surface water	fur	nctions	water functions	
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 600 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a for is located within the southbou Wetland and upland habita habitats outside of the Water level indicators a	ested wetland that connects to and US 98 right-of-way. Adjaca ts are available outside of the e assessment area is limited b and soil moisture appeared so	o offsite wetla acent land us assessment by the present mewhat appr	ands via a pipe cu e includes the Du area; however, w ce of right-of-way	ulvert. The assessment area uke Energy utility easement; vildlife access to and from fencing and US 98.	
w/o pres or current with 7 0	hummocks, water marks, an associated stormwater man discharge resultir	d adventitious rooting. Hydrolo agement facilities (i.e., ditches ng from the construction of US	ea included s ogic condition s). Soil erosio 5 98. The wet	surface water, mo as are affected by on observed indica tland receives rur	vises, elevated lichen lines, the adjacent US 98 and its ates alterations in points of hoff from US 98.	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is by construction of US 98 and alteration. Land manage maintenance within the	appropriate and desirable pla its associated stormwater ma ment practices are generally a right-of-way may affect natural	nt species. M nagement fac appropriate, b I recruitment	linimal invasive/e cilities (i.e., ditche out installation of or regeneraltion i	xotic species present. The ss) has resulted in habitat pipe culvert and routine n the plant community.	
w/o pres or						
current with						
7 0						
· · ·	-					
Score = sum of above scores/30 (if	If preservation as mitiga	ation,	F	or impact asses	sment areas	
uplands, divide by 20)	Broconvetion adjustmen	at factor –		FL = delta x	acres =	
current				0.07 0.50		
	Adjusted mitigation delt	ia =		0.67 X 0.53	= 0.35	
0.00]					
	If mitigation		-			
Delta = [with-current]	Time lag (t-factor) =		Fo	or mitigation asse	ssment areas	
0.67	Pisk factor -		RFG =	= delta/(t-factor x	risk) =	
-0.07						

Site/Project Name Application Num			ber Assessment Area Name or Number			
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetla	and 49
FLUCCs code	Further classification	ation (optional)		Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	PFO1/2C - d Leaved/Needle	- Palustrine, Fores e-Leaved, Deciduo Flooded	sted, Broad- ous, Seasonally		Impact	Size (in acres) 0.46
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, upla	nds		
Within the US 98 southbound rig	ht-of-way, the assessme runs underneath US 98	ent area is a fores connects Wetland	ted system that ex d 49 to other offsite	tends e wetla	outside of the right-of-w and systems.	/ay. A cross drain that
Assessment area description						
Dominant vegetation within th prea	e canopy of Wetland 49 dominantly consist of Ca) includes cypress arolina willow, prim	, Chinese tallow, a nrose willow, soft r	ind req ush, a	d maple. The understory nd maidencane.	y and groundcover
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way approximately 0.4 mile northwest of Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for pre-	vious	permit/other historic use)
Natural water storage and conv improvement; flo	eyance; foraging habita ood attenuation; refuge.	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	List of species	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading birds, turtl m	es, s <mark>nake</mark> s, song bir <mark>ds</mark> , nammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Util	zation (List species dire	ectly observed, or	other signs such a	s tracl	ks, droppings, casings, l	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	d.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 49		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impa	ct	T. Norman		9/21/20		
·						
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each		Condition is less than			o	
indicator is based on what would be suitable for the	supports wetland/surface	optimal, but sufficient to maintain most	wetland/	vel of support of	provide wetland	surface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water functio	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 0 .500(6)(b)Water Environment (n/a for uplands) w/o pres or current with	The assessment area is a for is located within the southbou and upland habitats are av outside of the assessm Water level indicators and so within the assessment area are affected by the adjacent observed indicates alteration	rested wetland that connects t und US 98 right-of-way. Adjaca railable outside of the assessm tent area is limited by the pres develop develop will moisture appropriate consid included surface water, elevate US 98 and its associated stor is in points of discharge resulti runoff fror	o offsite wetl acent land us rent area; ho ence of right oment. ering season ed lichen line mwater man ing from the n US 98.	ands via a cross of se includes reside wever, wildlife ac t-of-way fencing, U nal variation. Hydr es, and cypress kr agement facilities construction of US	drain. The assessm intial development; cess to and from ha JS 98, and resident ological indicators o nees. Hydrologic co ((i.e., ditches). Soil S 98. The wetland t	ent area Wetland abitats ial observed inditions erosion receives
7 0						
.500(6)(c)Community structure	Majority of plant cover is by construction of US 98 and	appropriate and desirable plai	nt species. M nagement fa	/inimal invasive/e cilities (i.e., ditche	xotic species prese es) has resulted in h	nt. The nabitat
2. Benthic Community	alteration. Land manager	ment practices are generally a	ppropriate, b	out installation of a	a cross drain and ro	utine
N/o pres or		ngnt-or-way may allect halula	i recruittitefil	or regeneration i	n die plant commun	nty.
current with						
7 0	1					
, 0						
Score = sum of above scores/30 (if	If preservation as mitigation	ation,		For impact assess	sment areas	
uplands, divide by 20)	Preservation adjustmer	nt factor =		FL = delta x a	acres =	
current pr w/o pres with				0.63 x 0.46	= 0.29	
0.63 0.00	Adjusted mitigation del	ia =				
	J					
	If mitigation		Fr	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.63	Risk factor =		RFG =	= delta/(t-factor x	risk) =	
	. L		L			

Site/Project Name Assessment Area Name or Number				or Number			
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)				Wetla	and 50	
FLUCCs code	Further classification	ation (optional)	I	Impact	t or Mitigation Site?	Assessment Area	
617 - Mixed Wetland Hardwood	ls PFO1C - Palu Decidu	ustrine, Forested, uous, Seasonally F	Broad-Leaved Flooded		Impact	Size (in acres) 0.15	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificatio	on (i.e. C	DFW, AP, other local/state/federa	Il designation of importance)	
Hillsborough River	III				None		
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplan	ds			
Within the US 98 south	ound right-of-way, the a	assessment area	is a forested systen	n that	extends outside of the	right-of-way.	
Assessment area description							
Dominant vegetation within the ca of primrose	nopy of Wetland 50 inc willow, whitetop sedge,	ludes red maple a creeping oxeye, V	nd water oak. The Virginia chain fern, v	under wax n	story and groundcover hyrtle, and bahia grass.	predominantly consist	
Significant nearby features			Uniqueness (con landscape.)	isideri	ng the relative rarity in	relation to the regional	
The assessment area is located within the southbound US 98 right-of-way approximately 0.5 mile northwest of Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for prev	ious p	permit/other historic use)	
Natural water storage and conv improvement; flo	eyance; foraging habita od attenuation; refuge.	t; wat <mark>er</mark> quality	None				
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reasor	List of species	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Amphibians, wading birds, turtl m	es, s <mark>nak</mark> es, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):	
	No evidence of wildlife utilitzation observed.						
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date(s):			
T. Norman			9/21/2021				

Site/Project Name	Project Name Assessment Area Nam			a Name or Number		
US 98 from W Socrum Loop Re	d to CR 54 (FPID 436673-1)			N	Wetland 50	
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impa	ct	T. Norman	9/2		9/21/2021	
		<u> </u>				
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present (0)	
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal lev	el of support of	Condition is insufficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/surface	
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water functions	
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or currentwith	The assessment area is a land use includes the resider the assessment area; howey	forested wetland and is locate tial and commercial developm ver, wildlife access to and from presence of right-of-wa	d within the s nent; Wetland habitats out ny fencing an	outhbound US 98 d and upland habi side of the asses d US 98.	3 right-of-way. Adjacacent tats are available outside of sment area is limited by the	
6 0						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 6 0	Water level indicators a Hydrological indicators obser marks. Hydrologic condit facilities (i.e., ditches), conditional consists of invasive/exotic si (i.e., ditches) has resulted in maintenance within the	and soil moisture appeared so ved within the assessment are ions are affected by the adjace Soil erosion observed indicate nstruction of US 98. The wetta anopy consists of appropriate a pecies. The construction of US n habitat alteration. Land man right-of-way may affect natural	mewhat appr a included s ent US 98 and s alterations and receives and desirable 6 98 and its a agement pra recruitment	ropriate considerii urface water, wat d its associated s in points of discha runoff from US 9 e plant species. T issociated stormw ictices are genera or regeneraltion i	ng seasonal variation. er-stained leaves and water tormwater management arge resulting from the 8. he groundcover/understory vater management facilities illy appropriate, but routine n the plant community.	
r	1					
Score = sum of above scores/30 (if uplands, divide by 20)	It preservation as mitig	ation,	F	For impact assess	sment areas	
current	Preservation adjustmer	nt factor =		r∟ = deita X a	acres =	
or w/o pres with	- Adjusted mitigation del	ta =		0.63 x 0.15	= 0.10	
0.63 0.00			L			
	-					
Dolto - [with averant]	Time log (t fester) -		Fo	or mitigation asse	ssment areas	
	Time lag (t-factor) =		556			
-0.63	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Site/Project Name	Project Name Assessment Area Name or Number Assessment Area Name or Number				or Number		
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)				Wetla	and 51	
FLUCCs code	Further classifica	tion (optional)	I	Impact	or Mitigation Site?	Assessment Area	
617 - Mixed Wetland Hardwood	ds PFO1C - Palu Decidu	ustrine, Forested, lous, Seasonally F	Broad-Leaved ⁻ looded		Impact	Size (in acres) 0.28	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificatio	n (i.e. C	FW, AP, other local/state/federa	I designation of importance)	
Hillsborough River	III				None		
Geographic relationship to and hyc	Irologic connection with	wetlands, other s	urface water, uplan	ds			
Within the US 98 south	bound right-of-way, the a	assessment area	is a forested systen	n that	extends outside of the	right-of-way.	
Assessment area description							
Dominant vegetation within the ca	nopy of Wetland 51 incl of primrose	ludes red maple a willow, Virginia ch	and water oak. The nain fern, and elder	under berry.	story and groundcover	predominantly consist	
Significant nearby features			Uniqueness (con landscape.)	sideri	n <mark>g the</mark> relative rarity in	relation to the regional	
The assessment area is located within the southbound US 98 right-of-way approximately 0.2 mile northwest of Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for prev	ious p	ermit/other historic use)	
Natural water storage and conv improvement; flc	eyance; foraging habita od attenuation; refuge.	t; water quality	None				
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Amphibians, wading birds, turtl m	es, sn <mark>ake</mark> s, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	other signs such as	track	s, droppings, casings, l	nests, etc.):	
	No evidence of wildlife utilitzation observed.						
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date(s):			
T. Norman			9/21/2021				

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 51		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impa	ct	T. Norman		9/21/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present (0)	
The scoring of each		Condition is less than	Missionalla			
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/surface	
type of wetland or surface	water functions	wetland/surface water	fui	nctions	water functions	
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a land use includes the resider the assessment area; howev presence of right-of-way Water level indicators a Hydrological indicators a	forested wetland and is locate tial and commercial developm er, wildlife access to and from y fencing, residential/commercial and soil moisture appeared so	d within the s hent; Wetlanc habitats out cial developm mewhat appr	outhbound US 9 d and upland hab side of the asses nent, Lakeland Ac	8 right-of-way. Adjacacent itats are available outside of sment area is limited by the rres Road, and US 98.	
w/o pres or current with 7 0	hummocks, and water r stormwater management fa resulting fro	narks. Hydrologic conditions a cilities (i.e., ditches). Soil eros m the construction of US 98.	re affected by ion observed The wetland	y the adjacent US d indicates alterat receives runoff fr	5 98 and its associated ions in points of discharge om US 98.	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The plant cover within the ca consists of invasive/exotic sp (i.e., ditches) has resulted in maintenance within the	anopy consists of appropriate a becies. The construction of US habitat alteration. Land man right-of-way may affect natural	and desirable 98 and its a lagement pra I recruitment	e plant species. T issociated stormv ictices are genera or regeneraltion i	he groundcover/understory vater management facilities ally appropriate, but routine n the plant community.	
w/o pres or						
current with						
6 0						
	-					
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.60 0.00	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, nt factor = a =	F	For impact assess FL = delta x 0.60 x 0.28	sment areas acres = = 0.17	
	If mitigation		5	r mitigation acco	ssmont aroas	
Delta = [with-current]	Time lag (t-factor) =			or mugation asse		
-0.60	Risk factor =		RFG =	= aelta/(t-factor x	risk) =	

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)				Wetla	and 52
FLUCCs code 630 - Wetland Forested Mixed	Further classifica PFO1/2C - Leaved/Needl	tion (optional) · Palustrine, Fores e-Leaved Deciduc Flooded	sted, Broad- bus, Seasonally	Impac	t or Mitigation Site? Impact	Assessment Area Size (in acres) 0.48
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	Il designation of importance)
Hillsborough River					None	
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplar	nds		
Within the US 98 southbound rig	nt-of-way, the assessme runs underneath US 98	ent area is a fores connects Wetland	ted system that ex d 52 to other offsite	tends e wetla	outside of the right-of-wand systems.	/ay. A cross drain that
Assessment area description						
Dominant vegetation within the car	opy of Wetland 52 inclucion consist of	udes cypress, red Fprimrose willow a	maple, and water and Virginia chain f	oak. T ern.	The understory and grou	indcover predominantly
Significant nearby features			Uniqueness (col landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way approximately 0.1 mile southeast of Keen Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious	permit/other historic use)
Natural water storage and conv improvement; flo	eyance; foraging habita od attenuation; refuge.	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtl m	es, s <mark>nake</mark> s, song bir <mark>ds</mark> , ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or o	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	1.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 52		
Impact or Mitigation		Assessment conducted by:		Assessment date	:	
Impa	ct	T. Norman			9/21/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal Io	vol of support of	Condition is insuffi	ciont to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/s	urface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	ns
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a for that runs underneath US 98 Road, an RV lot, and improv however, wildlife access to a	prested wetland and is located connects this area to other of ed pasture; Wetland and upla and from habitats outside of th way fencing, the RV lot, I	within the so fsite wetland nd habitats a le assessme Keen Road, a	buthbound US 98 systems. Adjace ire available outsi nt area is limited and US 98.	right-of-way. A cros nt land use includes de of the assessme by the presence of ri	s drain Keen nt area; ight-of-
5 0						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0	Water level indicators a Hydrological indicators obs conditions are affected by th Soil erosion observed indi	and soil moisture appeared so erved within the assessment a he adjacent US 98 and its ass cates alterations in points of d wetland receives m	mewhat appur rea included ociated storn ischarge resi unoff from US	ropriate consideri surface water an nwater managem ulting from the co S 98.	ng seasonal variatio d water marks. Hydr ent facilities (i.e., dit nstruction of US 98.	n. rologic ches). The
.500(6)(c)Community structure					1	
1. Vegetation and/or 2. Benthic Community w/o pres or current with 6 0	The plant cover within the ca consists of invasive/exotic sp (i.e., ditches) has resulted installation of a cross dra	anopy consists of appropriate i becies. The construction of US in habitat alteration. Land ma in and routine maintenance w regeneraltion in the	and desirable \$ 98 and its a anagement p ithin the right plant comm	e plant species. I associated stormv practices are gene t-of-way may affe unity.	he groundcover/und vater management fi erally appropriate, bu ct natural recruitmer	lerstory acilities it the it or
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.60 0.00	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, nt factor = ta =		For impact assess FL = delta x 0.60 x 0.48	sment areas acres = = 0.29	
Delta = [with-current]	Time lag (t-factor) =		Fo	or mitigation asse	ssment areas	
[earrowig			RFG :	= delta/(t-factor x	risk) =	
-0.60	Risk factor =			20110/ (C 100101 X		

Site/Project Name		Application Number	er		Assessment Area Name o	or Number
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)				Wetla	and 53
FLUCCs code	Further classification	ition (optional)		Impact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.11
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e. C	DFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hydr	ologic connection with	wetlands, other s	urface water, uplan	lds		
Within the US 98 northbound right- outside of the right-of-wa	of-way, the assessmer ay. A cross drain that r	nt area is comprise uns underneath U	ed of primrose willo S 98 connects Wet	w-don tland 5	ninated freshwater mars 53 to other offsite wetla	sh habitat that extends nd systems.
Assessment area description						
	Dominant vegetation	on within this weth	and consists of prin	nrose	willow.	
Significant nearby features			Uniqueness (con landscape.)	nsideri	n <mark>g the</mark> relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way approximately 0.5 mile southeast of the Keen Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious p	ermit/other historic use	2
Natural water storage and conve improvement	yance; foraging habita ; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, T assessment area)	ition b <u>y</u> F, SSC	y Listed Species (List s), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading bi	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or	other signs such as	s track	s, droppings, casings, ı	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date((s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 53		
Impact or Mitigation		Assessment conducted by:		Assessment date	:	
Impac	ct	T. Norman			9/21/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present (0))
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal Io	val of support of	Condition is insufficie	ont to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/sur	rface
type of wetland or surface	water functions	wetland/surface water functions water function				\$
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current with</u> 5 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a southbound US 98 right-of-w are available outside of assessment area is limited species are prese	an herbaceous wetland that ex ray. Adjacent land uses includ the assessment area; howeve by the presence of right-of-wa ent that may adversely affect th oil moisture appeared appropri	tends beyond e improved p er, wildlife ac y fencing, US ne functions p	d the right-of-way basture. Minimal v cess to and from S 98, and improve provided by the as	and is located within t vetland and upland hal habitats outside of the ed pasture. Invasive ex ssessment area.	the ibitats a xotic
w/o pres or current with 7 0	reviews, the assessment a leaves and water marks on t associated stormwater man discharge resultir	rea was inundated throughout the right-of-way fence. Hydrolo agement facilities (i.e., ditches ng from the construction of US	Additional h gic condition). Soil erosic 98. The we	nydrologic indicato is are affected by on observed indic ttland receives rur	ors included water-stai the adjacent US 98 ar ates alterations in poin noff from US 98.	ined nd its nts of
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Nearly all of the plant con associated stormwater ma practices include the instal	ver is comprised of invasive/ex nagement facilities (i.e., ditche lation of a cross drain and rou natural recruitment or regenera	totic plant sp ss) has result tine maintena altion in the p	becies. The const ted in habitat alter ance within the rig plant community.	ruction of US 98 and it ation. Land managem ght-of-way that may aff	its nent fect
w/o pres or with						
	1					
3 0						
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.50	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, nt factor = ta =		For impact assess FL = delta x a 0.50 x 0.11	sment areas acres = = 0.06	
Delta = [with-current]	Time lag (t-factor) =		Fo	or mitigation asse	ssment areas	
			RFG =	= delta/(t-factor x	risk) =	
-0.50	Risk factor =				,	

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)				Wetla	and 54
FLUCCs code 630 - Wetland Forested Mixed	Further classifica PFO1/2C - Leaved/Needl	ation (optional) - Palustrine, Fores e-Leaved Deciduc Flooded	ted, Broad- bus, Seasonally	Impac	t or Mitigation Site? Impact	Assessment Area Size (in acres) 0.49
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e.	OFW, AP, other local/state/federa	l designation of importance)
Hillsborough River					None	
Geographic relationship to and hydr	ologic connection with	wetlands, other s	urface water, uplar	nds		
Within the US 98 southbound righ	-of-way, the assessme ins underneath US 98	ent area is a fores connects Wetland	ted system that ex 1 54 to other offsite	tends e wetla	outside of the right-of-wand systems.	/ay. A cross drain that
Assessment area description						
Dominant vegetation within the cano	ppy of Wetland 54 inclu	udes cypress, red consist of primm	maple, and water ose willow.	oak. T	The understory and grou	indcover predominantly
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located wi approximately 0.4 mile northwest of Gator Creek Reserve locat	thin the southbound U Perkle Road. Green S ed on northeast side c	S 98 right-of-way Swamp WMA and of US 98.	Not unique			
Functions			Mitigation for pre-	vious	permit/other historic use)
Natural water storage and conve improvement; floc	yance; foraging habita d attenuation; refuge.	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Based that are representative of the assess be found)	d on Literature Review sment area and reasor	List of species	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtle ma	s, snakes, song birds, mmals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or o	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	1.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number	Assessment Are	a Name or Number		
US 98 from W Socrum Loo	o Rd to CR 54 (FPID 436673-1)			Wetland 54		
Impact or Mitigation		Assessment conducted by:	Assessment date	e:		
Ir	npact	T. Norman		9/21/2021		
l						
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each		Condition is less than				
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level of support of	Condition is insufficient to		
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current wit 5 0 .500(6)(b)Water Environme (n/a for uplands)	The assessment area is a f that runs underneath US residential developme assessment area; howeve presence of rig h M Water level indicators Hydrological indicators obs lines, moss, and adventitio	orested wetland and is located 5 98 connects this area to othe nt and improved pasture; Wetl r, wildlife access to and from h ght-of-way fencing, residential ght-of-way fencing, residential and soil moisture appeared so erved within the assessment a us rooting, Hydrologic condition	I within the southbound US 98 or offsite wetland systems. Adj and and upland habitats are a labitats outside of the assess development/improved pastur mewhat appropriate consider rea included surface water, w ns are affected by the adjacer	B right-of-way. A cross drain jacent land use includes available outside of the ment area is limited by the re, and US 98. ing seasonal variation. rater marks, elevated lichen nt US 98 and its associated		
w/o pres or current wit 7 0	stormwater management from the	acilities (i.e., ditches). Soil eros om the construction of US 98.	sion observed indicates altera The wetland receives runoff f	tions in points of discharge rom US 98.		
.500(6)(c)Community structu	ire					
1. Vegetation and/or 2. Benthic Community w/o pres or current wit 6 0	The plant cover within the c consists of mostly invasive, facilities (i.e., ditches) has m the installation of a cross o	anopy consists of appropriate /exotic species. The constructi esulted in habitat alteration. La drain and routine maintenance regeneraltion in the	and desirable plant species. T on of US 98 and its associate and management practices ar within the right-of-way may a plant community.	The groundcover/understory d stormwater management re generally appropriate, but ffect natural recruitment or		
Score = sum of above scores/30 uplands, divide by 20) current or w/o pres 0.60	(if If preservation as mitig Preservation adjustme Adjusted mitigation del	ation, nt factor = /ta =	For impact asses FL = delta x 0.60 x 0.49	esment areas acres = = 0.29		
	If mitigation		_			
D-H 1 11 11			For mitigation asse	essment areas		
Delta = [with-current]	l ime lag (t-factor) =					
-0.60 RFG = delta/(t-factor x risk) =				risk) =		

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetla	and 55
FLUCCs code	Further classification	ition (optional)		Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixe	PFO1/2C - d Leaved/Needl	Palustrine, Fores e-Leaved Deciduo Flooded	sted, Broad- ous, Seasonally		Impact	Size (in acres) 0.68
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	I designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, upla	nds		
Within the US 98 south	bound right-of-way, the a	assessment area	is a forested syste	m that	extends outside of the	right-of-way.
Assessment area description						
Dominant vegetation within the car cons	nopy of Wetland 55 inclu sist of Virginia chain ferr	udes cypress, red n, netted chain ferr	maple, and water n, maiden fern, pic	oak. T kerelv	he understory and grou reed, and cattail.	indcover predominantly
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way adjacent to the east side of Old Soldier Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for pre	vious	permit/other historic use)
Natural water storage and conv improvement; flo	veyance; foraging habita bod attenuation; refuge.	t; water quality	None			
Anticipated Wildlife Utilization Bas that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS(i)	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turt n	les, snakes, song birds, nammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	d.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number	Assessment Ar	Assessment Area Name or Number		
US 98 from W Socrum Loop	Rd to CR 54 (FPID 436673-1)			Wetland 55		
Impact or Mitigation		Assessment conducted by:	Assessment da	te:		
Imp	act	T. Norman		9/21/2021		
ļ		ļ				
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal level of support of	Condition is insufficient to		
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water functions water function				
water assessed		functions				
.500(6)(a) Location and Landscape Support	The assessment area is a fo use includes residential de available outside of the ass area is limited by the presen	prested wetland and is located velopment, improved pasture, essment area; however, wildlif ce of right-of-way fencing, resi and IL	within the southbound US 9 and Old Soldier Road; Wetla e access to and from habitat dential development/improve 5 os	B right-of-way. Adjacent land and and upland habitats are s outside of the assessment d pasture, Old Soldier Road,		
w/o pres or		and U	0.50.			
current with	-					
5 0						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 0	Water level indicators and so conditions are affected by t Soil erosion observed indi The plant cover within the c invasive/exotic species pre (i.e., ditches) has resulted routine maintenance within	bil moisture appeared somewh he adjacent US 98 and its ass cates alterations in points of d wetland receives re wetland receives re sent. The construction of US 9 i in habitat alteration. Land ma the right-of-way may affect nat	at appropriate considering s ociated stormwater manage ischarge resulting from the c unoff from US 98.	easonal variation. Hydrologic nent facilities (i.e., ditches). onstruction of US 98. The e plant species with minimal vater management facilities ierally appropriate, but the tion in the plant community.		
Score = sum of above scores/30 uplands, divide by 20) current pr w/o pres 0.63 0.00	(if Preservation as mitig Preservation adjustmen Adjusted mitigation del	ation, nt factor = ta =	For impact asse FL = delta x 0.63 x 0.6	ssment areas acres = 3 = 0.43		
Delta = [with-current]	If mitigation Time lag (t-factor) =		For mitigation ass	essment areas		
-0.63	Risk factor =		RFG = delta/(t-factor	<risk) =<="" td=""></risk)>		

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)				Wetla	and 56
FLUCCs code 630 - Wetland Forested Mixed	Further classifica PFO1/2C - Leaved/Needl	ation (optional) - Palustrine, Fores e-Leaved Deciduc Flooded	ted, Broad- bus, Seasonally	Impac	t or Mitigation Site? Impact	Assessment Area Size (in acres) 0.78
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	Il designation of importance)
Hillsborough River					None	
Geographic relationship to and hydi	ologic connection with	wetlands, other s	urface water, uplar	nds		
Within the US 98 southbound righ	t-of-way, the assessme ins underneath US 98	ent area is a fores connects Wetland	ted system that ex 1 56 to other offsite	tends e wetla	outside of the right-of-wand systems.	/ay. A cross drain that
Assessment area description						
Dominant vegetation within the can	opy of Wetland 56 inclu consist of	udes cypress, red f Virginia chain fer	maple, and water n and primrose wil	oak. T low.	The understory and grou	indcover predominantly
Significant nearby features			Uniqueness (col landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way less than 0.1 mile southeast of Perkle Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious	permit/other historic use)
Natural water storage and conve improvement; floo	yance; foraging habita od attenuation; refuge.	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment <mark>area and</mark> reasor	List of species	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtle ma	s, s <mark>nake</mark> s, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or o	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	1.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number	/	Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)		Wetland 56			
Impact or Mitigation		Assessment conducted by:	/	Assessment date):	
Impao	ct	T. Norman			9/21/2021	
		ł				
Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present	(0)
The scoring of each		Condition is less than				
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal lev	el of support of	Condition is insuf	ficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/	surface
type of wetland or surface	water functions	wetland/surface water	fur	nctions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a for that runs underneath US 9 residential development, outside of the assessment limited by the presence of rig	prested wetland and is located 28 connects Wetland 56 to oth improved pasture, and aquacu area; however, wildlife access ght-of-way fencing, residential bil moisture appeared somewh	within the so ier offsite wet iltural farm; V to and from development	uthbound US 98 land systems. Ac Vetland and upla habitats outside t/improved pastur	right-of-way. A cro djacent land use inc nd habitats are ava of the assessment re, aquaculture, and asonal variation. Hy	ss drain dudes ilable area is t US 98.
w/o pres or current with 7 0	conditions are affected by the Soil erosion observed indi	he adjacent US 98 and its ass cates alterations in points of di wetland receives ru	ociated storm ischarge resu unoff from US	nwater managem ulting from the co S 98.	ent facilities (i.e., d nstruction of US 98	itches). . The
.500(6)(c)Community structure	The plant cover within the	canopy consists of appropriat	e and desirat	ble plant species;	however, the unde	erstory
1. Vegetation and/or 2. Benthic Community w/o pres or current with	(i.e., ditches) has resulted installation of a cross drain	l in habitat alteration. Land ma and the routine maintenance regeneraltion in the	anagement pr within the rig	issociated stormv ractices are gene ht-of-way may af unity.	vater management srally appropriate, b fect natural recruitn	facilities ut the nent or
6	1					
ю 0						
	If proper setting and 10	ation			amont are	
uplands divide by 20)	ii preservation as mitiga	auon,		-or impact asses	sment areas	
upianus, divide by 20j	Preservation adjustment	nt factor =		FL = delta x	acres =	
current						
pr w/o pres with	Adjusted mitigation del	ta =		0.60 x 0.78	= 0.47	
0.60 0.00						
	J					
	If mitigation					
			Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.60	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Site/Project Name		Application Numbe	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)				Wetla	and 57
FLUCCs code	Further classification	ation (optional)		Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	PFO1/2C - Leaved/Needl	- Palustrine, Fores e-Leaved Deciduo Flooded	ited, Broad- ous, Seasonally		Impact	Size (in acres) 0.34
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e.	OFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hyc	Irologic connection with	wetlands, other so	urface water, uplar	nds		
Within the US 98 south	bound right-of-way, the a	assessment area i	is a forested syste	m that	t extends outside of the	right-of-way.
Assessment area description						
Dominant vegetation within the ca	nopy of Wetland 57 incl	ludes cypress and primrose w	red maple. The ui villow.	nderst	tory and groundcover pr	edominantly consist of
Significant nearby features			Uniqueness (col landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way approximately 0.2 mile northwest of Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious	permit/other historic use)
Natural water storage and conv improvement; flo	eyance; foraging habita od attenuation; refuge.	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	by Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtl m	es, sn <mark>ake</mark> s, song bir <mark>ds</mark> , ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or o	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	J.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number	Assessment Are	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 57		
Impact or Mitigation		Assessment conducted by:	Assessment dat	e:		
Impa	ct	T. Norman		9/21/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each	Condition is entired and fully	Condition is less than	Minimal layel of support of	Condition is insufficient to		
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		functions				
500(6)(a) Location and						
Landscape Support	The approximant area is a f	rested watland and is located	within the couthbound LIC O	9 right of way Watland and		
	upland habitats are available	e outside of the assessment ar	ea; however, wildlife access	to and from habitats outside		
	of the assess	ment area is limited by the pre	esence of right-of-way fencing	g and US 98.		
w/o pres or						
current with	-					
6 0						
.500(6)(b)Water Environment						
(n/a for uplands)	Water level indicators and so	bil moisture appeared somewh	at appropriate considering se	easonal variation. Hydrologic		
	Soil erosion observed indi	cates alterations in points of d	ischarge resulting from the co	onstruction of US 98. The		
		wetland receives ru	unoff from US 98.			
w/o pres or						
current with						
7 0						
E00/6)/a)Community atructure						
		•				
	The plant cover within the	canony consists of appropriat	o and desirable plant species	s howover the understony		
1 Vegetation and/or	consists predominantly of	of invasive/exotic species. The	construction of US 98 and it	s associated stormwater		
2. Benthic Community	management facilities (i.e.,	ditches) has resulted in habita	at alteration. Land managem	ent practices are generally		
	appropriate, but the routine m	naintenance within the right-of- plant com	-way may affect natural recru	itment or regeneraltion in the		
w/o pres or		plant con	initianity.			
current with						
6 0						
Score = sum of above scores/30 (if uplands, divide by 20)	if preservation as mitiga	allon,				
current	Preservation adjustmer	nt factor =	⊢L = delta x	acres =		
or w/o pres with	Adjusted mitigation del	a =	0.63 x 0.34	= 0.22		
0.63 0.00						
· <u>·</u>		a				
			For mitigation ass	essment areas		
Delta = [with-current]	Time lag (t-factor) =					
-0.63	Risk factor =		RFG = delta/(t-factor x	risk) =		

Site/Project Name		Application Numbe	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetla	and 58
FLUCCs code	Further classification	ation (optional)		Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixe	PFO1/2C - d Leaved/Needl	- Palustrine, Fores e-Leaved Deciduo Flooded	ited, Broad- ous, Seasonally		Impact	Size (in acres) 0.73
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	0N (i.e. (OFW, AP, other local/state/federa	I designation of importance)
Hillsborough River					None	
Geographic relationship to and hyo	Irologic connection with	wetlands, other s	urface water, uplar	nds		
Within the US 98 south	oound right-of-way, the a	assessment area i	is a forested syste	m that	extends outside of the	right-of-way.
Assessment area description						
Dominant vegetation within the ca	nopy of Wetland 58 incl Virgi	ludes cypress and inia chain fern anc	red maple. The un primrose willow.	nderst	ory and groundcover pr	edominantly consist of
Significant nearby features			Uniqueness (col landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way across from Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious p	permit/other historic use)
Natural water storage and conv improvement; flo	eyance; foraging habita ood attenuation; refuge.	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turt n	es, s <mark>nakes</mark> , song bir <mark>ds</mark> , nammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Util	zation (List species dire	ectly observed, or o	other signs such a	s tracł	ks, droppings, casings, l	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	1.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
A. Blakely			9/21/2021			

Site/Project Name		Application Number	Assessment Ar	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 58		
Impact or Mitigation		Assessment conducted by:	Assessment da	te:		
Impag	at	A. Blakely		9/21/2021		
		,				
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each		Condition is less than				
indicator is based on what would be suitable for the	Supports wetland/surface	optimal, but sufficient to maintain most	wetland/surface water	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		functions				
						
EQQ(6)(a) Location and						
Landscape Support						
	The assessment area is a fo	prested wetland and is located	within the southbound US	8 right-of-way. Wetland and		
	of the assess	ment area is limited by the pre	esence of right-of-way fencir	g and US 98.		
w/o pres or				-		
current with						
6 0						
.500(6)(b)Water Environment						
(n/a for uplands)	Water level indicators and so	bil moisture appeared somewh	nat appropriate considering s	easonal variation. Hydrologic		
	additions are affected by the	e adjacent US 98 and its asso	ncluded water-stained leave	ent facilities (i.e., ditches). In s moss and elevated lichen		
	lines. Soil erosion observed i	ndicates alterations in points o	of discharge resulting from th	e construction of US 98. The		
		wetland receives re	unoff from US 98.			
w/o pres or						
current with						
7 0						
.500(6)(c)Community structure						
	The plant cover within the	canopy consists of appropriat	e and desirable plant specie	s; however, the understory		
1. Vegetation and/or	consists predominantly o	of invasive/exotic species. The	e construction of US 98 and i	ts associated stormwater		
2. Benthic Community	management facilities (i.e.,	ditches) has resulted in habita	at alteration. Land manager	nent practices are generally		
	appropriate, but the routine in	plant com	nmunity.	authent of regeneration in the		
w/o pres or			-			
current with						
6 0						
	If procentiation as mitig	ation	For impost and	coment erece		
score = sum of above scores/30 (If uplands, divide by 20)	if preservation as mitiga	ation,	For Impact asse	ssment areas		
current	Preservation adjustmer	nt factor =	FL = delta	cacres =		
pr w/o pres with	Adjusted mitigation del	a =	0.63 x 0.7	3 = 0.46		
0.63 0.00						
<u> </u>	۷ 					
	If mitigation		For mitigation ass	essment areas		
Delta = [with-current]	Time lag (t-factor) =					
-0.63	Risk factor =		RFG = delta/(t-factor	k risk) =		
5.00						

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)				Wetla	and 59
FLUCCs code	Further classifica	ation (optional)		Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	PFO1/2C - Leaved/Needl	- Palustrine, Fores e-Leaved Deciduo Flooded	sted, Broad- ous, Seasonally		Impact	Size (in acres) 0.52
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	al designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hydr	ologic connection with	wetlands, other s	urface water, upla	nds		
Within the US 98 southbound right	-of-way, the assessme ins underneath US 98	ent area is a forest connects Wetland	ted system that ex d 59 to other offsite	tends e wetla	outside of the right-of-w and systems.	ay. A pipe culvert that
Assessment area description				7		
Dominant vegetation within the can Virginia ch	opy of Wetland 59 incl nain fern, buttonbush, v	ludes cypress and wild taro, bulrush,	l red maple. The u swamp fern, lizard	nderst I's tail,	tory and groundcover pr , and primrose willow.	redominantly consist of
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way approximately 0.1 mile southeast of Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for pre-	vious	permit/other historic use	9
Natural water storage and conve improvement; floo	yance; foraging habita od attenuation; refuge.	t; water quality	None			
Anticipated Wildlife Utilization Based that are representative of the asses be found)	d on Literature Review sment <mark>area and</mark> reasor	List of species nably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	by Listed Species (List s C), type of use, and inte	pecies, their legal insity of use of the
Amphibians, wading birds, turtle ma	s, snakes, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	d.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
A. Blakely			9/21/2021			
Site/Project Name		Application Number	Assessment A	rea Name or Number		
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US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 59		
Impact or Mitigation		Assessment conducted by:	Assessment of	ent date:		
Impac	ct	A. Blakely		9/21/2021		
<u></u>						
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal level of support	of Condition is insufficient to		
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		functions				
.500(6)(a) Location and Landscape Support W/o pres or current with						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0	.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrolog conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches) The wetland was inundated throughout. In addition to surface water, hydrologic indicators observed included water marks and elevated lichen lines. Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.					
.500(6)(c)Community structure	The plant cover within the consists predominantly or monocompatible (in the constant) of the state of the sta	canopy consists of appropriat	e and desirable plant spec construction of US 98 and	es; however, the understory its associated stormwater		
2. Benthic Community	appropriate, but the routine	e maintenance within the right-	of-way and installation of t	he culvert may affect natural		
w/o pres or		recruitment or regeneraltio	n in the plant community.			
current with						
6 0	1					
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.60	If preservation as mitig: Preservation adjustmer Adjusted mitigation del	ation, nt factor = ta =	For impact ass FL = delta 0.60 x 0	essment areas x acres = 52 = 0.31		
	If mitigation					
Delta = [with-current]	Time lag (t-factor) =		For mitigation a	ssessment areas		
-0.60	Risk factor =		RFG = delta/(t-facto	r x risk) =		

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)			Wetland 60		and 60
FLUCCs code	Further classifica	ition (optional)		Impac	t or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.58
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e. 0	OFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Within the US 98 northbound right-of-way, the assessment area is comprised of an herbaceous wetland community dominated by primrose willo and Carolina willow that connects to a forested wetland outside of the right-of-way. A cross drain that runs underneath US 98 connects Wetland to other offsite wetland systems					ated by primrose willow 8 connects Wetland 60	
Assessment area description						
Additiona	l vegetation within this	wetland consists \	/irginia chain fern,	red ro	oot, and caesarweed.	
Significant nearby features			Uniqueness (cor landscape.)	nsideri	ing the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 adjacent to the east side of Rockridge Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious p	permit/other historic use	9
Natural water storage and conve improvement	eyance; foraging habita ; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, 1 assessment area)	ition b Γ, SSC)	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading bi	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or	other signs such as	s track	ks, droppings, casings, l	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
A. Blakely			9/21/2021			

Site/Project Name		Application Number	/	Assessment Area Name or Number		
US 98 from W Socrum Loop Rd	I to CR 54 (FPID 436673-1)			Wetland 60		
Impact or Mitigation		Assessment conducted by:	/	Assessment date	:	
Impac	st	A. Blakely			9/21/2021	
		,				
Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present	(0)
The scoring of each	Condition is ontimal and fully	Condition is less than	Minimal Iou	al of our month of	Condition is insuff	i o i o o t t o
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/s	surface
type of wetland or surface	water functions	wetland/surface water functions water functions				ons
water assessed		functions				
.500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way into the Duke Ener w/o pres or of undeveloped land that is bounded with fencing. Wetland and upland habitats are available outside of assessment area; however, wildlife access to and from habitats outside of the assessment area is limited presence of right-of-way fencing, US 98, and commercial property. Invasive exotic species are present the adversely affect the functions provided by the assessment area. 5 0					nto the Duke Energy djacent land uses o available outside of nent area is limited cies are present tha a.	y utility consists the by the at may
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjace and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alter points of discharge resulting from the construction of US 98. The wetland receives runoff from US				iation. During the 20 cted by the adjacen red indicates alterati s runoff from US 98	021 field t US 98 ions in 3.	
w/o pres or						
current with						
7 0						
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is cor construction of US 98 and alteration. Land manageme right-of-way th	nprised of invasive, exotic spe its associated stormwater mai nt practices include the installa at may affect natural recruitme	cies with few nagement fac ation of a cros	r desirable/approp cilities (i.e., ditche ss drain and routi raltion in the plan	priate species prese es) has resulted in h ine maintenance wi tt community.	ent. The nabitat thin the
w/o pres or						
current with						
4 0						
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.53 0.00	If preservation as mitig Preservation adjustmen Adjusted mitigation del	ation, ht factor = ta =	F	For impact assess FL = delta x a 0.53 x 0.58	sment areas acres = = 0.31	
Delta = [with-current]	It mitigation Time lag (t-factor) =		Fo	or mitigation asse	ssment areas	
_0.52	Rick factor -		RFG =	- delta/(t-factor x	risk) =	
-0.53 Risk factor =						

Site/Project Name	hber Assessment Area Name or Number			or Number		
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)			Wetland 61		and 61
FLUCCs code	Further classification	ation (optional)	1	Impact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.85
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificatio	on (i.e. Of	FW, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplan	ıds		
Within the US 98 northbound rigoutside of the right-of-way into a	ght-of-way, the assessn forested wetland. The	nent area is comp forested wetland o	rised of a primrose- consists of red map	-willow ble and	dominated freshwater cypress encroaching i	marsh that extends into the right-of-way.
Assessment area description						
Dominant species within W	etland 61 include redro	oot, Virginia chain	fern, and Carolina	willow	with few red maple and	d cypress trees
Significant nearby features			Uniqueness (con landscape.)	nsiderin	n <mark>g the</mark> relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 approximately 0.2 mile southeast of Rockridge Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious pe	ermit/other historic use	•
Natural water storage and conv improvemen	eyance; foraging habita t; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reason	(List of species hably expected to	Anticipated Utiliza classification (E, T assessment area)	ition by Γ, SSC))	Listed Species (List s), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such as	s tracks	s, droppings, casings, ı	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date((s):		
A. Blakely			9/21/2021			

Site/Project Name		Application Number	Ass	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 61		
Impact or Mitigation		Assessment conducted by:	As	ssessment date:		
Impac	t	A. Blakely			9/21/2021	
<u> </u>			Į			
Scoring Guidance	Optimal (10)	Moderate(7)	Minim	nal (4)	Not Present (0)	
The scoring of each	Condition is optimal and fully	Condition is less than optimal, but sufficient to	Minimal level	of support of	Condition is insufficier	nt to
would be suitable for the	supports wetland/surface	maintain most	wetland/sur	rface water	provide wetland/surfa	ace
type of wetland or surface	water functions	wetland/surface water	funct	tions	water functions	
water assessed		Turictions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a located within the southbo commecial property tha assessment area; howeve presence of right-of-way fe ad	n herbaceous wetland that ext ound US 98 right-of-way. Adjac t is bounded with fencing. Wet r, wildlife access to and from h ncing, US 98, and commercia versely affect the functions pro	ends beyond th xent land uses o land and upland abitats outside I property. Invas wided by the as	ne right-of-way. consists of fore d habitats are a of the assessm sive exotic spec- ssessment area	The assessment area i sted wetland isolated b available outside of the nent area is limited by th cies are present that ma a.	is by the lay
5 0						
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. Dureviews, surface water was observed throughout the wetland and soils observed indicated a dark of present. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge result construction of US 98. The wetland receives runoff from US 98. w/o pres or current with 1. Vegetation and/or 2. Benthic Community w/o pres or current Water level indicators is comprised of invasive, exotic species with few desirable/appropriate speconstruction of US 98 and its associated stormwater management facilities (i.e., ditches) has real teration. Land management practices include the installation of a cross drain and routine maintor right-of-way that may affect natural recruitment or regeneraltion in the plant community				ation. During the 2021 d d a dark surface with m stormwater managemer arge resulting from the 3. priate species present. T is) has resulted in habit ne maintenance within t community.	field nuck nt The tat the	
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.53	If preservation as mitig Preservation adjustmer Adjusted mitigation del	ation, ht factor = ta =	For 0.5	r impact assess FL = delta x a 53 x 0.85	acres = = 0.45	
Delta = [with-current]	Time lag (t-factor) =		For n	mitigation asse	ssment areas	
-0.53	Risk factor =		RFG = de	elta/(t-factor x r	risk) =	
-0.53 Risk factor =						

Site/Project Name Application Number A				Assessment Area Name or Number		
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)			Wetland 62		and 62
FLUCCs code	Further classifica	ition (optional)		Impac	t or Mitigation Site?	Assessment Area
621 - Cypress	PFO2C – Palu Decidu	ustrine, Forested, uous, Seasonally I	Needle-Leaved Flooded		Impact	Size (in acres) 0.87
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	ON (i.e. (DFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, uplar	nds		
Within the right-	of-way, wetland 62 is co	mprised of a fore	sted wetland that e	xtends	s outside of the right-of-	way.
Assessment area description						
Dominant vegetation within Wetl	and 62 consists of cypre	ess, primrose willo smartwe	ow, Mexican primro eed.	se, pio	ckerelweed, Carolina wi	llow, buttonbush, and
Significant nearby features			Uniqueness (cor landscape.)	nsideri	ng the relative rarity in	relation to the regional
Wetland 62 is located within the southbound US 98 right-of-way directly west of Big Cypress Boulevard. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	∕ious p	permit/other historic use)
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, 1 assessment area	ation b T, SSC)	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading b	pirds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utili	ization (List species dire	ctly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):
No evidence of wildlife utilization observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
S. Szatyari			9/24/2021			

Site/Project Name		Application Number	A	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 62		
Impact or Mitigation		Assessment conducted by:	A	Assessment date:		
Impa	ct	S. Szatyari			9/24/2021	
		Ļ	Į			
Scoring Guidance	Optimal (10)	Moderate(7)	Mini	imal (4)	Not Present (0)	
The scoring of each		Condition is less than			o 1111 - 1 1 17 1	
Indicator is based on what	Condition is optimal and fully supports wotland/surface	optimal, but sufficient to	Minimal leve	el of support of	Condition is insufficien	nt to
type of wetland or surface	water functions	wetland/surface water	fun	ictions	water functions	100
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current with</u>	The assessment area is assessment area is located v upland habitats are available of the assessment area is lir adjacent uplands within the	an forested cypress dominate vithin the southbound US 98 rig outside of the assessment ar mited by the presence of right- right-of-way consist of mowed	ed wetland tha ght-of-way dir ea; however, of-way fencing d and maintair	at extends beyon ectly west of Big wildlife access t g, US 98, and re ned ruderal spec	d the right-of-way. The Cypress Blvd. Wetland o and from habitats outs sidential development. T ies overlaying fill materia	and side The al.
5 0				•		
 .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field reviews, this wetland was inundated throughout with water levels greater than 12 inches. In addition to surface was hydrologic indicators observed included moss, water marks, and buttressing. Hydrologic conditions are affected to the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives rune from US 98. 						field ater, I by noff
.500(6)(c)Community structure						
1. Vegetation and/or Plant cover within the right-of-way is a mix of native and invasive, exotic species. Cypress trees dominate the tree canopy with native and invasive species present in the understory. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community. w/o pres or					ree ed s he	
Score = sum of above scores/30 (if uplands, divide by 20) (if current br w/o pres 0.63 0.00	If preservation as mitiga Preservation adjustmen Adjusted mitigation del	ation, nt factor = ta =	Fi	FL = delta x a FL = delta x a 0.63 x 0.87	sment areas acres = = 0.55	
	If mitigation		For	r mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =		550			
-0.63	Risk factor =	ctor = RFG = delta/(t-factor x risk) =				

Site/Project Name Application Nu			ber Assessment Area Name or Number			or Number
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)				Wetland 63	
FLUCCs code	Further classifica	ition (optional)		Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	PF01/2C - Leaved/Needle	Palustrine, Fores -Leaved, Deciduo Flooded	sted, Broad- ous, Seasonally		Impact	Size (in acres) 0.09
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplar	nds		
Within the right-of-wa	ay, Wetland 63 is comp	rised of a forested	l wetland system tl	nat ext	tends outside of the righ	it-of-way.
Assessment area description						
Dominant vegetation within t	he canopy of Wetland 6 predominantly consist	63 includes cypres t of Virginia chain	ss, swamp b <mark>ay</mark> , an fern, swamp fern,	d red i and bi	maple. The understory a uttonbush.	and groundcover
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional
Wetland 63 is located within	the southbound US 98	right-of-way				
approximately 0.3 mile southeast of Big Cypress Boulevard. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for pre-	vious	permit/other historic use	•
Natural water storage and conve improvement; flo	eyance; foraging habita od attenuation; refuge.	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtl m	es, s <mark>nake</mark> s, song bir <mark>ds</mark> , ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	other signs such a	s tracl	ks, droppings, casings, l	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	1.		
Additional relevant factors:						
None.						
Assessment conducted by:			Assessment date	(s):		
S. Szatyari			9/24/2021			

Site/Project Name	Application Number	Assessment Area Name or Number				
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 63		
Impact or Mitigation		Assessment conducted by:		Assessment date	sessment date:	
Impac	ct	S. Szatyari			9/24/2021	
ļ			ļ			
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each		Condition is less than			o 1111 - 1 - 1	
Indicator is based on what	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to	Wetland	vel of support of	Condition is insuff	icient to
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a f within the southbound US upland habitats are available of the assessment area is	orested wetland that extends o 98 right-of-way. Adjacacent la e outside of the assessment ar limited by the presence of righ	outside the rin nd use inclu rea; however nt-of-way fen	ght-of-way. The a des residential de , wildlife access t cing, US 98, and	ssessment area is velopment; Wetlan o and from habitats residential develop	located d and outside ment.
5 0						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0	Water level indicators and s this wetland was inundated t stormwater management fa resulting fro	coil moisture appropriate consi hroughout. Hydrologic conditio icilities (i.e., ditches). Soil eros m the construction of US 98.	dering seaso ons are affection ion observed The wetland	onal variation. Dur ted by the adjacer d indicates alterat receives runoff fr	ring the 2021 field ro nt US 98 and its as ions in points of dis om US 98.	eviews, sociated charge
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover is solely cov associated stormwater man	ered by appropriate and desira	able plant sp s) has result	ecies. The constr ed in habitat alter	ruction of US 98 and ration. Land manag	d its jement
	may a	ffect natural recruitment or rec	generaltion ir	the plant commu	unity.	l-oi-way
w/o pres or						
current with						
7 0						
	a					
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	I	For impact assess	sment areas	
uplands, divide by 20)	Preservation adjustment	nt factor =		FL = delta x a	acres =	
current				0.63 7 0.00	- 0.06	
	Adjusted mitigation del	ia =		0.03 X 0.09	- 0.00	
0.00			<u>k</u>			
	If mitigation				1	
			Fo	For mitigation assessment areas		
Delta = [with-current]	I ime lag (t-factor) =					
-0.63	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Site/Project Name		Application Number	er	Assessment Area Name	or Number	
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)			Wetland 64		
FLUCCs code	Further classification	ition (optional)	Im	pact or Mitigation Site?	Assessment Area	
631 - Wetland Scrub	PSS1C - Palus Decidu	stine, Scrub-shrub ious, Seasonally F	o, Broad-leaved Flooded	Impact	Size (in acres) 0.28	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	(i.e. OFW, AP, other local/state/feder	al designation of importance)	
Withlacoochee River	111			None		
Geographic relationship to and hydr	Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands					
Wetland 64 is comprised of a s	crub-shrub wetland tha underneath US 98 co	at extends outside nnects Wetland 6	of the right-of-way ir 4 to other offsite wetl	ito a forested wetland. A cr and systems.	oss drain that runs	
Assessment area description						
Dominant vegetation within Wetland	d 64 includes red maple right-of-v	e, Carolina willow, way consists of ree	primrose willow, and d maple and cypress	smartweed. The forested	wetland adjacent to the	
Significant nearby features			Uniqueness (consi landscape.)	dering the relative rarity in	relation to the regional	
Wetland 64 is located within the southbound US 98 right-of-way approximately 0.3 mile northwest of West Socrum Loop Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for previo	us permit/other historic use	Э	
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.			None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment <mark>area and</mark> reasor	(List of species hably expected to	Anticipated Utilizatio classification (E, T, assessment area)	on by Listed Species (List s SSC), type of use, and inte	species, their legal ensity of use of the	
Amphibians, wading birds, turtle ma	es, snakes, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or	other signs such as t	racks, droppings, casings,	nests, etc.):	
No evidence of wildlife utilitzation observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date(s)	:		
S. Szatyari			9/24/2021			

Site/Project Name		Application Number		Assessment Area	a Name or Number			
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 64				
Impact or Mitigation		Assessment conducted by:		Assessment date	ate:			
Impac	ct	S. Szatyari			9/24/2021			
		<u> </u>						
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)		
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal la	vol of support of	Condition is insuffi	oiont to		
would be suitable for the	supports wetland/surface	maintain most	wetland	/surface water	provide wetland/s	surface		
type of wetland or surface	water functions	wetland/surface water functions water function				ns		
water assessed		functions						
.500(6)(a) Location and Landscape Support The assessment area is a scrub shrub weltand that extends outside of the right-of-way into a system. The assessment area is located within the southbound US 98 right-of-way. Wetland and available outside of the assessment area; however, wildlife access to and from habitats outside area is limited by the presence of right-of-way fencing, residential development, and US 98. Th within the right-of-way consist of mowed and maintained ruderal species overlaying fill .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal value is used and was inundated throughout with water levels greater than six in				y into a forested wel and and upland habi outside of the asses s 98. The adjacent u aying fill material. asonal variation. Du an six inches. Hydro	tland itats are ssment plands ring the blogic			
w/o pres or current with 7 0	w/o pres or current with 7 0					iches).		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is construction of US 98 and alteration. Land manageme may a	by appropriate and desirable p its associated stormwater ma ent practices are generally app iffect natural recruitment or reg	lant species nagement fa propriate, but generaltion in	with invasive/exo acilities (i.e., ditche t routine maintena n the plant commu	tic species present. s) has resulted in hance within the right- unity.	The abitat of-way		
w/o pres or								
current with								
6 0								
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.60 0.00	If preservation as mitig: Preservation adjustmer Adjusted mitigation del	ation, nt factor = ta =		For impact assess FL = delta x 0.60 x 0.28	sment areas acres = = 0.17			
	If mitigation		E	or mitigation asso	ssment aroos			
Delta = [with-current]	Time lag (t-factor) =			or milligation asse				
-0.60	Risk factor =		RFG	= delta/(t-factor x	RFG = delta/(t-factor x risk) =			

Site/Project Name		Application Number	er	A	Assessment Area Name o	or Number
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)			Wetland 65		
FLUCCs code	Further classification	ition (optional)	h	Impact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.42
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	n (i.e. 0	FW, AP, other local/state/federa	l designation of importance)
Withlacoochee River	111				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, upland	ds		
Wetland 65 is comprised of a primi drain	ose-willow dominated f that runs underneath U	reshwater marsh t S 98 connects We	that extends outside etland 65 to other of	e of the ffsite v	e right-of-way into a for vetland systems.	rested wetland. A cross
Assessment area description						
Additional vegetation observed wi	thin Wetland 65 include ested wetland adjacent	es Carolina willow to the right-of-wa	, red maple, wild tar y consists of red ma	ro, cati aple ar	tail, Virginia chain fern, nd sweet bay.	and buttonbush. The
Significant nearby features			Uniqueness (cons landscape.)	siderir	ng the relative rarity in	relation to the regional
Wetland 65 is located within the southbound US 98 right-of-way directly west of West Socrum Loop Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for previ	ious p	ermit/other historic use	•
Natural water storage and convo improvemen	eyance; foraging habita t; flood attenuation	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review esment area and reason	(List of species hably expected to	Anticipated Utilizat classification (E, T assessment area)	tion by , SSC	/ Listed Species (List s), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading b	irds, tu <mark>rtle</mark> s, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ctly observed, or	other signs such as	tracks	s, droppings, casings, ı	nests, etc.):
No evidence of wildlife utilization observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date(s	s):		
S. Szatyari			9/24/2021			

Site/Project Name		Application Number		Assessment Area	a Name or Number
US 98 from W Socrum Loop R	d to CR 54 (FPID 436673-1)			Wetland 65	
Impact or Mitigation		Assessment conducted by:		Assessment date:	
Impa	ct	S. Szatyari			9/24/2021
			+		
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present (0)
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal lev	vel of support of	Condition is insufficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/surface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water functions
water assessed		functions			
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with	The assessment area is an h The assessment area is available outside of the ass area is limited by the prese within the right-of-	erbaceous wetland that extend located within the southbound essment area; however, wildlif ence of right-of-way fencing, US way consist of mowed and ma	ds beyond th US 98 right- e access to a S 98, and W intained rude	e right-of-way into of-way. Wetland and from habitats Socrum Loop Ro eral species overla	o a forested wetland system. and upland habitats are outside of the assessment bad. The adjacent uplands aying fill material.
5 0					
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and s reviews, this wetland was i observed included surface and its associated storm	oil moisture appeared appropr nundated throughout with wate water and a high water table. H water management facilities (i.	iate conside er levels grea lydrologic cc .e., ditches).	ring seasonal var ater than six inche onditions are affec The wetland rece	iation. During the 2021 field es. Hydrological indicators cted by the adjacent US 98 eives runoff from US 98.
w/o pres or					
current with	-				
7 0					
.500(6)(c)Community structure	Plant cover within the right-co species. The construction of	f-way is comprised of primarily US 98 and its associated stor	/ invasive, e> mwater man	kotic species with hagement facilities	minimal presence of native s (i.e., ditches) has resulted
2. Benthic Community	in habitat alteration. Land m	anagement practices include	the routine n	naintenance withi	n the right-of-way that may
N/o pros or	and	set natural recruitment of reger		le plant commun	ity.
current with					
	-				
4 0					
Score = sum of above scores/30 (if	If preservation as mitig	ation,		For impact asses	sment areas
uplands, divide by 20)	Preservation adjustment	nt factor =		FL = delta x	acres =
current				0.53 y 0.40	- 0.22
	Adjusted mitigation del	ta =		0.33 X 0.42	- 0.22
0.00			<u></u>		
	If mitigation				
Dolta - [with ourront]	Time log /t fester) -		Fo	or mitigation asse	essment areas
	Time lag (t-lactor) =		550	//+ 5 +	
-0.53	Risk factor =		RFG =	= delta/(t-factor x	risk) =

APPENDIX 1.2

UMAM Worksheets – Mainline Secondary Impacts

Site/Project Name	I	Application Numbe	ber Assessment Area Name or Number			or Number
US 98 from W Socrum Loop Rd to (CR 54 (FPID 436673-1)				Wetland 1 (Sec	ondary Impact)
FLUCCs code	Further classifica	tion (optional)		Impact	t or Mitigation Site?	Assessment Area
630 -Wetland Forested Mixed	PFO1/2C - Pal Decidu	lustrine, Forested lous, Seasonally I	Broad-Leaved ⁻ looded	S	Secondary Impact	Size (in acres) 0.16
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ion (i.e. C	DFW, AP, other local/state/federal	designation of importance)
Withlacoochee River					None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplar	nds		
Within the US 98 northbound righ wetlar	t-of-way, the Wetland 1 ∩d system. The assessr	is an herbaceous nent area is a fore	wetland that extenested wetland systemetry	nds be tem tha	yond the right-of-way in at extends offsite.	ito an offsite, forested
Assessment area description						
Dominant v	egetation within the adja	acent forested we	tland system inclu	ides ree	d maple and water oak	
Significant nearby features			Uniqueness (con landscape.)	nsideri	ng the relative rarity in I	relation to the regional
The assessment area is located within the northbound US 98 right-of-way approximately 0.3 mile north of Hall Road/West Socrum Loop Road. Gree Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious p	permit/other historic use	
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review ssment area and reason	(List of species ably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading b	irds, turt <mark>les</mark> , small mamı	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	other signs such a	as track	s, droppings, casings, i	nests, etc.):
	No evic	dence of wildlife u	tilitzation observed	d.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
T. Norman			6/28/2021			

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Site/Project Name		Application Number		Assessment Area	a Name or Number
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 1 (Secondary Impact)	
Impact or Mitigation		Assessment conducted by:		Assessment date	:
Impac	ct	T. Norman			6/28/2021
l		<u> </u>			
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present (0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal Io	val of support of	Condition in inquifficient (
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/surface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water functions
water assessed		functions			
.500(6)(a) Location and Landscape Support	The assessment area is a fo way. Residential and comme upland habitats are available of the assessment area i	rested wetland system that ex ercial development is located v e outside of the assessment ar s limited by the presence of rig develop	tends northe west and nort rea; however ght-of-way fer oment.	ast located at the thwest of the asse , wildlife access to ncing, US 98, and	northbound US 98 right-c essment area. Wetland ar o and from habitats outsid d residential/commercial
current with					
0 5				•	
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure	During the 2021 field review and soil moisture appeared adjacent US 98 and its asso alterations in points of discha	s, surface water was observed appropriate considering seas clated stormwater manageme arge resulting from the constru	d throughout onal variation nt facilities (i iction of US S	the assessment a n. Hydrologic con .e., ditches). Soil 98. The wetland i	area. Water level indicator ditions are affected by the erosion observed indicate receives runoff from US 9
1. Vegetation and/or 2. Benthic Community w/o pres or current with 5 4	The caonopy of the asse construction of US 98 and alteration. Land manageme	ssment area consists of desira its associated stormwater mai ent practices are generally app may affect natural recruitment commi	able species nagement fac ropriate, but t or regeneral unity.	with invasive/exo cilities (i.e., ditche routine maintena Ition in the plant	tic species present. The es) has resulted in habitat nce within the right-of-way
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.60	If preservation as mitig Preservation adjustmer Adjusted mitigation del	ation, nt factor = ta =	F	For impact assess FL = delta x a 0.07 x 0.16	sment areas acres = = 0.01
Delta = [with-current]	It mitigation Time lag (t-factor) =		Fo	or mitigation asse	ssment areas
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =
l			<u> </u>		

					A (A)	N1 1
Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 2 (Sec	condary Impacts)
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area
		lustrine Emerger	nt Persistent	mpuo	t er mingenen ener	Size (in acres)
641 - Freshwater Marsh		Seasonally Floode	ed		Impact	0.07
		-				
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	ON (i.e. (OFW, AP, other local/state/federa	al designation of importance)
Withlacoochee River	III				None	
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplan	nds		
Within the US 98 northbound righ	nt-of-way, the Wetland 2	is an herbaceous	s wetland that exter	nds be	eyond the right-of-way in	nto an offsite, forested
Accompany area description		wettand Sy	stem.			
Assessment area description						
Vegetation of	served within the asses	sment area consi	sts of buttonbush.	Caroli	na willow, and red map	le.
			,			
Significant paarby factures			Uniqueness (cor	nsider	ing the relative rarity in	relation to the regional
	· · · · · · · · · · · · · · · · · · ·		landscape.)		•	
approximately 0.6 mile north of Ha	Within the northbound U-	5 98 right-of-way				
Swamp WMA and Gator Creek F	Reserve located on north	neast side of US			Not unique	
	98.					
Functions			Mitigation for prev	/ious p	permit/other historic use	9
	r					
Natural water storage and conv improvement	eyance; foraging habita it: flood attenuation	t; water quality			None	
Anticipated Wildlife Utilization Base	ed on Literature Review	(List of species	Anticipated Utiliza	ation b	y Listed Species (List s	pecies, their legal
be found)	ssment area and reason	ably expected to	classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
,			,	/		
			Little Blue Herc	on (ST	, foraging); Tricolored I	Heron (ST, foraging);
Amphibians, wading b	pirds, turtles, small mam	mals	Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging);			
				Everg	lade Shall Kite (FE, for	aging)
Observed Evidence of Wildlife Util	zation (List species dire	ctly observed, or	l other signs such as	s track	s, droppings, casings,	nests, etc.):
			0			· ,
	No evi	dence of wildlife u	tilitzation observed	1.		
Additional relevant factors:						
Additional relevant factors.						
		None				
		None	-			
Assessment conducted by:			Assessment date	(s):		
T Norman			6/28/2021	<u>,-</u>).		
1. Horman			5,20,2021			

Site/Project Name		Application Number	Assessment Area	a Name or Number
US 98 from W Socrum Loop Rd	to CR 54 (FPID 436673-1)		Wetland 2	2 (Secondary Impacts)
Impact or Mitigation		Assessment conducted by:	Assessment date	2:
Impac	t	T. Norman		6/28/2021
Sooring Cuidenee	Ontime! (10)	Moderate (7)	Minimal (4)	Not Proceed (0)
Scoring Guidance The scoring of each	Optimal (10)	Condition is less than	winimal (4)	NOT Present (U)
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level of support of	Condition is insufficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface
type of wetland or surface water assessed	water functions	wetiand/surface water functions	tunctions	water functions
			l	·
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is development and improved available outside of the ass area is limited by the present present tha	a forested wetland system loc l pasture is located northeast o ressment area; however, wildli ce of right-of-way fencing, US s at may adversely affect the fun	ated at the northbound US 98 of the assessment area. Weth fe access to and from habitats 98, and residential/pasture us ctions provided by the assess	right-of-way. Residential and and upland habitats are s outside of the assessment e. Invasive exotic species are sment area.
6 5				
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 7	During the 2021 field revi indicators and soil moisture by the adjacent US 98 and indicates alterations in points	ews, soils were saturated at th appeared appropriate conside d its associated stormwater ma s of discharge resulting from th US	e surface throughout the asser ring seasonal variation. Hydro anagement facilities (i.e., ditch e construction of US 98. The 98.	essment area. Water level ologic conditions are affected nes). Soil erosion observed e wetland receives runoff from
.500(6)(c)Community structure				
 Vegetation and/or Benthic Community 	Majority of the plant cover species present. The const resulted in habitat alteration and routine maintenance	and presence is comprised of ruction of US 98 and its assoc . Land management practices within the right-of-way that ma comm	f desirable wetland species wi iated stormwater managemer include the installation of a pi ay affect natural recruitment of nunity.	th minimal invasive, exotic nt facilities (i.e., ditches) has pe culvert within the wetland r regeneraltion in the plant
current with				
6 5				
·				
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	For impact asses	ssment areas
uplands, divide by 20)	Preservation adjustmer	nt factor =	FL = delta x	acres =
current or w/o pres with			0.07 x 0.07	= 0.005
0.63 0.57	Adjusted mitigation del	ia =		* -
	l			
	If mitigation		For mitigation asso	essment areas
Delta = [with-current]	Time lag (t-factor) =			
-0.07	Risk factor =		RFG = delta/(t-factor x	risk) =

Cite/Drois et Norre		Analisation Number			Assessment Area Norra	en Numeh en
		Application Number				
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 3 (See	condary Impact)
FLUCCs code	Further classification	ition (optional)		Impac	t or Mitigation Site?	Assessment Area
	PFO1C - Pali	strine Forested	Broad-Leaved		Ū	Size (in acres)
617 - Mixed Wetland Hardwoo	ods Decidu	ious, Seasonally I	Flooded		Impact	0.05
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e. (OFW, AP, other local/state/federa	al designation of importance)
Withlacoochee River	Ш				None	
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, upla	nds		
The assessment area is	s forested wetland that co	onnects to other o	ff-site wetlands via	a a cro	ssdrain that runs under	neath US 98.
Assessment area description						
Dominant vogetation within the c	anony of the assessmer	at area consists of	rod maple and w	tor on		var apacias consists of
Dominant vegetation within the c	primrose willo	ow, beggarticks, li	mpograss, and eld	erberr	y.	er species consists of
				noidor	ing the relative resituin	rolation to the regional
Significant nearby features			landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located	within the northbound U	S 98 right-of-way				
approximately 0.7 mile north of H	all Road/West Socrum L reek Reserve located on	oop Road. Gator			Not unique	
	US 98.					
Functions			Mitigation for pre	vious p	permit/other historic use)
Natural water storage and conv improvement: flu	veyance; foraging habita	t; water quality	None			
improvement, in	ood attendation, relage.					
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliza	ation b	y Listed Species (List s	pecies, their legal
be found)	essment area and reason	lably expected to	assessment area	1, 550	<i>)</i> , type of use, and inte	insity of use of the
,				,		
Amphibians, wading birds, turt	tles, snakes, song birds.	raptors. small	Little Blue He	ron (S	T. foraging/nesting): Tr	icolored Heron (ST.
n n n	nammals	1 ,	foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Util	lization (List species dire	ctly observed, or	other signs such a	s tracł	ks, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	d.		
Additional relevant factors:						
		N 1				
		None				
Assessment conducted by:			Assessment date	e(s):		
T. Norman			6/28/2021	、 /		

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland	3 (Secondary Impact)
Impact or Mitigation		Assessment conducted by:		Assessment date	2	
Impac	ot	T. Norman			6/28/2021	
Scoring Guidanco	Ontimal (10)	Modorato(7)	Mi	nimal (4)	Not Procent	(0)
The scoring of each	Optimar (10)	Condition is less than	IAII	ninai (4)	Not Fresent	(0)
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal le	Condition is insuffi	cient to	
would be suitable for the type of wetland or surface	supports wetland/surface water functions	maintain most wetland/surface water	wetland/surface water provide water			urface
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 5 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a for US 98. The assessment area and east of the assessment habitats are available outsis assessment area is limited groundcover composition water level indicators and so indicators observed within the elevated lichen lines, humm associated stormwater mar	prested wetland that connects area; Upland forest habitat is I de of the assessment area; ho by the presence of right-of-wa n in the assessment area cons functions provided by bil moisture appeared somewh the assessment area included ocks, and water marks. Hydro nagement facilities (i.e., ditche	to off-site wi bound US 98 i located north wever, wild y fencing, U: sists of invas the assess the assess the assess a appropria a high wate logic conditii s). Soil eros	etlands via a cross right-of-way. Impro- for the assessme ife access to and S 98, and active p sive exotic species nent area. Atte considering sea r table, saturation, ons are affected b ion observed indic	s drain that runs unde oved pasture is locate int area. Wetland and from habitats outside pastures. The majority is that adversely affect asonal variation. Hyd , aquatic mosses/live y the adjacent US 98 cates alterations in po	erneath ed west d upland e of the y of the t the rological rworts, 3 and its pints of
ula prog or	discharge resulti	ing from the construction of US	598. The w	etland receives ru	inoff from US 98.	
current with						
.500(6)(c)Community structure						
1. Vegetation and/or 2. Benthic Community w/o pres or current 5 4					e plant ated ces are ss drains	
Score = sum of above scores/30 (if	If preservation as mitig	ation,		For impact asses	ssment areas	
uplands, divide by 20)	Proponyction adjuster -	at factor -		FL = delta x	acres =	
current	Preservation adjustmen			0.07 0.05	- 0.000	
	Adjusted mitigation delt	ta =		0.07 X 0.05	= 0.003	
0.00 0.53]		R			
	If mitigation				anoment erece	
Delta = [with-current]	Time lag (t-factor) =			-or milligation asse		
-0.07	Risk factor =		RFG	= delta/(t-factor x	risk) =	

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)				Wetland 4 (See	condary Impact)
FLUCCs code	Further classifica	ition (optional)		Impac	t or Mitigation Site?	Assessment Area
617 - Mixed Wetland Hardwood	s PFO1C - Palu Decidu	ustrine, Forested, ious, Seasonally F	Broad-Leaved Impact Size (in ac Flooded 0.42		Size (in acres) 0.42	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e. (OFW, AP, other local/state/federa	al designation of importance)
Withlacoochee River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplar	nds		
The assessment area is a forested	d wetland that extends	offsite and conne 98.	cts to other offsite	wetlar	nds via a cross drain tha	at runs underneath US
Assessment area description						
Dominant vegetation within the can the wetland predominant	opy consists of red ma _l ly consists of elderberry	ple, water oak, an /, buttonbush, bus	d sweetbay. The si shy bluestem, Virgi	ubcan nia ch	opy and groundcover o ain fern, primrose willov	f the forested portion of w, blackberry.
Significant nearby features			Uniqueness (cor	nsider	ing the relative rarity in	relation to the regional
The assessment area is located w approximately 0.2 mile southeast of Green Swamp WMA and Gator Cre I	ithin the northbound US f the entrance to Gator eek Reserve located on JS 98.	S 98 right-of-way Creek Preserve. northeast side of			Not unique	
Functions			Mitigation for prev	/ious p	permit/other historic use	9
Natural water storage and conve improvement; flo	eyance; foraging habita od attenuation; refuge.	t; water quality			None	
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, ⁻ assessment area	ation b T, SS()	y Listed Species (List s C), type of use, and inte	pecies, their legal ensity of use of the
Amphibians, wading birds, turtle ma	es, snakes, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ctly observed, or	other signs such a	s tracł	ks, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	1.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 4 (Secondary Impact)		
Impact or Mitigation		Assessment conducted by:		Assessment date	:	
Impac	ct	T. Norman			6/28/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present (0)	
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal Io	vol of support of	Condition is insufficient	t to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/surfac	ice
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water functions	
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 5	The assessment area is a fo US 98. The assessment area use is located east of the as area; however, wildlife acces	prested wetland that connects a is located at the northbound ssessment area; Wetland and s to and from habitats outside of-way fencing, US 98, and	to offsite wet US 98 right-o upland habit of the asses d pasture/res	tlands via a cross of-way. Improved fats are available esment area is lim sidential use.	drain that runs undernea pasture and residential la outside of the assessme ited by the presence of ri	ath land ent right-
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7	Water level indicators a Hydrological indicators obse table, and water marks. Hy management facilities (i.e., c the c	and soil moisture appeared so erved within the assessment a drologic conditions are affecte litches). Soil erosion observed construction of US 98. The we	mewhat appirea included ad by the adja i indicates all titland receive	ropriate considerii elevated lichen li acent US 98 and terations in points es runoff from US	ng seasonal variation. nes, saturation, high wat its associated stormwate of discharge resulting fr 98.	ter er rom
.500(6)(c)Community structure	Majority of plant cover is by	appropriate and desirable pla	nt species. M	/inimal invasive/e	xotic species present. Th	he
2. Benthic Community	alteration. Land manageme	ent practices are generally app	propriate, but	routine maintena	nce within the right-of-wa	au /ay
	may a	ffect natural recruitment or rec	generaltion ir	n the plant commu	unity.	
w/o pres or						
current with	-					
7 6						
Score = sum of above scores/30 (if	If preservation as mitig	ation,		For impact assess	sment areas	
uplands, divide by 20)	Preservation adjustmer	nt factor =		FL = delta x a	acres =	
current or w/o pres with				0.07 x 0.42	= 0.03	
0.67 0.60	Adjusted mitigation del	a =				
0.00	J					
	If mitigation		F	or mitigation asso	ssment areas	
Delta = [with-current]	Time lag (t-factor) =			a magadon asse		
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =	
5.07						

Site/Project Name		Application Number	۶r		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)	, ppiloddor Hambe			Wetl	and 5
FLUCCs code	Further classification	tion (optional)	1	Impact	or Mitigation Site?	Assessment Area
631 - Wetland Scrub	PSS1C - Palus Decidu	stine, Scrub-shrub Ious, Seasonally F	o, Broad-leaved [−] looded		Impact	Size (in acres) 0.02
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificatio	on (i.e. C	FW, AP, other local/state/federa	l designation of importance)
Withlacoochee River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplan	ds		
The assessment	area is a scrub-shrub w	etland that extend	ds offsite and is adja	acent	to the Gator Creek Res	serve.
Assessment area description				7		
Dominant vegetation within the ass	essment area consists	of red maple sapl fern.	ings, buttonbush, re	edroot	t, sand cordgrass, coin	wort, and Virginia chain
Significant nearby features			Uniqueness (con	isideri	ng the relative rarity in	relation to the regional
The assessment area is located v approximately 0.1 mile southeast of Green Swamp WMA and Gator Cr	vithin the northbound US of the entrance to Gator eek Reserve located on US 98.	S 98 right-of-way Creek Preserve. northeast side of			Not unique	
Functions			Mitigation for prev	ious p	ermit/other historic use	9
Natural water storage and conv improvement; flo	eyance; foraging habita od attenuation; refuge.	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utilizat classification (E, T assessment area)	tion by , SSC	y Listed Species (List s ;), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtl m	es, s <mark>nake</mark> s, song bir <mark>ds</mark> , ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date(s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number	Assessment Are	a Name or Number		
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 5		
Impact or Mitigation		Assessment conducted by:	Assessment dat	e:		
Impao	ct	T. Norman		6/28/2021		
	Ortimal (40)	Madausta (7)	Minimal (4)	Not Dress and (0)		
Scoring Guidance	Optimal (10)	Condition is less than	Minimai (4)	Not Present (0)		
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level of support of	Condition is insufficient to		
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water provide wetland/surface			
type of wetland or surface	water functions	wetland/surface water	functions	functions		
Water assessed		Iditions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a so at the northbound US 98 r however, wildlife access to a	rub shrub weltand adjacent to ight-of-way. Wetland and upla ind from habitats outside of the fencing a	the Gator Creek Preserve. T nd habitats are available out e assessment area is limited nd US 98.	The assessment area is located side of the assessment area; by the presence of right-of-way		
6 5						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologica indicators observed within the assessment area included elevated lichen lines, water-stained leaves, and water marks Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.					
	af	fect natural recruitment or rege	eneraltion in the plant comm	unity.		
w/o pres or						
current with	4					
7 6						
Sooro - aum of above secret/20	If proconvotion on mitig	ation	For impact and	assmont areas		
uplands, divide by 20)						
current	Preservation adjustmer	nt factor =		A 40160 -		
or w/o pres with	Adjusted mitigation delt	a =	0.07 x 0.02	= 0.001		
0.67 0.60						
	If mitigotics					
			For mitigation as	sessment areas		
Delta = [with-current]	I ime lag (t-factor) =					
-0.07	Risk factor =		RFG = delta/(t-factor >	arisk) =		

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to (CR 54 (FPID 436673-1)	,			Wetland 6	(Secondary)
FLUCCs code	Further classification	tion (optional)		Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	PFO1/2C leaved/Needl	- Palustine, Fores e-leaved Deciduo Flooded	ted, Broad- us, Seasonally		Impact	Size (in acres) 0.07
Basin/Watershed Name/Number	Affected Waterbody (Clas	ted Waterbody (Class) Special Classification			OFW, AP, other local/state/federa	I designation of importance)
Withlacoochee River		ш			None	
Geographic relationship to and hyc	Irologic connection with	wetlands, other s	urface water, uplai	nds		
The ass	essment area is a fores	ted wetland syste	m associated with	the G	ator Creek Reserve.	
Assessment area description						
The dominant vegetation within the	e canopy of this wetland of cabbage pa	l consists of red m alm, wax myrtle, p	naple and bald cyp ersimmon, and eld	oress. derber	The subcanopy and gro ry.	undcover is comprised
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional
The assessment area is located within the northbound US 98 right-of-wa approximately 0.2 mile northwest of the entrance to Gator Creek Preserv Green Swamp WMA and Gator Creek Reserve located on northeast side US 98.			Not unique			
Functions			Mitigation for pre	vious	permit/other historic use)
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.			None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS(I)	by Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtl m	es, sn <mark>ake</mark> s, song bir <mark>ds</mark> , ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	d.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number	Assessment Are	a Name or Number
US 98 from W Socrum Loop Re	d to CR 54 (FPID 436673-1)		Wetland 6 (Seco	
Impact or Mitigation	Assessment conducted by: Assessment date:		2:	
Impa	ct	T. Norman		6/28/2021
Scoring Guidanco	Ontimal (10)	Modorato(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	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 w/o pres or current with	The assessment area is a for within the northbound US 98 however, wildlife access to a	rested wetland associated with a right-of-way. Wetland and up nd from habitats outside of the fencing a	n the Gator Creek Reserve. Th land habitats are available ou e assessment area is limited b nd US 98.	ne assessment area is located tside of the assessment area; y the presence of right-of-way
6 5				
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 7 .500(6)(c)Community structure	Water level indicators and so indicators observed within the marks. Hydrologic conditions (i.e., ditches). Soil erosion c	bil moisture appeared somewh he assessment area included is are affected by the adjacent observed indicates alterations 98. The wetland recei	nat appropriate considering se aquatic mosses/liverworts, ele US 98 and its associated stor in points of discharge resulting ives runoff from US 98.	asonal variation. Hydrological evated lichen lines, and water mwater management facilities g from the construction of US
1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 6	Majority of plant cover is b construction of US 98 and alteration. Land managemer aff	y appropriate and desirable pla d its associated stormwater ma it practices are generally appro fect natural recruitment or rege	ant species. Minimal invasive/ anagement facilities (i.e., ditch opriate, but routine maintenan eneraltion in the plant commu	exotic species present. The hes) has resulted in habitat ce within the right-of-way may hity.
.	•			
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.67	If preservation as mitig: Preservation adjustmen Adjusted mitigation del	ation, nt factor = ta =	For impact asse FL = delta x 0.07 x 0.07	ssment areas acres = = 0.005
Delta = [with-current]	Time lag (t-factor) =		For mitigation ass	essment areas
			RFG = delta/(t-factor x	risk) =
-0.07	RISK TACTOR =			

Site/Project Name		Application Number	ər		Assessment Area Name	or Number	
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)		51		Wetland 7 (Sec	condary Impact)	
				-			
FLUCCs code	Further classifica	ition (optional)	ated Broad	Impac	t or Mitigation Site?	Assessment Area	
630 - Wetland Forested Mixe	d Leaved/Need	 Palustrine, Fores e-Leaved Decidud 	ous. Seasonally		Impact	0.59	
		Flooded			·		
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	al designation of importance)	
Hillsborough River	111				None		
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, upla	nds			
	The assessment are	a is a forested we	etland system that	extend	ds offsite.		
Assessment area description							
Dominant vegetation within Wet	and 7 includes primrose	willow, bulrush, f	alse hop sedge, si	martwe	eed, Virginia chain fern,	netted chain fern, St.	
Augustine grass, and red maple s	aplings. The canopy of	the forested wetla	and adjacent to the	right-	of-way is comprised of o	cypress and water oak.	
			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional	
Significant nearby features			landscape.)			· · · · · · · · · · · · · · · · · · ·	
The assessment area is located	within the northbound U	S 98 right-of-way					
approximately 0.2 mile southeas	t of Pioneer Drive. Gree	n Swamp WMA	Not unique				
Functions			Mitigation for pre	vious	permit/other historic use	e	
Natural water storage and conv	revance: foraging habita	t: water quality					
improvemen	nt; flood attenuation	t, water quality	None				
Anticipated Wildlife Litilization Dee	ad an Literatura Deview	(List of aposiss	Anticipated Litilia	ation h	w Listed Species (Lists	paging their legal	
that are representative of the asse	ssment area and reason	ably expected to	classification (E,	T, SS	C), type of use, and inte	ensity of use of the	
be found)			assessment area	ı)	,		
Amphibians wading b	pirds turtles small mam	mals	Florida Sandhill Crane (ST, foraging); Tricolored Heron (ST, foraging);				
, anprilorario, maaring k			Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Util	ization (List species dire	ectly observed, or	other signs such a	is tracl	ks, droppings, casings,	nests, etc.):	
	No evi	dence of wildlife u	itilitzation observe	d.			
Additional relevant factors:							
		None					
		None					
Assessment conducted by:			Assessment date	e(s):			
, T. Norman			6/28/2021	. ,			

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Rd	to CR 54 (FPID 436673-1)			Wetland 7	/ (Secondary Impact)	
Impact or Mitigation		Assessment conducted by:		Assessment date	:	
Impac	ot	T. Norman		6/28/2021		
<u> </u>						
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present (0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal Io	ol of support of	Condition is insuffic	iont to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/su	Irface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	s
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with	The assessment area is a development and improved available outside of the asse area is limited by the preser are present the development are present the development the development the development of the assessment the development of the de	a forested wetland system loc: pasture is located northwest o essment area; however, wildlif nce of right-of-way fencing, US nat may adversely affect the fu	ated at the no f the assessi e access to a 98, and resi nctions provi	orthbound US 98 ment area. Wetla and from habitats idential/pasture u ided by the asses	right-of-way. Resider nd and upland habita outside of the assess se. Invasive exotic sp ssment area.	ntial ts are sment becies
6 5						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or	Water level indicators a indicators observed within th water marks. Hydrologic con facilities (i.e., ditches). con con Majority of the plant cover construction of US 98 and alteration. Land manager maintenance within the rig	nd soil moisture appeared app e assessment area included v iditions are affected by the adj Soil erosion observed indicates nstruction of US 98. The wetter struction of US 98. The wetter is associated stormwater mainent practices include the insta ht-of-way that may affect natu	ant species v nagement fac allation of a p ral recruitme	sidering seasona leaves, saturatio and its associate in points of disch runoff from US 9 vith invasive, exo cilities (i.e., ditche oipe culvert within nt or regeneraltio	l variation. Hydrologio n, adventitious rootin d stormwater manag- arge resulting from th 8. tic species present. T es) has resulted in ha the wetland and rout n in the plant commu	cal g, and ement le 'he bitat tine nity.
current with						
5 4						
	1					
Score = sum of above scores/30 (if uplands, divide by 20)	It preservation as mitiga	ation,	F	-or impact asses	sment areas	
current	Preservation adjustmer	nt factor =		FL = delta x	acres =	
or w/o pres with	Adjusted mitigation delt	a =		0.07 x 0.59	= 0.04	
0.60 0.53	,					
<u> </u>	۷ 					
	If mitigation		Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Site/Project Name		Application Number	۹r		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)		Wetland 8 (Secondary Impa			condary Impact)
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	PF01/2C leaved/Needlo	- Palustine, Fores e-leaved Deciduo Flooded	ted, Broad- us, Seasonally		Impact	Size (in acres) 0.57
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e.	OFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, upla	nds		
The assessment area is a foreste	d wetland system that e dr	extends into a larg ain that runs unde	er wetland system erneath US 98.	and o	connects to other wetlan	d systems via a cross
Assessment area description						
Dominant vegetation within the	canopy consists of red consists of w	maple, sweetbay, vild taro, primrose	sweet gum, and b willow, and maide	ald cy ncane	vpress. Groundcover sp e.	ecies predominantly
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located within the northbound US 98 right-of-way directly northwest of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for pre-	vious	permit/other historic use	9
Natural water storage and conv improvement; flo	eyance; foraging habita od attenuation; refuge.	t; water quality			None	
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review assment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS(i)	by Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtl m	es, sn <mark>ak</mark> es, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	other signs such a	s trac	ks, droppings, casings,	nests, etc.):
Evidence of wildlife observed includes crayfish burrows.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number	A	ssessment Area	a Name or Number
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 8 (Secondary Ir	
Impact or Mitigation		Assessment conducted by:	A	Assessment date:	
Impac	ot	T. Norman			6/28/2021
L		<u> </u>			
Scoring Guidance	Optimal (10)	Moderate(7)	Minir	mal (4)	Not Present (0)
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal leve	el of support of	Condition is insufficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/su	urface water	provide wetland/surface
type of wetland or surface water assessed	water functions	wetland/surface water functions	func	ctions	water functions
	L	lanotorio	·		
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 5	The assessment area is a fo is located at the northbound are available outside of assessme	rested wetland system that ext I US 98 right-of-way and adjact the assessment area; howeve ent area is limited by the prese	tends into a lar ent to resident er, wildlife acce nce of right-of-	rger wetland sys tial land use. We ess to and from -way fencing and	stem. The assessment area etland and upland habitats habitats outside of the d US 98.
 .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. yd indicators observed included aquatic mosses/liverworts, elevated lichen lines, crayfish burrows, buttress hummocks, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associa stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of dis resulting from the construction of US 98. The wetland receives runoff from US 98. 					asonal variation. ydrological sh burrows, buttressing, 5 98 and its associated ions in points of discharge om US 98.
7 7					
.500(6)(c)Community structure					
1. Vegetation and/or 2. Benthic Community w/o pres or current with 6 5	Plant cover within the canopy the understory. The constru- resulted in habitat alteration. the right-of-way and installa	r is appropriate and desirable p iction of US 98 and its associa Land management practices tion of pipe culverts and cross the plant co	plant species. tted stormwate are generally a drains may af ommunity.	Invasive/exotic er management appropriate, but ffect natural recr	species are dominant within facilities (i.e., ditches) has routine maintenance within uitment or regeneraltion in
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	Fo	or impact assess	sment areas
current	Preservation adjustmer	nt factor =		FL = delta x a	acres =
or w/o pres with 0.63 0.57	Adjusted mitigation delt	a =	0	0.07 x 0.57	= 0.04
	J				
	If mitigation		For	mitigation asse	ssment areas
Delta = [with-current]	Time lag (t-factor) =				
-0.07	Risk factor =		RFG = 0	delta/(t-factor x	risk) =

Side/Triges relation Publication Number Passessment of Number US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1) Impact Wetland 9 (Secondary Impacts) FLUCCs code Further classification (optional) Impact Assessment Area 630 - Wetland Forested Mixed Further classification (optional) Impact Assessment Area 630 - Wetland Forested Mixed Affected Waterbody (Class) Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) None Withlacoochee River III 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 assessment area is a forested wetland system that extends offsite. Assessment area description Dominant vegetation within the canopy consists of bald cypress, red maple, water oak, and laurel oak. The subcanopy and groundcover predominately consists of wax myrtle, primrose willow, Virginia chain fern, bluestern, blurush, and paragrass. Significant nearby features Uniqueness (considering the relative rarity in relation to the regional landscape.) The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Reserve located on northeast side of US 98. Not unique ² unctions Mitigation for previous permit/other historic use Not uni
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1) Wetland 9 (Secondary Impacts) FLUCCs code Further classification (optional) PFO1/2C - Palustine, Forested, Broad- leaved/Needle-leaved Deciduous, Seasonally Flooded Impact or Mitigation Site? Impact Assessment Area Size (in acres) 0.17 Basin/Watershed Name/Number Withlacoochee River Affected Waterbody (Class) Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) None None Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands The assessment area is a forested wetland system that extends offsite. Assessment area description Dominant vegetation within the canopy consists of bald cypress, red maple, water oak, and laurel oak. The subcanopy and groundcover predominately consists of wax myrtle, primrose willow, Virginia chain fern, blursh, and paragrass. Uniqueness (considering the relative rarity in relation to the regional landscape.) Significant nearby features The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground within the northbound US 98 right-of- way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98. Mitigation for previous permit/other historic use *unctions Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge. Mitigation for previous permit/other historic use
FLUCCs code Further classification (optional) PFO1/2C - Palustine, Forested, Broad- leaved/Needle-leaved Deciduous, Seasonally Flooded Impact or Mitigation Site? Impact Assessment Area Size (in acres) 0.17 Basin/Watershed Name/Number Withlacoochee River Affected Waterbody (Class) Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) None And the season of importance Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands The assessment area is a forested wetland system that extends offsite. Assessment area description Dominant vegetation within the canopy consists of bald cypress, red maple, water oak, and laurel oak. The subcanopy and groundcover predominately consists of wax myrtle, primrose willow, Virginia chain fern, bluestem, bulrush, and paragrass. Uniqueness (considering the relative rarity in relation to the regional landscape.) Significant nearby features The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground within the northbound US 98 right-of- way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98. Mitigation for previous permit/other historic use Functions Mitigation for previous permit/other historic use Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge. Mitigation for previous permit/other historic use
630 - Wetland Forested Mixed PFO1/2C - Palustine, Forested, Broad-leaved Deciduous, Seasonally Impact Size (in acres) 630 - Wetland Forested Mixed Affected Waterbody (Class) Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) 0.17 Basin/Watershed Name/Number Affected Waterbody (Class) Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) None Withlacoochee River III None None Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands The assessment area is a forested wetland system that extends offsite. Assessment area description Dominant vegetation within the canopy consists of bald cypress, red maple, water oak, and laurel oak. The subcanopy and groundcover predominately consists of wax myrtle, primrose willow, Virginia chain fern, bluestem, bulrush, and paragrass. Significant nearby features Uniqueness (considering the relative rarity in relation to the regional landscape.) The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground within the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98. Mitigation for previous permit/other historic use Functions Mitigation for previous permit/other historic use None
630 - Wetland Forested Mixed leaved/Needle-leaved Deciduous, Seasonally Flooded Impact 0.17 Basin/Watershed Name/Number Withlacoochee River Affected Waterbody (Class) Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) None None Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands The assessment area is a forested wetland system that extends offsite. Assessment area description Dominant vegetation within the canopy consists of bald cypress, red maple, water oak, and laurel oak. The subcanopy and groundcover predominately consists of wax myrtle, primrose willow, Virginia chain fern, bluestem, bulrush, and paragrass. Uniqueness (considering the relative rarity in relation to the regional landscape.) Significant nearby features Uniqueness (considering the relative rarity in relation to the regional landscape.) The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground within the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98. Mitigation for previous permit/other historic use Functions Mitigation for previous permit/other historic use
Flooded Flooded Basin/Watershed Name/Number Affected Waterbody (Class) Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) Withlacoochee River III 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 assessment area is a forested wetland system that extends offsite. Assessment area description Dominant vegetation within the canopy consists of bald cypress, red maple, water oak, and laurel oak. The subcanopy and groundcover predominately consists of wax myrtle, primrose willow, Virginia chain fern, bluestem, bulrush, and paragrass. Significant nearby features Uniqueness (considering the relative rarity in relation to the regional landscape.) The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground within the northbound US 98 right-of-way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98. Not unique Functions Mitigation for previous permit/other historic use Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge. None
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Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.
improvement, nood attendation, relidge.
Anticipated Wildlife Utilization Based on Literature Review (List of species Anticipated Utilization by Listed Species (List species, their legal
that are representative of the assessment area and reasonably expected to classification (E, T, SSC), type of use, and intensity of use of the
assessment area)
Amphibians, wading birds, turtles, snakes, song birds, raptors, small Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST,
mammais foraging/nesting); wood Stork (FT, foraging/nesting);
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):
Evidence of wildlife allow used includes everyfield however
Evidence of wildlife observed includes crayiish burrows.
Additional relevant factors:
Neve
None.
Assessment conducted by: Assessment date(s):
F. Norman 6/28/2021

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)	Wetland 9		Wetland 9 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impa	ct	T. Norman			6/28/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each	O	Condition is less than			O an alitican in in a suff	
would be suitable for the	supports wetland/surface	maintain most	wetland	surface water	provide wetland/s	surface
type of wetland or surface	water functions	wetland/surface water	fu	inctions	water functio	ns
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 5 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a northbound US 98 right-of-w outside of the assessment Water level indicators a Hydrological indicators of	and soil moisture appeared so	extends offs (campground to and from tt-of-way fen mewhat app	ite. The assessm d. Wetland and up habitats outside cing and US 98.	ent area is located a pland habitats are av of the assessment a ng seasonal variatic sed trunks water-	at the vailable area is on.
w/o pres or current with 7 7	leaves, saturation, hummo adjacent US 98 and its asso alterations in points of discha	ocks, water marks, and advent ciated stormwater manageme arge resulting from the constru	itious rooting nt facilities (i loction of US	g. Hydrologic conc i.e., ditches). Soil 98. The wetland	litions are affected I erosion observed in receives runoff from	by the indicates I US 98.
.500(6)(c)Community structure	Plant cover within the canopy	y is appropriate and desirable	plant species	s. Invasive/exotic	species are domina	nt within
 Vegetation and/or Benthic Community 	the understory. The constru- resulted in habitat alteration. the right-of-wa	iction of US 98 and its associa Land management practices ay may affect natural recruitme	ated stormwa are generally ent or regene	ater management y appropriate, but raltion in the plan	facilities (i.e., ditche routine maintenanc t community.	es) has e within
w/o pres or						
	4					
6 5						
Score = sum of above scores/30 (if	If preservation as mitigation	ation,		For impact asses	sment areas	
uplands, divide by 20)	Preservation adjustmor	nt factor =		FL = delta x	acres =	
current				0.07 v 0.47	- 0.01	
	Adjusted mitigation del	ta =		0.07 X 0.17	- 0.01	
0.07	<u></u>					
	If mitigation		-	or mitigation ac	comont areas	
Delta = [with-current]	Time lag (t-factor) =			or mitigation asse	ssinent areas	
-0.07	Risk factor =		RFG :	= delta/(t-factor x	risk) =	

Site/Project Name		Application Number	ər		Assessment Area Name	or Number	
LIS 98 from W Socrum Loop Rd to	CR 54 (EPID 436673-1)	, ipplication rambe			Wetland 10 (Sec	condary Impacts)	
	GI(54 (I FID 450075-1)				Welland TO (Sec	condary impacts)	
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area	
630 Wotland Forested Mixe	d PFO1/2C	- Palustine, Fores	ted, Broad-		Impact	Size (in acres)	
000 - Welland Torested Mixe		Flooded	us, ceasonally		Impact	0.05	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	l designation of importance)	
Withlacoochee River	III				None		
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, uplai	nds			
The assessment area is a foreste	ed wetland system that e	xtends offsite and	connects to other	wetla	nds via a cross drain th	at runs underneath US	
		98.					
Assessment area description							
Dominant vegetation within	the canopy consists of r	ed maple, bald cy	press, sweet bay,	and re	d bay. The subcanopy	and groundcover	
	predominantly consis	ts of primrose will	ow, paragrass, and	d torpe	edo grass.		
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional	
The assessment area is located	d directly north of the ent	trance to Gator	landscape.)				
Creek Campground within the	northbound US 98 right-	of-way. Green			Notunique		
Swamp WMA and Gator Creek F	Reserve located on north	neast side of US	Not unique				
	90.						
Functions			Mitigation for pre	vious	permit/other historic use	2	
Natural water storage and conv	vevance: foraging habita	t: water quality					
improvement; fl	ood attenuation; refuge.	i, water quality	None				
Anticipated Wildlife Litilization Bas	od on Literature Poview	(List of spacios	Anticipated Litiliz	ation h	w Listod Spacios (List s	nacios thair lagal	
that are representative of the asse	essment area and reason	nably expected to	classification (E,	T, SS	C), type of use, and inte	nsity of use of the	
be found)			assessment area)			
Amphibians, wading birds, turt	les, snakes, song bir <mark>ds</mark> ,	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST,				
n	nammals		foraging/	nestin	g); Wood Stork (F I , for	aging/nesting);	
Observed Evidence of Wildlife Liti	inction (List on a size dive						
Observed Evidence of Wildlife Uli	ization (List species dire	cuy observed, or	other signs such a	s traci	ks, droppings, casings,	nesis, eic.):	
	Evidence of	wildlife observed i	includes crayfish b	urrows	3.		
Additional relevant factors:							
Auditional relevant lactors.							
		None					
Assessment conducted by:			Assessment date	e(s):			
T. Norman			6/28/2021				

Site/Project Name		Application Number	Assessment Ar	ea Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)		Wetland 10 (Secondary Im			
Impact or Mitigation		Assessment conducted by:	Assessment da	te:		
Impact		T. Norman		6/28/2021		
Section Cuidenee	Ontimal (10)	Mederate/7	Minimal (4)	Not Dresset (0)		
The scoring of each	Optimal (10)	Condition is less than	Minimai (4)	Not Present (0)		
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level of support of	Condition is insufficient to		
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current with</u> 6 5 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is underneath US 98 The a park/campground. Wetlan access to and from habitats of water level indicators and so indicators observed inclicon observed indicators are affected by the erosion observed indicators affected by the	a forested wetland system and ssessment area is located at t id and upland habitats are ava outside of the assessment are 99 outside of the assessment are 99 outside of the assessment are 91 outside of the assessment 91 outside of the assessment 92 outside of the assessment outside	d connects to other wetlands he northbound US 98 right- illable outside of the assess a is limited by the presence 8. at appropriate considering s ble, adventitious rooting, and ciated stormwater managem rege resulting from the constr	via a cross drain that runs of-way and adjacent to a RV nent area; however, wildlife of right-of-way fencing and US easonal variation. Hydrological d water marks. Hydrologic ent facilities (i.e., ditches). Soil		
w/o pres or current with 7 7		receives runof	ff from US 98.			
.500(6)(c)Community structure						
1. Vegetation and/or 2. Benthic Community w/o pres or current with						
Score = sum of above scores/30 (if	If preservation as mitiga	ation,	For impact ass	essment areas		
uplatius, divide by 20)	Preservation adjustment	nt factor =	FL = delta	x acres =		
current			· · · ·	<u> </u>		
pr w/o pres with	Adjusted mitigation delt	ta =	0.07 x 0.0	5 = 0.003		
0.63 0.57						
L	1					
	If mitigation			accompant array		
Dolta - [with ourroat]	Time lac /t feator) -		For mitigation as	sessment areas		
	i ime iag (t-tactor) =					
-0.07	Risk factor =		RFG = delta/(t-factor	х пѕк) =		

Site/Project Name		Application Number	or		Assessment Area Name	or Number
		Application Number	51			
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 11 (See	condary Impacts)
FLUCCs code	Further classification	tion (optional)		Impact	or Mitigation Site?	Assessment Area
	PEM1C - Pa	lustrine. Emerger	nt. Persistent.		-	Size (in acres)
641 - Freshwater Marsh		Seasonally Floode	ed		Impact	0.36
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e. 0	DFW, AP, other local/state/federa	al designation of importance)
Withlacoochee River	111				None	
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, uplar	nds		
The assessment area is sm	all forested wetland sys	tem and connects	to other wetlands	via a c	cross drain that runs un	derneath US 98.
Assessment area description						
Dominant vegetation within Wetla	nd 11 consists of alligat willow. Adjacent to the r	orweed, torpedo (ight-of-way, this w	grass, sesban, mai /etland system con	idenca isists o	ne, smartweed, barnya f red maple.	rd grass, and primrose
Significant nearby features			Uniqueness (co landscape.)	nsideri	ng the relative rarity in	relation to the regional
The assessment area is located	within the northbound U	S 98 right-of-way				
approximately 0.1 mile southeas	t of Earnest Road. Gree	n Swamp WMA			Not unique	
and Galor Creek Reserve in	Judieu on northeast side	e 01 03 98.				
Functions			Mitigation for pre-	vious p	permit/other historic use	9
Natural water storage and conv	revance: foraging habita	t: water quality				
improvemen	nt; flood attenuation	t, water quality	None			
Anticipated Wildlife Utilization Base	ed on Literature Review	(List of species	Anticipated Utiliza	ation b	y Listed Species (List s	pecies, their legal
that are representative of the asse	ssment area and reason	hably expected to	classification (E,	T, SSC), type of use, and inte	nsity of use of the
be found)			assessment area	ı)		
		•	Little Blue Her	on (ST	forgaina): Tricolored I	Heron (ST forgaing):
Amphibians, wading b	pirds, turtles, small mam	mals	Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging);			
			Everglade Snail Kite (FE, foraging)			
			46	- 4		
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such a	IS TRACK	s, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	itilitzation observed	d.		
Additional ralevant factors:						
Additional relevant factors.						
		None	.			
Assessment conducted by:			Assessment date	e(s):		
T. Norman			6/28/2021	·		

Site/Project Name		Application Number		Assessment Area	a Name or Number		
US 98 from W Socrum Loop Rd	to CR 54 (FPID 436673-1)	8-1) We		Wetland 11 (Secondary Impacts)		cts)	
Impact or Mitigation		Assessment conducted by:		Assessment date:			
Impac	ct	T. Norman			6/28/2021		
<u></u>				<u> </u>			
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)	
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal le	vel of support of	Condition is insuf	ficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland	/surface water	provide wetland/	surface	
type of wetland or surface	water functions	wetland/surface water	fu	unctions	water function	ons	
water assessed		Tunctions					
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 4 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a northbound US 98 right-of-w habitat is available outside assessment area is limited exotic species are pr	a small forested wetland syste ay. Adjacent land uses consis of the assessment area; how by the presence of right-of-wa esent that may adversely affer oil moisture appeared appropr	m to the nor ts of residen ever, wildlife ay fencing, U t the functio	th. The assessme tial and pasture. N access to and fro JS 98, and resider ons provided by th	ent area is located a Vinimal weltand an om habitats outside ntial/pasture use. In e assessment area	at the d upland of the avasive l. 2021 field	
w/o pres or current with 7 7	reviews, this wetland was ir associated stormwater man discharge resultir	nundated throughout. Hydrolog agement facilities (i.e., ditches ng from the construction of US	<mark>jic co</mark> ndition: 5). Soil erosio 98. The we	s are affected by t on observed indic atland receives rur	the adjacent US 98 ates alterations in p noff from US 98.	and its points of	
.500(6)(c)Community structure							
1. Vegetation and/or 2. Benthic Community w/o pres or current with 5 4	Majority of the plant cover wi the subcanopy/groundcover ditches) has resulted in habit of-way and installation of pi	thin the canopy is comprised of r. The construction of US 98 at tat alteration. Land manageme pe culverts and cross drains th plant corr	of desirable nd its associ ent practices nat may affe nmunity.	plant species with iated stormwater r include routine m ct natural recruitm	i invasive, exotic s management faciliti naintenance within f nent or regeneraltio	pecies in ies (i.e., the right- n in the	
<u> </u>							
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.57	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, ht factor =		For impact assess FL = delta x 0.07 x 0.36	sment areas acres = = 0.02		
	If mitigation		F	or mitigation asse	essment areas		
Delta = [with-current]	Time lag (t-factor) =						
-0.07	Risk factor =		RFG	= delta/(t-factor x	risk) =		
Cite/Drainet Name			Imbor Accessment Area Name or Number				
--	---	---------------------------------	---	--------------------------	---	------------------------	--
Site/Project Name			51				
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 12 (Sec	condary Impacts)	
FLUCCs code	Further classifica	tion (optional)		Impact	or Mitigation Site?	Assessment Area	
	PFO1/2C ·	Palustrine, Fores	ted, Broad-	Impao	or magadori elle.	Size (in acres)	
630 - Wetland Forested Mixe	d Leaved/Needl	le-Leaved Deciduous, Seasonally			Impact	0.59	
		Flooded					
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importar				
Withlacoochee River			None				
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, upla	nds			
	The asses	sment area is a fo	rested wetland sy	vstem.			
Assessment area description							
Dominant vegetation within We	tland 12 consists of Car	olina willow, red m	naple saplings, pri	mrose	willow, smartweed, barı	nyard grass, fireflag,	
goiden canna, soft rush, Virginia	chain tern, lizard's tail, a	and Duirush. Adjad	s	-way, th	is wetland system con	sists of red maple and	
		cypres	3.				
Significant nearby features	Uniqueness (co	onsideri	ng the relative rarity in	relation to the regional			
- , , , , , , , , , , , , , , , , , , ,	landscape.)						
I he assessment area is located			Not unique				
Reserve located on northeast side of US 98.							
Functions		Mitigation for pre	vious p	ermit/other historic use	9		
Natural water storage and conv	veyance; foraging h <mark>abi</mark> ta	t; wat <mark>er</mark> quality			None		
improvemen	nt; flood attenuation						
Anticipated Wildlife Litilization Bas	od on Literature Poview	(List of spacios	Anticipated Litiliz	ation b	v Listad Spacias (List s	nacios, thair logal	
that are representative of the asse	ssment area and reason	ably expected to	classification (E. T. SSC), type of use, and intensity of use of the				
be found)		, '	assessment area	a) ́	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	5	
			Little Blue Her	on (ST	, foraging); Tricolored I	Heron (ST, foraging);	
Amphibians, wading b	oirds, turtles, small mam	mals	Florida Sandhi	ill Cran	e (ST, foraging); Wood	Stork (FT, foraging);	
				Everg	lade Snail Kite (FE, fora	aging)	
Observed Evidence of Wildlife Litil	ization (List apopios dire	atly absorved or	athar aigna auch a	a track	a droppingo oppingo	nanta ata):	
Observed Evidence of Wildlife Oth	ization (List species dire	city observed, or	other signs such a	as track	s, droppings, casings, i	nesis, eic.).	
	No evi	dence of wildlife u	tilitzation observe	d			
Additional relevant factors:							
		Nono					
		none	•				
			1				
Assessment conducted by:			Assessment date	e(s):			
T. Norman			6/28/2021				

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop R	d to CR 54 (FPID 436673-1)			Wetland 12	2 (Secondary Impac	cts)
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impa	ct	T. Norman			6/28/2021	
<u> </u>		↓				
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each	Condition is ontimal and fully	Condition is less than	Minimal	vol of support of	Condition in incut	ficiant to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/	surface
type of wetland or surface	water functions	wetland/surface water	fu	inctions	water function	ons
water assessed		tunctions				
.500(6)(a) Location and Landscape Support The assessment area is a forested wetland system located at the northbound US 98 right-of-way. Adjactive uses consists of residential development. Minimal wetland and upland habitats are available outside assessment area; however, wildlife access to and from habitats outside of the assessment area is limited presence of right-of-way fencing, US 98, and residential/pasture use. Invasive exotic species are present adversely affect the functions provided by the assessment area. w/o pres or current with 5 4					ght-of-way. Adjace available outside of nent area is limited ecies are present t a.	nt land i the by the hat may
 .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 20 reviews, this wetland was inundated throughout. Other hydrological indicators observed included water may hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilitie ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of The wetland receives runoff from US 98. 					021 field narks. ties (i.e., f US 98.	
.500(6)(c)Community structure 1. Vegetation and/or	Majority of the plant cover	within the canopy is comprise	d desirable p	plant species with	invasive, exotic s	Decies
2. Benthic Community	in habitat alteration. Land ma of pipe culverts	anagement practices include ro that may affect natural recruitr	nent or reger	enance within the neraltion in the pla	right-of-way and in ant community.	stallation
w/o pres or						
current with						
5 4						
	1					
0 ()	16 mm	-4:		F		
Score = sum of above scores/30 (if uplands, divide by 20)	IT preservation as mitig	alion,		For impact asses	sment areas	
current	Preservation adjustmer	nt factor =		FL = deita X	acies =	
or w/o pres with	Adjusted mitigation del	ta =		0.07 x 0.59	= 0.04	
0.57 0.50			L			
	If mitigation		· · · · ·			
Delta = [with_ourront]	Time lag (t_factor) =		F	or mitigation asse	ssment areas	
			REC	= delta/(t_factor v	risk) =	
-0.07	Risk factor =		KFG -	- uena/(1-180101 X	non) –	

Site/Project Name		Application Number	ər		Assessment Area Name	or Number	
		Application Number					
US 98 from W Socrum Loop Rd to C	JR 54 (FPID 436673-1)				Wetland 13 (See	condary Impacts)	
FLUCCs code	Further classification	tion (optional)		Impact	t or Mitigation Site?	Assessment Area	
	PEM1C - Pa	Palustrine Emergent Persistent		•	C C	Size (in acres)	
641 - Freshwater Marsh		Seasonally Floode	ed	Impact		0.35	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e. 0	DFW, AP, other local/state/federa	I designation of importance)	
Withlacoochee River	III		None				
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplar	nds			
The assessment area is a fo	prested wetland system	connected to othe	er wetland systems	s via a	cross drain that runs u	nderneath US 98	
Assessment area description							
Dominant vegetation within Wetlan we	nd 13 consists of Caroli tland community adjace	na willow, saltbus ent to the right-of-v	h, caesarweed, Me way consists of cyp	exican press a	primrose willow, and sh and red maple.	ield fern. The forested	
Significant nearby features			Uniqueness (con landscape.)	nsideri	ing the relative rarity in	relation to the regional	
The assessment area is located within the northbound US 98 right-of-way							
approximately 0.1 mile southeast of Perkle Road. Green Swamp WMA and Gator Creek Reserve located on portheast side of US 98			Not unique				
Functions			Mitigation for prev	vious p	permit/other historic use	9	
Natural water storage and conv	eyance; foraging habita	t; wat <mark>er</mark> quality			None		
improvemen	t; flood attenuation		None				
Anticipated Wildlife Utilization Base	ed on Literature Review	(List of species	Anticipated Utilization by Listed Species (List species, their legal				
that are representative of the asses	ssment area and reasor	nably expected to	classification (E, T, SSC), type of use, and intensity of use of the				
			assessment area)			
			Little Blue Here	on (ST	, foraging); Tricolored I	Heron (ST, foraging);	
Amphibians, wading b	irds, tu <mark>rtles</mark> , small mam	mals	Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging);				
				Everg	lade Shall Kite (FE, for	aging)	
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	I other signs such a	s track	s, droppings, casings,	nests, etc.):	
	No evi	dence of wildlife u	itilitzation observed	4			
	NOEVI						
Additional relevant factors:							
		None	e.				
Appagement and dusted by			According	(a);			
			Assessment date	(s):			
I. Norman			6/28/2021				

Site/Project Name		Application Number	As	Assessment Area Name or Number			
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 13 (Secondary Impacts)			
Impact or Mitigation		Assessment conducted by:	As	Assessment date:			
Impa	ct	T. Norman			6/28/2021		
		<u> </u>					
Scoring Guidance	Optimal (10)	Moderate(7)	Minin	mal (4)	Not Present (0)		
The scoring of each indicator is based on what	Condition is optimal and fully	Condition is less than optimal, but sufficient to	Minimal leve	l of support of	Condition is insufficient to		
would be suitable for the	supports wetland/surface	maintain most	wetland/su	provide wetland/surface			
type of wetland or surface	water functions	wetland/surface water	/surface water functions water functions				
waler assessed		TUTICUOTIS					
.500(6)(a) Location and Landscape Support w/o pres or current with 6 5	The assessment area is a uses consists of residentia area; however, wildlife acces of-way fencing, US 98, and	forested wetland system local Il development. Wetland and u s to and from habitats outside residential land use. Invasive functions provided by t	ted at the north upland habitats of the assess exotic species the assessmen	nbound US 98 ri are available o ment area is lim are present tha at area.	ight-of-way. Adjacent land utside of the assessment ited by the presence of right- at may adversely affect the		
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with	Water level indicators a indicators observed included adjacent US 98 and its asso alterations in points of discha	nd soil moisture appeared app d aquatic mosses/liverworts ar ciated stormwater manageme arge resulting from the constru	propriate consid d water marks nt facilities (i.e. action of US 98	dering seasonal s. Hydrologic co ., ditches). Soil s. The wetland i	I variation. Hydrological nditions are affected by the erosion observed indicates receives runoff from US 98.		
7 7							
.500(6)(c)Community structure							
1. Vegetation and/or 2. Benthic Community	The canopy consists of des The construction of US 98 ar alteration. Land manageme culverts and cross dr	sirable and appropriate plant s nd its associated stormwater n nt practices include routine ma ains that may affect natural re	pecies with inv nanagement fa aintenance with cruitment or re	vasive, exotic sp acilities (i.e., dito hin the right-of-v generaltion in th	becies present throughout. shes) has resulted in habitat way and installation of pipe he plant community.		
w/o pres or							
current with							
6 5							
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	Fo	or impact assess	sment areas		
uplands, divide by 20)	Preservation adjustment	nt factor =		FL = delta x	acres =		
current pr w/o pres with			0	.07 x 0.35	= 0.02		
0.63 0.57	Adjusted mitigation del	ia =					
	J						
	If mitigation		For	mitigation asse	ssment areas		
Delta = [with-current]	Time lag (t-factor) =			0			
-0.07	Risk factor =		RFG = c	delta/(t-factor x	risk) =		

Site/Project Name	Application Number	nber Assessment Area Name or Number			or Number		
		Application Number			Wetland 14 (Secondary Impacts)		
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				vvetland 14 (See	condary impacts)	
FLUCCs code	Further classification	tion (optional)		Impact or Mitigation Site?		Assessment Area	
	PFO1/2C -	- Palustrine, Fores	Palustrine, Forested, Broad-		-	Size (in acres)	
630 – Wetland Forested Mixe	ed Leaved/Need	e-Leaved Deciduo	ous, Seasonally		Impact	0.37	
		Tibbded	1				
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification (i.e. OFW, AP, other local/state/federal designation of import				
Hillsborough River	III		None				
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, upla	nds			
	-						
	The assessment area	is a small forested	d system outside o	of the r	ight-of-way		
Assessment area description							
Dominant vegetation within Wet	land 14 consists of most	tly primrose willow	with red maple sa	aplings	, barnyard grass, water	pennywort, coinwort,	
sinatweeu, and	Son rush Aujacent to t	ne ngnt-oi-way, th	le lorested carlopy	CUIISI	sis of red maple and cy	press.	
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional	
			landscape.)				
The assessment area is located within the northbound US 98 right-of-way					Not unique		
Gator Creek Reserve located on northeast side of US 98.							
Functions			Mitigation for pre	vious	permit/other historic use	9	
Natural water storage and ean	www.	t: water quality					
improvement	nt; flood attenuation	t, water quality			None		
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliz	ation b	y Listed Species (List s	pecies, their legal	
be found)			assessment area	1, 00. I)			
			Little Blue Her	on (ST	, foraging); Tricolored I	Heron (ST, foraging);	
Amphibians, wading	birds, turtles, small mam	mals	Florida Sandhi	Il Cran Evero	ie (ST, foraging); Wood ilade Snail Kite (FE, for	Stork (FI, foraging);	
				Lvorg		aging/	
Observed Evidence of Wildlife Uti	lization (List species dire	ctly observed, or	other signs such a	is tracl	ks, droppings, casings,	nests, etc.):	
	Evidence of wildlife	abaanvad inaluda	d amall fich and a	ovfich	hurrowo		
		observed include		ayiisii	burrows.		
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	e(s):			
T. Norman			6/28/2021				
			1				

Site/Project Name		Application Number	,	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 14 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impa	ct	T. Norman			6/28/2021	
<u> </u>						
Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present (0))
The scoring of each	Condition is ontined and fully	Condition is less than	Minimalla	al of our most of	Condition is insufficia	
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/surf	face
type of wetland or surface	water functions	wetland/surface water	fui	nctions	water functions	
water assessed		functions				
F						
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is fore consists of improved pastu wildlife access to and from ha US 98, and improved pastu	ested wetland system located a re. Mlnimal wetland and uplan abitats outside of the assessm re. Invasive exotic species are by the assess	at the northbo d habitats are ent area is lir present that sment area.	ound US 98 right- e available outsid nited by the press may adversely at	of-way. Adjacent land u e of the assessment ar ence of right-of-way fer ffect the functions provi	uses rea; ncing, <i>r</i> ided
5						
5 4				•		
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 20 reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 a associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in po- discharge resulting from the construction of US 98. The wetland receives runoff from US 98. w/o pres or current with 7 7 .500(6)(c)Community structure					iation. During the 2021 he adjacent US 98 and ates alterations in point noff from US 98.	l field d its ts of
1. Vegetation and/or 2. Benthic Community w/o pres or current with 5 4	Majority of plant cover with species present. The constr resulted in habitat alteration may a	in the canopy is comprised of uction of US 98 and its associ . Land management practices iffect natural recruitment or rec	desirable/app ated stormwa s include routi generaltion in	propriate species ater management ine maintenance the plant commu	with some invasive/exc facilities (i.e., ditches) within the right-of-way i nity.	otic) has that
	I					
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.57 0.50	If preservation as mitig Preservation adjustmen Adjusted mitigation del	ation, ht factor = ta =	F	For impact assess FL = delta x a 0.07 x 0.37	sment areas acres = = 0.02	
Delta = [with-current]	Time lag (t-factor) =		Fo	or mitigation asse	ssment areas	
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =	
-0.07						

Site/Project Name	Application Number	ober Assessment Area Name or Number			or Number	
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)	, ppiloadon rambe	Wetland 15 (Se		condary Impacts)	
FLUCCs code	Further classifica	I ition (optional)		Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixe	PFO1/2C - d Leaved/Needl	- Palustrine, Fores e-Leaved Deciduo Flooded	ested, Broad- ious, Seasonally		Impact	Size (in acres) 0.26
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importan			
Hillsborough River	111		None			
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, upla	nds		
The assessment area is a small	forested system outside	e of the right-of-wa other offsite wetla	ay. A cross drain th and systems.	nat run	s underneath US 98 co	nnects Wetland 15 to
Assessment area description						
Dominant vegetation within this Ad	wetland consists of Ca acent to the right-of-wa	rolina willow, prim y, the forested car	rose willow, cattail nopy consists of cy	, Virgiı /press	nia chain fern, and west and water oak.	Indian marshgrass.
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located within the northbound US 98 right-of-wa approximately 0.4 mile northwest of Perkle Road. Green Swamp WMA an Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for pre	vious	permit/other historic use	9
Natural water storage and conv improvemer	eyance; foraging habita it; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS(i)	by Listed Species (List s C), type of use, and inte	pecies, their legal ensity of use of the
Amphibians, wading b	oirds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Util	zation (List species dire	ctly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
	Ν	lo evidence of wild	dlife observed.			
Additional relevant factors:						
		None	ŀ.			
			14	(-)		
Assessment conducted by:			Assessment date	e(s):		

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop R	d to CR 54 (FPID 436673-1)			Wetland 15 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impa	ct	T. Norman		6/28/2021		
·			ļ			
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each	Condition is ontimal and fully	Condition is less than	Minimal Io	val of support of	Condition is insuffi	oiont to
would be suitable for the	supports wetland/surface	maintain most	wetland/	/surface water	provide wetland/s	urface
type of wetland or surface	water functions	wetland/surface water	fu	inctions	water function	าร
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 4 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a uses consists of improved area; wildlife access to and fencing, US 98, and improv	forested wetland system local pasture. MInimal wetland and from habitats outside of the as ed pasture. Invasive exotic spo provided by the as	ted at the no upland habit sessment a ecies are pre- ssessment a	rthbound US 98 ri ats are available rea is limited by th esent that may adv rea.	ight-of-way. Adjacen outside of the assess ne presence of right- versely affect the fur	t land sment of-way nctions 21 field
w/o pres or current with 7 7	with 7					
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The canopy consists of desir. The construction of US 98 an alteration. Land manageme cross drains and pipe c	able/appropriate species while nd its associated stormwater n ent practices include routine m ulverts that may affect natural	the groundo nanagement aintenance v recruitment	cover is comprised facilities (i.e., dito within the right-of- or regeneraltion in	d of invasive, exotic : ches) has resulted in way and the installa n the plant communi	species. habitat tion of ty.
w/o pres of						
	-					
5 4						
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.57 0.50	If preservation as mitig: Preservation adjustmen Adjusted mitigation del	ation, nt factor = ta =		For impact assess FL = delta x a 0.07 x 0.26	sment areas acres = = 0.02	
	If mitigation		F	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.07	Risk factor =		RFG :	= delta/(t-factor x	risk) =	

Site/Droject Name Applica			mber Assessment Area Name or Number			or Number
LIS 08 from W Socrum Loop Rd to					Wotland 16 (So	condary Impacts)
	CR 34 (FFID 430073-1)					condary impacts)
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area
620 Wetland Faracted Mive	PFO1/2C -	Palustrine, Fores	sted, Broad-		Impost	Size (in acres)
050 - Welland Forested Mixe	Leaved/Need	Flooded	ous, seasonally impact			0.30
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importan			
Hillsborough River	III				None	
Coographic relationship to and hu	dralagia connection with	watlanda, athar a	urfaga watar upla	nda		
Geographic relationship to and hyd	arologic connection with	wettands, other s	unace water, upla	nus		
The assessment area is compris	sed a small forested sys	tem outside of the other offsite wetla	e right-of-way. A pi and systems.	pe cul	vert that runs undernea	th US 98 connects to
Assessment area description						
Ad	jacent to the right-of-way	, the forested car	nopy consists of cy	press	and red maple.	
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located within the northbound US 98 right-of-wa						
approximately 0.1 mile southeast of Keen Road. Green Swamp WMA					Not unique	
Gator Greek Reserve loc	ated on northeast side d	of US 98.				
Functions			Mitigation for pre	vious	permit/other historic use	9
Natural water storage and conv improvement	veyance; foraging habita nt; flood attenuation	t; water quality			None	
Anticipated Wildlife Utilization Bas that are representative of the asse	ed on Literature Review ssment area and reasor	(List of species	Anticipated Utiliza	ation b	by Listed Species (List s	pecies, their legal
be found)			assessment area	ı)	-,, -,,,	····· y -· -·· -···
Amphibians wading b	pirds turtles small mam	mals	Little Blue Her Florida Sandhi	on (S⊺ Il Crar	r, foraging); Tricolored I ne (ST_foraging): Wood	Heron (ST, foraging); Stork (FT_foraging)
, anprilorario, maaring k		inalo		Everg	lade Snail Kite (FE, for	aging)
Observed Evidence of Wildlife Litil	inction (List operator dive			- 4	ka duanainana aasimaa	nanta ata):
Observed Evidence of Wildlife Util	ization (List species dire	cuy observed, or	other signs such a	is trac	ks, droppings, casings,	nesis, elc.):
	N	lo evidence of wild	llife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Accorement data	v(c):		
T Norman			6/28/2024	(3).		
			0/20/2021			

Site/Project Name		Application Number	,	Assessment Area Name or Number		
US 98 from W Socrum Loop R	d to CR 54 (FPID 436673-1)			Wetland 16	δ (Secondary Impact	s)
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impa	ict	T. Norman	T. Norman		6/28/2021	
ļ						
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal Io	vol of support of	Condition is insuffi	ciont to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/s	urface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water functior	าร
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current with 5 4	The assessment area is a uses consists of improved p outside of the assessment ar presence of right-of-way fen that ma	forested wetland system locat asture and residential develop rea; wildlife access to and from cing, US 98, and improved pa ay adversely affect the function	ed at the nor ment. Minim h habitats out sture/residen is provided b	thbound US 98 ri al wetland and up tside of the asses tial use. Invasive y the assessmen	ght-of-way. Adjacent oland habitats are av sment area is limited exotic species are p t area.	t land railable d by the present
.500(6)(b)Water Environment (n/a for uplands)	Water level indicators and s reviews, this wetland was in associated stormwater man discharge resultin	ater level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field eviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its ssociated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.				
w/o pres or						
current with	-					
7 7						
.500(6)(c)Community structure 1. Vegetation and/or	Majority of plant cover within the understory. The constru- resulted in habitat alteration	n canopy is comprised of desir iction of US 98 and its associa	able species ated stormwa	s with invasive, ex ter management ine maintenance	otic species present facilities (i.e., ditches within the right-of-wa	within s) has av and
2. Benthic Community	the installation of cross dra	ains and pipe culverts that may	y affect natur	ral recruitment or	regeneraltion in the	plant
w/o pres or		comm	unity.			
current with						
5 4						
Score = sum of above scores/30 (i	f If preservation as mitigation	ation,	F	For impact asses	sment areas	
current	Preservation adjustmen	nt factor =		FL = delta x	acres =	
or w/o pres with	Adjusted mitigation del	ta =		0.07 x 0.30	= 0.02	
0.57 0.50	/ ajuotou miligation uoi					
	J					
	If mitigation		Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Site/Project Name	Application Number	nher Assessment Area Name or Number			or Number	
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)	, ipplication realine	Wetland 17 (Sec		condary Impacts)	
FLUCCs code	Further classifica	tion (optional)		Impact	or Mitigation Site?	Assessment Area
630 – Wetland Forested Mixe	PFO1/2C - d Leaved/Needle	- Palustrine, Fores e-Leaved Deciduc Flooded	Palustrine, Forested, Broad- -Leaved Deciduous, Seasonally Flooded		Impact	Size (in acres) 0.12
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importan			
Hillsborough River	III		None			
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplar	nds		
Wetland 17 is comprised of a to	rpedo grass-dominated Adjacent forested we	freshwater marsh tland lies within th	that connects to a ne boundary of the	small Green	forested system outsid Swamp.	le of the right-of-way.
Assessment area description						
In addition to torpedo grass, ot	her species present incl	ude primrose willo	ow and smartweed	. The c	canopy consists of red	maple and cypress.
Significant nearby features			Uniqueness (con landscape.)	nsideri	ng the relative rarity in	relation to the regional
The assessment area is located within the northbound US 98 right-of-way approximately 0.1 mile southeast of Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious p	ermit/other historic use	9
Natural water storage and conv improvemer	eyance; foraging habita t; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation by T, SSC)	y Listed Species (List s), type of use, and inte	pecies, their legal Insity of use of the
Amphibians, wading b	uirds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	other signs such a	s track	s, droppings, casings,	nests, etc.):
	Ν	lo evidence of wild	dlife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 17	/ (Secondary Impac	cts)
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impao	ot	T. Norman		6/28/2021		
I						
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each		Condition is less than			o	
would be suitable for the	supports wetland/surface	optimal, but sufficient to maintain most	wetland/	surface water	provide wetland	surface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is a uses consists of improved area; wildlife access to and fencing, US 98, and improv	The assessment area is a forested wetland system located at the northbound US 98 right-of-way. Adjacent land uses consists of improved pasture. MInimal wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and improved pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area.				
current with						
5 4	1					
				•		
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the reviews, this wetland was inundated throughout. Hydrologic conditions are affected by the adjacent US 9 associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in discharge resulting from the construction of US 98. The wetland receives runoff from US 98. w/o pres or current with 7 7 .500(6)(c)Community structure The canopy consists of desirable/appropriate species. However, exotic/invasive species are present wi understory. The construction of US 98 and its associated stormwater management facilities (i.e., ditche resulted in habitat alteration. Land management practices include routine maintenance within the right-of may affect natural recruitment or regeneration in the plant community.					iation. During the 2 he adjacent US 98 ates alterations in p noff from US 98. es are present wihr cilities (i.e., ditches within the right-of-u unity.	tin the basis has way that
current with						
5 4						
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.57 0.50	If preservation as mitig: Preservation adjustmen Adjusted mitigation del	ation, nt factor = ta =		For impact assess FL = delta x 0.07 x 0.12	sment areas acres = = 0.01	
Delta = [with-current]	Time lag (t-factor) =		Fo	or mitigation asse	ssment areas	
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =	
3.01						

Site/Project Name		Application Number	<u>ə</u> r		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)	, ppilodion Hambe		Wetland 18 (Secondary Impacts)		
FLUCCs code	Further classification	tion (optional)		Impact	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	PFO1/2C - d Leaved/Needle	- Palustrine, Fores e-Leaved Deciduo Flooded	sted, Broad- ous, Seasonally		Impact	Size (in acres) 0.16
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e. C	DFW, AP, other local/state/federa	al designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd Wetland 18 is comprised of a to Adjacent forested wetland lies wit	trologic connection with rpedo grass-dominated hin the boundary of the	wetlands, other s freshwater marsh Green Swamp. Th cypress and re	urface water, uplar that connects to a ne forested wetland ed maple.	nds i small d comr	forested system outsid nunity adjacent to the r	le of the right-of-way. ight-of-way consists of
Assessment area description						
In addition to	torpedo grass, other sp	ecies present incl	ude sand cordgras	s, prin	nrose willow, and sesba	in.
Significant nearby features		Uniqueness (co landscape.)	nsideri	ng the relative rarity in	relation to the regional	
The assessment area is located v directly across from Lakeland Acro Creek Reserve located	S 98 right-of-way WMA and Gator S 98.	Not unique				
Functions			Mitigation for pre-	vious p	permit/other historic use	9
Natural water storage and conv improvemer	eyance; foraging habita it; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SSC)	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading b	birds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Util	zation (List species dire	ctly observed, or	other signs such a	s track	s, droppings, casings,	nests, etc.):
	Ν	lo evidence of wild	dlife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number	Asse	essment Area	Name or Number	
US 98 from W Socrum Loop Ro	I to CR 54 (FPID 436673-1)			Wetland 18 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:	Asse	essment date	:	
Impa	t	T Norman	man 6/28/20		6/28/2021	
					0/20/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Minima	l (4)	Not Present	(0)
The scoring of each		Condition is less than			0 111	c · · · ·
would be suitable for the	supports wetland/surface	maintain most	wetland/surfa	ace water	provide wetland	surface
type of wetland or surface	water functions	wetland/surface water	functio	ns	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is an h system to the north. The as consists of improved pastu wildlife access to and from ha US 98, private fencing, an	nerbaceous wetland that exten- sessment area is located withi re. Minimal wetland and uplan- abitats outside of the assessm d improved pasture. Invasive e functions provided by t	ds beyond the rig n the northbound d habitats are ava ent area is limited exotic species are he assessment a	ht-of-way into US 98 right-o ailable outside by the prese present that rea.	o an offsite forested of-way. Adjacent la e of the assessmer ence of right-of-way may adversely affe	l wetland nd uses nt area; / fencing, ect the
5 4						
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic indicators observed included saturation and a high water table. Hydrologic conditions are affected by the adja US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alte in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98 w/o pres or current with 7 7 .500(6)(c)Community structure The understory consists of invasive, exotic species. The canopy consists of desirable/appropriate species. construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in ha alteration. Land management practices include routine maintenance within the right-of-way that may affect n: recruitment or regeneralion in the plant community.						gical djacent Iterations 98. 98. s. The nabitat natural
current with						
5 4	1					
4						
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.57 0.50	If preservation as mitig Preservation adjustmen Adjusted mitigation del	ation, nt factor = ta =	For ir 0.07	mpact assess FL = delta x a x 0.16	acres = = 0.01	
Delta = [with-current]	ir mitigation Time lag (t-factor) =		For mit	tigation asses	ssment areas	
0.07	Pick factor -		RFG = delt	ta/(t-factor x r	risk) =	
-0.07	RISK TACTOR =			•		

Site/Draiget Name		Application Number	2		Accomment Area Nama	or Numbor	
Site/Project Name		Application Number					
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 19 (See	condary Impacts)	
FLUCCs code	Further classifica	tion (optional)		Impact	or Mitigation Site?	Assessment Area	
	PF01/2C -	- Palustrine, Fores	sted, Broad-	impuot	or wingation one :	Size (in acres)	
630 – Wetland Forested Mixe	d Leaved/Needl	e-Leaved Deciduo	ous, Seasonally		Impact	0.45	
		Flooded					
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificat	ion (i.e. C	OFW, AP, other local/state/federa	I designation of importance)	
Hillsborough River					None		
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, upla	nds			
The approximant area includes a s	mall forested system as	taida of the right i	of way A aroos dr	ain that	rung undernaath US O	9 connects Watland 10	
The assessment area includes a s	mail lorested system ou	o other offsite wet	land systems.	am mai	runs underneath 05 9	o connects wettand 19	
Accompany area description							
Assessment area description							
	The ferrented		- 5 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -				
	The forested	canopy consists (of cypress and rec	a maple	2.		
				naidari	ng the relative rarity in	relation to the regional	
Significant nearby features			landscape.)	nsideri	rig the relative rarity in	relation to the regional	
The approximent area is leasted a	C 09 right of way						
approximately 0.5 mile northwest	d Green Swamp	Not unique					
WMA and Gator Creek Reserve located on northeast side of US 98.							
Functions			Mitigation for pre	evious p	ermit/other historic use)	
Natural water storage and conv	veyance; foraging habita	t; wat <mark>er</mark> quality			None		
improvemer	nt; flood attenuation						
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliz	ation by	v Listed Species (List s	pecies their legal	
that are representative of the asse	ssment area and reason	ably expected to	classification (E,	T, SSC	c), type of use, and inte	nsity of use of the	
be found)			assessment area	a)		-	
			Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging);				
Amphibians, wading b	oirds, turtles, small mam	mals	Florida Sandhi	ill Crane	e (ST, foraging); Wood	Stork (FT, foraging);	
				Evergi	ade Shall Kile (FE, Iora	aging)	
Observed Evidence of Wildlife Litil	ization (List species dire	ctly observed or	other signs such a	as track	s dronnings casings	nests etc.):	
					s, droppings, casings,	10313, 010.).	
Evide	nce of wildlife observed	included a great	egret foraging with	nin the a	assessment area.		
		0	0 0 0				
Additional relevant factors:							
		None					
		None	-				
			I .				
Assessment conducted by:			Assessment date	e(s):			
T. Norman			6/28/2021				
			1				

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 19 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impac	ot	T. Norman	T. Norman		6/28/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal Io	upl of our port of	Condition is incuff	i ai ant ta
would be suitable for the	supports wetland/surface	opumar, but sunicient to	wotland/surface water			surface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water functio	ins
water assessed		functions				
	-	•				
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is a uses consists of the Duke I outside of the assessment limited by the presence of present tha	forested wetland system locat Energy facility that is bounded area; however, wildlife access right-of-way fencing, US 98, a t may adversely affect the fund	ed at the nor with fencing to and from nd the Duke ctions provide	thbound US 98 ri Wetland and upl habitats outside Energy facility. In ed by the assessr	ght-of-way. Adjacer and habitats are av of the assessment a vasive exotic specie nent area.	nt land ailable area is es are
current with						
5 4						
Ŭ Ŧ				•		
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with	Water level indicators and s reviews, the assessment are and its associated stormwa points of discharge re	oil moisture appeared appropries was inundated throughout, ater management facilities (i.e. soulting from the construction of	iate conside Hydrologic cr , ditches). Sr f US 98. Th	ring seasonal vari onditions are affe oil erosion observ e wetland receive	iation. During the 20 cted by the adjacen red indicates alterati s runoff from US 98	021 field t US 98 ions in 3.
7 7						
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The canopy consists of des invasive, exotic species. ditches) has resulted in hab routine maintenance wit	sirable and appropriate species The construction of US 98 and itat alteration. Land managem thin the right-of-way that may a comm	s. Plant cove its associate ent practices iffect natural unity	er withn the unders ed stormwater ma s include the insta recruitment or re	story includes prese nagement facilities illation of a cross dr generaltion in the pl	ence of (i.e., ain and ant
w/o pres or		comm	unity.			
current with						
5 4						
Score = sum of above scores/30 (if	If preservation as mitig	ation,		For impact assess	sment areas	
uplands, divide by 20)		· · · · · · · · · · · · · · · · · · ·		FI = delta x	acres =	
current	Preservation adjustment	nt factor =	1			
or w/o pres with	Adjusted mitigation del	ta =		0.07 x 0.45	= 0.03	
0.57 0.50	, lajaotoa miligation del					
	J					
	If mitigation		-	or mitigation ac	comont oraco	
Delta = [with-current]	Time lag (t-factor) =		FO	or milligation asse	ssment areas	
0.07	Pisk factor -		RFG =	= delta/(t-factor x	risk) =	
-0.07						

Site/Project Name		Application Number)r		Accomment Area Nama	or Numbor
			51	ŕ		
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 20 (See	condary impacts)
FLUCCs code	Further classification	ition (optional)		Impact	t or Mitigation Site?	Assessment Area
C44 Enclosed an March	PEM1C - Pa	alustrine, Emerger	nt. Persistent.			Size (in acres)
641 - Freshwater Marsh	5	Seasonally Floode	ed		Impact	0.32
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	ON (i.e. C	DFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	111		None			
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, uplar	nds		
The assessment area is comprise A pipe cu	ed of an herbaceous wet Ilvert that runs undernea	land community d ath US 98 connect	ominated by primress Wetland 20 to ot	ose wil ther off	llow that connects to a fsite wetland systems	larger wetland system.
Assessment area description						
Dominant vegetation within this w	etland consists of prime	ose willow with fo	tail, cattail, looses	trife, V	írginia chain fern, bulru	sh, and pickerelweed.
J J					5	· ·
Significant nearby features		Uniqueness (cor landscape.)	nsideri	ng the relative rarity in	relation to the regional	
The assessment area is located within the northbound US 98 right-of-way						
at the Duke Energy utility easement. Green Swamp WMA and Gator Cree					Not unique	
		0.				
Functions			Mitigation for prev	vious p	permit/other historic use)
Natural water storage and conv	veyance; foraging habita	t; wat <mark>er</mark> quality			Nama	
improvemer	nt; flood attenuation		NONE			
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliza	ation b	y Listed Species (List s	pecies, their legal
that are representative of the asse be found)	ssment area and reasor	nably expected to	classification (E, assessment area	T, SSC)	c), type of use, and inte	nsity of use of the
,				/		
			Little Blue Hero	on (ST	, foraging); Tricolored I	Heron (ST, foraging);
Amphibians, wading b	birds, turtles, small mam	mals	Florida Sandhil	Il Cran Evergl	e (ST, foraging); Wood lade Snail Kite (FE, for	Stork (FT, foraging); aging)
				5		5 5/
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such a	s track	s, droppings, casings,	nests, etc.):
	N	lo evidence of wild	llife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number		Assessment Area Name or Number			
US 98 from W Socrum Loop Re	d to CR 54 (FPID 436673-1)			Wetland 20 (Secondary Impacts)			
Impact or Mitigation		Assessment conducted by:		Assessment date:			
Impa	ct	T. Norman		6/28/2021			
		<u> </u>					
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)	
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal lev	vel of support of	Condition is insuff	ficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water provide wetland/s			surface	
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	ons	
water assessed		functions					
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is an within the northbound US 9 with fencing. Wetland and up and from habitats outside of Duke Energy facility. Invas	herbaceous wetland at Duke I 8 right-of-way. Adjacent land u oland habitats are available ou the assessment area is limiter ive exotic species are present assessme	Energy utility uses consists tside of the a d by the pres that may ad- ent area.	easement. The a of the Duke Ene assessment area; ence of right-of-w versely affect the	assessment area is rgy facility that is bo however, wildlife a vay fencing, US 98, functions provided	located ounded ccess to and the by the	
current with		docomentarea.					
5 4							
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 202 reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent to and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alteration points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. w/o pres or current with 7 7 .500(6)(c)Community structure Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species presen construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in ha alteration. Land management practices include the installation of a pipe culvert and routine maintenance with						021 field t US 98 ions in 3. ent. The nabitat tithin the	
w/o pres or							
current with							
4 3							
	l						
Score = sum of above scores/30 (if uplands, divide by 20) (if uplands, divide by 20) current with or w/o pres with 0.53 0.47	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, nt factor = ta =		For impact assess FL = delta x a 0.07 x 0.32	sment areas acres = = 0.02		
Delta = [with-current]	If mitigation Time lag (t-factor) =		Fo	or mitigation asse	ssment areas		
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =		
L							

					A (A N	N1 1	
Site/Project Name		Application Number	er		Assessment Area Name	or Number	
US 98 from W Socrum Loop Rd to CF	R 54 (FPID 436673-1)				Wetland 21 (Se	condary Impacts)	
FLUCCs code	Further classifica	ation (optional)		Impact	or Mitigation Site?	Assessment Area	
		lustrino Emorgor	at Doreistopt	mpao	or magadori ene.	Size (in acres)	
641 - Freshwater Marsh	FLINITO - Fa	Seasonally Floode	ed		Impact	0.05	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e. 0	DFW, AP, other local/state/federa	al designation of importance)	
Hillsborough River	III				None		
Geographic relationship to and hydro	ologic connection with	wetlands, other s	urface water, uplar	nds			
The a	assessment area is co	omprised of a torp	edo-grass dominat	ted free	shwater marsh.		
Assessment area description							
I	Dominant vegetation v	vithin this wetland	consists of solely	of torp	edo grass.		
			Uniqueness (co	neideri	ng the relative rarity in	relation to the regional	
Significant nearby features			landscape.)	IISIUEII			
The assessment area is located ap	northwest of the						
Green Swamp WMA and Gator Creek Reserve located on northeast side of			Not unique				
U	S 98.						
Functions			Mitigation for pre-	vious p	ermit/other historic use	9	
Natural water storage and convey	yance; foraging habita	t; water quality			None		
improvement,							
Anticipated Wildlife Utilization Based	I on Literature Review	(List of species	Anticipated Utiliza	ation b	y Listed Species (List s	pecies, their legal	
that are representative of the assess be found)	ment area and reason	hably expected to	classification (E, assessment area	1, 550), type of use, and inte	Insity of use of the	
,				,			
			Little Blue Her	on (ST	, foraging); Tricolored I	Heron (ST, foraging);	
Amphibians, wading bir	ds, tu <mark>rtles</mark> , small mam	mals	Florida Sandhi	ll Cran	e (ST, foraging); Wood	Stork (FT, foraging);	
				Everg	lade Shall Kite (FE, for	aging)	
Observed Evidence of Wildlife Utiliza	ation (List species dire	ectly observed, or	I other signs such a	s track	s, droppings, casings,	nests, etc.):	
		المرينة ومعروفة والمرا	dlife elsesmued				
	N	to evidence of wild	allie observed.				
Additional relevant factors:							
		None					
			I				
Assessment conducted by:			Assessment date(s):				
T. Norman			6/28/2021				

Site/Project Name		Application Number	A	Assessment Area	a Name or Number	
US 98 from W Socrum Loop R	d to CR 54 (FPID 436673-1)			Wetland 21 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:	A	Assessment date	2	
Impa	ct	T. Norman			6/28/2021	
	Ontine al (40)	Madausta (7)	NA:		Net Breeset	(0)
Scoring Guidance	Optimai (10)	Condition is less than	ININ	imai (4)	NOT Present	(0)
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal lev	el of support of	Condition is insuf	ficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/	surface
type of wetland or surface	water functions	wetland/surface water	fun	nctions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 5 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a located within the north assessment area; howeve presence of right-of-way fer ac Water level indicators and reviews, the assessmen observed within Wetland 21 Hydrologic conditions are a dithete. Scillersing of	n herbaceous wetland near the bound US 98 right-of-way. We r, wildlife access to and from I acing, US 98, and the Duke Er dversely affect the functions pr dversely affect the functions pr tarea was inundated through on or near the fence posts inc fected by the adjacent US 98	e Duke Energ tiland and upl habitats outsik nergy facility. I ovided by the ovided by the priate consider put. In addition cluded elevate and its associ	y utility easemer and habitats are de of the assess invasive exotic sp assessment are assessment are surface wate ad lichen lines, hr iated stormwater	nt. The assessment available outside of ment area is limited pecies are present t a. riation. During the 2 r, hydrological indic ummocks, and wate management facilit	area is the by the hat may 021 field ators r marks. ies (i.e.,
w/o pres or current with 7 7		The wetland receive	s runoff from	ŪS 98.		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Nearly all of plant cover is stormwater management fac the routine maintenance	s comprised of invasive, exotic ilities (i.e., ditches) has resulte within the right-of-way that ma comm	c species. The ed in habitat al y affect natura unity.	e construction of Iteration. Land m al recruitment or	US 98 and its associanagement practice regeneraltion in the	ciated es include plant
w/o pres or						
current with						
Willi Willi	4					
3 2						
· · · · · ·	-					
Score = sum of above scores/30 (if	If preservation as mitig	ation,	F	or impact asses	ssment areas	
uplands, divide by 20)	Preservation adjustment	nt factor =		FL = delta x	acres =	
current				0.07 0.07		
pr w/o pres with	Adjusted mitigation del	ta =	(u.u/ x 0.05	= 0.003	
0.53 0.47			L			
L	⊿		_			
	If mitigation		Ec	or mitigation asso	essment areas	
Delta = [with-current]	Time lag (t-factor) =			a muyauon asst		
-0.07	Risk factor =		RFG =	delta/(t-factor x	risk) =	

Site/Project Name		Application Number	er		Assessment Area Name	or Number	
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)	,	-	·	Wetland 22 (Secondary Impacts)		
FLUCCs code	Further classifica	tion (optional)		Impact	or Mitigation Site?	Assessment Area	
630 – Wetland Forested Mixed	PF01/2C - Leaved/Needlo	- Palustrine, Fores e-Leaved Deciduc Flooded	sted, Broad- ous, Seasonally		Impact	Size (in acres) 0.23	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e. C	DFW, AP, other local/state/federa	l designation of importance)	
Hillsborough River	111				None		
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplar	nds			
Wetland 22 is comprised of freshw	ater marsh habitat that the forested	extends outside c canopy consists c	of the right-of-way i of cypress and red	nto a fe maple	orested wetland. Adjac	ent to the right-of-way,	
Assessment area description							
	The forested	canopy consists of	of cypress and red	maple			
Significant nearby features			Uniqueness (con landscape.)	nsideri	ng the relative rarity in	relation to the regional	
Wetland 22 is located within approximately 0.2 mile northwes Green Swamp WMA and Gator Cru	right-of-way illity easement. northeast side of	f Not unique					
Functions			Mitigation for prev	vious p	permit/other historic use	•	
Natural water storage and conv improvemen	eyance; foraging habita t; flood attenuation	t; water quality	None				
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reasor	(List of species ably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	other signs such a	s track	s, droppings, casings,	nests, etc.):	
	Ν	lo evidence of wild	dlife observed.				
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	e(s):			
S. Szatyari			9/24/2021				

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop R	d to CR 54 (FPID 436673-1)			Wetland 22 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impa	ct	S. Szatyari			9/24/2021	
		•	•			
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present (0	0)
The scoring of each		Condition is less than				
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal lev	vel of support of	Condition is insuffici	ient to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/su	rface
type of wetland or surface	water functions	wetland/surface water	d/surface water functions water fun			s
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current with</u> 6 5 .500(6)(b)Water Environment (n/a for uplands)	rested wetland near the Duke ht-of-way. Wetland and uplan and from habitats outside of th Duke Energy facility. Nuisance the functions provided by bil moisture appeared appropri	Energy utility d habitats are e assessment e vegetation s y the assess y the assess y the assess the assess y the assess y the assess y the assess	y easement. The a e available outsid nt area is limited l species are prese ment area.	assessment area is lo e of the assessment a by the presence of rig ent that may adversely ation.Hydrological ind onditions are affected	bcated area; jht-of- y affect licators by the	
w/o pres or current with 7 7	US 98. A pipe culvert t	pated stormwater managemer hat runs underneath US 98 co	nnects Wetla	e., ditches). The vand 22 to other of	vetland receives runo fsite wetland systems	off from
.500(6)(c)Community structure						
 Vegetation and/or Benthic Community 	I he canopy is dominant comprised of a mix of native management facilities (i.e routine maintenance wit	ed by desirable/appropriate sp and invasive, exotic species. ., ditches) has resulted in hab thin the right-of-way that may a comm	ecies. Nearly The construc itat alteration affect natural unity.	all of plant cover ction of US 98 and Land managem recruitment or reg	Within the understory d its associated storm ent practices include generaltion in the plar	r is nwater the nt
with						
current with	4					
6 5						
	1					
Score = sum of above scores/30 (if	f preservation as mitig	ation.	F	For impact assess	sment areas	
uplands, divide by 20)	,	,				
current	Preservation adjustmer	nt factor =			aures -	
or w/o pres with				0.07 x 0.23	= 0.02	
	Adjusted mitigation del	ta =			0.02	
0.63 0.57			L			
			_			
	If mitigation		E	or mitigation asso	sement areas	
Delta = [with-current]	Time lag (t-factor) =			a miliyalion asse		
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Site/Project Name		Application Number	er		Assessment Area Name	or Number	
US 98 from W Socrum Loop Rd to CR	54 (FPID 436673-1)				Wetland 23 (See	condary Impacts)	
FLUCCs code	Further classification	ation (optional)		Impac	t or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.11	
Basin/Watershed Name/Number Af	fected Waterbody (Cla	ss)	Special Classification	ON (i.e. (DFW, AP, other local/state/federa	I designation of importance)	
Hillsborough River	III				None		
Geographic relationship to and hydrol	ogic connection with	wetlands, other s	urface water, uplan	nds			
Within the right-of-way, Wetland 23 is the freshwater mars	s comprised of fresh h continues approxir	water marsh habita nately 25 feet nort	at that extends outs h before abutting n	side o [.] nesic	f the right-of-way. Adjac pine forest with saw pal	ent to the right-of-way, metto	
Assessment area description							
Dominant vegetation inclu	ides torpedo grass, r	naidencane, butto	onweed, foxtail gras	ss, arr	owhead, coinwort, and	natal grass.	
Significant nearby features		Uniqueness (cor	nsideri	ing the relative rarity in	relation to the regional		
Wetland 23 is located within the northbound US 98 right-of-way approximately 0.3 miles northwest of the Duke Energy utility easement Green Swamp WMA and Gator Creek Reserve located on northeast side US 98.			f Not unique				
Functions			Mitigation for prev	/ious p	permit/other historic use)	
Natural water storage and conveya improvement; f	Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			None			
Anticipated Wildlife Utilization Based that are representative of the assessr be found)	on Literature Review nent area and reason	List of species	Anticipated Utiliza classification (E, 1 assessment area)	ation b F, SS()	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the	
Amphibians, wading bird	s, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Utilizat	ion (List species dire	ectly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):	
	No evidence of wildlife observed.						
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	(s):			
S. Szatyari			9/24/2021				

Site/Project Name		Application Number		Assessment Area Name or Number			
US 98 from W Socrum Loop Rd	to CR 54 (FPID 436673-1)			Wetland 23 (Secondary Impacts)			
Impact or Mitigation		Assessment conducted by:		Assessment date:			
Impac	t	S. Szatyari	S. Szatyari 9/2		9/24/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)	
The scoring of each	Condition is ontimal and fully	Condition is less than	Minimalla	val of our name of	Condition is insuf	ficientte	
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/	surface	
type of wetland or surface	water functions	wetland/surface water	fu	Inctions	water function	ons	
water assessed		functions					
.500(6)(a) Location and Landscape Support w/o pres or current with 6 5 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is an easement. The assessment available outside of the asse area is limited by the prese species are prese Water level indicators and s reviews, this wetland was water and aquatic veget	herbaceous wetland that exte area is located at the northbor essment area; however, wildlif nce of right-of-way fencing, U2 ant that may adversely affect th oil moisture appeared appropri nundated throughout with wat ation, hydrological indicators of	nds beyond und US 98 ri e access to a S 98, and the e functions iate conside er levels gre oserved with	the right-of-way n ght-of-way. Wetla and from habitats e Duke Energy fac provided by the a provided by the a string seasonal var ater than four incl in Wetland 23 on	ear the Duke Energ ind and upland hab outside of the asse cility. Nuisance veg ssessment area. iation. During the 2 hes. In addition to s or near the fence p	gy utility iitats are essment etation 021 field surface posts	
w/o pres or current with 7 7	with 7						
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Nearly all of plant cover is co its associated stormwater m practices include the routine	omprised of a mix of native and anagement facilities (i.e., ditch maintenance within the right-c	d invasive, e nes) has resu of-way that m	xotic species. The ulted in habitat alt nay affect natural	e construction of US eration. Land mana recruitment or rege	5 98 and agement neraltion	
		in the plant of	community.	-	-		
w/o pres or							
current with							
5 4							
	let in the						
uplands, divide by 20)	Il preservation as mitiga	auon,		For impact asses	sment areas		
current	Preservation adjustmer	nt factor =		FL = delta x	acres =		
or w/o pres with	Adjusted mitigation dolt	io –		0.07 x 0.11	= 0.01		
0.60 0.53	Aujusted miligation del	la –					
	l						
	If mitigation			or mitigation asso	ssment areas		
Delta = [with-current]	Time lag (t-factor) =			or mugaton asse			
-0.07	Risk factor =		RFG :	= delta/(t-factor x	risk) =		

Site/Project Name		Application Number	er		Assessment Area Name	or Number	
US 98 from W Socrum Loop Rd to (CR 54 (FPID 436673-1)	, ipplication Humbe			Wetland 24 (Sec	condary Impacts)	
FLUCCs code	Further classification	ation (optional)		Impac	t or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.18	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification (i.e. OFW, AP, other local/state/federal designation of impo				
Hillsborough River	III				None		
Geographic relationship to and hyc Wetland 24 is comprised of a fres wetland systems via a cross drain	Irologic connection with hwater marsh that exte that runs underneath U horth before abutting a f	wetlands, other s nds into a forested S 98. Adjacent to forested wetland c	urface water, uplar d wetland system o the right-of-way, th lominated by red n	nds outside ne fres na <mark>ple</mark> a	of the right-of-way and hwater marsh continues and cypress.	l is connected to other s approximately 25 feet	
Assessment area description Dominant vegetation within Wet	and 24 includes torped	o grass and maide willow	encane with foxtail	grass	, Virginia chain fern, ses	sbania, and primrose	
Significant nearby features			Uniqueness (co landscape)	nsider	ing the relative rarity in	relation to the regional	
Wetland 24 is located within the northbound US 98 right-of-way approximately 0.6 miles northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.				Not unique			
Functions			Mitigation for pre-	vious p	permit/other historic use)	
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			None				
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such a	s track	ks, droppings, casings, l	nests, etc.):	
	Ν	lo evidence of wild	llife observed.				
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	e(s):			
S. Szatyari			9/24/2021				

Site/Project Name			Application Number		Assessment Area Name or Number		
US 98 from W Socrum	n Loop Rd	I to CR 54 (FPID 436673-1)			Wetland 24	Wetland 24 (Secondary Impacts)	
Impact or Mitigation			Assessment conducted by:		Assessment date:		
	Impac	t .	S. Szatyari			9/24/2021	
	_						
Scoring Guidance		Optimal (10)	Moderate(7)	Mi	nimal (4)	Not Present	(0)
The scoring of each			Condition is less than				
indicator is based on what	at	Condition is optimal and fully	optimal, but sufficient to	Minimal le	vel of support of	Condition is insuff	icient to
would be suitable for the	•	supports wetland/surface	maintain most	wetland	/surface water	provide wetland/	surface
type of wetland or surface	е	water functions	wetland/surface water	fu	Inctions	water function	ons
water assessed			functions				
.500(6)(a) Location and Landscape Support The assessment area is a easement. The assessment are available outside assessment area is limite vegetation species a w/o pres or current with 6 5 .500(6)(b)Water Environment (n/a for uplands) Water level indicators and reviews, this wetland we water, hydrological indice alovated lighter links			herbaceous wetland that exte area is located within the nort the assessment area; howeve by the presence of right-of-way present that may adversely af oil moisture appeared appropri inundated throughout with wa ors observed within Wetland 2	nds beyond hbound US er, wildlife ac y fencing, US fect the func iate conside ter levels gro 4 on or nea	the right-of-way n 98 right-of-way. W cess to and from 5 98, and the Duk tions provided by ering seasonal var eater than six inch r the fence posts i	ear the Duke Energ /etland and upland habitats outside of e Energy facility. No the assessment are iation. During the 2/ ies. In addition to su ncluded water mark	ny utility habitats the uisance ea. D21 field urface is and
w/o pres or current 7	with 7	elevated lichen lines. Hyd management facilities (i.e., d	Irologic conditions are affected itches). The wetland receives 98 connects Wetland 24 to of	I by the adja runoff from I her offsite w	cent US 98 and it US 98. A cross dra vetland systems.	s associated storm	vater leath US
.500(6)(c)Community s 1. Vegetation and 2. Benthic Commun	tructure /or nity	Nearly all of plant cover is co its associated stormwater m practices include the routine	omprised of a mix of native and anagement facilities (i.e., ditch maintenance within the right-co in the plant o	d invasive, e nes) has res of-way that n community.	exotic species. The ulted in habitat alt nay affect natural	e construction of US eration. Land mana recruitment or reger	98 and gement neraltion
w/o pres or							
current	with						
	****	1					
5	4						
		8					
Score = sum of above score	res/30 (if	If preservation as mitig	ation.		For impact assess	sment areas	
uplands. divide hv 2	20)						
aplando, divido by Z	/	Preservation adjustment	nt factor =		FL = delta x	acres =	
current							
or w/o pres	with	Adjusted mitigation delt	ta =		0.07 x 0.18	= 0.01	
0.60	0.53			L			
		J					
		If mitigation		,			
		ii mitigation		F	or mitigation asse	ssment areas	
Delta = [with-curre	nt]	Time lag (t-factor) =			5		
-0.07		Risk factor =		RFG	= delta/(t-factor x	risk) =	
L		۱ L		L			

Site/Project Name		Application Numbe	Number Assessment Area Name or Number			
US 98 from W Socrum Loop Rd to CR 5	4 (FPID 436673-1)				Wetla	and 25
FLUCCs code	Further classification	ation (optional)	I	Impact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.20
Basin/Watershed Name/Number Affe	cted Waterbody (Cla	ss)	Special Classificatio	n (i.e. C	OFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hydrolo	gic connection with	wetlands, other s	urface water, uplan	ds		
Within the right-of-way, Wetland 25	is comprised of a fr	eshwater marsh th planted p	nat extends outside bine.	of rig	ht-of-way. Adjacent to t	he wetalnd is upland
Assessment area description						
	Dominant ve	egetation within W	etland 25 is maider	ncane.		
Significant nearby features			Uniqueness (con	sideri	ng the relative rarity in	relation to the regional
Wetland 25 is located within the northbound US 98 right-of-way approximately 0.7 miles northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side US 98.			Not unique			
Functions			Mitigation for prev	ious p	ermit/other historic use)
Natural water storage and conveya improvement; flo	nce; foraging habita	t; water quality	None			
Anticipated Wildlife Utilization Based o that are representative of the assessm be found)	n Literature Review ent area and reason	(List of species hably expected to	Anticipated Utilizat classification (E, T assessment area)	tion by , SSC	y Listed Species (List s c), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds	, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utilization	on (List species dire	ectly observed, or	other signs such as	track	s, droppings, casings, ı	nests, etc.):
	Ν	lo evidence of wild	llife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date(s):		
S. Szatyari			9/24/2021			

Site/Project Name		Application Number	Assessment Ar	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 25		
Impact or Mitigation		Assessment conducted by:	Assessment da	Assessment date:		
Impac	ct	S. Szatvari		9/24/2021		
·		,				
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each		Condition is less than				
indicator is based on what would be suitable for the	supports wetland/surface	optimal, but sufficient to maintain most	wetland/surface water	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 5 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is an easement. The assessment are available outside of assessment area is limite adjacent uplands within the Water level indicators and s reviews, the soils observed w observed within Wetland 25 adjacent US 98 and its asso	herbaceous wetland that exte area is located within the nort the assessment area; howeve ed by the presence of right-of-v right-of-way consist of mowed oil moisture appeared appropr within Wetland 25 consisted of included surface water and a h	nds beyond the right-of-way hbound US 98 right-of-way. er, wildlife access to and fror way fencing, US 98, and the d and maintained ruderal spe iate considering seasonal va a dark surface with muck pr nigh water table. Hydrologic t facilities (i.e., ditches). The	near the Duke Energy utility Wetland and upland habitats n habitats outside of the Duke Energy facility. The accies overlaying fill material.		
w/o pres or current with 7 7		US	98.			
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Nearly all plant cover cons management facilities (i.e routine maintenance wit	isted of native maidencane. Th ., ditches) has resulted in habi thin the right-of-way that may a comm	he construction of US 98 and itat alteration. Land manage iffect natural recruitment or i unity.	d its associated stormwater ment practices include the egeneraltion in the plant		
w/o pres or current with 6 5						
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	For impact asse	ssment areas		
uplands, divide by 20)	Preservation adjustment	nt factor =	FL = delta	x acres =		
current			0.07 x 0.2	0 = 0.01		
0.63 0.57	Adjusted mitigation del	ta =	3.01 X 0.2	- 0.01		
0.07	J					
	If mitigation		For mitigation as	essment areas		
Delta = [with-current]	Time lag (t-factor) =			DESSITICIT ALCAS		
-0.07	Risk factor =		RFG = delta/(t-factor	x risk) =		

Site/Project Name		Application Number	r		Assessment Area Name	or Number	
US 98 from W. Socrum Loop Rd to	CR 54 (FPID 436673-1)		•	,	Wetland 26 (Sec	condary Impacts)	
	UN 34 (I I ID 430073-1)				Wettand 20 (Sec	sondary impacts)	
FLUCCs code	Further classifica	tion (optional)		Impact	or Mitigation Site?	Assessment Area	
631 - Wetland Scrub	PSS1C – Palus	trine, Scrub-Shrul	o, Broad-Leaved		Impact	0.23	
	Decidu	ious, Seasonally I	looded		•		
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e. C	DFW, AP, other local/state/federa	l designation of importance)	
Hillsborough River	111				None		
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, uplar	nds			
Within the right-of-way, Wetland Adjace	26 is comprised of fresh ent to the right-of-way, th	water marsh habi ne scrub-shrub we	at that extends ou tland consists prec	tside o domina	f the right-of-way into a antly of buttonbush	scrub-shrub wetland.	
Assessment area description							
	Densinent verstet	tion consists of hu	tta a bura burith unita				
	Dominant vegeta	tion consists of bu	lionbush with prim	irose w	/iiow.		
Significant nearby features			Uniqueness (cor	nsideri	ng the relative rarity in	relation to the regional	
Wetland 26 is located within	the northbound US 98 r	right-of-way	landscape.)				
approximately 1.0 mile northwe	st of the Duke Energy ut	ility easement.			Not unique		
Green Swamp WMA and Gator Cr	eek Reserve located on	northeast side of			i tot uniquo		
Functions			Nitigation for provinue permit(ether biotorie use				
Functions			witigation for pre-	vious p			
Natural water storage and conv	veyance; foraging habitat	t; wat <mark>er</mark> quality			None		
improvemer	nt; flood attenuation						
Anticipated Wildlife Utilization Base	ed on Literature Review	(List of species	Anticipated Utilization by Listed Species (List species, their legal				
that are representative of the asse be found)	ssment area and reasor	hably expected to	classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
,				,			
A nanhihiana . wadina k			Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging);				
Amphibians, wading t	birds, turties, small mam	mais	Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
					•		
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such a	s track	s, droppings, casings,	nests, etc.):	
	Ν	lo evidence of wild	llife observed.				
Additional relevant factors:							
Auditional relevant factors.							
		None					
Assessment conducted by:			Assessment date	(s):			
S. Szatyari			9/24/2021	(- <i>)</i> -			
,							

Site/Project Name	Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 26	δ (Secondary Impacts)
Impact or Mitigation		Assessment conducted by:		Assessment date:	
Impa	ct	S. Szatyari			9/24/2021
ļ		<u> </u>		ļ	
Scoring Guidance	Optimal (10)	Moderate(7)	Mii	nimal (4)	Not Present (0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal Ia	vel of support of	Condition is insufficient to
would be suitable for the	supports wetland/surface	maintain most	wetland	provide wetland/surface	
type of wetland or surface	water functions	wetland/surface water	fu	Inctions	water functions
water assessed		functions			
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is a located at the northbound US area; however, wildlife acces of-way fencing, US 98, and t	scrub-shrub wetland near the S 98 right-of-way. Wetland and s to and from habitats outside the Duke Energy facility. The a and maintained ruderal spec	Duke Energ d upland hab of the asses idjacent upla cies overlayi	y utility easement pitats are available ssment area is lim ands within the rig ng fill material.	. The assessment area is outside of the assessmen ited by the presence of righ ht-of-way consist of mowed
current with	1				
5 4					
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with	Water level indicators a indicators observed within table. Hydrologic conditions a Plant cover consists of a co and its associated storr management practices inclue	nd soil moisture appeared app Wetland 26 included surface v are affected by the adjacent US (i.e., ditches). The wetland r mbination of native, nuisance, nwater management facilities de the routine maintenance wi regeneraltion in the	and invasiv (i.e., ditches thin the right	nsidering seasona marks on the fend associated storm off from US 98.	l variation. Hydrological e posts, and a high water water management facilitie: The construction of US 98 nabitat alteration. Land affect natural recruitment o
5 4					
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.57 0.50	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, nt factor = ta =		For impact assess FL = delta x 0.07 x 0.23	sment areas acres = = 0.02
	If mitigation		F	or mitigation asse	ssment areas
Delta = [with-current]	Time lag (t-factor) =			Si miliyalion asse	
-0.07	Risk factor =		RFG	= delta/(t-factor x	risk) =

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to (CR 54 (FPID 436673-1)	, pprodion runno			Wetland 27 (See	condary Impacts)
FLUCCs code	Further classifica	ation (optional)		Impac	t or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.32
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classificati	on (i.e. 0	DFW, AP, other local/state/federa	al designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hyc	Irologic connection with	wetlands, other s	urface water, upla	nds		
	The assessmen	t area is comprise	d of freshwater ma	arsh ha	abitat	
Assessment area description						
Dominant vege	tation includes maidend	cane with torpedo	grass, barny <mark>a</mark> rd gr	rass, ai	rrowhead, and buttonwe	eed.
Significant nearby features			Uniqueness (co landscape.)	nsideri	ing the relative rarity in	relation to the regional
Wetland 27 is located within the northbound US 98 right-of-way approximately 0.75 mile southeast of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for pre	vious p	permit/other historic use	9
Natural water storage and conv improvemen	eyance; foraging habita t; flood attenuation	it; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reaso	(List of species nably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS(ı)	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading b	irds, turtles, small mam	nmals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such a	is track	s, droppings, casings,	nests, etc.):
	Ν	lo evidence of wild	dlife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
S. Szatyari			9/24/2021			

Site/Project Name		Application Number		Assessment Area Name or Number	
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 27	(Secondary Impacts)
Impact or Mitigation		Assessment conducted by:	As	Assessment date:	
Impa	ct	S. Szatyari		9/24/2021	
<u> </u>		<u> </u>	I		
Scoring Guidance	Optimal (10)	Moderate(7)	Minin	mal (4)	Not Present (0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal Javo	of support of	Condition is insufficient t
would be suitable for the	supports wetland/surface	maintain most	wetland/su	urface water	provide wetland/surface
type of wetland or surface	water functions	wetland/surface water	func	ctions	water functions
water assessed		functions			
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 4	The assessment area is a northbound US 98 right-of-wa wildlife access to and from ha US 98, and SR 471. The adj	an herbaceous wetland that ne ay. Wetland and upland habita abitats outside of the assessm acent uplands within the right- overlaying fi	ear SR 471. Th ts are available ent area is limi of-way consist ill material.	e assessment a e outside of the ited by the press of mowed and	area is located within the assessment area; howeve ence of right-of-way fencin maintained ruderal specie
 .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 202 reviews, this wetland was inundated throughout with water levels greater than six inches. Hydrologic condition affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetl receives runoff from US 98. w/o pres or current with T 					iation. During the 2021 fiel . Hydrologic conditions ar .e., ditches). The wetland
.500(6)(c)Community structure					
 Vegetation and/or Benthic Community 	of US 98 and its associated management practices include	stormwater management facil de the routine maintenance wi regeneraltion in the	ities (i.e., ditch thin the right-or plant commun	e, exotic specie les) has resulted f-way that may a nity.	s present. The construction d in habitat alteration. Land affect natural recruitment o
w/o pres or					
current with	4				
6 5					
Score = sum of above scores/30 (if	If preservation as mitig	ation,	Fo	or impact assess	sment areas
uplands, divide by 20)	Proponyation adjustment	at factor -		FL = delta x	acres =
current	Preservation adjustmen		^	07 . 0.00	- 0.02
	Adjusted mitigation del	ta =	0.	.07 X U.32	- 0.02
0.00					
	If mitigation		For	mitigation acco	semant areas
Delta = [with-current]	Time lag (t-factor) =		For	muyauon asse	Someni aleas
-0.07	Risk factor =		RFG = o	delta/(t-factor x	risk) =

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to Cf	R 54 (FPID 436673-1)				Wetland 28 (See	condary Impacts)
FLUCCs code	Further classification	ation (optional)		Impact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.10
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classificati	ON (i.e. C	DFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hydro	ologic connection with	wetlands, other s	urface water, uplar	nds		
The assessment area is	comprised of a maide	encane-dominated	l freshwater marsh	that e	xtends outside of the ri	ght-of-way.
Assessment area description						
Additional veget	ation present includes	primrose willow a	nd red maple sapli	ings ale	ong the right-of-way fer	nce.
Significant nearby features			Uniqueness (con landscape.)	nsideri	ng the relative rarity in	relation to the regional
Wetland 28 is located within the northbound US 98 right-of-way approximately 0.6 mile southeast of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious p	permit/other historic use)
Natural water storage and conver improvement;	yance; foraging habita flood attenuation	t; water quality	None			
Anticipated Wildlife Utilization Based that are representative of the assess be found)	I on Literature Review sment area and reaso	(List of species nably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading bir	ds, turtles, small marr	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliza	ation (List species dire	ectly observed, or	other signs such a	s track	s, droppings, casings,	nests, etc.):
	И	lo evidence of wild	dlife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
S. Szatyari			9/24/2021			

Site/Project Name		Application Number	ŀ	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 28 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:	ŀ	Assessment date:		
Impa	ct	S. Szatyari		9/24/2021		
ļ		<u> </u>				
Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present (0)	
The scoring of each indicator is based on what	Condition is optimal and fully	Condition is less than	Minimal lev	el of support of	Condition is insufficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/s	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	fur	nctions	water functions	
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is an h 98 right-of-way. Wetland and to and from habitats outside SR 471. The adjacent uplar	erbaceous wetland near SR 4 upland habitats are available of the assessment area is lim ids within the right-of-way cons fill mat	71. The asser outside of the nited by the pr sist of mowed erial.	ssment area is lo e assessment are resence of right-o l and maintained	ocated at the northbound US ea; however, wildlife access of-way fencing, US 98, and ruderal species overlaying	
current with	4					
5 4						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 6 5	Water level indicators and s reviews, this wetland was in affected by the adjacent U Plant cover consists primaril US 98 and its associated s management practices inclue	oil moisture appeared approprundated throughout with water S 98 and its associated storm receives runof	iate consider levels greate water manage f from US 98.	ing seasonal var er than six inches ement facilities (i invasive, exotic s ines) has resulted of-way that may unity.	iation. During the 2021 field s. Hydrologic conditions are .e., ditches). The wetland species. The construction of in habitat alteration. Land affect natural recruitment or	
Score = sum of above scores/30 (if	If preservation as mitig	ation.	F	For impact assess	sment areas	
uplands, divide by 20)			_ '	FL = delta x	acres =	
current	Preservation adjustmer	IL IACTOF =		0.07 . 0.10	- 0.04	
o co	Adjusted mitigation delt	ta =		U.U/ X U.10	= 0.01	
0.53]		<u> </u>			
	If mitigation					
Delta = [with-current]	Time lag (t-factor) =		Fo	or mitigation asse	ssment areas	
			RFG =	edelta/(t-factor x	risk) =	
-0.07	Risk factor =		14 0 -		,	

Site/Project Name		Application Number	ation Number Assessment Area Name or Number			
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)				Wetla	and 29
FLUCCs code	Further classification	ation (optional)		Impact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.27
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	ON (i.e. C	FW, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplar	nds		
The assessm	ent area is comprised o	f freshwater marsl	h habitat that exten	nd to a	forested wetland syste	m.
Assessment area description						
Dominant vegetation includes pick	erelweed, maidencane a	and alligatorweed. willow and sa	. Additional vegetat altbush.	tion pre	esent along the right-of	-way includes primrose
Significant nearby features			Uniqueness (cor landscape.)	nsiderii	ng the relative rarity in	relation to the regional
Wetland 29 is located within the northbound US 98 right-of-way approximately 0.4 mile southeast of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious p	ermit/other historic use)
Natural water storage and conv improvemer	eyance; foraging habita t; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species nably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading b	uirds, turtles, small mam	imals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):
	Ν	lo evidence of wild	llife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
S. Szatyari			9/24/2021			

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 29		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impac	t	S. Szatyari			9/24/2021	
<u> </u>						
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present ((0)
The scoring of each		Condition is less than				
Indicator is based on what would be suitable for the	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to	Winimal lev	vel of support of	provide wetland/s	cient to
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	IS
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a assessment area is located a of the assessment area; how the presence of right-of-wa m	in herbaceous wetland near S at the northbound US 98 right- wever, wildlife access to and fr y fencing, US 98, and SR 471 owed and maintained ruderal	R 471 that co of-way. Wetla rom habitats . The adjace species over	onnects to a fores and and upland h outside of the ass nt uplands within laying fill material	ted wetland system. abitats are available sessment area is limi the right-of-way cons l.	The outside ited by sist of
6 5						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 5 4	Water level indicators and s reviews, this wetland was water, hydrological indicators by the adjacent US 98 and Plant cover consists of a m stormwater management include the routine mainter	oil moisture appeared appropr inundated throughout with was s observed included water man its associated stormwater ma runoff from ix of native and invasive, exoti facilities (i.e., ditches) has res nance within the right-of-way th plant con	c species. Th ulted in habit national manuality.	ring seasonal var eater than six inch nce posts. Hydrol acilities (i.e., ditche distant distriction of he construction of tat alteration. Land t natural recruitm	iation. During the 202 es. In addition to sur ogic conditions are a es). The wetland rece solution addition are a est of the wetland rece f US 98 and its associ d management pract ent or regeneraltion i	21 field face ffected eives
	ı ———					
Score = sum of above scores/30 (if uplands, divide by 20)	If preservation as mitigation	ation,		For impact assess	sment areas	
current	Preservation adjustmer	nt factor =		FL = delta x a	acres =	
or w/o pres with	Adjusted mitigation delt	a =		0.07 x 0.27	= 0.02	
0.60 0.53	, lajuotoa miligation del					
	If mitigation		Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =			-		
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =	
Site/Project Name		Application Number	er	ŀ	Assessment Area Name o	or Number
--	--	---	--	-------------------------	--	--
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)		Wetland 30			and 30
FLUCCs code	Further classifica	ation (optional)		Impact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	ent, Persistent, Impact Size (in acres led 0.05			Size (in acres) 0.05
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classification	on (i.e. O	FW, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplar	nds		
	The assessmen	t area is comprise	d of freshwater ma	arsh hal	bitat	
Assessment area description						
Dominant vegetation includ	es maidencane, arrowh	ead, buttonweed,	coinwort, sand cor	rdgrass	, and bahiagrass (Pası	palum notatum).
Significant nearby features			Uniqueness (cor landscape.)	nsiderir	ng the relative rarity in	relation to the regional
Wetland 30 is located within the northbound US 98 right-of-way approximately 0.3 mile southeast of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.						
Functions			Mitigation for prev	vious p	ermit/other historic use	9
Natural water storage and conv improvemer	eyance; foraging habita t; flood attenuation	it; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reaso	(List of species nably expected to	Anticipated Utiliza classification (E, T assessment area	ation by T, SSC)	/ Listed Species (List s), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading b	uirds, turtles, small marr	imals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such as	s tracks	s, droppings, casings, ı	nests, etc.):
	Ν	lo evidence of wild	dlife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
S. Szatyari			9/24/2021			

Site/Project Name Application Number Assessment Area Name or Number US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1) Wetland 30 Impact or Mitigation Assessment conducted by: Assessment date: 9/24/2021 Impact S. Szatyari Optimal (10) Minimal (4) Not Present (0) Scoring Guidance Moderate(7) The scoring of each Condition is less than indicator is based on what Condition is optimal and fully optimal, but sufficient to Minimal level of support of Condition is insufficient to would be suitable for the supports wetland/surface wetland/surface water provide wetland/surface maintain most type of wetland or surface water functions wetland/surface water functions water functions water assessed functions .500(6)(a) Location and The assessment area is an herbaceous wetland near SR 471. The assessment area is located at the northbound US Landscape Support 98 right-of-way. Wetland and upland habitats are available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right-of-way fencing, US 98, and SR 471. The adjacent uplands within the right-of-way consist of mowed and maintained ruderal species overlaying fill material. w/o pres or current with 5 4 .500(6)(b)Water Environment Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field (n/a for uplands) reviews, this wetland was inundated throughout with water levels greater than six inches. In addition to surface water and aquatic vegetation, hydrological indicators observed included water marks on the fence posts. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98. w/o pres or current with 7 7 .500(6)(c)Community structure Plant cover primarily consists of native with minimal presence of invasive, exotic species. The construction of US 98 1. Vegetation and/or and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land 2. Benthic Community management practices include the routine maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community. w/o pres or current with 6 5 If preservation as mitigation, Score = sum of above scores/30 (if For impact assessment areas uplands, divide by 20) FL = delta x acres = Preservation adjustment factor = current or w/o pres with x 0.05 = 0.003 0.07 Adjusted mitigation delta = 0.60 0.53 If mitigation For mitigation assessment areas Delta = [with-current] Time lag (t-factor) = RFG = delta/(t-factor x risk) = -0.07 Risk factor =

PART II – Quantification of Assessment Area (impact or mitigation) (See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name		Application Number	er	,	Assessment Area Name	or Number	
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)				Wetla	and 31	
FLUCCs code	Further classification	ation (optional)		Impact	or Mitigation Site?	Assessment Area	
641 – Freshwater Marsh	PEM1C – Pa	alustrine, Emergei Seasonally Floode	ent, Persistent, led Impact Size (in acres) 0.47				
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e. C	DFW, AP, other local/state/federa	l designation of importance)	
Hillsborough River	III				None		
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplar	nds			
Within the right-of-way, Wetland cross dra	31 is comprised of fres ain that runs underneat	hwater marsh hab n US 98 connects	itat that extends ou Wetland 31 to othe	utside er offsi	of the right-of-way into ite wetland systems.	a forested wetland. A	
Assessment area description							
Dominant v	egetation includes para	grass and torpedo	o grass with barnya	ard gra	ss, and primrose willow	,	
Significant nearby features			Uniqueness (cor landscape.)	nsideri	ng the relative rarity in	relation to the regional	
Wetland 31 is located within the northbound US 98 right-of-way direct northwest of SR 471. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for prev	vious p	ermit/other historic use)	
Natural water storage and conv improvemen	eyance; foraging habita t; flood attenuation	t; wat <mark>er</mark> quality	None				
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, ⁻ assessment area	ation by T, SSC)	y Listed Species (List s ۵), type of use, and inte	pecies, their legal nsity of use of the	
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such a	s track	s, droppings, casings,	nests, etc.):	
	Frogs	were observed d	uring field reviews.				
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	(s):			
S. Szatyari			9/24/2021				

Site/Project Name		Application Number Assessment Area Name or Number			a Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)				Wetland 31		
Impact or Mitigation		Assessment conducted by:		Assessment date:			
Impao	ot	S. Szatyari		9/24/2021			
Scoring Guidance	Optimal (10)	Moderate(7)	Mi	nimal (4)	Not Present	(0)	
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal la	val of support of	Condition is insuff	ficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland	/surface water	provide wetland/	surface	
type of wetland or surface	water functions	wetland/surface water	fu	inctions	water function	ons	
water assessed		functions					
.500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland adjacent to the right-of-way that connects to a for system adjacent to SR 471. The assessment area is located at the northbound US 98 right-of-way upland habitats are available outside of the assessment area; however, wildlife access to and from I of the assessment area is limited by the presence of right-of-way fencing, US 98, and SR 471. The a within the right-of-way consist of mowed and maintained ruderal species overlaying fill ma within the right-of-way consist of mowed and maintained ruderal species overlaying fill ma within the right-of-way consist of mowed and maintained ruderal species overlaying fill ma within the right-of-way consist of mowed and maintained ruderal species overlaying fill ma within the right-of-way consist of mowed and maintained ruderal species overlaying fill ma within the right-of-way consist of mowed and maintained ruderal species overlaying fill ma within the right-of-way consist of mowed and maintained ruderal species overlaying fill ma within the right-of-way consist of mowed and maintained ruderal species overlaying fill ma within the right-of-way consist of mowed and maintained ruderal species overlaying fill ma within the right-of-way consist of mowed and maintained ruderal species overlaying fill ma use of the assessment area is an overlay of the assessment area is a species overlaying fill ma species overlaying fill ma use of the assessment area is a species overlaying fill ma use of the assessment area is a species overlaying fill ma species overlaying fill ma use overlay overlay overlay overlay overlay overlay overlay overlay overlay overlay is the adjacent US 98 and its associated appropriate considering seasonal variation. During reviews, this wetland was inundated throughout with water levels greater than six inches. Hydrologic affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches) receives ru					ects to a forested w right-of-way. Wetlar o and from habitats 2 471. The adjacent aying fill material. aying fill material. s. Hydrologic conditi .e., ditches). The w	etland outside uplands 021 field ions are etland	
w/o pres or							
current with							
7 7							
.500(6)(c)Community structure							
 Vegetation and/or Benthic Community 	Plant cover within the right-o its associated stormwater m practices include the routine	f-way is nearly all comprised of anagement facilities (i.e., ditch maintenance within the right-or in the plant of	f invasive, e nes) has res of-way that n community.	exotic species. The ulted in habitat alt nay affect natural	e construction of US eration. Land mana recruitment or reger	8 98 and gement neraltion	
w/o pres or							
current with							
4 3							
Score = sum of above scores/30 (if	If preservation as mitigation	ation,		For impact asses	sment areas		
uplands, divide by 20)	FL = delta x acres =						
current					- 0.00		
	Adjusted mitigation delt	ta =		0.07 X 0.47	- 0.03		
0.53 0.47]						
	If mitigation		,		1		
			F	or mitigation asse	essment areas		
Delta = [with-current]	Time lag (t-factor) =						
-0.07	Risk factor =		RFG	= delta/(t-factor x	risk) =		

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)		Wetland 33 (Secondary Impacts)			
FLUCCs code	Further classifica	tion (optional)		Impact	t or Mitigation Site?	Assessment Area
630 – Wetland Forested Mixed	PF01/2C - Leaved/Needle	- Palustrine, Fores e-Leaved Deciduo Flooded	ested, Broad- lous, Seasonally Impact 0.33			Size (in acres) 0.33
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e. C	DFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplai	nds		
Within the right-of-way, Wetland system. A	d 33 is comprised of free cross drain that runs un	shwater marsh ha derneath US 98 c	bitat that extends connects this wetla	outside nd to c	e of the right-of-way into other wetland systems.	o a forested wetland
Assessment area description						
Dominant vegetation within the maidencane. The forested wetland	ne understory includes a d canopy consists of cyp equipme	alligatorweed and press and red may ent rutting through	torpedo grass with ple. The majority o nout the right-of-wa	h primr of Wetla ay.	ose willow, bahiagrass, and 33 appeared to be	, smartweed, and disturbed by truck and
Significant nearby features			Uniqueness (co landscape.)	nsideri	ng the relative rarity in	relation to the regional
Wetland 33 is located within the southbound US 98 right-of-way approximately 260 feet southeast of CR 54. Green Swamp WMA and Gat Creek Reserve located on northeast side of US 98.			r Not unique			
Functions			Mitigation for pre-	vious p	permit/other historic use)
Natural water storage and conve improvemen	eyance; foraging habita t; flood attenuation	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ctly observed, or	other signs such a	s track	s, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	itilization observed	1.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
S. Szatyari			9/24/2021			

Site/Project Name		Application Number	Asses	sment Area Name or Number		
US 98 from W Socrum Loop Rd	to CR 54 (FPID 436673-1)		,	Wetland 33 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:	Asses	Assessment date:		
Impac	ot	S. Szatyari		9/24/2021		
					(0)	
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4) Not Present	(0)	
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level of s	support of Condition is insuf	ficient to	
would be suitable for the	supports wetland/surface	ce maintain most wetland/surface water provide wetland/sur				
water assessed	water functions	functions water functions water functions				
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is a southbound US 98 right- however, wildlife access to a way fencing, US 98, and C	a forested wetland system adja of-way. Wetland and upland h and from habitats outside of th R 54. The adjacent uplands w ruderal species over	acent to CR 54. The abitats are availabl e assessment area vithin the right-of-wa rlaying fill material.	e assessment area is located a e outside of the assessment a a is limited by the presence of ay consist of mowed and main	at the area; right-of- tained	
current with						
5 4	1					
				¥		
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 20 reviews, the soils observed within Wetland 33 consisted of a dark surface with muck present. Hydrological ir observed included surface water and a high water table. Hydrologic conditions are affected by the adjacent and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US				021 field ndicators t US 98 S 98.		
current with						
7 7						
.500(6)(c)Community structure	Plant cover within the unders	tory is comprised of primorily i	nvacive exotic coo	cies with presence of nativo s	necies in	
 Vegetation and/or Benthic Community 	the canopy. The construct resulted in habitat alteration that may	tion of US 98 and its associate n. Land management practices y affect natural recruitment or r	ed stormwater man s include the routine regeneraltion in the	agement facilities (i.e., ditches e maintenance within the right plant community.	s) has of-way	
w/o pres or						
current with						
5 4						
Score = sum of above scores/30 (if	If preservation as mitiga	ation,	For im	pact assessment areas		
uplands, divide by 20)	Proponuction adjuster -	et factor -	FL	_ = delta x acres =		
current	Preservation adjustmen		0.07	v 0.22 - 0.02		
o 57 O 50	Adjusted mitigation delt	ta =	0.07	x 0.33 = 0.02		
0.57 0.50						
	If mitigation		F	ration apparent		
Delta = [with-current]			For mitig	auon assessment areas		
	l ime lag (t-factor) =			,		

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to CR	54 (FPID 436673-1)				Wetland 34 (See	condary Impacts)
FLUCCs code	Further classification	tion (optional)		Impac	t or Mitigation Site?	Assessment Area
621 - Cypress	PFO2C – Palu Decidu	istrine, Forested, ious, Seasonally I	Needle-LeavedSize (in acres)Flooded0.05			Size (in acres) 0.05
Basin/Watershed Name/Number A	ffected Waterbody (Cla	ss)	Special Classification	on (i.e. (OFW, AP, other local/state/federa	I designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hydro	logic connection with	wetlands, other s	urface water, uplar	nds		
Within the US 98 southbound right- way into	of-way, the assessme a forested wetland. T	ent area is compri he wetland outsid	sed of a freshwate e the right-of-way i	r mars s dom	sh habitat that extends o inated by cypress.	outside of the right-of-
Assessment area description						
	Dominant vegetati	on includes cypre	ss, torpedo <mark>gr</mark> ass,	maide	ncane.	
Significant nearby features			Uniqueness (cor	nsider	ing the relative rarity in	relation to the regional
The assessment area is located with approximately 0.1 mile southeast Swamp WMA and Gator Creek Res	nin the southbound U of Old Dade City Roa serve located on north 98.	S 98 right-of-way ad. The Green neast side of US			Not unique	
Functions			Mitigation for prev	/ious p	permit/other historic use)
Natural water storage and convey improvement;	ance; foraging habita flood attenuation	t; water quality	None			
Anticipated Wildlife Utilization Based that are representative of the assess be found)	on Literature Review ment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, ⁻ assessment area	ation b T, SS()	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading bird	ls, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliza	tion (List species dire	ctly observed, or	other signs such a	s tracł	ks, droppings, casings,	nests, etc.):
	Ν	lo evidence of wild	dlife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
A. Blakely			9/21/2021			

Site/Project Name		Application Number	Assessment Area	a Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)		Wetland 3	Wetland 34 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:	Assessment date	2		
Impac	ct	A. Blakely		9/21/2021		
	0					
Scoring Guidance	Optimal (10)	Moderate(7)	Minimai (4)	Not Present (0)		
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level of support of	Condition is insufficient to		
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 4 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is consists of the residential fa of the assessment area; how presence of right-of-way ac Water level indicators and a reviews, the assessment are Hydrologic conditions are a ditches). Soil erosion obser	a forested wetland located at f icilities that are bounded with f ever, wildlife access to and fro fencing, US 98, and residentia dversely affect the functions pr soil moisture appeared appropr a was inundated throughout w fected by the adjacent US 98 ved indicates alterations in po	the southbound US 98 right-of encing. Wetland and upland h om habitats outside of the ass al faclities. Invasive exotic spe ovided by the assessment are ovided by the assessment are vith water levels greater than s and its associated stormwater ints of discharge resulting fro	f-way. Adjacent land uses habitats are available outside essment area is limited by the cies are present that may ea. riation. During the 2021 field six inches and cypress knees. r management facilities (i.e., n the construction of US 98.		
w/o pres or current with 7 7		The wetland receive	s runoff from US 98.			
.500(6)(c)Community structure	Plant cover within the canon	v is appropriate: however, inv	asive/exotic species are prese	ant within the understory. The		
1. Vegetation and/or 2. Benthic Community w/o pres or current with	construction of US 98 and alteration. Land manageme	its associated stormwater ma ent practices include routine m recruitment or regeneraltion	anagement facilities (i.e., ditch naintenance within the right-of on in the plant community.	es) has resulted in habitat -way that may affect natural		
5 4	1					
, , , , , , , , , , , , , , , , , , ,						
Score = sum of above scores/30 (if	If preservation as mitig	ation,	For impact asses	ssment areas		
uplands, divide by 20)			FL = delta x	acres =		
current	Preservation adjustmer	nt factor =				
or w/o pres with	Adjusted mitigation del	ta =	0.07 x 0.05	= 0.003		
0.57 0.50	, lajaotoa miligation del					
	J					
	If mitigation		–	. 1		
Dolta - [with ourroat]	Time log (t feater) -		For mitigation ass	essment areas		
	Time lag (t-factor) =					
-0.07	Risk factor =		RFG = delta/(t-factor x	risk) =		

Site/Project Name		Application Number	٩r		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)	, approaction realing c			Wetland 35 (See	condary Impacts)
FLUCCs code	Further classifica	tion (optional)		Impact	or Mitigation Site?	Assessment Area
617 – Mixed Wetland Hardwoo	ds PFO1C – Palu Decidu	ustrine, Forested, ious, Seasonally F	, Broad-Leaved Impact Size (in acres) Flooded 0.07			Size (in acres) 0.07
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e. C	DFW, AP, other local/state/federa	al designation of importance)
Hillsborough River	Ш				None	
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplar	nds		
Within the US 98 southbound rig way into a fore	ht-of-way, the assessme sted wetland. The wetla	ent area is compri nd outside the rigl	sed of a freshwate ht-of-way consists	r mars of red	h habitat that extends on maple and Chinese tal	outside of the right-of- low.
Assessment area description						
	Dominant vegetatio	n within consists o	of red maple and C	hinese	e tallow.	
Significant nearby features			Uniqueness (cor	nsideri	ng the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-war approximately 0.4 mile southeast of Old Dade City Road. The Green Swamp WMA and Gator Creek Reserve located on northeast side of U 98.			Not unique			
Functions			Mitigation for prev	vious p	ermit/other historic use	9
Natural water storage and conv improvemen	eyance; foraging habita t; flood attenuation	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, ⁻ assessment area	ation by T, SSC)	y Listed Species (List s ۵), type of use, and inte	pecies, their legal ensity of use of the
Amphibians, wading b	pirds, tu <mark>rtles</mark> , small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	other signs such a	s track	s, droppings, casings,	nests, etc.):
	Ν	lo evidence of wild	llife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
A. Blakely			9/21/2021			

Site/Project Name		Application Number	Assessment A	rea Name or Number	
US 98 from W Socrum Loop	Rd to CR 54 (FPID 436673-1)		Wetla	nd 35 (Secondary Impacts)	
Impact or Mitigation		Assessment conducted by:	Assessment	ate:	
Im	pact	A. Blakely		9/21/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)	
indicator is based on what	Condition is optimal and fully	condition is less trian	Minimal level of support	of Condition is insufficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface water	
type of wetland or surface	water functions	wetland/surface water	functions	functions	
water assessed		functions			
.500(6)(a) Location and Landscape Support w/o pres or current with					
.500(6)(b)Water Environmen (n/a for uplands) w/o pres or current with 7 7	.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 for reviews, the assessment area was inundated throughout with water levels greater than six inches. Hydrologic condi are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosis observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receive runoff from US 98.				
.500(6)(c)Community structur	e Diant course is a mix of both r		ico. The construction of L	00 and its accorded starmuster	
 Vegetation and/or Benthic Community 	management facilities (i.e maintenance within the i	ative and exotic/invasive spec e., ditches) has resulted in habi right-of-way that may affect nat	tat alteration. Land manag ural recruitment or regene	ement practices include routine raltion in the plant community.	
w/o pres or					
current with					
5 4					
· · · · · · · · · · · · · · · · · · ·	//r	-ti	- · ·		
Score = sum of above scores/30	(If If preservation as mitig	ation,	For impact a	ssessment areas	
uplanus, divide by 20)	Preservation adjustme	nt factor =	FL = de	ta x acres =	
current			0.07	07 - 0.005	
pr w/o pres with	Adjusted mitigation del	ta =	0.07 x 0	0' = 0.005	
0.57 0.50			L		
·					
	If mitigation		For mitiaction	assassment areas	
Delta = [with-current]	Time lag (t-factor) =		For mugation		
			RFG = delta/(t-facto	r x risk) =	
-0.07	Risk factor =				

Cite/Ducient Name	ulication Number			an Numban		
Site/Project Name Ap	plication Number	1	Assessment Area Name			
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)			Wetland 36 (Se	condary Impacts)		
FLUCCs code Further classification	n (optional)	In	npact or Mitigation Site?	Assessment Area		
PEO1C – Palustr	rine Forested	Broad-Leaved	.p	Size (in acres)		
617 - Mixed Wetland Hardwoods Deciduous	s, Seasonally F	Flooded	Impact	0.07		
		<u> </u>				
Basin/Watershed Name/Number Affected Waterbody (Class)		Special Classification	(i.e. OFW, AP, other local/state/federation	al designation of importance)		
Hillsborough River III			None			
Geographic relationship to and hydrologic connection with we	tlands, other su	urface water, upland	S			
The assessment	area is compri	sed of a forested we	etland.			
Assessment area description						
The forested wetland cons	sisted of red ma	aple, water oak, and	Chinese tallow.			
Significant nearby features		Uniqueness (cons	idering the relative rarity in	relation to the regional		
The approximate tree is leasted within the southhound LIC O	9 right of way	landscape.)				
approximately 0.5 mile southeast of Old Dade City Road.	o fight-of-way The Green					
Swamp WMA and Gator Creek Reserve located on northeast	st side of US		Not unique			
98.						
Functions		Mitigation for previo	ous permit/other historic use	e		
Natural water storage and conveyance; foraging habitat; w	ater quality	None				
improvement, nood attenuation						
Anticipated Wildlife Utilization Based on Literature Review (Lis	st of species	Anticipated Utilizati	on by Listed Species (List s	species, their legal		
that are representative of the assessment area and reasonable	ly expected to	classification (E, T,	SSC), type of use, and inte	ensity of use of the		
be lound)		assessment area)				
	•	l ittle Blue Heron	(ST foraging): Tricolored	Heron (ST forgaing):		
Amphibians, wading birds, turtles, small mamma ^l	ls	Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging);				
		Everglade Snail Kite (FE, foraging)				
Observed Evidence of wildlife Oulization (List species directly	observed, or c	biner signs such as	tracks, droppings, casings,	nesis, elc.):		
No e	vidence of wild	llife observed.				
Additional relevant factors:						
	None.					
	-					
Assessment conducted by:		Assessment date(s):			
A Dialcali		0/04/0004				

Site/Project Name		Application Number	Assess	sment Area I	Name or Number	
US 98 from W Socrum Loop Rd	I to CR 54 (FPID 436673-1)			Wetland 36 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:	Assess	Assessment date:		
Impac	ot	A. Blakely		9/21/2021		
Scoring Guidance	Ontimal (10)	Moderate(7)	Minimal (/	4)	Not Present (0)	
The scoring of each		Condition is less than	aminiai (4	• <i>y</i>	Not i resent (0)	
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level of su	upport of	Condition is insufficien	nt to
type of wetland or surface	water functions	wetland/surface water	functions		water functions	ace
water assessed		functions				
.500(6)(a) Location and Landscape Support The assessment area is a forested wetland. The assessment area is located at the southbound US 98 r Adjacent land uses consists of the residential facilities that are bounded with fencing. Wetland and upland available outside of the assessment area; however, wildlife access to and from habitats outside of the assessment area; however, wildlife access to and from habitats outside of the area is limited by the presence of right-of-way fencing, US 98, and residential facilities. Invasive exotic so present that may adversely affect the functions provided by the assessment area. .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the reviews, the assessment area was inundated throughout with water levels greater than six inches, liverwor mats. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater managem (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construe 98. The wetland receives runoff from US 98.					abound US 98 right-of-w land and upland habitat outside of the assessme vasive exotic species a nent area. ation. During the 2021 f inches, liverworts, and vater management facil from the construction of	way. ts are leent are field lalgal lities f US
w/o pres or current with						
7 7						
.500(6)(c)Community structure						
 Vegetation and/or Benthic Community 	Plant cover consists of a mix stormwater management fac routine maintenance within th	of both native and invasive/ex ilities (i.e., ditches) has resulte ne right-of-way that may affect	cotic species. The c ed in habitat alteration natural recruitment	construction on. Land ma or regenera	of US 98 and its associon anagement practices included in the plant community of the plant	ciated clude unity.
w/o pres or						
current with	4					
5 4						
_						
Score = sum of above scores/30 (if	If preservation as mitig	ation,	For im	pact assess	ment areas	
uplands, divide by 20)	Preservation adjustmen	at factor =	FI	L = delta x a	acres =	
current	Freservation aujustmer	IL IAUUI -	0.07	V 0.07	- 0.005	
0.57 0.50	Adjusted mitigation del	ta =	0.07	x 0.07	- 0.005	
0.50	<u></u>					
	If mitigation		For mitic	nation asses	ssment areas	
Delta = [with-current]	Time lag (t-factor) =			30001 00060		
-0.07	Risk factor =		RFG = delta/	(t-factor x ris	sk) =	

Site/Project Name		Application Number	ar		Assessment Area Name	or Number
		Application Numbe	51			
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 37 (See	condary impacts)
FLUCCs code	Further classification	tion (optional)		Impac	t or Mitigation Site?	Assessment Area
	PF01/2C -	- Palustrine, Fores	sted, Broad-			Size (in acres)
630 – Wetland Forested Mixe	d Leaved/Needl	e-Leaved Deciduo Flooded	ous, Seasonally		Impact	0.16
		Tibbaca	.			
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ion (i.e.	OFW, AP, other local/state/federa	al designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, upla	nds		
	g	,	,			
The	e assessment area is co	mprised of a fores	sted wetland within	an im	proved pasture.	
Assessment area description						
т	he forested wetland con	sisted of red map	e, water oak, cypr	ess, a	nd wax myrtle.	
			-,			
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional
Significant nearby leatures			landscape.)		•	
The assessment area is located w	vithin the southbound U	S 98 right-of-way			N ()	
approximately 0.4 mile northwest Gator Creek Reserve loc	of SR 471. The Green S ated on northeast side c	of US 98			Not unique	
Functions			Mitigation for pre	vious	permit/other historic use	9
Natural water storage and conv	eyance; foraging habita	t; wat <mark>er</mark> quality	None			
improvemen						
Anticipated Wildlife Utilization Base	ed on Literature Review	(List of species	Anticipated Utiliz	ation b	y Listed Species (List s	pecies, their legal
that are representative of the asse	ssment area and reasor	nably expected to	classification (E,	T, SS(C), type of use, and inte	nsity of use of the
			assessment area	•)		
			Little Blue Her	on (ST	, foraging); Tricolored I	Heron (ST, foraging);
Amphibians, wading b	oirds, tu <mark>rtles</mark> , small mam	mals	Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging);			Stork (FT, foraging);
			Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	l other signs such a	is tracl	s droppings casings	nests, etc.).
	(<u>_</u> cp = 0.00 a c		ellier elgile edelle		,	
	Ν	lo evidence of wild	llife observed.			
Additional relevant factors:						
		Nono				
		none	•			
Assessment conducted by:			Assessment data	a(s).		
			0/21/2024	(3).		
A. DIANEIY			9/21/2021			

Site/Project Name		Application Number	Assessment A	rea Name or Number	
US 98 from W Socrum Loop F	Rd to CR 54 (FPID 436673-1)		Wetland	37 (Secondary Impacts)	
Impact or Mitigation		Assessment conducted by:	Assessment d	date:	
Impa	act	A. Blakely		9/21/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)	
The scoring of each		Condition is less than			
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level of support of	of Condition is insufficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface	
type of wetland or surface	water functions	wetland/surface water	functions	water functions	
water assessed		functions			
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 4 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a fo Adjacent land uses consists are available outside of assessment area is limited species are prese Water level indicators and s reviews, the assessment conditions are affected by t	orested wetland. The assessment of the residential facilities that the assessment area; however by the presence of right-of-way and that may adversely affect th oil moisture appeared appropri area was inundated throughou he adjacent US 98 and its ass	ent area is located at the so t are bounded with fencing. ar, wildlife access to and fro fencing, US 98, and resid the functions provided by the interfunctions provided by the ut with water levels greater ociated stormwater manage	buthbound US 98 right-of-way. Wetland and upland habitats m habitats outside of the ential faclities. Invasive exotic e assessment area. Variation. During the 2021 field than six inches. Hydrologic ement facilities (i.e., ditches).	
w/o pres or current with 7 7	Soli erosion observed ind	cates alterations in points of d wetland receives ru	ischarge resulting from the unoff from US 98.	construction of US 98. The	
.500(6)(c)Community structure					
 Vegetation and/or Benthic Community 	Plant cover is comprise construction of US 98 and alteration. Land manageme	d of mostly desirable/appropria its associated stormwater ma nt practices include routine ma recruitment or regeneraltio	ate species with some inva- nagement facilities (i.e., dite aintenance within the right-o n in the plant community.	sive species present. The ches) has resulted in habitat of-way that may affect natural	
current with					
With	-				
6 5					
Sooro = oum of chours accred/20	if If proconvotion on mitig	ation	Ear impact ass	ossmont aroas	
uplands, divide by 20)	in preservation as milig	auon,	i or impact ass	Coontil altao	
	Preservation adjustment	nt factor =	FL = delta	x acres =	
current	· · ·		0.07 . 0	16 - 0.01	
or w/o pres with	Adjusted mitigation del	ta =	0.07 X 0.	io = U.U I	
0.60 0.53			L		
·	_				
	If mitigation		For mitiantic	accoment ereas	
Delta = [with_current]	Time lag (t-factor) -		For mitigation as	sessment areas	
-0.07	Risk factor =		RFG = delta/(t-factor	x risk) =	

Site/Project Name	Application Number	er Assessment Area Name or Number			or Number	
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)				Wetland 38 (See	condary Impacts)
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area
: 630 – Wetland Forested Mixe	PFO1/2C – d Leaved/Needle	- Palustrine, Fores e-Leaved Deciduo Flooded	sted, Broad- ous, Seasonally		Impact	Size (in acres) 0.24
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e. (OFW, AP, other local/state/federa	I designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplai	nds		
The assessment area is comprised	l of a forested wetland v 38	vithin an improved to other offsite we	d pasture. A cross etland systems.	drain	that runs underneath U	S 98 connects Wetland
Assessment area description						
The fores	ted wetland adjacent to	the right-of-way c	consists of red map	ole, wa	ter oak, and cypress.	
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right- approximately 0.1 mile northwest of SR 471. The Green Swamp WM Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for pre-	vious p	permit/other historic use)
Natural water storage and convo improvemen	eyance; foraging habita t; flood attenuation	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ctly observed, or	other signs such a	s tracł	ks, droppings, casings,	nests, etc.):
	Evidence of wi	Idlife observed we	ere small fish and t	tadpol	es.	
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
A. Blakely			9/21/2021			

Site/Project Name		Application Number		Assessment Area	a Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 38 (Secondary Impacts)		cts)	
Impact or Mitigation		Assessment conducted by:	,	Assessment date:			
Impac	ot	A. Blakely			9/21/2021		
						(
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)	
indicator is based on what	Condition is optimal and fully	optimal but sufficient to	Minimal lev	vel of support of	Condition is insuf	ficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/	surface	
type of wetland or surface	water functions	wetland/surface water	fui	nctions	water function	ons	
water assessed		functions					
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 4	The assessment area is a fo Adjacent land uses consists are available outside of assessment area is limited species are prese	rested wetland. The assessme of the residential facilities that the assessment area; howeve by the presence of right-of-wa ent that may adversely affect th	ent area is lo t are bounder er, wildlife act y fencing, US le functions p	cated at the sout d with fencing. W cess to and from \$ 98, and improve provided by the as	hbound US 98 right /etland and upland habitats outside of ed pasture. Invasive ssessment area.	t-of-way. habitats the e exotic	
 .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 for reviews, the assessment area showed high water table, dark surfaces, liverworts, and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditche Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. 					021 field ologic itches). 3. The		
7 7							
, , , , , , , , , , , , , , , , , , , ,							
.500(6)(c)Community structure							
 Vegetation and/or Benthic Community 	Plant cover within the canc within the understory. The co has resulted in habitat alter that may	py is comprised of desirable/a onstruction of US 98 and its as ation. Land management prac / affect natural recruitment or r	ppropriate sp sociated stor tices include regeneraltion	pecies. Invasive/e rmwater manage routine maintena in the plant com	exotic species are p ment facilities (i.e., ance within the right munity.	oresent ditches) -of-way	
w/o pres or							
current with	4						
5 4							
II							
	ı r		-				
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	F	For impact asses	sment areas		
uplands, divide by 20)	Preservation adjustment	nt factor =		FL = delta x	acres =		
current							
or w/o pres with	Adjusted mitigation del	ia =		0.07 x 0.24	= 0.02		
0.57 0.50			L				
	J						
	If mitigation		-				
Dolta - [with ourroat]	Time lac /t feator) -		Fo	or mitigation asse	essment areas		
	Time lag (t-factor) =						
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =		

Cite/Drois et Norre		Application Number		L		an Numah an
		Application Number	Motiond 20 (Secondary Imposto)			
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 39 (Se	condary Impacts)
FLUCCs code	Further classification	tion (optional)		Impact	or Mitigation Site?	Assessment Area
	PEM1C - Pa	alustrine, Emerger	nt, Persistent,			Size (in acres)
641 - Freshwater Marsh		Seasonally Floode	ed		Impact	0.23
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e. O	FW, AP, other local/state/federa	al designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, uplar	nds		
The assessm	ent area is comprised of	f a freshwater mar	sh habitat that ext	ends o	utside of the right-of-w	ay.
Assessment area description						
Dominant vegetatio	n within this wetland co	nsists of foxtail ise	eshan beakrush n	rimrose	willow and blue main	lencane
Borninant Vogotate			obali, beakieoli, p	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Significant nearby features			Uniqueness (collandscape.)	nsiderir	ng the relative rarity in	relation to the regional
The assessment area is located v	vithin the southbound U	S 98 right-of-way				
approximately 0.4 mile southeast	of SR 471. The Green S	Swamp WMA and			Not unique	
Galor Creek Reserve loc		03 98.				
Functions			Mitigation for pre-	vious p	ermit/other historic use	9
Natural water storage and conv	vevance: foraging habita	t: water quality				
improvemen	nt; flood attenuation	,	None			
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utilization by Listed Species (List species, their legal			
that are representative of the asserted to the asserted by found by the found by th	ssment area and reasor	nably expected to	classification (E, T, SSC), type of use, and intensity of use of the			
				()		
			Little Blue Her	on (ST,	foraging); Tricolored I	Heron (ST, foraging);
Amphibians, wading l	oirds, turtles, small mam	mals	Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging);			
			Evergiade Shall Nite (FE, loragilig)			
Observed Evidence of Wildlife Util	ization (List species dire	ectly observed, or	other signs such a	is tracks	s, droppings, casings,	nests, etc.):
	Ν	lo evidence of wild	dlife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
A. Blakely			9/21/2021	. /		
,			-			

Site/Project Name		Application Number	Assessment /	Area Name or Number			
US 98 from W Socrum Loop Ro	I to CR 54 (FPID 436673-1)		Wetlan	d 39 (Secondary Impacts)			
Impact or Mitigation		Assessment conducted by:	Assessment	late:			
	tr	A Blakely		9/21/2021			
				0,2,1,202,1			
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)			
The scoring of each		Condition is less than					
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface			
type of wetland or surface	water functions	wetland/surface water	wetland/surface water functions water functions				
water assessed		functions					
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is a located at the southbound U fencing. Wetland and upland from habitats outside of the a pasture. Invasive exotic sp	n herbaceous wetland that ext S 98 right-of-way. Adjacent lar I habitats are available outside issessment area is limited by t ecies are present that may ad are	ends beyond the right-of-w d uses consists of improv e of the assessment area; he presence of right-of-wa versely affect the functions a.	vay. The assessment area is ed pasture that is bounded with nowever, wildlife access to and y fencing, US 98, and improved provided by the assessment			
current with							
5 4							
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 20 reviews, the assessment area showed dark surfaces and muck. Hydrologic conditions are affected by the ar US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates all in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 9				variation. During the 2021 field is are affected by the adjacent n observed indicates alterations ceives runoff from US 98.			
w/o pres or							
current with							
7 7							
.500(6)(c)Community structure	Majority of plant cover is cor	nprised of invasive, exotic spe	cies with few desirable/ap	propriate species present. The			
2. Benthic Community	construction of US 98 and alteration. Land manageme	its associated stormwater maint practices include routine maint practices include routine mainter recruitment or regeneraltio	nagement facilities (i.e., di aintenance within the right n in the plant community.	tches) has resulted in habitat of-way that may affect natural			
w/o pres or							
current with							
4 3							
II.							
Seere = sum of shour seeres/20 /if	If properties as mitig	ation	Ear impact on	accoment cross			
uplands, divide by 20)			FL = delt				
current	Preservation adjustment factor = FL = delta x acres =						
or w/o pres with	Adjusted mitigation del	ta =	0.07 x 0	.23 = 0.02			
0.53 0.47			L				
	If mitigation						
Delta = [with-current]	Time lag (t-factor) =		For mitigation a	ssessment areas			
			REG = dolta//t facto	r v risk) =			
-0.07	Risk factor =			1 A 119K) -			

Site/Project Name		Application Number	er		Assessment Area Name o	or Number
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)				Wetla	and 40
FLUCCs code	Further classification	ition (optional)	1	Impact	t or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed Impact 0.11			Size (in acres) 0.11
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e. C	DFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	ologic connection with	wetlands, other s	urface water, uplan	ds		
The assessment area is comprised	d of a freshwater marsh forested wet	habitat that exten land dominated by	nds outside of the r y red maple and cy	ight-o press	f-way approximately 25	feet before abutting a
Assessment area description						
Dominant vegetation within th	is wetland consists of V	West Indian marsl	ngrass, alligatorwee	ed, tor	rpedo grass, maidencar	ne, and soft rush.
Significant nearby features			Uniqueness (con landscape.)	nsideri	ng the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-w approximately 0.5 mile southeast of SR 471. The Green Swamp WMA a Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious p	permit/other historic use	•
Natural water storage and conve improvement	yance; foraging habita ; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, T assessment area)	ition b <u>i</u> F, SSC	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading bi	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ctly observed, or	other signs such as	s track	s, droppings, casings, ı	nests, etc.):
	Evidence of wild	life observed with	in the wetland inclu	ıded fr	rogs.	
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date((s):		
A. Blakely			9/21/2021			

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)		Wetland 40			
Impact or Mitigation		Assessment conducted by:		Assessment date	:	
Impa	ct	A. Blakely			9/21/2021	
		,				
Scoring Guidance	Optimal (10)	Moderate(7)	Mii	nimal (4)	Not Present	(0)
The scoring of each		Condition is less than	N			
indicator is based on what would be suitable for the	supports wetland/surface	optimal, but sufficient to maintain most	wetland	vel of support of /surface water	provide wetland	ficient to
type of wetland or surface	water functions	wetland/surface water functions water functions				ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current with 6 5	The assessment area is a located at the southbound U fencing. Wetland and uplanc from habitats outside of the pasture. Invasive exotic sp	n herbaceous wetland that ext S 98 right-of-way. Adjacent lar I habitats are available outside a assessment area is limited b ecies are present that may ad are	ends beyond d uses cons e of the asse y the presen versely affect a.	d the right-of-way. sists of improved p ssment area; how ce of right-of-way t the functions pro	. The assessment a basture that is bour vever, wildlife acces fencing, US 98, im bvided by the asses	area is nded with ss to and proved ssment
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 7	Water level indicators and s reviews, the assessment are fence posts. Hydrologic con facilities (i.e., ditches). S con	oil moisture appeared appropr ea was inundated throughout, ditions are affected by the adja Soil erosion observed indicates nstruction of US 98. The wetla	iate conside displayed el acent US 98 s alterations and receives	ering seasonal var evated lichen line: and its associate in points of disch runoff from US 9	iation. During the 2 s, and high water n d stormwater mana arge resulting from 8.	2021 field harks on agement the
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover is comprise associated stormwater ma practices include routine ma	d of both desirable and invasiv nagement facilities (i.e., ditche intenance within the right-of-w the plant co	ve, exotic sp es) has resul ray that may ommunity.	ecies. The constru ted in habitat alter affect natural rec	uction of US 98 and ration. Land manag ruitment or regener	d its jement raltion in
w/o pres or						
current with						
5 4						
	l					
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.60 0.53	If preservation as mitigated Preservation adjustmer Adjusted mitigation delt	ation, nt factor = ta =		For impact assess FL = delta x 0.07 x 0.11	sment areas acres = = 0.01	
	If mitigation		F	or mitigation asse	ssment areas	
	Time lag (t-factor) =		DEC	= delta//t factor v	risk) =	
-0.07	Risk factor =		KFG		115r <i>)</i> -	

Site/Project Name		Application Number	er	L	Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)	, pp. oddon Humbe	Wetland 41 (Secondary Impacts			condary Impacts)
FLUCCs code	Further classifica	tion (optional)		Impact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	ed Size (in acres			Size (in acres) 0.07
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e. C	DFW, AP, other local/state/federa	al designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplar	nds		
The assessment area is comprised	l of a freshwater marsh wetland. The fore	habitat that exten sted wetland cons	ds outside of the ri sists of red maple a	ight-of- and cyp	way approximately 25	feet abutting a forested
Assessment area description						
Dominant vegetation within this w	etland consists of torpe	do grass with red	maple saplings, an	rowhea	ad, maidencane, alligat	orweed, and soft rush.
Significant nearby features			Uniqueness (cor landscape.)	nsideri	ng the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-w approximately 0.6 mile southeast of SR 471. The Green Swamp WMA a Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious p	permit/other historic use	9
Natural water storage and conv improvemen	eyance; foraging habita t; flood attenuation	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b <u>y</u> T, SSC)	y Listed Species (List s), type of use, and inte	pecies, their legal Insity of use of the
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	other signs such a	s track	s, droppings, casings,	nests, etc.):
	Ν	lo evidence of wild	dlife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
A. Blakely			9/21/2021			

Site/Project Name		Application Number	Assessment Are	a Name or Number	
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)		Wetland 4	1 (Secondary Impacts)	
Impact or Mitigation		Assessment conducted by:	Assessment date	e:	
Impa	ct	A. Blakely		9/21/2021	
	0				
Scoring Guidance	Optimal (10)	Moderate(7) Condition is less than	Minimal (4)	Not Present (0)	
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level of support of	Condition is insufficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface	
type of wetland or surface	water functions	wetland/surface water	functions	water functions	
water assessed		functions			
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 5 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a located within the southbou with fencing. Wetland and u and from habitats outside of pasture, and forested wetland water level indicators and reviews, the assessment an	an herbaceous wetland that ex nd US 98 right-of-way. Adjace pland habitats are available or the assessment area is limiter d. Invasive exotic species are the assess soil moisture appeared approp rea was inundated throughout,	tends beyond the right-of-way in land uses consists of impro- utside of the assessment area d by the presence of right-of present that may adversely a ment area.	y. The assessment area is byved pasture that is bounded a; however, wildlife access to vay fencing, US 98, improved ffect the functions provided by ariation. During the 2021 field es, and high water marks on	
w/o pres or current with 7 7 500(6)(c)Community structure	fence posts. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.				
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with					
<u> </u>	•				
Score = sum of above scores/20 /if	If preservation as mitig	ation	For impact asso	ssment areas	
uplands, divide by 20)	ii preservation as miliga				
current	Preservation adjustment factor =				
or w/o pres with	Adjusted mitigation dat	$0.07 \times 0.07 = 0.005$			
0.57 0.50	Aujusted miligation del	ia –			
5.00]				
	If mitigation		_		
Delta = [with_current]	Time lag (t-factor) -		For mitigation ass	essment areas	
	1 iiiie iag (1-iacioi) -				
-0.07	Risk factor =		RFG = delta/(t-factor x	risk) =	

Site/Project Name		Application Number	ar.		Assessment Area Name	or Number
		Application Numbe	51	Wotland 42 (Secondary Impacts)		
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				vvetland 42 (See	condary impacts)
FLUCCs code	Further classification	tion (optional)		Impac	t or Mitigation Site?	Assessment Area
	PF01/2C -	- Palustrine, Fores	sted, Broad-Size (i			Size (in acres)
630 – Wetland Forested Mixe		e-Leaved Deciduo Flooded	ous, Seasonally		Impact	0.43
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ion (i.e.	OFW, AP, other local/state/federa	al designation of importance)
Hillsborough River		,			None	a designation of importance)
Geographic relationship to and hy-	drologic connection with	wetlands, other s	urface water, upla	nds		
The assessment ar	ea is comprised of a fore	ested wetland adja	acen t to a primros	se willo	ow-dominated freshwate	r marsh.
Assessment area description				-		
The forested watland consists of	Fred menle and every	Dominantwarate	tion within the un	doroto	nu concieto of primreces	villow with pottoil and
	rieu maple and cypress	pickerelw	/eed	Jersion		willow with cattall, and
		-		un a i el a u	ing the velotion venity in	volotion to the version of
Significant nearby features			landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located	within the southbound U	S 98 right-of-way				
approximately 0.8 mile southeast	of SR 471. The Green S	Swamp WMA and			Not unique	
Gator Greek Reserve loc	ated on northeast side c	of US 98.				
Functions			Mitigation for pre	vious	permit/other historic use)
Natural water storage and conv improvement	veyance; foraging habita	t; water quality			None	
Improvemen	n, nood allendation					
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliz	ation b	by Listed Species (List s	pecies, their legal
be found)	essment area and reason	lably expected to	classification (E, 1, SSC), type of use, and intensity of use of the assessment area)			
			Little Blue Her	on (ST	Γ, foraging); Tricolored I	Heron (ST, foraging);
Amphibians, wading i	birds, turties, small mam	mais	Everalade Snail Kite (FE, foraging);			
						5 5,
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such a	is tracl	ks, droppings, casings,	nests, etc.):
	Ν	lo evidence of wild	dlife observed.			
Additional relevant factors:						
		Ness				
		None				
Assessment conducted by:			Assessment date	e(s):		
A. Blakely			9/21/2021	. /		

Site/Project Name		Application Number	As	ssessment Area	a Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 42 (Secondary Impacts)			
Impact or Mitigation		Assessment conducted by:	As	ssessment date	:		
Impac	ct	A. Blakely		9/21/2021			
Scoring Guidance	Optimal (10)	Moderate(7)	Minir	mal (4)	Not Present (0)		
The scoring of each indicator is based on what would be suitable for the	Condition is optimal and fully supports wetland/surface	Condition is less than optimal, but sufficient to maintain most	andition is less than mal, but sufficient to maintain most Minimal level of support of wetland/surface water provide wetland/surf				
type of wetland or surface	water functions	wetland/surface water functions water functions					
water assessed		functions					
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a consists of improved pasture assessment area; howeve f presence of right-of-way present tha	a forested wetland located at th e that is bounded with fencing. r, wildlife access to and from h fencing, US 98, improved past t may adversely affect the fund	ne southbound Wetland and u labitats outside ure, and forest ctions provided	US 98 right-of- upland habitats of the assessn ted wetland. Inv d by the assessr	way. Adjacent land uses are available outside of the nent area is limited by the asive exctic species are nent area.		
6 5							
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with	Water level indicators and s reviews, the assessment area fence posts. Hydrologic con facilities (i.e., ditches). S con	oil moisture appeared appropr a displayed elevated lichen linu ditions are affected by the adja Soil erosion observed indicate nstruction of US 98. The wetla	riate considerir es, surface wai acent US 98 ar s alterations in and receives ru	ng seasonal var ter, dark surface nd its associate points of dischaunoff from US 96	iation. During the 2021 field es, and high water marks or d stormwater management arge resulting from the 8.		
.500(6)(c)Community structure							
1. Vegetation and/or 2. Benthic Community w/o pres or current with	The canopy consists of appro exotic species with few o stormwater management include routine maintenance	opriate species. Nearly all of p lesirable/appropriate species p facilities (i.e., ditches) has res e within the right-of-way that m comm	lant cover with present. The co ulted in habitat ay affect natur unity.	in the underssto onstruction of U t alteration. Land ral recruitment o	ory is comprised of invasive, S 98 and its associated d management practices or regeneraltion in the plant		
4 3	1						
- 5							
					a		
Score = sum of above scores/30 (if uplands divide by 20)	If preservation as mitigation	ation,	Fo	or impact assess	sment areas		
current	Preservation adjustmer	nt factor =		FL = delta x a	acres =		
or w/o pres with	Adjusted mitigation delt	ia =	0.	.07 x 0.43	= 0.03		
0.57 0.50							
	If mitigation						
Delta = [with-current]	Time lag (t-factor) =		For	mitigation asse	ssment areas		
0.07			RFG = o	delta/(t-factor x	risk) =		
-0.07	RISK factor =		_	,	,		

Site/Project Name Application Number				r Assessment Area Name or Number			
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)		Wetland 43			and 43	
FLUCCs code	Further classification	ation (optional)		Impact	or Mitigation Site?	Assessment Area	
621 - Cypress	PFO2C - Palu [istrine, Forested, Deciduous, Cypres	Needle-Leaved Impact Size (in acres 955			Size (in acres) 0.22	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ion (i.e. O	FW, AP, other local/state/federa	al designation of importance)	
Hillsborough River					None		
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, uplar	nds			
	The assessm	ent area is compr	ised of a forested	wetland	1.		
Assessment area description							
Dominant vegetation w	ithin this wetland consis	ts of cypress. The	understory include	es torpe	edo grass, pickerelwee	ed, soft rush.	
Significant nearby features			Uniqueness (co landscape.)	onsiderir	ng the relative rarity in	relation to the regional	
The assessment area is located within the southbound US 98 right-of-w approximately 0.9 mile southeast of SR 471. The Green Swamp WMA a Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for pre-	vious p	ermit/other historic use	9	
Natural water storage and conv improvemer	veyance; foraging habita ht; flood attenuation	ıt; wat <mark>er</mark> quality	None				
Anticipated Wildlife Utilization Bas that are representative of the asse be found)	ed on Literature Review essment area and reason	(List of species nably expected to	Anticipated Utiliza classification (E, assessment area	ation by T, SSC a)	/ Listed Species (List s), type of use, and inte	pecies, their legal ensity of use of the	
Amphibians, wading b	birds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Util	ization (List species dire	ectly observed, or	other signs such a	as tracks	s, droppings, casings,	nests, etc.):	
	Ν	lo evidence of wild	dlife observed.				
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	e(s):			
А. ЫАКЕІУ			9/21/2021				

Site/Project Name		Application Number	Assessment Ar	ea Name or Number		
US 98 from W Socrum Loop Rd	to CR 54 (FPID 436673-1)		Wetland 43			
Impact or Mitigation		Assessment conducted by:	Assessment da	te:		
Impac	t	A. Blakely		9/21/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
I he scoring of each indicator is based on what	Condition is optimal and fully	Condition is less than optimal, but sufficient to	Minimal level of support of	Condition is insufficient to		
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		TUTICUOTIS				
.500(6)(a) Location and Landscape Support	The assessment area is a consists of improved pasture assessment area; however presence of right-of-way ad	a forested wetland located at the that is bounded with fencing. r, wildlife access to and from h fencing, US 98, and improved	ne southbound US 98 right-o Wetland and upland habitat abitats outside of the assess pasture. Invasive exotic spe outled by the assessment at	f-way. Adjacent land uses s are available outside of the sment area is limited by the cies are present that may ea		
w/o pres or				G d.		
current With						
5 4						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or	Water level indicators and s reviews, the assessment are and its associated stormwa points of discharge re	oil moisture appeared appropries was inundated throughout. ater management facilities (i.e. sulting from the construction of a substruction of	riate considering seasonal va Hydrologic conditions are aff , ditches). Soil erosion obse f US 98. The wetland receiv	ariation. During the 2021 field ected by the adjacent US 98 rved indicates alterations in /es runoff from US 98.		
current with						
7 7						
.500(6)(c)Community structure	The canopy is comprised	of appropriate species. Major	itv of plant cover within the ι	nderstory is comprised of		
 Vegetation and/or Benthic Community 	invasive, exotic species associated stormwater ma practices include routine ma	with few desirable/appropriate nagement facilities (i.e., ditche intenance within the right-of-w the plant co	e species present. The cons is) has resulted in habitat alt vay that may affect natural re ommunity.	truction of US 98 and its eration. Land management cruitment or regeneraltion in		
w/o pres or			·			
current with						
5 4						
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	For impact asse	ssment areas		
uplands, divide by 20)	Preservation adjustmor	nt factor =	FL = delta	cacres =		
current			0.07 v 0.2	2 = 0.01		
	Adjusted mitigation del	ta =	0.07 X 0.2	- 0.01		
0.50						
	If mitigation		For mitigation and	ossmont aroas		
Delta = [with-current]	Time lag (t-factor) =					
-0.07	Risk factor =		RFG = delta/(t-factor	k risk) =		

		, application realined	21			
LIS 98 from W Socrum Loop Rd to CR 54 (EPID 436673-1)				Wetland 11 (Secondary Impacts		
	(1 FID 430073-1)					condary impacts)
FLUCCs code	Further classifica	tion (optional)		Impact of	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	llustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.48
Basin/Watershed Name/Number Affect	ed Waterbody (Clas	ss)	Special Classification	ON (i.e. OF	FW, AP, other local/state/federa	al designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hydrologi	c connection with	wetlands, other s	urface water, uplar	nds		
The assessment area is comprised of a t 25 feet so	freshwater marsh uth before abutting	habitat that exten g a forested wetla	ds outside of the ri nd dominated by re	ight-of-v ed map	way. The freshwater m le and cypress.	narsh continues beyond
Assessment area description						
Dominant vegetation within this wetlan	d consists of allig	atorweed, torpedo water hys	o grass, primrose w ssop.	villow, n	naidencane, buttownw	rood, arrowhead, and
Significant nearby features			Uniqueness (cor	nsiderin	g the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way approximately 0.9 mile northwest of the Duke Energy utility easement. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			, Not unique			
Functions			Mitigation for prev	vious pe	ermit/other historic use	9
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			None			
Anticipated Wildlife Utilization Based on that are representative of the assessmer be found)	Literature Review It area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation by T, SSC))	Listed Species (List s), type of use, and inte	pecies, their legal ensity of use of the
Amphibians, wading birds, t	urtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utilization	(List species dire	ctly observed, or	other signs such as	s tracks	, droppings, casings,	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s) [.]		
	onducted by: Assessment date(s): 9/21/2021					

US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1) Wetland 44 (Secondary Impacts) Impact or Mitigation Assessment conducted by: Assessment conducted by: A Blakely Assessment date: 9/21/2021 Socring Guidance Under the socration of each indicator is based on what type of wetland or surface water functions Optimal (10) Moderate(7) Minimal (4) Not Present (0) Socring Guidance would be subted for the type of wetland or surface water functions Condition is sets that functions Minimal level of support of condition is insufficient maintain more water functions Condition is insufficient functions Condition is insufficient functions Soci6(s)(a) Location and Landscape Support The assessment area is an horbaccous wetland that extends beyond the right-of-way. The assessment area is incated at the southbound US 98 right-of-way. Adjacent land uses consists of undeweloped land with fearing. We estimate the southbound US 98 right-of-way. Adjacent land uses consists of undeweloped land with fearing. We pres or current 500(6)(a)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 fit reviews, the assessment area was inundated thoruginout. Hydrologic conditions are affected by the adjacent US 39. The wetland receives runoff from US 98. % pres or current Najority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated atormwater management facities (a, diftee), the adjacent US	Site/Project Name		Application Number	ļ	Assessment Area	a Name or Number		
Impact or Mitigation Assessment conducted by: Assessment date: 9/21/2021 Scoring Guidance The scoring of each indicator is based on what would be suitable for the per of welland or surface water assessed Optimal (10) Moderate(7) Minimal (4) Not Present (0) Condition is optimal and fully be of welland or surface water assessed Optimal (10) Condition is less than original, but sufficient welland/surface water Minimal (4) Not Present (0) S00(6)(a) Location and Landscape Support The assessment area is an herbaceous welland that extends beyond the right-of-way. The assessment area is functions Condition is insufficient welland/surface water Condition is insufficient water functions w/o pres or current with The assessment area is an herbaceous welland that extends beyond the right-of-way. The assessment area is limited by the presence of hpt-of-way, the assessment area is pasture. Invasive exotic species are present that may advered by the functions provided by the assessment area. \$500(6)(b)(Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 for reviews, the assessment area was inundated throughout. Hydrogic conditions are affected by the adjacent US 39. w/o pres or current with 7 7 500(6)(c)Community structure Majority of plant covere is comprised of invasive, exotic species with few	US 98 from W Socrum Loop Rd	to CR 54 (FPID 436673-1)		Wetland 44 (Secondary Impacts)				
Impact A. Blakely 921/201 Scoring Guidance The scoring of each water assessed Impact A. Blakely 921/201 Condition is softmal and fully upped veltands on what water assessed Impact A. Blakely 921/201 Condition is softmal and fully upped veltands under water assessed Impact Impact Not Present (0) main lut sufficient to maintain most water functions Impact Condition is notificient most water functions .500(6)(a) Location and Landscape Support The assessment area is an herbaceous welland that extends beyond the inph-of-way. The assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consister of undeveloped land with fending. UVeland and upland habitats are available outbid of the assessment area. Is invited by the assessment area is located at the southbound US 98 right-of-way. Adjacent US 9. .500(6)(b)/Water Environment (n'a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 fit reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 9. .500(6)(c)/Community structure (n'a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 fit reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 9. .500(6)(c)/Community structure (vo pres or current Water level indicators is comprised of invasive, exoti	Impact or Mitigation	, , , , , , , , , , , , , , , , , , ,	Assessment conducted by:		Assessment date		,	
Scoring Guidance The scoring of each indicator is based on what yould be subled for the type of wetland or surface water assessed Optimal (10) Moderate(7) (Condition is less than indicator is based on what supports wetland/surface water functions Minimal (4) Not Present (0) .500(6)(a) Location and Landscape Support Condition is optimal and fully supports wetland/surface water functions Minimal evel of support of water functions Condition is optimal and fully optimal, but sufficient water functions Condition is optimal and fully supports wetland/surface water functions .500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of undeveloped land with flencing. We betan double of the assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of undeveloped land with flencing. We betan double of the assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of undeveloped land with flencing. We betan double of the assessment area was inundated thoughout. Hythrologic conditions are affected by the adjacent US 5 and is associated stormwater management flavities (i.e., ditches). Soil erosion observed indicates alterations is points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. .500(6)(c)Community structure Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. Th construction of US 98 and its associated stormwater management flavities (i.e., ditches). Soil erosion observed in habitat alter	Impact	t	A Blakely			9/21/2021		
Storing Guidance The scoring of each indicator is based on what would be suitable for the water assessed Optimal (19) Moderate(7) Minimal (4) Not Present (9) .500(6)(a) Condition is optimal and fully upport wetland/surface water assessed Condition is optimal and fully upports wetland/surface water functions Minimal level of support of wetland/surface functions Condition is insufficient wetland/surface functions Condition is insufficient wetland/surface functions .500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consisted or uneassessment area, lowever, wildlife access to and for habitats outside of the assessment area is limited by the presence of right-of-way fullow pasture. Invasive exotic species are present that may adversity affect the functions provided by the assessment area. .500(6)(b)Water Environment (n/a for upland) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 fit reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 9 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates afterations in points of discharge resulting from the construction of US 98. The wetland receives nunoff from US 98. .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community wo pres or current Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. Th constr		•	7 11 2141101			0,21,2021		
The second of each what would be suitable for the support of the or surface water functions Condition is optimal and fully optimal, but sufficient to maintain most wetar discrete water assessed Minimal level of support of functions Condition is insufficient to maintain most wetar discrete water functions Condition is insufficient to maintain most wetar discrete water functions Condition is insufficient to maintain most wetar discrete water functions Minimal level of support of functions Condition is insufficient to maintain most wetar discrete water functions Condition is insufficient to maintain most wetar discrete water functions Condition is insufficient to maintain most wetar discrete water functions Condition is insufficient to maintain most wetar discrete water functions Condition is insufficient to maintain most wetar discrete water functions Condition is insufficient to maintain most wetar discrete water functions .500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is include the assessment area; is limited by the presence of right-of-way forcing. US 98, and improve pasture. Invasive exolic species are present that may adversely affect the functions provided by the assessment area was inundated throughout. Thydrologic conditions are affected by the adjacent US 9 .500(6)(b)Water Environment (rvia for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 fit reviews, the assessment area was inundated throughout. Thydrologic conditions are affected by the adjacent US 9 Sou(6)(c)/Community structure Majority of plant co	Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present	(0)	
Indicator's based of what would be subport or water assessed Condition is optimal and fully water functions Minimal evel of subport or functions Condition is institute water functions .500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of undeveloped land with flexing, water assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of undeveloped land with flexing, wetland and upland habitats are available outside of the assessment area, however, willife access to and from habitats outside of the assessment area is limited by the presence of right-of-way forcing. US 98, and improve pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area. .500(6)(b)(Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 fit and its associated stormwater imanagement facilities (i.e., ditches). Soil erosin observed indicate alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. 1. Vegetation and/or 2. Benthic Community Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect nature recruitment or regeneration in the plant community.	The scoring of each		Condition is less than					
type of wetland or surface water assessed the functions wetland/surface water functions functions performance .500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of undeveloped land with fencing. Welland and upland habitats are valiable outside of the assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of undeveloped land with fencing. Welland and upland habitats are valiable outside of the assessment area is souther that may adversely affect the functions provided by the assessment area. .500(6)(b)(Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 fit reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 9 and its associated stormwater management facilities (i.e., ditches). Soil erosino observed indicates alterations it points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. 1. Vegetation and/or 2. Benthic Community wo pres or current with 4 Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine mantenance within the right-of-way that may affect nature recruitment or regeneration in the plant community. wo pres or current with 3 For impact assessment areas	indicator is based on what would be suitable for the	Supports wetland/surface	optimal, but sufficient to maintain most	wetland/s	/el of support of surface water	provide wetland	ficient to	
water assessed functions .500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of undeveloped land with fencing. Wetland and upland habitats are available outside of the assessment area, however, wildlife access to and from biblicate outside of the assessment area is limited by the presence of of-way fencing. US 98, and improve pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area. .500(6)(b)/Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 file reviews, the assessment area was inundated throughout. Hydriogic conditions are affected by the adjacent US and its associated stormwater management facilities (i.e., ditches). Socion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. % o pres or current with 1. Vegetation and/or 2. Benthic Community Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect nature recruitment or regeneralition in the plant community. wo pres or current with 4 3 Score = sum of above scores/30 (ff) If preservation as mitigation,	type of wetland or surface	water functions	wetland/surface water	fur	nctions	water function	ons	
.500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located at the southbound US 98 right-of-way. Adjacent land uses consists of undeveloped land with freing. Wetland and upland habitats are available outside of the assessment area, however, wildlife access to and from pasture. Invasive exotic species are present that may adversely affect the functions provided by the assessment area. 0 5 .500(6)(b)(b)(Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 fit reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 5 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations is points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. 1. Vegetation and/or 2. Benthic Community Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. Th construction of US 98 and its associated stormwater management fracibilies (i.e., diches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect nature recruitment or regeneraltion in the plant community. with 4 3 Score = sum of above scores/30 (ff) If preservation as mitigation,	water assessed		functions					
.500(6)(a) Location and Landscape Support The assessment area is an herbaceous wetland that extends beyond the right-of-way. The assessment area is located at the southbound US 98 right-of-way. Adjacent land user consists of undeveloped land with fending. Uetland and upland habitats are available outside of the assessment area, however, within feacess to and from habitats outside of the assessment area is limited by the presence of right-of-way. The assessment area is urrent with 6 5 .500(6)(b)(Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 fit reviews, the assessment area was included throughout Hydrologic conditions are affected by the adjacent US 9 and its associated stomwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. 1 Vegetation and/or 2. Benthic Community wo pres or current 1 Majority of plant cover is comprised of invasive, exolic species with few desirable/appropriate species present. The construction of US 98 and its associated stomwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect nature recruitment or regeneration in the plant community. wo pres or current with 4 3 3 Majority of plant cover is comprised of invasive, exolic species with few desirable/appropriate species present. The construction of US 98 and its associated stomwater management facilities (i.e., diches) has resulted in habitat alteration. Land management pract								
current with 6 5 .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 fit reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 6 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. w/o pres or current with 1. Vegetation and/or 2. Benthic Community Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. Th construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect nature recruitment or regeneraltion in the plant community. w/o pres or current with 4 3 Score = sum of above scores/20 (ff If preservation as mitigation,	.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is a located at the southboun Wetland and upland habita habitats outside of the ass pasture. Invasive exotic sp	n herbaceous wetland that ext d US 98 right-of-way. Adjacent its are available outside of the essment area is limited by the ecies are present that may ad are	tends beyond t land uses co assessment presence of versely affect a.	I the right-of-way. onsists of undeve area; however, w right-of-way fenci t the functions pro	The assessment a cloped land with fer vildlife access to ar ing, US 98, and im ovided by the asses	area is ncing. nd from proved ssment	
6 5 .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 fit reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US s and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. 1. Vegetation and/or 2. Benthic Community w/o pres or current Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. Th construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect nature recruitment or regeneraltion in the plant community. w/o pres or current with 4 3 Score = sum of above scores/30 (ff) If preservation as mitigation,	current with							
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.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 fit reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 9 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. w/o pres or current with 1. Vegetation and/or 2. Benthic Community Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect nature recruitment or regeneraltion in the plant community. w/o pres or current with 4 3 Score = sum of above scores/30 (if If preservation as mitigation,								
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current with 7 7 .500(6)(c)Community structure .500(6)(c)Community structure 1. Vegetation and/or Majority of plant cover is comprised of invasive, exotic species with few desirable/appropriate species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitate alteration. Land management practices include routine maintenance within the right-of-way that may affect nature recruitment or regeneraltion in the plant community. w/o pres or current with 4 3 Score = sum of above scores/30 (if If preservation as mitigation,	w/o pres or							
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.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 4 3 Score = sum of above scores/30 (if If preservation as mitigation, For impact assessment areas	7 7							
w/o pres or current with 4 3 Score = sum of above scores/30 (if f preservation as mitigation, For impact assessment areas	.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community 4. Section 2. Benthic Community							
w/o pres or current with 4 3 Score = sum of above scores/30 (if If preservation as mitigation, For impact assessment areas		•	recruitment or regeneraltio	n in the plant	community.			
Vitting Vitting 4 3 Score = sum of above scores/30 (if If preservation as mitigation, For impact assessment areas	w/o pres or							
4 3 Score = sum of above scores/30 (if If preservation as mitigation, For impact assessment areas	current with							
Score = sum of above scores/30 (if If preservation as mitigation, For impact assessment areas	4 3							
Score = sum of above scores/30 (if If preservation as mitigation, For impact assessment areas								
	Score = sum of above scores/30 (if	If preservation as mitig	ation,	F	or impact asses	sment areas		
uplands, divide by 20) Preservation adjustment factor = FL = delta x acres =	uplands, divide by 20)	Preservation adjustment	nt factor =		FL = delta x a	acres =		
current $0.07 \times 0.48 = 0.03$	current or w/o pres with				0.07 x 0.48	= 0.03		
Adjusted mitigation delta =	0.57 0.50	Adjusted mitigation del	ta =		0.07 A 0.40	- 0.00		
	0.00							
If mitigation		If mitigation		Fo	r mitigation asso	esement areas		
Delta = [with-current] Time lag (t-factor) =	Delta = [with-current]	Time lag (t-factor) =			n miliyalion asse			
-0.07 Risk factor = RFG = delta/(t-factor x risk) =	-0.07	Risk factor =		RFG =	e delta/(t-factor x	risk) =		

Site/Project Name	er Assessment Area Name or Number			or Number		
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)				Wetland 45 (Secondary Impacts)		
FLUCCs code	Further classifica	ition (optional)	Impact or Mitigation Site? Assess			Assessment Area
630 – Wetland Forested Mixed	PFO1/2C – Leaved/Needle	- Palustrine, Fores e-Leaved Deciduc Flooded	sted, Broad- ous, Seasonally		Impact	Size (in acres) 0.24
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	al designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, upla	nds		
The assessment area is comprised	l of a forested wetland.	The forested wetl rush.	and consists of red	d map	le, cypress, dahoon holl	y, buttonbush, and soft
Assessment area description						
The fore	sted wetland consists o	f red maple, cypre	ess, dahoon holly,	buttor	bush, and soft rush.	
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-wa approximately 0.2 mile northwest of the Duke Energy utility easement. The Green Swamp WMA and Gator Creek Reserve located on northeast side US 98.			Not unique			
Functions			Mitigation for pre-	vious	permit/other historic use)
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS(i)	y Listed Species (List s C), type of use, and inte	pecies, their legal Insity of use of the
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ectly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
A. Blakely			9/21/2021			

Site/Project Name		Application Number	Assessment A	ea Name or Number			
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)		Wetland	Wetland 45 (Secondary Impacts)			
Impact or Mitigation		Assessment conducted by:	Assessment da	ate:			
Impa	ct	A. Blakely		9/21/2021			
			L				
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)			
I he scoring of each indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level of support of	f Condition is insufficient to			
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface			
type of wetland or surface	water functions	wetland/surface water	functions	water functions			
waler assessed		luncions					
.500(6)(a) Location and Landscape Support The assessment area is a forested wetland located within the southbound US 98 right-of-way. Adjacent lan consists of undeveloped land with fencing. Wetland and upland habitats are available outside of the assess area; however, wildlife access to and from habitats outside of the assessment area is limited by the presence of-way fencing, US 98, and undeveloped land. Invasive exotic species are present that may adversely affer functions provided by the assessment area. .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 20							
w/o pres or current with 7 7	and its associated stormwe points of discharge re	ater management facilities (i.e. sulting from the construction c	, ditches). Soil erosion obse f US 98. The wetland recei	rved indicates alterations in ves runoff from US 98.			
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community Majority of plant cover is comprised of desirable/appropriate species with invasive/exotic species present at the right of-way. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the right-of-way that may affect							
w/o pres or		0		,			
current with							
5 4]						
	<u>I</u>						
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.60 0.53	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, nt factor = ta =	For impact ass FL = delta 0.07 x 0.2	essment areas x acres = 4 = 0.02			
Delta = [with-current]	If mitigation Time lag (t-factor) =		For mitigation as	sessment areas			
			RFG = delta/(t-factor	x risk) =			
-0.07	Risk factor =			-7			

Site/Project Name		Application Number)r		Accessment Area Name	or Numbor	
		Application Numbe					
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 46 (See	condary Impacts)	
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area	
	PF01/2C -	- Palustrine, Fores	sted, Broad-		5	Size (in acres)	
630 - Wetland Forested Mixe	d Leaved/Needle	e-Leaved Deciduo	ous, Seasonally		Impact	0.25	
		Flooded					
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ion (i.e. (OFW, AP, other local/state/federa	al designation of importance)	
Hillsborough River	III				None		
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, upla	nds			
The assessment area co	mprised of a forested we	etland. A pipe culv	vert is constructed	within	a ditch that connects to	o this wetland.	
Assessment area description							
	The forested wetlen	d consists of rod		ad butt	anhuah		
	The lorested wettan		maple, cypress, ar		onbush.		
			Uniqueness (co	neidor	ing the relative rarity in	relation to the regional	
Significant nearby features			landscape.)	insider	ing the relative failty in	relation to the regional	
The assessment area is located v	vithin the southbound US	S 98 right-of-way					
approximately 0.1 mile northwe	st of the Duke Energy ut	ility easement.			Not unique		
Green Swamp WMA and Gator Cr	eek Reserve located on	northeast side of					
Functions			Mitigation for pre	vious p	permit/other historic use	9	
Netural water storage and conv	www.	ti watar guality					
Natural water storage and conv improvement	revance; foraging nabita	t; water quality	None				
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliz	ation b	y Listed Species (List s	pecies, their legal	
that are representative of the asse	ssment area and reasor	ably expected to	classification (E, T, SSC), type of use, and intensity of use of the				
				•)			
			Little Blue Her	on (ST	foraging): Tricolored I	Heron (ST, foraging) [.]	
Amphibians, wading b	oirds, turtles, small mam	mals	Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging);				
			Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such a	is track	ks, droppings, casings,	nests, etc.):	
	Ν	o evidence of wild	llife observed				
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	e(s) [.]			
T. Norman			6/28/2021	(-).			
			0/20/2021				

Site/Project Name		Application Number	Assessme	nt Area Name or Number
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)		land 46 (Secondary Impacts)	
Impact or Mitigation		Assessment conducted by:	Assessme	nt date:
Impac	ct	T. Norman 6/28/20		6/28/2021
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
indicator is based on what	Condition is optimal and fully	optimal but sufficient to	Minimal level of supp	ort of Condition is insufficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/surface wa	ater provide wetland/surface
type of wetland or surface	water functions	wetland/surface water	functions	. water functions
water assessed		functions		
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a fi land uses includes residenti area; however, wildlife acces of-way fencing, US 98, resid present tha	orested wetland system and is ial development. Wetland and s to and from habitats outside lential development, and the I t may adversely affect the fund	located at the southboup upland habitats are av of the assessment are buke Energy utility ease tions provided by the a	und US 98 right-of-way. Adjacent ailable outside of the assessment a is limited by the presence of right ement. Invasive exotic species are assessment area.
5 4				
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 6	Water level indicators and s reviews, the assessment are and its associated stormwa points of discharge re Majority of plant cover is con construction of US 98 and alteration. Land managemen right-of-way th	oil moisture appeared appropriation awas inundated throughout, ater management facilities (i.e. sulting from the construction of the construction	iate considering seaso Hydrologic conditions a , ditches). Soil erosion f US 98. The wetland te species with few inv nagement facilities (i.e. ation of a pipe culvert a ent or regeneraltion in t	nal variation. During the 2021 field ire affected by the adjacent US 98 observed indicates alterations in receives runoff from US 98. asive/exotic species present. The , ditches) has resulted in habitat nd routine maintenance within the he plant community.
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	For impact	assessment areas
uplands, divide by 20)	Proconvotion adjustment	at factor –	FL = 0	delta x acres =
current				
pr w/o pres with	Adjusted mitigation del	ta =	0.07 x	0.25 = 0.02
0.63 0.57				
	d			
	If mitigation		For mitigatio	n assessment areas
Delta = [with-current]	Time lag (t-factor) =			
0.07	Dials fa at		RFG = delta/(t-fa	actor x risk) =
-0.07	Risk factor =			,

Site/Droject Name		Application Number			Accoment Area Nama	or Numbor	
		Application Numbe	Assessment Area Name of Number				
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 47 (Se	condary Impacts)	
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area	
044 Engelsunder March	PEM1C - Pa	lustrine, Emerger	nt, Persistent,		luce a st	Size (in acres)	
641 - Freshwater Marsh	5	Seasonally Floode	ed		Impact	0.15	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	0N (i.e. (OFW, AP, other local/state/federa	al designation of importance)	
Hillsborough River	III				None		
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, uplar	nds			
The assessment area comprised	d of cattail-dominated fre underneath US 98 co	eshwater marsh ha nnects Wetland 4	abitat that extends 7 to other offsite w	outsic etland	le of the right-of-way. A l systems.	cross drain that runs	
Assessment area description							
Dominant vegetation within this w	etland consists of cattai	I. Other vegetation torpedo a	n present includes rass	Caroli	ina willow, pickerelweed	d, primrose willow, and	
Significant nearby features			Uniqueness (con landscape.)	nsideri	ing the relative rarity in	relation to the regional	
The assessment area is located w	vithin the southbound U	S 98 right-of-way					
at the Duke Energy utility easeme	nt. Green Swamp WMA	and Gator Creek			Not unique		
Reserve located of	montheast side of 00 9	0.					
Functions			Mitigation for prev	vious p	permit/other historic use	9	
Natural water storage and conv	evance: foraging habita	t: water quality					
improvemer	it; flood attenuation		None				
Anticipated Wildlife Utilization Base	ed on Literature Review	(List of species	Anticipated Utilization by Listed Species (List species, their legal				
that are representative of the asse be found)	ssment area and reasor	hably expected to	classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
				/			
			Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging);				
Amphibians, wading b	oirds, tu <mark>rtles</mark> , small mam	mals	Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)				
				Lioig			
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such a	s track	ks, droppings, casings,	nests, etc.):	
	N	lo evidence of wild	llife observed.				
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	(s) [.]			
T Norman			Assessment date(s). 0/21/2021				

Site/Project Name		Application Number Assessment Area Name or			a Name or Number			
US 98 from W Socrum Loop R	d to CR 54 (FPID 436673-1)	Wetland 47 (Seconda			Wetland 47 (Secondary Impacts)			
Impact or Mitigation		Assessment conducted by:		Assessment date):			
Impa	ct	T. Norman			9/21/2021			
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)		
The scoring of each		Condition is less than						
Indicator is based on what	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to	Minimal le	vel of support of	Condition is insuff	icient to		
type of wetland or surface	water functions	wetland/surface water	fu	inctions	water functio	ns		
water assessed		functions						
	1							
.500(6)(a) Location and	The assessment area is	s an herbaceous wetland that e	extends beyo	ond the right-of-wa	ay and is located at	the		
Landscape Support	easement. Wetland and up	and habitats are available out	side of the a	ssessment area:	however, wildlife ac	cess to		
	and from habitats outsid	e of the assessment area is lin	mited by the	presence of right-	-of-way fencing, US	98,		
N/o pros or	residential development,	and the Duke Energy utility ea	sement. Inv	asive exotic speci	ies are present that	may		
current with	au	versely allect the functions pro			d.			
5 4								
				•				
500(6)(b)Water Environment								
(n/a for uplands)	Water level indicators and s	ndicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 field						
	reviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US 98							
	and its associated stormwa	ater management facilities (i.e.	, ditches). S	oil erosion observ	ved indicates alterati	ions in		
	points of discharge re	sulting from the construction o	of US 98. Th	e wetland receive	es runoff from US 98	3.		
w/o pres or								
current with								
7 7								
EQQ(6)(a)Cammunity attracture								
		•						
1 Magatation and/or	Majority of the plant cove	er and presence is comprised o	of invasive e	xotic plant species	s with minimal desir	able		
2. Benthic Community	species. The construction of	US 98 and its associated stor	mwater mar	nagement facilities	s (i.e., ditches) has ı n and routino maint	resulted		
,	within the right-of-w	ay that may affect natural recr	uitment or re	egeneraltion in the	e plant community.	enance		
w/o pres or	Ŭ			-				
current with								
4 3								
Score = sum of above scores/30 (if	If preservation as mitigation	ation,		For impact asses	sment areas			
uplands, divide by 20)	Preservation adjustment	nt factor =		FL = delta x	acres =			
current				0.07 v 0.15	= 0.01			
0.53 0.47	Adjusted mitigation del	ta =		0.07 X 0.10	- 0.01			
0.47								
	If mitigation		_	an mitimation	comont or			
Delta = [with-current]	Time lag (t-factor) =		F	or mitigation asse	essment areas			
· ···· · ····· · ·	3()		REC	= delta/(t-factor v	risk) =			
-0.07	Risk factor =		RFG -	- delia/(l-laciol X	113K) -			
8			4					

Site/Project Name		Application Numbe	r	As	ssessment Area Name o	or Number	
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)		Wetland 48			nd 48	
FLUCCs code	Further classifica	tion (optional)	Impact or Mitigation Site? Assessmen				
617 - Mixed Wetland Hardwood	ds PFO1C - Palu Decidu	ustrine, Forested, ious, Seasonally F	Broad-Leaved Flooded		Impact	Size (in acres) 0.43	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	n (i.e. OF	W, AP, other local/state/federa	l designation of importance)	
Hillsborough River	III				None		
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, upland	ds			
The assessment area is a for	ested system that exten connect	ds outside of the r ting this wetland to	ight-of-way. A pipe o adjacent wetlands	culvert	runs underneath the	adjacent driveway	
Assessment area description							
Dominant vegetation within the car	opy of Wetland 48 inclu predominantly consist	udes water oak, sv t of wax myrtle, Vi	vamp bay, l <mark>aura</mark> l oa rginia chain fern, an	ak, and nd maid	red maple. The under len fern.	story and groundcover	
Significant nearby features			Uniqueness (cons landscape.)	sidering	g the relative rarity in i	relation to the regional	
The assessment area is located within the southbound US 98 right-of-way directly southeast of the Duke Energy utility easement. Green Swamp WM/ and Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for previ	ious pe	rmit/other historic use		
Natural water storage and conv improvement; flo	eyance; foraging habita ood attenuation; refuge.	t; water quality	None				
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Amphibians, wading birds, turtl m	es, snakes, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or o	other signs such as	tracks,	, droppings, casings, r	nests, etc.):	
No evidence of wildlife utilitzation observed.							
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date(s	s):			
T. Norman			9/21/2021				

Site/Project Name	e/Project Name Assessment Area Name or Number Assessment Area Name or N				a Name or Number		
US 98 from W Socrum Loop Rd	I to CR 54 (FPID 436673-1)	Wetland			Wetland 48		
Impact or Mitigation		Assessment conducted by:		Assessment date	:		
Impac	st	T. Norman			9/21/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present (0)		
The scoring of each		Condition is less than					
would be suitable for the	supports wetland/surface	optimal, but sufficient to maintain most	wetland/	vel of support of	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water functions		
water assessed		functions					
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 5 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a for is located at the southboun Wetland and upland habita habitats outside of the Water level indicators a Hydrological indicators obse	ested wetland that connects to d US 98 right-of-way. Adjacac its are available outside of the e assessment area is limited b and soil moisture appeared so rved within the assessment ar	o offsite wetle ent land use assessment by the present mewhat appine ea included	ands via a pipe cu includes the Duk t area; however, w ice of right-of-way	ulvert. The assessment area e Energy utility easement; vildlife access to and from fencing and US 98.		
w/o pres or current with 7 7	hummocks, water marks, an associated stormwater man discharge resultir	d adventitious rooting. Hydrolo agement facilities (i.e., ditches ng from the construction of US	ogic conditior s). Soil erosic 98. The we	ns are affected by on observed indica tland receives rur	the adjacent US 98 and its ates alterations in points of noff from US 98.		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices are generally appropriate, but installation of pipe culvert and routine							
w/o pres or							
current with							
7 6							
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.67 0.60	If preservation as mitiga Preservation adjustmer Adjusted mitigation dell	ation, nt factor = ta =		For impact assess FL = delta x 0.07 x 0.43	sment areas acres = = 0.03		
	-						
Delta = [with-current]	if mitigation Time lag (t-factor) =		Fo	or mitigation asse	ssment areas		
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =		
Site/Project Name		Application Number	er		Assessment Area Name	or Number	
--	--	--	---	------------------------	---	--	
US 98 from W Socrum Loop Rd to CF	R 54 (FPID 436673-1)				Wetland 49 (See	condary Impacts)	
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area	
630 - Wetland Forested Mixed	PFO1/2C - Leaved/Needle	Palustrine, Fores -Leaved, Deciduo Flooded	sted, Broad- ous, Seasonally		Impact	Size (in acres) 0.30	
Basin/Watershed Name/Number A	ffected Waterbody (Clas	ss)	Special Classificati	ON (i.e. (OFW, AP, other local/state/federa	l designation of importance)	
Hillsborough River	III				None		
Geographic relationship to and hydro	ologic connection with	wetlands, other s	urface water, uplar	nds			
The assessment area is a forested	system that extends o 49	outside of the right to other offsite we	t-of-way. A cross d etland systems.	Irain th	at runs underneath US	98 connects Wetland	
Assessment area description							
Dominant vegetation within the predo	canopy of Wetland 49 minantly consist of Ca) includes cypress arolina willow, prim	, Chinese tallow, a nrose willow, soft re	ind rec ush, ai	d maple. The understory nd maidencane.	y and groundcover	
Significant nearby features			Uniqueness (co landscape.)	nsideri	ing the relative rarity in	relation to the regional	
The assessment area is located within the southbound US 98 right-of-way approximately 0.4 mile northwest of Lakeland Acres Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for pre-	vious p	permit/other historic use	;	
Natural water storage and convey improvement; floo	vance; foraging habita d attenuation; refuge.	t; water quality	None				
Anticipated Wildlife Utilization Based that are representative of the assess be found)	on Literature Review ment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the	
Amphibians, wading birds, turtles mai	s, s <mark>nakes</mark> , song birds, mmals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Utiliza	ation (List species dire	ctly observed, or	other signs such a	s track	ks, droppings, casings,	nests, etc.):	
No evidence of wildlife utilitzation observed.							
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	e(s):			
T. Norman			9/21/2021				

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 49	e (Secondary Impact	ts)
Impact or Mitigation		Assessment conducted by:		Assessment date	:	
Impa	ct	T. Norman			9/21/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)
The scoring of each		Condition is less than				
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal lev	vel of support of	Condition is insuffi	icient to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/s	surface
water assessed	water functions	functions	iu	ncuons	water runction	ns
water assessed		Turiotions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a fo is located at the southbound upland habitats are availabl of the assessment area is	rested wetland that connects t US 98 right-of-way. Adjacacer e outside of the assessment ar limited by the presence of rigl	o offsite weth It land use in rea; however ht-of-way fen	ands via a cross o cludes residential , wildlife access t cing, US 98, and	drain. The assessmo I development; Wetl o and from habitats residential developr	ent area land and outside ment.
5 4						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 6	Water level indicators and so within the assessment area are affected by the adjacent observed indicates alteration Majority of plant cover is by construction of US 98 and alteration. Land manage maintenance within the	all moisture appropriate consid included surface water, elevat US 98 and its associated stor is in points of discharge resulti runoff from appropriate and desirable pla its associated stormwater ma ment practices are generally a right-of-way may affect natural	ering season ed lichen line mwater man- ing from the o n US 98.	al variation. Hydr ss, and cypress k agement facilities construction of US dinimal invasive/e cilities (i.e., ditche ut installation of a or regeneraltion i	ological indicators o nees. Hydrologic cor ; (i.e., ditches). Soil o S 98. The wetland r solution of the sector of the sector solution of the sector of the sector solution of the sector of the secto	bserved nditions erosion receives nt. The abitat utine hity.
Sooro - aum of above secret/20	If proconvotion on mitig	ation		For impact coord	smont aross	
uplands, divide by 20)	ii preservation as mitig	auon,			sment areas	
ourrent	Preservation adjustmer	nt factor =	1	FL = delta x a	acres =	
or w/o pres with				0.07 x 0.30	= 0.02	
	Adjusted mitigation del	ta =	1	5.57 X 0.50	- 0.02	
0.63 0.57						
	-					
	If mitigation		Fr	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
0.07	Piak factor -		RFG =	= delta/(t-factor x	risk) =	
-0.07	KISK factor =				,	

Site/Drainet Norse		Analisation Number				en Numeh en
		Application Numbe	er		Assessment Area Name	
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 50 (See	condary Impacts)
FLUCCs code	Further classification	tion (optional)		Impact	t or Mitigation Site?	Assessment Area
	PFO1C - Pali	ustrine Forested	Broad-Leaved		C C	Size (in acres)
617 - Mixed Wetland Hardwoo	ds Decidu	ious, Seasonally	Flooded		Impact	0.13
Pagin Materahad Name Number	Affected Waterbady (Clay		Special Classificati	ion (i		
Basin/watersned Name/Number	Affected waterbody (Clas	55)	Special Classificati	ION (I.e. C	DFW, AP, other local/state/federa	al designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, upla	nds		
Tł	ne assessment area is a	forested system	that extends outsid	le of th	e right-of-way.	
Assessment area description						
Densis and a second diam with in the						
of primrose	e willow, whitetop sedge.	creeping oxeve.	Virginia chain fern.	. wax n	vrtle. and bahia drass.	predominantiy consist
				,	,	
Significant nearby features			Uniqueness (co	nsideri	ng the relative rarity in	relation to the regional
The assessment area is located y	within the southbound U	S 98 right-of-way				
approximately 0.5 mile northwest	of Lakeland Acres Road	d. Green Swamp			Not unique	
WMA and Gator Creek Reservent	ve located on northeast s	side of US 98.				
Functions			Mitigation for pre-	vious r	ermit/other historic use	2
			initigation for pro	viouo p		
Natural water storage and conv	veyance; foraging h <mark>abi</mark> ta	t; wat <mark>er</mark> quality			None	
improvement; fl	ood attenuation; refuge.					
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliza	ation b	y Listed Species (List s	pecies, their legal
that are representative of the asse	essment area and reasor	nably expected to	classification (E,	T, SSC	C), type of use, and inte	nsity of use of the
be found)			assessment area	a)		
				(0)		· · · · · · · · · · · · · · · · · · ·
Amphibians, wading birds, turt	les, snakes, song birds, nammals	raptors, small	Little Blue He	eron (S /nestin	1, foraging/nesting); 1r a) [,] Wood Stork (FT, for	colored Heron (ST,
					g),	~gg,eg);
Observed Evidence of Wildlife Uti	ization (List species dire	ctly observed. or	other signs such a	is track	s. droppings. casings.	nests. etc.):
		,	5		, 11 5 , 5 ,	, ,
	No evi	dence of wildlife u	itilitzation observed	d.		
Additional relevant factors:						
		None	.			
Assessment conducted by:			Assessment date	e(s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 50 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impac	ct	T. Norman			9/21/2021	
ļ		<u> </u>		<u> </u>		
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present (0)	
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal la	vel of support of	Condition is insufficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water provide wetland/sur			
type of wetland or surface	water functions	wetland/surface water	fu	inctions	water functions	
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a f use includes the residential a assessment area; however	orested wetland and is located and commercial development; r, wildlife access to and from h presence of right-of-wa	d at the south Wetland an abitats outsi ay fencing an	hbound US 98 rig d upland habitats ide of the assess nd US 98.	ht-of-way. Adjacacent land are available outside of the nent area is limited by the	
	1					
6 5						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrological indicators observed within the assessment area included surface water, water-stained leaves and water marks. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.					
1. Vegetation and/or 2. Benthic Community w/o pres or current with 6 5	The plant cover within the ca consists of invasive/exotic sp (i.e., ditches) has resulted in maintenance within the	anopy consists of appropriate a becies. The construction of US n habitat alteration. Land man right-of-way may affect natural	and desirabl 9 98 and its a agement pra recruitment	e plant species. T associated stormv actices are genera or regeneraltion i	he groundcover/understory vater management facilities ally appropriate, but routine in the plant community.	
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.63 0.57	If preservation as mitiga Preservation adjustmer Adjusted mitigation dell	ation, nt factor =		For impact assess FL = delta x i 0.07 x 0.13	sment areas acres = = 0.01	
	If mitigation		F	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =			or mugation asse		
-0.07	Risk factor =		RFG	= delta/(t-factor x	risk) =	

Othe /Duration of Niewan		A			A + A NI	N.L
Site/Project Name		Application Number	er	· · · · · · · · · · · · · · · · · · ·	Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 51 (See	condary Impacts)
FLUCCs code	Further classifica	tion (optional)		Impact	or Mitigation Site?	Assessment Area
		ustring Forestad	Pread Leaved	impuot	or wingation one :	Size (in acres)
617 - Mixed Wetland Hardwoo	ids PFO1C - Pail	ustrine, Forested,	Broad-Leaved		Impact	0.32
	Decide	ious, ocasonally i	looded			
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ion (i.e. C	FW, AP, other local/state/federa	al designation of importance)
Hillsborough River					None	
Geographic relationship to and hy-	drologic connection with	wetlands, other s	urface water, upla	nds		
Tł	ne assessment area is a	forested system t	hat extends outsid	le of the	e right-of-way.	
Assessment area description						
Dominant vegetation within the ca	anopy of Wetland 51 inc	ludes red maple a	and water oak. The	e under	story and groundcover	predominantly consist
	of primrose	willow, Virginia ch	nain fern, and elde	rbe <mark>rry</mark> .		
			Uniqueness (co	nsideri	ng the relative rarity in	relation to the regional
Significant nearby features			landscape.)	noidem		relation to the regional
The assessment area is located y	within the southbound LI	S 98 right-of-way				
approximately 0.2 mile northwest	of Lakeland Acres Road	d. Green Swamp			Not unique	
WMA and Gator Creek Reserv	ve located on northeast	side of US 98.			·	
Functions			Mitigation for pre-	vious p	ermit/other historic use	9
Natural water storage and conv	veyance; foraging habita	t; water quality			None	
improvement, in	oou allendalion, reidge.					
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliza	ation by	y Listed Species (List s	pecies, their legal
that are representative of the asse	essment area and reasor	nably expected to	classification (E,	T, SSC	;), type of use, and inte	nsity of use of the
be found)			assessment area	ı)		
Amphibians, wading birds, turt	les, snakes, song bir <mark>ds</mark> ,	raptors, small	Little Blue He	eron (S ⁻	T, foraging/nesting); Tr	icolored Heron (ST,
n	nammals		foraging/	/nesting	g); Wood Stork (FT, for	aging/nesting);
Observed Evidence of Wildlife Util	ization (List species dire	ectly observed, or	other signs such a	is track	s, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	d.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 51 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:		Assessment date	:	
Impa	ct	T. Norman			9/21/2021	
ļ		<u> </u>		<u> </u>		
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present (0)	
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal la	vel of support of	Condition is insufficient to	
would be suitable for the	supports wetland/surface	maintain most	t wetland/surface water provide wetland/sur			
type of wetland or surface	water functions	wetland/surface water	fu	inctions	water functions	
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a f use includes the residential a assessment area; however presence of right-of-way	orested wetland and is located and commercial development; r, wildlife access to and from h y fencing, residential/commerc	d at the south Wetland an abitats outsi cial developm	hbound US 98 rigi d upland habitats ide of the assessm nent, Lakeland Ac	ht-of-way. Adjacacent land are available outside of the nent area is limited by the rres Road, and US 98.	
5 4						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 6 5	Water level indicators a Hydrological indicators o hummocks, and water n stormwater management fa resulting fro	and soil moisture appeared so observed within the assessme narks. Hydrologic conditions a collities (i.e., ditches). Soil eros m the construction of US 98.	mewhat app nt area inclu re affected b ion observed The wetland	ropriate consideri ded surface water y the adjacent US d indicates alterat receives runoff fr e plant species. T associated stormv actices are genera or regeneraltion i	ng seasonal variation. r, water-stained leaves, 5 98 and its associated ions in points of discharge om US 98. he groundcover/understory vater management facilities ally appropriate, but routine n the plant community.	
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.60	If preservation as mitigated Preservation adjustmer Adjusted mitigation delt	ation, ht factor = la =		For impact assess FL = delta x 0.07 x 0.32	sment areas acres = = 0.02	
	If mitigation		F	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.07	Risk factor =		RFG	= delta/(t-factor x	risk) =	

Site/Project Name		Application Number	۲.		Assessment Area Name	or Number
LIS 08 from W Socrum Loop Pd to					Wotland 52 (Soc	condary Impacts)
	GIV 34 (I FID 430073-1)				Welland 32 (Sec	condary impacts)
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area
630 Wotland Ecrosted Mixe	PFO1/2C -	 Palustrine, Fores Looved Decidure 	sted, Broad-		Impact	Size (in acres)
000 - Wetland Torested Mixe		Flooded	Jus, deasonally		Impact	0.33
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e. (OFW, AP, other local/state/federa	Il designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, uplai	nds		
The assessment area is a foreste	outside of the righ	t-of-way. A cross c	Irain th	at runs underneath US	98 connects Wetland	
•	52	to other offsite w	etland systems.			
Assessment area description						
Dominant vegetation within the car	hopy of Wetland 52 inclu	udes cypress, red	maple, and water	oak. T	he understory and grou	indcover predominantly
	consist of	f primrose willow a	and Virginia chain f	fern.		
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional
			landscape.)			
The assessment area is located v approximately 0.1 mile southeast	of Keen Road, Green S	S 98 right-of-way wamp WMA and			Not unique	
Gator Creek Reserve loc	ated on northeast side o	of US 98.				
Functions			Mitigation for pro	vieue	ormit/other biotorie use	
Functions			Milligation for pre-	vious	bermil/other historic use	3
Natural water storage and conv	eyance; foraging habita	t; wat <mark>er</mark> quality			Nono	
improvement; flo	ood attenuation; refuge.				None	
Anticipated Wildlife Utilization Base	ed on Literature Review	(List of species	Anticipated Utiliza	ation b	y Listed Species (List s	pecies, their legal
that are representative of the asse	ssment area and reasor	nably expected to	classification (E,	T, SSC	C), type of use, and inte	nsity of use of the
pe found)			assessment area)		
Anandaikiana waadina kinda tuut		nentene encell	Little Dive Lle			is along dillanan (CT
Amphibians, wading birds, turti m	ies, snakes, song birds, nammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting): Wood Stork (FT, foraging/nesting):			
						0 0 0,,
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	I other signs such a	s track	ks, droppings, casings,	nests, etc.):
	No ovi	donao of wildlife u	tilitzation obconvo	4		
	NO EVI			J.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s)·		
T Norman			9/21/2021			
			0,21,2021			

Site/Project Name		Application Number	Asses	ssment Area	Name or Number	
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 52 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:	Asses	ssment date:		
Impac	ot	T. Norman		9/21/2021		
		ł	4			
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal	(4)	Not Present (0))
The scoring of each		Condition is less than				
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level of	support of	Condition is insufficie	ient to
would be suitable for the	supports wetland/surface	maintain most	wetland/surfac	ce water	provide wetland/sur	rface
water assessed	water functions	functions	iunction	15	water functions	5
water assessed		Tunctions				
.500(6)(a) Location and Landscape Support w/o pres or current with 5 4 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a for runs underneath US 98 conn an RV lot, and improved however, wildlife access to a Water level indicators a	prested wetland and is located lects this area to other offsite v pasture; Wetland and upland h and from habitats outside of th way fencing, the RV lot, h way fencing, the RV lot, h	at the southbound vetland systems. A nabitats are availa e assessment are keen Road, and U	d US 98 right Adjacent land ble outside d a is limited b IS 98.	-of-way. A cross drain d use includes Keen I of the assessment are by the presence of righ	n that Road, ea; ht-of-
w/o pres or current with 7 7 7	Hydrological indicators obs conditions are affected by t Soil erosion observed indi	erved within the assessment a he adjacent US 98 and its ass cates alterations in points of d wetland receives ru	rea included surfa ociated stormwate scharge resulting noff from US 98.	ace water and er manageme from the cor	d water marks. Hydrol ent facilities (i.e., ditch nstruction of US 98. 1	logic hes). The
.500(6)(c)Community structure						
1. Vegetation and/or 2. Benthic Community w/o pres or current with	The plant cover within the ca consists of invasive/exotic sp (i.e., ditches) has resulted installation of a cross dra	anopy consists of appropriate a pecies. The construction of US I in habitat alteration. Land ma in and routine maintenance w regeneraltion in the	and desirable plan 98 and its associ anagement practic thin the right-of-w plant community.	nt species. Th iated stormw ces are gene ay may affec	ne groundcover/under ater management fac rally appropriate, but f t natural recruitment o	rstory cilities the or
6 5						
	1					
	1					
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	For im	npact assess	ment areas	
uplands, divide by 20)	Preservation adjustme	nt factor =	F	⁻ L = delta x a	acres =	
current	i reservation aujustinei					
or w/o pres with	Adjusted mitigation del	ta =	0.07	x 0.33	= 0.02	
0.60 0.53			L			
	J					
	If mitigation		F	anting	amont are	
Delta = [with current]	Time lag (t factor) -		For miti	igation asses	ssment areas	
	(t-factor) =					
-0.07	Risk factor =		RFG = delta	a/(t-factor x r	isk) =	

Site/Project Name		Application Number	۹r		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)	, .pp		ľ	Wetland 53 (See	condary Impacts)
FLUCCs code	Further classifica	ition (optional)		Impact	or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.12
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	0N (i.e. 0	OFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplan	nds		
The assessment area is comprise tha	d of primrose willow-do t runs underneath US 9	minated freshwate 8 connects Wetla	er marsh habitat tha Ind 53 to other offs	at exte ite wet	ends outside of the right tland systems.	t-of-way. A cross drain
Assessment area description						
	Dominant vegetation	on within this weth	and consists of prir	mrose	willow.	
Significant nearby features			Uniqueness (cor landscape.)	nsiderii	ng the relative rarity in	relation to the regional
The assessment area is located within the southbound US 98 right-of-way approximately 0.5 mile southeast of the Keen Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	/ious p	ermit/other historic use)
Natural water storage and conve improvement	eyance; foraging habita ;; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading b	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ctly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	I to CR 54 (FPID 436673-1)			Wetland 53	3 (Secondary Impac	cts)
Impact or Mitigation		Assessment conducted by:		Assessment date	:	
Impac	st	T. Norman			9/21/2021	
<u> </u>		<u> </u>				
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal Io	val of our name of	Condition is insuf	ficientte
would be suitable for the	supports wetland/surface	maintain most	o Minimal level of support of Condition is insuffic wetland/surface water provide wetland/su			surface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support	The assessment area is southbound US 98 right-of-w are available outside of assessment area is limited species are prese	s an herbaceous wetland that e vay. Adjacent land uses include the assessment area; howeve by the presence of right-of-wa ent that may adversely affect th	extends beyc e improved p er, wildlife ac y fencing, US ne functions p	and the right-of-wa pasture. Minimal v cess to and from S 98, and improve provided by the as	ay and is located at vetland and upland habitats outside of ed pasture. Invasive ssessment area.	t the habitats the e exotic
current with						
5 4						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 3 2	Water level indicators and s reviews, the assessment a leaves and water marks on associated stormwater man discharge resulting Nearly all of the plant cor associated stormwater ma practices include the instal	oil moisture appeared appropri rea was inundated throughout the right-of-way fence. Hydrolo agement facilities (i.e., ditches ng from the construction of US wer is comprised of invasive/ex nagement facilities (i.e., ditches lation of a cross drain and rou natural recruitment or regenera	iate conside Additional h gic condition). Soil erosic 98. The we 98. The we solic plant sp s) has result tine mainten altion in the p	ring seasonal vari hydrologic indicato is are affected by on observed indica titland receives rur eccies. The const ted in habitat alter ance within the rig olant community.	iation. During the 2 ors included water- the adjacent US 9 ates alterations in p noff from US 98.	2021 field stained 8 and its points of nd its gement y affect
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o preswith	If preservation as mitigate Preservation adjustment	ation, nt factor =		For impact assess FL = delta x 0.07 x 0.12	sment areas acres = = 0.01	
0.50 0.43	, lajastea mitigation del					
	J					
	If mitigation		Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Site/Droject Name		Application Number			Accompant Area Name	or Numbor	
UC 00 from W/ Coorum Loon Dd to			-1				
US 98 from W Socrum Loop Ra to	GR 54 (FPID 436673-1)				vvetland 54 (Sec	condary impacts)	
FLUCCs code	Further classifica	ition (optional)		Impac	t or Mitigation Site?	Assessment Area	
620 Watland Earostad Mixa	PFO1/2C -	Palustrine, Fores	sted, Broad-		Impost	Size (in acres)	
050 - Welland Forested Mixe	Leaved/Need	Flooded	Jus, Seasonally		Impact	0.30	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	al designation of importance)	
Hillsborough River					None		
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, upla	nds			
The assessment area is a foreste	ed system that extends o 54	outside of the right to other offsite we	t-of-way. A cross c etland systems.	drain th	nat runs underneath US	98 connects Wetland	
Assessment area description							
Dominant vegetation within the car	hopy of Wetland 54 inclu	udes cypress, red	maple, and water	oak. T	he understory and grou	Indcover predominantly	
		consist of primr	ose willow.				
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional	
The assessment area is located v	vithin the southbound U	S 98 right-of-way	(and cooper)				
approximately 0.4 mile northwest	of Perkle Road. Green S	Swamp WMA and	Not unique				
Gator Creek Reserve loc	ated on northeast side c	of US 98.					
Functions			Mitigation for pre	vious	permit/other historic use	9	
Natural water storage and conv	avance: foreging hebite	t: water quality					
improvement; flo	ood attenuation; refuge.	t, water quality			None		
Anticipated Wildlife Utilization Base	ed on Literature Review	(List of species	Anticipated Utilization	ation k	y Listed Species (List s	pecies, their legal	
that are representative of the asse	ssment area and reasor	hably expected to	classification (E, assessment area	T, SS(i)	C), type of use, and inte	ensity of use of the	
				•)			
Amphibians, wading birds, turt	es, snakes, song birds,	raptors, small	Little Blue He	eron (S	T, foraging/nesting); Tr	icolored Heron (ST,	
'n	nammals		foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Util	ization (List species dire	ectly observed, or	other signs such a	is trac	ks, droppings, casings,	nests, etc.):	
	No evi	dence of wildlife u	tilitzation observed	d.			
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	e(s):			
T. Norman			9/21/2021				

Site/Project Name		Application Number	Assessment Are	a Name or Number			
US 98 from W Socrum Loo	p Rd to CR 54 (FPID 436673-1)		Wetland 5	4 (Secondary Impacts)			
Impact or Mitigation		Assessment conducted by:	Assessment dat	e:			
Ir	npact	T. Norman		9/21/2021			
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)			
I he scoring of each	Condition is optimal and fully	Condition is less than	Minimal level of support of	Condition is insufficient to			
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water provide wetland/su				
type of wetland or surface	water functions	wetland/surface water	functions	water functions			
water assessed		functions					
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> wit	The assessment area is a f runs underneath US 98 cor development and improve however, wildlife access to way	orested wetland and is located inects this area to other offsite id pasture; Wetland and upland and from habitats outside of th fencing, residential development	at the southbound US 98 rig wetland systems. Adjacent la d habitats are available outsic le assessment area is limited ent/improved pasture, and US	ht-of-way. A cross drain that and use includes residential le of the assessment area; by the presence of right-of- 5 98.			
5 4							
.500(6)(b)Water Environme (n/a for uplands) w/o pres or	nt Water level indicators Hydrological indicators obs lines, moss, and adventitio stormwater management for resulting from	and soil moisture appeared so erved within the assessment a us rooting. Hydrologic condition acilities (i.e., ditches). Soil eros om the construction of US 98.	mewhat appropriate consider rea included surface water, w ns are affected by the adjace sion observed indicates altera The wetland receives runoff	ring seasonal variation. vater marks, elevated lichen nt US 98 and its associated ations in points of discharge from US 98.			
current wit	h						
7 7							
.500(6)(c)Community struct	Ire						
 Vegetation and/or Benthic Community 	The plant cover within the c consists of mostly invasive facilities (i.e., ditches) has n the installation of a cross of	anopy consists of appropriate /exotic species. The constructi esulted in habitat alteration. La drain and routine maintenance regeneraltion in the	and desirable plant species. on of US 98 and its associate and management practices a within the right-of-way may a plant community.	The groundcover/understory ed stormwater management re generally appropriate, but ffect natural recruitment or			
current wit	h						
6 5							
Score = sum of above scores/30	(if If preservation as mitig	ation,	For impact asses	ssment areas			
uplands, divide by 20)	Preservation adjustme	nt factor =	FL = delta x	acres =			
current							
or w/o pres wit	h Adjusted mitigation de	lta =	0.07 x 0.36	6 = 0.02			
0.60 0.5	3						
	If mitigation		For mitigation and	ossmont areas			
Delta = [with-current]	Time lag (t-factor) =		For mitigation ass	essment areas			
				(riok) –			
-0.07	Risk factor =		RFG = delta/(t-factor x risk) =				

Site/Project Name		Application Number	ar.		Assessment Area Name	or Number	
		Application Number	51				
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 55 (Se	condary Impact)	
FLUCCs code	Further classification	ition (optional)		Impac	t or Mitigation Site?	Assessment Area	
	PFO1/2C -	Palustrine, Fores	sted, Broad-	· ·	Ū	Size (in acres)	
630 - Wetland Forested Mixe	d Leaved/Needl	e-Leaved Deciduo	ous, Seasonally		Impact	0.33	
	•	Flooded	-				
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	l designation of importance)	
Hillsborough River	111				None		
Geographic relationship to and hyd	drologic connection with	wetlands. other s	urface water. upla	nds			
	5	,					
Th	e assessment area is a	forested system t	hat extends outsic	le of th	ne right-of-way.		
Assessment area description							
Dominant vegetation within the car	hopy of Wetland 55 inclusion of Wetland 55 inclusion for the second second second second second second second s	udes cypress, red	maple, and water	oak. T	he understory and grou	indcover predominantly	
CONS	sst of virginia chain left		n, maiden leni, pic	Kereiw	eeu, and callan.		
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional	
olgimicant nearby reataree			landscape.)				
The assessment area is located within the southbound US 98 right-of-wa					N <i>L</i> L		
adjacent to the east side of Old	Soldier Road. Green Sw ated on northeast side c	amp WMA and	Not unique				
Galor Greek Reserve loc		00 90.					
Functions			Mitigation for pre	vious	permit/other historic use)	
Natural water storage and conv	eyance; foraging habita	t; wat <mark>er</mark> quality			None		
Improvement; fic	bod attenuation; refuge.						
Anticipated Wildlife Utilization Base	ed on Literature Review	(List of species	Anticipated Utiliz	ation b	y Listed Species (List s	pecies, their legal	
that are representative of the asse	ssment area and reasor	nably expected to	classification (E,	T, SSO	C), type of use, and inte	nsity of use of the	
be found)			assessment area	1)			
		•					
Amphibians, wading birds, turt	es, snakes, song bir <mark>ds</mark> ,	raptors, small	Little Blue He	eron (S	T, foraging/nesting); Tr	icolored Heron (ST,	
m	nammals		foraging,	/nestin	g); Wood Stork (FT, for	aging/nesting);	
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such a	is tracl	ks, droppings, casings,	nests, etc.):	
	No ovi	donao of wildlifo u	tilitzation obconvo	ч			
	NO EVI			u.			
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	e(s).			
T Norman			0/21/2021				
T. NOIMAN			912112021				

Site/Project Name		Application Number	/	Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 5	5 (Secondary Impa	ict)
Impact or Mitigation		Assessment conducted by:	/	Assessment date	:	
Impa	ct	T. Norman			9/21/2021	
		<u> </u>				
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)
The scoring of each	Condition is ontimal and fully	Condition is less than	Minimal Iou	al of our port of	Condition is insuf	ficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/	/surface
type of wetland or surface	water functions	wetland/surface water	fur	nctions	. water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is a fo includes residential deve available outside of the asso area is limited by the present	rested wetland and is located lopment, improved pasture, ar essment area; however, wildlif ce of right-of-way fencing, resi and U	at the southb nd Old Soldie e access to a dential develo S 98.	oound US 98 right r Road; Wetland and from habitats opment/improved	t-of-way. Adjacent and upland habitat outside of the asse I pasture, Old Soldi	land use is are essment ier Road,
current with						
5 4						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 6	Water level indicators and so conditions are affected by t Soil erosion observed indi The plant cover within the c invasive/exotic species pre- (i.e., ditches) has resulted routine maintenance within	bil moisture appeared somewh he adjacent US 98 and its ass cates alterations in points of d wetland receives m anopy and understory consists esent. The construction of US 9 l in habitat alteration. Land ma the right-of-way may affect nat	at appropriat ociated storm ischarge resu unoff from US s of appropria 98 and its ass anagement pi tural recruitme	te considering sea nwater managem ulting from the co S 98. ate and desirable sociated stormwa ractices are gene ent or regeneralti	asonal variation. Hy ent facilities (i.e., d nstruction of US 98 plant species with ter management fa erally appropriate, b ion in the plant corr	ydrologic litches). 3. The minimal acilities nut the munity.
I	, <u> </u>					
Score = sum of above scores/30 (if uplands, divide by 20)	If preservation as mitig	ation,	F	For impact assess	sment areas	
current	Preservation adjustmer	nt factor =		FL = deita x a	acres =	
or w/o pres with	Adjusted mitigation del	ta =		0.07 x 0.33	= 0.02	
0.63 0.57						
·	-	a				
			Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Site/Project Name		Application Number	٥r		Assessment Area Name	or Number	
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 56 (Se	condary Impact)	
FLUCCs code	Further classifica	tion (optional)	atod Broad	Impac	t or Mitigation Site?	Assessment Area	
630 - Wetland Forested Mixe	d Leaved/Needle	e-Leaved Deciduo	ous, Seasonally		Impact	0.62	
		Flooded					
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importan				
Hillsborough River	111				None		
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, upla	nds			
The assessment area is a forest	ed system that extends o 56	outside of the righ to other offsite w	t-of-way. A cross c etland systems.	drain th	nat runs underneath US	98 connects Wetland	
Assessment area description							
Dominant vegetation within the ca	nopy of Wetland 56 inclu consist of	udes cypress, red ⁻ Virginia chain fer	maple, and water n and primrose wi	oak. T llow.	he understory and grou	ndcover predominantly	
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional	
The assessment area is located within the southbound US 98 right-of-wa							
less than 0.1 mile southeast of Perkle Road. Green Swamp WMA and			Not unique				
Galor Greek Neserve loc	ated on northeast side o	100 90.					
Functions			Mitigation for pre-	vious	permit/other historic use	2	
Natural water storage and conv improvement; flo	veyance; foraging habita bod attenuation; refuge.	t; water quality	None				
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliza	ation b	y Listed Species (List s	pecies, their legal	
that are representative of the asse	ssment area and reasor	nably expected to	classification (E,	T, SS(1)	C), type of use, and inte	nsity of use of the	
				•)			
Amphibians, wading birds, turt n	les, s <mark>nakes</mark> , song bir <mark>ds</mark> , nammals	raptors, small	Little Blue He foraging/	eron (S /nestin	T, foraging/nesting); Tr g); Wood Stork (FT, for	icolored Heron (ST, aging/nesting);	
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such a	is tracl	ks, droppings, casings,	nests, etc.):	
	No evi	dence of wildlife u	tilitzation observed	d.			
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	e(s):			
T. Norman			9/21/2021	. /			
			Į				

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 5	6 (Secondary Impa	ct)
Impact or Mitigation		Assessment conducted by:		Assessment date):	
Impao	ct	T. Norman			9/21/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each		Condition is less than				
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal lev	vel of support of	Condition is insuf	ficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water provide wetlan		provide wetland/	surface
type of wetland or surface	water functions	wetland/surface water	fu	Inctions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 4 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a for runs underneath US 98 conn development, improved par assessment area; howevel presence of right-of-w water level indicators and so conditions are affected by th Soil erosion observed indi	rested wetland and is located ects Wetland 56 to other offsit sture, and aquacultural farm; V r, wildlife access to and from h vay fencing, residential develo bil moisture appeared somewh he adjacent US 98 and its ass cates alterations in points of d wetland receives m	at the south e wetland sy Vetland and labitats outsi pment/impro	te considering sem mater managem ulting from the co S 98.	t-of-way. A cross d land use includes re re available outside nent area is limited aculture, and US 98 asonal variation. Hy ient facilities (i.e., di nstruction of US 98	vdrologic titches). by the by the by the by the by the by the by the by the by
,						
w/o pres or						
current with						
7 7						
.500(6)(c)Community structure						
 Vegetation and/or Benthic Community 	The plant cover within the consists of invasive/exotic sp (i.e., ditches) has resulted	canopy consists of appropriat pecies. The construction of US in habitat alteration. Land ma	e and desira 5 98 and its a anagement p	ble plant species; associated stormv practices are gene	however, the unde vater management erally appropriate, b	erstory facilities ut the
	installation of a cross drain	and the routine maintenance	within the rig	ght-of-way may af	fect natural recruitm	nent or
w/o pres or		regeneration in the	piant comm	iurilly.		
current with						
Current with	4					
6 5						
[1					
Score = sum of above scores/30 (if	If preservation as mitiga	ation,		For impact asses	sment areas	
uplanus, divide by 20)	Preservation adjustment	nt factor =		FL = delta x	acres =	
current						
pr w/o pres with	Adjusted mitigation delt	ia =		0.07 x 0.62	= 0.04	
0.60 0.53						
II	4					
	If mitigation		-	an millionation of	coment arrest	
Delta = [with current]	Time lag (t factor) -		F	or mitigation asse	ssment areas	
	(1-140101) =					
-0.07	Risk factor =		RFG :	= delta/(t-factor x	risk) =	

Site /Drain at Nama		Analisation Number			Assessment Area Norra	en Numeh en	
Site/Project Name		Application Numbe			Assessment Area Name		
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 57 (Se	condary Impact)	
FLUCCs code	Further classifica	ition (optional)		Impac	t or Mitigation Site?	Assessment Area	
	PFO1/2C -	Palustrine, Fores	sted, Broad-		· · · · · · · · · · · · · · · · · ·	Size (in acres)	
630 - Wetland Forested Mixe	d Leaved/Need	e-Leaved Deciduo	ous, Seasonally		Impact	0.25	
		Flooded					
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	al designation of importance)	
Hillsborough River	111				None		
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, upla	nds			
Т	ne assessment area is a	forested system t	hat extends outsic	le of th	ne right-of-way		
					lo light of hay.		
Assessment area description							
Dominant vegetation within the ca	anopy of Wetland 57 incl	udes cypress and	red maple. The u	nderst	orv and groundcover pr	edominantly consist of	
		primrose v	villow.				
Significant nearby features		Uniqueness (considering the relative rarity in relation to the landscape.)				relation to the regional	
The assessment area is located	within the southbound U	S 98 right-of-wav					
approximately 0.2 mile northwest of Earnest Road. Green Swamp WMA			Not unique				
and Gator Creek Reserve l	ocated on northeast side	e of US 98.					
Functions			Mitigation for pre	vious	nermit/other historic use	2	
			inigetion for pro	nouo			
Natural water storage and conv	veyance; foraging h <mark>abi</mark> ta	t; wat <mark>er</mark> quality			Nono		
improvement; flo	ood attenuation; refuge.						
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliza	ation b	y Listed Species (List s	pecies, their legal	
that are representative of the asse	ssment area and reason	nably expected to	classification (E,	T, SS	C), type of use, and inte	nsity of use of the	
be found)			assessment area	ı)			
Amphibians, wading birds, turt	les, snakes, song bir <mark>ds</mark> ,	raptors, small	Little Blue He	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST,			
n	nammals		foraging	/nestin	g); Wood Stork (FT, for	aging/nesting);	
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such a	is tracl	ks, droppings, casings,	nests, etc.):	
	No ovi	donco of wildlifo u	tilitzation obsorved	ч			
	NOEVI			u.			
Additional relevant factors:							
		None	_				
Assessment conducted by:			Assessment date	e(s):			
T Norman			9/21/2021	· /-			
			5/21/2021				

Site/Project Name		Application Number	A	Assessment Area	a Name or Number
US 98 from W Socrum Loop Rd	to CR 54 (FPID 436673-1)			Wetland 5	7 (Secondary Impact)
Impact or Mitigation		Assessment conducted by:	A	Assessment date	:
Impac	t	T. Norman			9/21/2021
· · ·					
Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present (0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal law	el of support of	Condition is insufficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water provide wetland		provide wetland/surface
type of wetland or surface	water functions	wetland/surface water	fur	nctions	water functions
water assessed		functions			
.500(6)(a) Location and Landscape Support	The assessment area is a upland habitats are available of the assess	forested wetland and is locate outside of the assessment ar ment area is limited by the pre	ed at the sout rea; however, esence of righ	thbound US 98 ri wildlife access to nt-of-way fencing	ight-of-way. Wetland and o and from habitats outside and US 98.
w/o pres or					
current with					
6 5					
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrol conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditche Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. Th wetland receives runoff from US 98.					asonal variation. Hydrologic ent facilities (i.e., ditches). nstruction of US 98. The
current with					
7 7					
.500(6)(c)Community structure					
1. Vegetation and/or 2. Benthic Community w/o pres or current 0 5					
Score = sum of above scores/30 (if	If preservation as mitiga	ation,	F	or impact asses	sment areas
uplands, divide by 20)	Preservation adjustment	nt factor =		FL = delta x	acres =
current pr w/o pres with				0.07 x 0.25	= 0.02
0.63 0.57	Adjusted mitigation delt	a =			0.02
0.07]				
	If mitigation		Fo	r mitigation asso	ssment areas
Delta = [with-current]	Time lag (t-factor) =			a muyauon asse	
-0.07	Risk factor =		RFG =	delta/(t-factor x	risk) =

Site/Project Name		Application Number	or.		Accessment Area Name	or Numbor	
		Application Numbe	51				
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 58 (Se	condary impacts)	
FLUCCs code	Further classification	tion (optional)		Impac	t or Mitigation Site?	Assessment Area	
	PFO1/2C -	Palustrine, Fores	sted, Broad-		Ū	Size (in acres)	
630 - Wetland Forested Mixe	d Leaved/Need	e-Leaved Deciduo	ous, Seasonally		Impact	0.39	
		Tibbaca	[- · · · · ·				
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e.	OFW, AP, other local/state/federa	al designation of importance)	
Hillsborough River	III				None		
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, upla	nds			
	0	,	<i>2</i> 1				
Th	ie assessment area is a	forested system t	hat extends outsic	le of th	ne right-of-way.		
Assessment area description							
Dominant vegetation within the ca	nopy of Wetland 58 incl	udes cypress and	l red maple. The u	nderst	ory and groundcover p	redominantly consist of	
	Virg	inia chain fern and	d primrose willow.				
Significant nearby features			Uniqueness (considering the relative rarity in relation to the re				
orginitiounit nourby routeroo			landscape.)				
The assessment area is located within the southbound US 98 right-of-wa							
located on nor	theast side of US 98.	or Creek Reserve	Not unique				
Functions			Mitigation for pre	vious	permit/other historic use)	
Natural water storage and conv	veyance; foraging habita	t; water quality			None		
improvement, it	bod attendation, rendge.						
Anticipated Wildlife Utilization Base	ed on Literature Review	(List of species	Anticipated Utiliz	ation b	y Listed Species (List s	pecies, their legal	
that are representative of the asse	ssment area and reason	hably expected to	classification (E,	1,880	C), type of use, and inte	nsity of use of the	
20104114)				•)			
Amphibiana wading birda turt	loo anakaa aana hirda	rantara amali	Little Plue He	ron (S	T forgaing/posting): Tr	isolarad Haran (ST	
Amphibians, wading birds, turt	nammals	raptors, small	foraging	/nestin	ig); Wood Stork (FT, for	aging/nesting);	
			5 5		3 //	3 3 3 3,	
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed. or	other signs such a	is trac	ks. droppings. casings.	nests. etc.):	
	(, ,			,		
	No evi	dence of wildlife u	tilitzation observed	d.			
Additional relevant factors:							
		Nono					
		None					
Assessment conducted by:			Assessment data	a(e).			
			0/04/0004	(3).			
A. Diakely			9/21/2021				

Site/Project Name		Application Number	Asse	essment Area	Name or Number
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 58	(Secondary Impacts)
Impact or Mitigation		Assessment conducted by:	Asse	essment date	:
Impa	ct	A. Blakely			9/21/2021
· · ·					
Scoring Guidance	Optimal (10)	Moderate(7)	Minima	d (4)	Not Present (0)
The scoring of each	Condition is ontimal and fully	Condition is less than	Minimellougla	foundation	Condition in insufficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/surfa	ace water	provide wetland/surface
type of wetland or surface	water functions	wetland/surface water	functio	ons	water functions
water assessed		functions			
.500(6)(a) Location and					
Landscape Support	The assessment area is a	forested wetland and is locate	ed at the southbo	ound US 08 riv	nht-of-way. Wetland and
	upland habitats are available	e outside of the assessment ar	rea; however, wild	dlife access to	o and from habitats outside
	of the assess	ment area is limited by the pre	esence of right-of	f-way fencing	and US 98.
w/o pres or					
current with	4				
6 5					
.500(6)(b)Water Environment	Water level indicators and so	bil moisture appeared somewh	at appropriate co	onsidering sea	asonal variation. Hydrologic
	conditions are affected by the	e adjacent U <mark>S 98</mark> and its asso	ciated stormwate	er manageme	nt facilities (i.e., ditches). In
	addition to surface water, hy	drologic indicators observed in ndicates alterations in points of	ncluded water-sta	ained leaves,	moss, and elevated lichen
	intes. Con crosion observed i	wetland receives ru	unoff from US 98		
w/o pres or					
current with					
7 7					
500(6)(c)Community structure					
		*			
	The plant cover within the	canony consists of appropriat	e and desirable r	lant species.	however the understory
1. Vegetation and/or	consists predominantly c	of invasive/exotic species. The	construction of l	JS 98 and its	associated stormwater
2. Benthic Community	management facilities (i.e.,	ditches) has resulted in habita	at alteration. Lan	nd manageme	ent practices are generally
	appropriate, but the routine n	naintenance within the right-of- plant com	way may attect n munity.	natural recruit	ment or regeneraltion in the
w/o pres or		plant oon			
current with	4				
6 5					
	1				
0 () (= (=	lf and a start of the start	-4:			
Score = sum of above scores/30 (if uplands, divide by 20)	if preservation as mitiga	ation,	⊢or i	mpact assess	sment areas
current	Preservation adjustmer	nt factor =		r∟ = delta x a	acres =
or w/o pres with	Adjusted mitiaation delt	a =	0.07	x 0.39	= 0.03
0.63 0.57					
·	ط ب ر بر بر	<u>.</u>			
-	If mitigation		For mi	itigation asse	ssment areas
Delta = [with-current]	Time lag (t-factor) =				
-0.07	Risk factor =		RFG = del	lta/(t-factor x ı	risk) =

Site/Project Name		Application Number	er.		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)	, .pp.,			Wetland 59 (See	condary Impacts)
5,400		<i></i>		1		
FLUCCs code	Further classifica	ition (optional) Palustrine Fores	ted Broad-	Impac	t or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	Leaved/Needle	e-Leaved Deciduo Flooded	ous, Seasonally		Impact	0.37
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e. (OFW, AP, other local/state/federa	al designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	ologic connection with	wetlands, other s	urface water, uplar	nds		
The assessment area is a forested	l system that extends c 59	outside of the right to other offsite we	-of-way. A pipe cu etland systems.	lvert th	hat runs underneath US	98 connects Wetland
Assessment area description						
Dominant vegetation within the car Virginia cl	opy of Wetland 59 incl nain fern, buttonbush, v	udes cypress and wild taro, bulrush,	red maple. The u swamp fern, lizard	nderst I's tail,	ory and groundcover pr and primrose willow.	redominantly consist of
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located w approximately 0.1 mile southeast and Gator Creek Reserve lo	thin the southbound Us of Earnest Road. Gree cated on northeast side	S 98 right-of-way n Swamp WMA e of US 98.	X		Not unique	
Functions			Mitigation for pre-	vious p	permit/other historic use	9
Natural water storage and conve improvement; floo	eyance; foraging habita od attenuation; refuge.	t; water quality			None	
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	by Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtle ma	es, snakes, song birds, ammals	raptors, small	Little Blue He foraging/	ron (S 'nestin	iT, foraging/nesting); Tr g); Wood Stork (FT, for	icolored Heron (ST, aging/nesting);
Observed Evidence of Wildlife Utiliz	ation (List species dire	ctly observed, or	other signs such a	s tracł	ks, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	d.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
A. Blakely			9/21/2021			

Site/Project Name		Application Number	Asses	sment Area	Name or Number	
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)		,	Wetland 59	(Secondary Impacts)	
Impact or Mitigation		Assessment conducted by:	Asses	sment date:		
Impac	ot	A. Blakely		ę	9/21/2021	
		ł				
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal ((4)	Not Present (0)	
The scoring of each		Condition is less than				
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level of s	support of	Condition is insufficier	nt to
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water provide wetland/s			ace
water assessed	water functions	functions	Turicuona	5		
		Iditotorio				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 4 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a upland habitats are available of the assessment area Water level indicators and so conditions are affected by t	a forested wetland and is locate e outside of the assessment ar is limited by the presence of ri bil moisture appeared somewh he adjacent US 98 and its ass	ed at the southbour ea; however, wildlin ght-of-way fencing, at appropriate cons ociated stormwater	nd US 98 rig fe access to US 98, and sidering sea	ht-of-way. Wetland an and from habitats out commercial property. sonal variation. Hydrol int facilities (i.e., ditche	nd tside logic es).
w/o pres or current with 7 7	marks and elevated lichen lin	nes. Soil erosion observed ind nstruction of US 98. The wetla	icates alterations in and receives runoff	n points of di from US 98	scharge resulting from	n the
.500(6)(c)Community structure						
1. Vegetation and/or 2. Benthic Community w/o pres or current with 6 5	The plant cover within the consists predominantly of management facilities (i.e., appropriate, but the routine	canopy consists of appropriat of invasive/exotic species. The ditches) has resulted in habit e maintenance within the right recruitment or regeneraltio	e and desirable pla construction of US at alteration. Land of-way and installa n in the plant comn	nt species; 5 98 and its a managemen tion of the c nunity.	however, the understo associated stormwater nt practices are genera ulvert may affect natur	ory r ally ral
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.60	If preservation as mitig Preservation adjustmer Adjusted mitigation del	ation, nt factor = ta =	For imp FL 0.07	pact assessi L = delta x a x 0.37	ment areas cres = = 0.02	
Delta = [with-current]	If mitigation Time lag (t-factor) =		For mitig	gation asses	sment areas	
	Piek feeter -		RFG = delta	/(t-factor x ri	sk) =	
-0.07	RISK TACTOR =					

Site/Project Name		Application Number	۶r		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)				Wetland 60 (Sec	condary Impacts)
FLUCCs code	Further classifica	tion (optional)	ated Dreed	Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	Leaved/Needle	- Palustrine, Fores e-Leaved Deciduo Flooded	ous, Seasonally		Impact	0.54
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e. (OFW, AP, other local/state/federa	al designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplar	nds		
The assessment area is comprise	d of a forested wetland 60	outside of the righ to other offsite w	nt-of-way. A cross o etland systems	drain ti	hat runs underneath US	98 connects Wetland
Assessment area description						
The forested v	vetland community cons	sists of cypress, re	ed maple, primrose	e willow	v, and Viirginia chain fe	rn.
Significant nearby features			Uniqueness (co landscape.)	nsideri	ing the relative rarity in	relation to the regional
The assessment area is located w the east side of Rockridge Road. Reserve located on	vithin the southbound U Green Swamp WMA a northeast side of US 9	S 98 adjacent to nd Gator Creek 8.	X		Not unique	
Functions			Mitigation for pre-	vious p	permit/other historic use)
Natural water storage and convo improvemen	eyance; foraging habita t; flood attenuation	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ctly observed, or	other signs such a	s track	ks, droppings, casings,	nests, etc.):
	Ν	o evidence of wild	dlife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
A. Blakely			9/21/2021			

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop	Rd to CR 54 (FPID 436673-1)			Wetland 60) (Secondary Impact	s)
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Imp	act	A. Blakely			9/21/2021	
		l	ļ			
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each		Condition is less than			o	
Indicator is based on what would be suitable for the	Supports wetland/surface	optimal, but sufficient to	Winimal lev	vel of support of	provide wetland/s	cient to
type of wetland or surface	water functions	wetland/surface water	fu	Inctions	water function	ns
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is easement. The assessmen undeveloped land that assessment area; howeve presence of right-of-way fe ad	a forested wetland that extend t area is located at the southb is bounded with fencing. Wetl r, wildlife access to and from h encing, US 98, and commercia lversely affect the functions pro	Is beyond the ound US 98 and and upla abitats outsi I property. In vided by the	e right-of-way into right-of-way. Adja and habitats are a de of the assessr vasive exotic spe a assessment area	o the Duke Energy ut iccent land uses cons vailable outside of th nent area is limited t icies are present that a.	tility ists of ne by the t may
5 4						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 500(6)(c)Community structure	ater Environment Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 freviews, the assessment area was inundated throughout. Hydrologic conditions are affected by the adjacent US and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. with 7					21 field US 98 ons in
1. Vegetation and/or 2. Benthic Community w/o pres or current with 5 4	The canopy consists of construction of US 98 and alteration. Land manageme right-of-way th	f appropriate species. The und its associated stormwater ma nt practices include the install at may affect natural recruitme	erstory is con nagement fa ation of a cro ent or regene	mprised of invasiv cilities (i.e., ditche iss drain and rout eraltion in the plan	ve/exotic species. Th ss) has resulted in ha ine maintenance with tt community.	ne abitat hin the
Score = sum of above scores/30 uplands, divide by 20) current or w/o pres with 0.57 0.50	if If preservation as mitig Preservation adjustmen Adjusted mitigation del	ation, nt factor = ta =		For impact assess FL = delta x = 0.07 x 0.54	sment areas acres = = 0.04	
	If mitigation					
Delta = [with-current]	Time lag (t-factor) =		Fo	or mitigation asse	ssment areas	
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Site/Droject Name		Application Number	2 ^{<i>r</i>}		Accompant Area Nama	or Numbor	
Site/Project Name		Application Number	51		Assessment Area Name		
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 61 (Se	condary Impacts)	
FLUCCs code	Further classifica	ition (optional)		Impac	t or Mitigation Site?	Assessment Area	
	PFO1/2C -	- Palustrine, Fores	sted, Broad-	'	5	Size (in acres)	
630 - Wetland Forested Mixe	d Leaved/Needl	e-Leaved Deciduo	ous, Seasonally		Impact	0.51	
		Flooded					
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ion (i.e.	OFW, AP, other local/state/federa	al designation of importance)	
Hillsborough River	III				None		
O			1				
Geographic relationship to and hy-	arologic connection with	wetlands, other s	uriace water, upla	nas			
	The assessme	ent area is compris	sed of a a forested	l wetla	nd.		
		•					
Assessment area description							
	Dansinantana						
	Dominant spec	cies red maple, cy	press, and primito	se will	ow.		
			Uniqueness (co	nsider	ring the relative rarity in	relation to the regional	
Significant nearby features			landscape.)	1131001	ing the relative ranty in		
The assessment area is loo	cated within the southbo	und US 98					
approximately 0.2 mile southeast	of Rockridge Road. Gre	en Swamp WMA			Not unique		
and Gator Creek Reserve I	ocated on northeast side	e of US 98.					
Functions			Mitigation for pre	vious	nermit/other historic use	<u></u>	
			Wiligation for pre	vious			
Natural water storage and conv	veyance; foraging habita	t; wat <mark>er</mark> quality			News		
improvemen	nt; flood attenuation		None				
Anticipated Wildlife Litilization Bas	ed on Literature Review	(List of species	Anticinated Litiliz	ation h	w Listed Species (Lists	necies their legal	
that are representative of the asse	essment area and reason	nably expected to	classification (E,	T, SS	C), type of use, and inte	ensity of use of the	
be found)			assessment area	ı)			
A search its is a second in a s			Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging);				
Amphibians, wading i	oirds, turties, small mam	mais	Florida Sandhi	II Crar Evero	alade Snail Kite (FF_for	aging)	
				21015			
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such a	is trac	ks, droppings, casings,	nests, etc.):	
	N	lo evidence of wild	dlife observed.				
Additional relevant factors:							
		None	ł.				
		None					
Assessment conducted by:			Assessment date	e(s):			
			9/21/2021	(-).			
A. DIANCIY			3/21/2021				

Site/Project Name		Application Number	Assessment Are	a Name or Number		
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)		Wetland 6	Wetland 61 (Secondary Impacts)		
Impact or Mitigation	· · ·	Assessment conducted by:	Assessment date	<u>.</u>		
Impa	ct	A Blakely		9/21/2021		
		A. Diakery		5/21/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each		Condition is less than				
would be suitable for the	supports wetland/surface	optimal, but sufficient to maintain most	wetland/surface water	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is a fo the southbound US 98 right- that is bounded with fencing wildlife access to and from ha US 98, and commercial	rested wetland that extends be of-way. Adjacent land uses co J. Wetland and upland habitats abitats outside of the assessm property. Invasive exotic speci provided by the a	eyond the right-of-way. The as nsists of forested wetland isol are available outside of the a ent area is limited by the pres es are present that may adve ssessment area.	essessment area is located at lated by commecial property assessment area; however, ence of right-of-way fencing, rsely affect the functions		
5 4						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 5 4	Water level indicators and s reviews, surface water was o present. Hydrologic condi facilities (i.e., ditches), s co	soil moisture appeared appropri observed throughout the wetlan tions are affected by the adjac Soil erosion observed indicates instruction of US 98. The wetlan propriate species. Majority of pl desirable/appropriate species p facilities (i.e., ditches) has resi a cross drain and routine mair recruitment or regeneraltio	iate considering seasonal van dand soils observed indicate ent US 98 and its associated s alterations in points of disch and receives runoff from US 9 ant cover within the understoi present. The construction of L ulted in habitat alteration. Lan ttenance within the right-of-wa n in the plant community.	riation. During the 2021 field ed a dark surface with muck stormwater management large resulting from the 8. ry is comprised of invasive, IS 98 and its associated id management practices ay that may affect natural		
	, <u> </u>					
Score = sum of above scores/30 (if uplands, divide by 20)	If preservation as mitig	ation,	For impact asses	sment areas		
current	Preservation adjustment	nt factor =	⊢L = delta x	acres =		
or w/o pres with	Adjusted mitigation del	ta =	0.07 x 0.51	= 0.03		
0.57 0.50						
	If mitigation					
			For mitigation asse	essment areas		
Delta = [with-current]	I ime lag (t-factor) =					
-0.07	Risk factor =		RFG = delta/(t-factor x	risk) =		

Site/Project Name		Application Number	ər		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to CR	54 (FPID 436673-1)	,	-		Wetland 62 (Sec	condary Impacts)
	, , , , , , , , , , , , , , , , , , ,					
FLUCUS code	Further classifica	ation (optional)		Impac	t or Mitigation Site?	Assessment Area
621 - Cypress	PFO2C – Palı Decidu	ustrine, Forested, uous, Seasonally	Needle-Leaved Flooded		Impact	0.54
Basin/Watershed Name/Number Af	ected Waterbody (Cla	ss)	Special Classificati	ON (i.e. (DFW, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hydrol	ogic connection with	wetlands, other s	urface water, uplar	nds		
The assessn	nent area is comprise	ed of a forested w	etland that extends	s outsi	de of the right-of-way.	
Assessment area description				7		
Dominant vegetation within Wetland	62 consists of cypre	ess, primrose willo smartwe	ow, Mexican primro eed.	ose, pic	ckerelweed, Carolina wi	llow, buttonbush, and
Significant nearby features			Uniqueness (co landscape.)	nsideri	ing the relative rarity in	relation to the regional
Wetland 62 is located within the sou	ithbound US 98 righ	t-of-way directly				
west of Big Cypress Boulevard. Green Swamp WMA and Gator Creek Not unique Reserve located on northeast side of US 98.						
Functions			Mitigation for pre-	vious p	permit/other historic use)
Natural water storage and conveya improvement; f	nce; foraging habita ood attenuation	it; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Based of that are representative of the assessme be found)	on Literature Review ment area and reason	(List of species nably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading bird	s, turtles, small mam	nmals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utilizat	ion (List species dire	ectly observed, or	other signs such a	s track	s, droppings, casings,	nests, etc.):
	No ev	idence of wildlife u	utilization observed	I.		
Additional relevant factors:						
		None).			
Assessment conducted by:			Assessment date	e(s):		
S. Szatyari			9/24/2021			

Site/Project Name			Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Lo	oop Rd	to CR 54 (FPID 436673-1)			Wetland 62 (Secondary Impacts)		
Impact or Mitigation			Assessment conducted by:		Assessment date	:	
	Impac	t	S. Szatyari		9/24/2021		
<u> </u>					Į		
Scoring Guidance		Optimal (10)	Moderate(7)	Mi	nimal (4)	Not Present	(0)
The scoring of each			Condition is less than				
indicator is based on what		Condition is optimal and fully	optimal, but sufficient to	Minimal le	evel of support of	Condition is insuff	ficient to
would be suitable for the		supports wetland/surface	maintain most	wetland	/surface water	provide wetland/	surface
type of wetland or surface		water functions	wetland/surface water	fu	unctions	water function	ons
water assessed			functions				
.500(6)(a) Location and Landscape Support w/o pres or current v 5 .500(6)(b)Water Environm (n/a for uplands)	d <u>with</u> 4	The assessment area is assessment area is located upland habitats are available of the assessment area is lir adjacent uplands within the Water level indicators and s reviews, this wetland was inu hydrologic indicators observ	an forested cypress dominate at the southbound US 98 righ outside of the assessment ar nited by the presence of right- right-of-way consist of mower oil moisture appeared appropr ndated throughout with water ed included moss, water mark	ed wetland ti tt-of-way dirr ea; howeve of-way fenci d and mainta and mainta iate conside evels greate s, and buttr	hat extends beyon ectly west of Big C r, wildlife access to ng, US 98, and re ained ruderal spec aring seasonal varier than 12 inches. essing. Hydrologic	d the right-of-way. " cypress Blvd. Wetla o and from habitats sidential developme ies overlaying fill m iation. During the 2/ In addition to surfac	The nd and outside ent. The aterial. 021 field ce water, ected by
w/o pres or current v 7	with 7	the adjacent US 98 and its a	ssociated stormwater manage from U	ement faciliti S 98.	es (i.e., ditches). T	The wetland receive	es runoff
500(0)(.)0							
.500(6)(c)Community struc	cture						
1. Vegetation and/or 2. Benthic Community w/o pres or current v 7	v with 6	Plant cover within the right- canopy with native and inva stormwater management include the routine mainten	of-way is a mix of native and ir asive species present in the ur facilities (i.e., ditches) has res ance within the right-of-way th plant corr	nvasive, exo nderstory. T ulted in habi nat may affer nmunity.	tic species. Cypre he construction of itat alteration. Land ct natural recruitm	ss trees dominate t US 98 and its asso d management pra ent or regeneraltior	the tree ociated ctices o in the
Score = sum of above scores/	'30 /if	If preservation as mitig	ation		For impact assoc	sment areas	
uplands, divide by 20)							
ourront		Preservation adjustmer	nt factor =	1	FL = delta x a	acres =	
or w/o pres	with			1	0.07 v 0.54	- 0.04	
		Adjusted mitigation delt	a =	1	0.07 X 0.04	- 0.04	
0.63 0).57	I		L			
•							
		If mitigation		_	or mitigation asso	ssment aroos	
Delta = [with-current]		Time lag (t-factor) =			or milligation asse	Somenic areas	
0.07		Pick factor -		RFG	= delta/(t-factor x	risk) =	
-0.07 Risk factor =				,			

Site/Project Name		Application Number	ar		Assessment Area Name	or Number
		Application Numbe	Wetland 62 (Secondary Impo			
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 63 (See	condary Impacts)
FLUCCs code	Further classifica	ition (optional)		Impac	t or Mitigation Site?	Assessment Area
	PFO1/2C -	Palustrine, Fores	sted, Broad-		· · · · · · · · · · · · · · · · · ·	Size (in acres)
630 - Wetland Forested Mixe	d Leaved/Needle	e-Leaved, Deciduo	ous, Seasonally		Impact	0.15
		Flooded				
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	al designation of importance)
Hillsborough River	III				None	
Coographic relationship to and hy	drologia connection with	watlanda, athar a		ndo		
Geographic relationship to and hy		wettanus, other s	unace water, upla	nus		
The assessm	ent area is comprised o	f a forested wetlar	nd system that ext	ends c	outside of the right-of-wa	ay.
Assessment area description						
Dominant vagatation within	the ease of Matland	2 includes overes		drod	manla. The understary	and groundoovor
Dominant vegetation within	predominantly consist	t of Virginia chain	fern, swamp fern.	and b	uttonbush.	and groundcover
	prodominantiy conoio		ioni, onemp ioni,			
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional
	the second block of the second states of the second	alah faran	lanuscape.)			
Wetland 63 is located within approximately 0.3 mile southeast	of Big Cypress Boulevar	right-of-way			Not unique	
WMA and Gator Creek Reserv	/e located on northeast	side of US 98.			Hot diliquo	
Functions			Mitigation for pre	vious	permit/other historic use	9
		ti unatan avraliti i				
improvement: fl	pod attenuation: refuge.	t; water quality	None			
······································	, .					
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliz	ation b	y Listed Species (List s	pecies, their legal
that are representative of the asser	essment area and reason	hably expected to	classification (E,	1, 550), type of use, and inte	nsity of use of the
				•)		
						is share dillare a (OT
Amphibians, wading birds, turt	ies, snakes, song birds, nammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
			loraging/nesting), wood Stork (F1, loraging/nesting),			
Observed Evidence of Wildlife Litil	ization (List species dire	octly observed or	other signs such a	s tracl	ks droppings casings	nests etc.):
Observed Evidence of Wildlife Oti	ization (List species dire	city observed, or		is traci	s, droppings, casings,	nesis, etc. <i>j</i> .
	No evi	dence of wildlife u	tilitzation observe	d.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
S. Szatyari			9/24/2021			
,						

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 63 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:		Assessment date	:	
Impac	ct	S. Szatyari			9/24/2021	
<u> </u>		<u> </u>				
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each		Condition is less than			0 111	.
would be suitable for the	Supports wetland/surface	optimal, but sufficient to maintain most	wetland/	vel of support of	provide wetland/	surface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	ons
water assessed		functions				
	1					
.500(6)(a) Location and Landscape Support The assessment area is a forested wetland that extends outside the right-of-way. The assessment area the southbound US 98 right-of-way. Adjacacent land use includes residential development; Wetland a habitats are available outside of the assessment area; however, wildlife access to and from habitats ou assessment area is limited by the presence of right-of-way fencing, US 98, and residential develop					sessment area is lo nent; Wetland and i rom habitats outsid idential developme	ocated at upland le of the ent.
current with						
5 4						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 6	Water level indicators and s this wetland was inundated t stormwater management fa resulting fro Plant cover is solely cov associated stormwater man practices are generally appr may a	indicators and soil moisture appropriate considering seasonal variation. During the 2021 fiel was inundated throughout. Hydrologic conditions are affected by the adjacent US 98 and its management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of resulting from the construction of US 98. The wetland receives runoff from US 98. ver is solely covered by appropriate and desirable plant species. The construction of US 98 stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land mare a generally appropriate, but installation of a cross drain and routine maintenance within the rimary affect natural recruitment or regeneraltion in the plant community.				
Score = sum of above scores/30 (if	If preservation as mitig	ation,		For impact assess	sment areas	
uplands, divide by 20)	Preservation adjustment factor = FL = delta x acres =					
current						
o oo	Adjusted mitigation del	ta =		υ.υ <i>ι</i> χ υ.15	= 0.01	
0.63 0.57			K			
	If mitigation					
			Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to C	to CR 54 (FPID 436673-1) Wetland 64 (Seconda			condary Impacts)		
FLUCCs code	Further classifica	tion (optional)		Impact	t or Mitigation Site?	Assessment Area
631 - Wetland Scrub	PSS1C - Palus Decidu	stine, Scrub-shrub ious, Seasonally F	o, Broad-leaved ⁻ looded		Impact	Size (in acres) 0.20
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	ON (i.e. C	DFW, AP, other local/state/federa	al designation of importance)
Withlacoochee River	III				None	
Geographic relationship to and hydr	ologic connection with	wetlands, other s	urface water, uplar	nds		
The assessment area is comprise ru	ed of a scrub-shrub wet Ins underneath US 98	land that extends connects Wetland	outside of the righ d 64 to other offsite	t-of-wa wetla	ay into a forested wetlan nd systems.	nd. A cross drain that
Assessment area description						
Dominant vegetation within Wetland	d 64 includes red maple right-of-v	e, Carolina willow, way consists of ree	, primrose willow, a d maple and cypre	ind sm ss.	artweed. The forested	wetland adjacent to the
Significant nearby features			Uniqueness (cor	nsideri	ng the relative rarity in	relation to the regional
Wetland 64 is located within the southbound US 98 right-of-way approximately 0.3 mile northwest of West Socrum Loop Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	/ious p	permit/other historic use	9
Natural water storage and conve improvement; floo	yance; foraging habita od attenuation; refuge.	t; water quality	None			
Anticipated Wildlife Utilization Based that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading birds, turtle ma	s, snakes, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ctly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):
No evidence of wildlife utilitzation observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
S. Szatyari			9/24/2021			

Site/Project Name		Application Number	A	Assessment Area	a Name or Number	
US 98 from W Socrum Loop Rd	I to CR 54 (FPID 436673-1)			Wetland 64 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:	ŀ	Assessment date	:	
Impac	ct	S. Szatyari			9/24/2021	
						(*)
Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present	: (0)
indicator is based on what	Condition is optimal and fully	Condition is less than	Minimal lov	ol of support of	Condition is insut	ficient to
would be suitable for the	condition is optimal and fully	optimal, but sufficient to	wotland/s	surface water	provide wetland	
type of wetland or surface	water functions	wetland/surface water	wettanu/s	actions	water function	ons
water assessed	water functions	functions	iui	10110113	water fullet	0115
Haldi dobbobba		. anouono				
.500(6)(a) Location and Landscape Support w/o pres or <u>current with</u> 5 4	The assessment area is a system. The assessment a available outside of the asse area is limited by the preser within the right-of-t	a scrub shrub weltand that extere rea is located at the southbour sssment area; however, wildlif nee of right-of-way fencing, res way consist of mowed and ma	ends outside o nd US 98 righ e access to a sidential devel intained ruder	of the right-of-wa ht-of-way. Wetlan ind from habitats opment, and US ral species overla	y into a forested w ad and upland habit outside of the asse 8 98. The adjacent aying fill material.	etland tats are essment uplands
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with	vertice with with water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Duration 2021 field reviews, this wetland was inundated throughout with water levels greater than six inches. Hydrol conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., dite The wetland receives runoff from US 98.					uring the rologic litches).
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is l construction of US 98 and alteration. Land manageme may a	by appropriate and desirable p its associated stormwater man ant practices are generally app ffect natural recruitment or rec	lant species v nagement fac propriate, but i generaltion in	with invasive/exo ilities (i.e., ditche routine maintena the plant commu	otic species present es) has resulted in ance within the righ unity.	t. The habitat t-of-way
w/o pres or						
current with						
6 5	1					
0 5						
	16 mm	- 41	_			
Score = sum of above scores/30 (if If preservation as mitigation, For impact assessment areas						
upianus, uiviue by 20	Preservation adjustment factor = FL = delta x acres =					
current						
pr w/o pres with	Adjusted mitigation delt	ia =		0.07 x 0.20	= 0.01	
0.60 0.53						
<u> </u>	4					
	If mitigation		_			
Dolta = [with ourront]	Time lac /t feater) -		Fo	minigation asse	essment areas	
	rime lag (t-lactor) =					
-0.07	Risk factor = RFG = delta/(t-factor x risk) =					

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to CR 5	4 (FPID 436673-1)		Wetland 65 (Secondary Impacts)			condary Impacts)
FLUCCs code	Further classification	ation (optional)		Impact	t or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.42
Basin/Watershed Name/Number Affe	ected Waterbody (Cla	ss)	Special Classification	0N (i.e. 0	DFW, AP, other local/state/federa	I designation of importance)
Withlacoochee River					None	
Geographic relationship to and hydrolo	gic connection with	wetlands, other s	urface water, uplar	nds		
The assessment area consists of a	forested wetland. A	cross drain that r system	uns underneath US เร.	S 98 c	onnects Wetland 65 to	other offsite wetland
Assessment area description						
The forested wetland consi	sts of red maple, sw	veet bay, primrose	e willow, cattail, Virg	ginia cl	hain fern,wild taro, and	buttonbush.
Significant nearby features			Uniqueness (cor landscape.)	nsideri	ng the relative rarity in	relation to the regional
Wetland 65 is located within the southbound US 98 right-of-way directly west of West Socrum Loop Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious p	permit/other historic use)
Natural water storage and conveya improvement; flo	nce; foraging habita bod attenuation	ıt; wa <mark>ter</mark> quality	None			
Anticipated Wildlife Utilization Based of that are representative of the assessme be found)	n Literature Review ent area and reaso	(List of species nably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SSC)	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds	, turtles, small mam	nmals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utilizati	on (List species dire	ectly observed, or	other signs such a	s track	s, droppings, casings,	nests, etc.):
No evidence of wildlife utilization observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
S. Szatyari			9/24/2021			

Site/Project Name		Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 65 (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impac	ct	S. Szatyari	S. Szatyari		9/24/2021	
l		<u> </u>				
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present ((0)
The scoring of each		Condition is less than				
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal lev	vel of support of	Condition is insuffic	cient to
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	unace Is
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a for the southbound US 98 righ however, wildlife access to a way fencing, US 98, and W 5	rested wetland that extends be ht-of-way. Wetland and upland and from habitats outside of th Socrum Loop Road. The adjac maintained ruderal specie	eyond the rig habitats are e assessmen cent uplands is overlaying	ht-of-way. The as available outside nt area is limited l within the right-of fill material.	sessment area is loc e of the assessment a by the presence of rig -way consist of mow	ated at area; ght-of- ed and
	1					
5 4						
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. During the 2021 reviews, this wetland was inundated throughout with water levels greater than six inches. Hydrological indications observed included surface water and a high water table. Hydrologic conditions are affected by the adjacent US and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 94 w/o pres or current with					21 field ators US 98 98.	
.500(6)(c)Community structure						
1. Vegetation and/or 2. Benthic Community w/o pres or current with	The canopy consists of app exotic species with minimal management facilities (i.e routine maintenance wit	propriate species. Plant cover I presence of native species. T ., ditches) has resulted in hab thin the right-of-way that may a comm	within the un 'he construct itat alteration affect natural unity.	Iderstory is compr tion of US 98 and I. Land managem recruitment or re	rised of primarily inva its associated storm ent practices include generaltion in the pla	asive, water e the ant
5 4]					
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	F	For impact assess	sment areas	
uplands, divide by 20)	Preservation adjustment	nt factor =		FL = delta x a	acres =	
current				0.07 × 0.40	- 0.02	
	Adjusted mitigation delt	ta =		0.07 X 0.42	- 0.03	
0.57 0.50						
	If mitigation					
			Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

APPENDIX I.3

UMAM Worksheets – Preliminary Pond Sites Direct

Impacts

Site/Project Name Application Number US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)			er	Assessment Area N V	ame or Number Vetland 66 (FPC 4B)	
FLUCCs code	Further classifica	ation (optional)		Impact or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	ed Impact of Magaton one Size (in a Size (in a 0.17			
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classification	On (i.e. OFW, AP, other local/state	/federal designation of importance)	
Hillsborough River	III			None		
Geographic relationship to and hyc	Irologic connection with	wetlands, other s	urface water, uplar	lds		
The asses	ssment area is a disturb	bed herbaceous w	etland surrounded	by residential developme	ent.	
Assessment area description						
	The dominant vege	etation consists of	primrose willow and	d bahia grass.		
Significant nearby features			Uniqueness (cor landscape.)	nsidering the relative rari	ty in relation to the regional	
The assessment area is located near northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious permit/other histori	c use	
Natural water storage and conv improvement; flo	eyance; foraging habita ood attenuation; refuge.	at; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reaso	(List of species nably expected to	Anticipated Utiliza classification (E, 1 assessment area)	tion by Listed Species (Ι Γ, SSC), type of use, and)	ist species, their legal l intensity of use of the	
Amphibians, wading birds, turtl m	es, s <mark>nakes</mark> , song bir <mark>ds</mark> , aammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such as	s tracks, droppings, casiı	ngs, nests, etc.):	
	No evi	idence of wildlife u	tilitzation observed	L		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
T. Norman			6/28/2021			
Site/Project Name		Application Number	Assessment Are	Assessment Area Name or Number		
--	--	---	--	--	--	--
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 66 (FPC 4B)		
Impact or Mitigation		Assessment conducted by:	Assessment date	Assessment date:		
Impac	ot	T. Norman		6/28/2021		
·						
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each indicator is based on what	Condition is optimal and fully	Condition is less than optimal, but sufficient to	Minimal level of support of	Condition is insufficient to		
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
walei מספרסטלט						
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is assessment area is located i outside of the assessment limited by the pres	an herbaecous wetland system near northbound US 98 right-o area; however, wildlife access sence of Pioneer Drive, reside	n that is surrounded by reside f-way. Minimal wetland and u to and from habitats outside ntial development, private fer	ential development. The pland habitats are available of the assessment area is ncing,and US 98.		
5 0						
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat less than appropriate considering seasonal variations are affected by the adjacent development and its associated stormwater management fact (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction o 98.						
b 0						
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover consis and its associated storm management practic	ts ofl invasive/exotic species of nwater management facilities are consists of routine mainter	with few desirable species. Th (i.e., ditches) has resulted in l ance of the residential prope	ne surrounding development habitat alteration. Land rites and roadways.		
	-9					
w/o pres or current with						
	1					
4 0						
	a	a				
Score = sum of above scores/30 (if	If preservation as mitiga	ation,	For impact asses	sment areas		
current	Preservation adjustmer	t factor =	FL = delta x	acres =		
pr w/o pres with	Adjusted mitigation delt	a =	0.47 x 0.17	= 0.08		
0.47 0.00						
·	If mitigation					
Dolta - [with ourrent]	Time lag (t fector) =		For mitigation asse	essment areas		
			PEC - dolto//t foster y	rick) –		
-0.47	Risk factor =			113K) -		

Site/Project Name Application Nu			ber Assessment Area Name or Number			or Number
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)				Wetla (FPC 4A I	and 67 Easement)
FLUCCs code	Further classifica	ation (optional)	ted Broad-	Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	l leaved/Needl	e-leaved Deciduor Flooded	us, Seasonally		Impact	0.23
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e.	OFW, AP, other local/state/federa	al designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, uplai	nds		
The assessment a	area is a forested wetlar	nd system surroun	nded by residential	devel	opment to the north and	d west.
Assessment area description						
The dominant ve	getation within the can	opy of this wetland	d consists of <mark>r</mark> ed m	aple,	water oak, and bald cyp	ress.
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located near northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for pre	vious	permit/other historic use	2
Natural water storage and conv improvement; flo	eyance; foraging habita od attenuation; refuge.	ıt; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review asment area and reason	(List of species nably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS(i)	by Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtl m	es, s <mark>nake</mark> s, song bir <mark>ds</mark> , ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
No evidence of wildlife utilitzation observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number	Ass	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 67 (EPC 44 Easement)		
Impact or Mitigation		Assessment conducted by:	Ass	Assessment date:		
Impac	ct	T. Norman		6/28/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Minim	al (4)	Not Present	(0)
The scoring of each		Condition is less than				.
indicator is based on what would be suitable for the	Supports wetland/surface	optimal, but sufficient to maintain most	wetland/sur	of support of face water	provide wetland/	surface
type of wetland or surface	water functions	wetland/surface water	functi	ions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a for west. The assessment area available outside of the asse area is limited by the preser	orested wetland system that is a is located near the northbou essment area; however, wildlif nce of Pioneer Drive, residentia US : bil moisture appeared somewh	surrounded by nd US 98 right-o e access to and al development, 38.	residential dev of-way. Wetlan I from habitats private fencing	velopment to the no d and upland habit outside of the asse g, right-of-way fenc	orth and ats are essment ing and
w/o pres or current with 7 0	conditions are affected by t Soil erosion observed indi	he adjacent US 98 and its ass cates alterations in points of d wetland receives m	ociated stormwa ischarge resultir unoff from US 98	ater managem ng from the cor 8.	ent facilities (i.e., d nstruction of US 98	itches). 3. The
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of the plant cove construction of US 98 and	er within canopy is desirable platities associated stormwater man	ant species with nagement facilit	n invasive, exot ies (i.e., ditche	tic species present. es) has resulted in h	. The nabitat
2. 2011.10 001111.1.1.1	maintenance within the rig	ht-of-way that may affect natu	ral recruitment c	or regeneraltion	n in the plant comm	nunity.
w/o pres or	ĺ					
current with						
7 0						
II						
a () (a) (a) (a)	la e e					
uplands, divide by 20)	ii preservation as muga	auon,	FOI	EL = dolta x c		
current	Preservation adjustment factor =					
or w/o pres with	Adjusted mitigation del	ta =	0.6	67 x 0.23	= 0.15	
0.67 0.00						
	If mitigation					
			For m	nitigation asse	ssment areas	
Deita = [with-current]	i ime iag (t-tactor) =					
-0.67	Risk factor =		RFG = de	elta/(t-factor x i	risk) =	

Site/Project Name Application US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)			er	Assessment Area Name or Number Wetland 67 (FPC 4A)			
FLUCCs code 630 - Wetland Forested Mixed	Further classifica PFO1/2C leaved/Needl	ation (optional) - Palustine, Fores e-leaved Deciduo Flooded	ted, Broad- us, Seasonally	Impac	t or Mitigation Site?	Assessment Area Size (in acres) 0.83	
Basin/Watershed Name/Number Hillsborough River	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e. (OFW, AP, other local/state/federa	I designation of importance)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands The assessment area is a forested wetland system surrounded by residential development to the north and west.					d west.		
Assessment area description The dominant ve	getation within the can	opy of this wetland	d consists of red m	aple, v	water oak, and bald cyp	ress.	
Significant nearby features The assessment area is located near northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique				
Functions Natural water storage and conve improvement; flo	Mitigation for previous permit/other historic use None						
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS(I)	by Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the	
Amphibians, wading birds, turtle ma	es, snakes, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):	
	No evidence of wildlife utilitzation observed.						
Additional relevant factors:							
		None					
Assessment conducted by: T. Norman			Assessment date 6/28/2021	e(s):			

Site/Project Name		Application Number	Assessment	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 67		
Impact or Mitigation		Assessment conducted by:	Assessment	Assessment date:		
Impac	ct	T. Norman		6/28/2021		
·						
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each		Condition is less than				
indicator is based on what would be suitable for the	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to maintain most	wetland/surface wate	T of Condition is insufficient to		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current with</u> 6 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a f west. The assessment are available outside of the asse area is limited by the preser	orested wetland system that is a is located near the northbou essment area; however, wildlif nce of Pioneer Drive, residenti US : bil moisture appeared somewh	surrounded by residentiand US 98 right-of-way. We access to and from hat al development, private for the second state of the s	al development to the north and tetland and upland habitats are bitats outside of the assessment encing, right-of-way fencing and		
w/o pres or current with 7 0	conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches) Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.					
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of the plant cove construction of US 98 and alteration. Land manager	er within canopy is desirable platist associated stormwater mainent practices include the inst	ant species with invasive nagement facilities (i.e., allation of a pipe culvert v	, exotic species present. The ditches) has resulted in habitat vithin the wetland and routine		
	maintenance within the rig	ht-of-way that may affect natu	ral recruitment or regene	raltion in the plant community.		
w/o pres or						
current with						
7 0						
Score = sum of above scores/30 (if	If preservation as mitig	ation	For impact a	ssessment areas		
uplands, divide by 20)		, 	FL = de	lta x acres =		
current	Preservation adjustmen	nt ractor =				
or w/o pres with	Adjusted mitigation del	ta =	0.67 x	0.83 = 0.55		
0.00						
	If mitigation					
Delta = [with-current]	Time lag (t-factor) =		For mitigation	assessment areas		
			REG = delta//t foo	tor x risk) =		
-0.67 Risk factor = RFG = delta/(t-factor x risk) =						

Site/Project Name	Site/Project Name Application Nut			er Assessment Area Name or Number		
US 98 from W Socrum Loop Rd to (CR 54 (FPID 436673-1)				(FPC 4B I	Easement)
FLUCCs code 630 - Wetland Forested Mixed	Further classifica PFO1/2C leaved/Needl	ation (optional) - Palustine, Fores e-leaved Deciduo Flooded	Impact or Mitigation Site? sted, Broad- bus, Seasonally Impact		Assessment Area Size (in acres) 0.38	
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classificati	ON (i.e.	OFW, AP, other local/state/federa	al designation of importance)
Hillsborough River	ш				None	
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, upla	nds		
The assessment a	area is a forested wetlar	nd system surroun	nded by residential	devel	opment to the north and	d west.
Assessment area description						
The dominant ve	egetation within the can	opy of this wetland	d consists of red m	aple,	water oak, and bald cyp	press.
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located near northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for pre-	vious	permit/other historic use	9
Natural water storage and conv improvement; flo	eyance; foraging habita ood attenuation; refuge.	ıt; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reaso	(List of species nably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS(i)	by Listed Species (List s C), type of use, and inte	pecies, their legal ensity of use of the
Amphibians, wading birds, turtl m	es, s <mark>nakes</mark> , song bir <mark>ds</mark> , aammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	d.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
I. Norman			6/28/2021			

Site/Project Name		Application Number	A	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 67 (EPC 4B Easement)		
Impact or Mitigation		Assessment conducted by:	Α	Assessment date:		
Impac	ct	T. Norman			6/28/2021	
·						
Scoring Guidance	Optimal (10)	Moderate(7)	Mini	imal (4)	Not Present	(0)
The scoring of each		Condition is less than				
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal leve	el of support of	Condition is insuf	ficient to
type of wetland or surface	water functions	wetland/surface water	fun	actions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support	The assessment area is a for west. The assessment area available outside of the asso area is limited by the preser	orested wetland system that is a is located near the northbour essment area; however, wildlif ice of Pioneer Drive, residenti US s	s surrounded b nd US 98 righ e access to ar al developmen 98.	by residential dev it-of-way. Wetlan nd from habitats nt, private fencin	velopment to the no d and upland habit outside of the asse g, right-of-way fenc	orth and ats are essment cing and
current with						
0				•		
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure	500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydro conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditch Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. T wetland receives runoff from US 98. pres or urrent with 7 0 500(6)(c)Community structure					
1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 0	1. Vegetation and/or 2. Benthic Community w/o pres or current					
	I					
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.67	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, ht factor = ta =	F	FL = delta x FL = delta x 0.67 x 0.38	sment areas acres = = 0.25	
			Foi	r mitigation asse	ssment areas	
Deita = [with-current]	i ime iag (t-tactor) =					
-0.67	Risk factor =		RFG =	delta/(t-factor x	risk) =	

Site/Project Name Application Num US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)			er	Assessment Area Name or Number Wetland 67 (FPC 4B)		
FLUCCs code 630 - Wetland Forested Mixed	Further classifica PFO1/2C d leaved/Needl	ation (optional) - Palustine, Fores e-leaved Deciduo Flooded	ted, Broad- us, Seasonally	, Broad- Seasonally Impact or Mitigation Site? Assessn Size (i 0.50		Assessment Area Size (in acres) 0.50
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e.	OFW, AP, other local/state/federa	l designation of importance)
Geographic relationship to and hv	trologic connection with	wetlands other s	urface water, uplai	nds	None	
The assessment a	area is a forested wetlar	nd system surroun	ided by residential	devel	opment to the north and	d west.
Assessment area description						
The dominant ve	egetation within the can	opy of this wetland	l consists of red m	aple,	water oak, and bald cyp	ress.
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located near the northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions		Mitigation for pre-	vious	permit/other historic use)	
Natural water storage and conv improvement; flo	reyance; foraging habita bod attenuation; refuge.	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS(i)	by Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtl m	les, snakes, song birds, nammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Util	ization (List species dire	ectly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
No evidence of wildlife utilitzation observed.						
Additional relevant factors:						
		None				
Assessment conducted by: T. Norman			Assessment date 6/28/2021	e(s):		
			0, 20, 202 1			

Site/Project Name		Application Number	Ass	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 67		
Impact or Mitigation		Assessment conducted by:	Ass	Assessment date:		
Impac	ct	T. Norman		6/28/2021		
·						
Scoring Guidance	Optimal (10)	Moderate(7)	Minima	al (4)	Not Present	: (0)
The scoring of each		Condition is less than				
indicator is based on what would be suitable for the	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to maintain most	wetland/sur	of support of face water	provide wetland	ficient to
type of wetland or surface	water functions	wetland/surface water	functi	ions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current with 6 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a f west. The assessment are available outside of the asse area is limited by the preser	orested wetland system that is a is located near the northbou essment area; however, wildlif nce of Pioneer Drive, residentia US :	a surrounded by nd US 98 right-o e access to and al development, 98.	residential dev of-way. Wetlan I from habitats private fencing	velopment to the no d and upland habit outside of the asse g, right-of-way fend	orth and lats are essment cing and
w/o pres or current with 7 0	 conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches) Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. w/o pres or current with 7 					
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of the plant cove construction of US 98 and atteration Land manager	er within canopy is desirable platits associated stormwater ma	ant species with nagement faciliti	i invasive, exot ies (i.e., ditche	tic species present es) has resulted in l	. The habitat
	maintenance within the rig	ht-of-way that may affect natu	ral recruitment o	or regeneraltion	n in the plant com	nunity.
w/o pres or	Ĩ					-
current with						
7 0						
score = sum of above scores/30 (if uplands, divide by 20)	If preservation as mitiga	ation,	For	EL = dolto x		
current	Preservation adjustment factor = FL = delta x acres =					
or w/o pres with	Adjusted mitigation del	ta =	0.6	67 x 0.50	= 0.33	
0.67 0.00			L			
	If mitigation					
Della – fu ^{rti} l – 1			For m	nitigation asse	ssment areas	
Deita = [with-current]	i ime iag (t-factor) =					
-0.67	Risk factor =		RFG = de	elta/(t-factor x ı	risk) =	

Site/Project Name Application Nu			Assessment Area Name or Number			or Number
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetia (FPC 4C	and 67 Easement)
FLUCCs code	Further classifica	ation (optional) - Palustine, Fores	ted Broad-	Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	d leaved/Needl	e-leaved Deciduo Flooded	us, Seasonally		Impact	0.23
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e.	OFW, AP, other local/state/federa	al designation of importance)
Hillsborough River					None	
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplai	nds		
The assessment a	area is a forested wetlar	nd system surroun	ided by residential	devel	opment to the north and	d west.
Assessment area description						
The dominant ve	egetation within the can	opy of this wetland	d consists of red m	aple,	water oak, and bald cyp	ress.
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located near the northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for pre	vious	permit/other historic use	2
Natural water storage and conv improvement; flo	eyance; foraging habita ood attenuation; refuge.	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reason	(List of species nably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading birds, turtl m	es, s <mark>nakes</mark> , song bir <mark>ds</mark> , nammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Util	zation (List species dire	ectly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	d.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number	Ass	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 67 (EPC 4C Easement)		
Impact or Mitigation		Assessment conducted by:	Ass	Assessment date:		
Impac	ct	T. Norman		6/28/2021		
·						
Scoring Guidance	Optimal (10)	Moderate(7)	Minim	nal (4)	Not Present	(0)
The scoring of each		Condition is less than				.
indicator is based on what would be suitable for the	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to maintain most	Winimai level	of support of	provide wetland	ficient to
type of wetland or surface	water functions	wetland/surface water	funct	tions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a f west. The assessment are available outside of the asse area is limited by the preser	orested wetland system that is a is located near the northbou essment area; however, wildlif nce of Pioneer Drive, residenti- US : US :	surrounded by nd US 98 right- e access to and al development, 98.	residential dev of-way. Wetlan d from habitats , private fencing	velopment to the no d and upland habit outside of the asse g, right-of-way fenc	orth and ats are essment cing and
w/o pres or current with 7 0	conditions are affected by t Soil erosion observed indi	he adjacent US 98 and its ass cates alterations in points of d wetland receives m	oclated stormwa ischarge resultir unoff from US 9	ater managem ng from the cor 8.	ent facilities (i.e., d nstruction of US 98	itches). 3. The
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of the plant cove construction of US 98 and alteration. Land manager	er within canopy is desirable platist associated stormwater main nent practices include the inst	ant species with nagement facilit allation of a pipe	n invasive, exot ties (i.e., ditche e culvert within	tic species present ss) has resulted in I the wetland and rc	. The habitat putine
	maintenance within the rig	ht-of-way that may affect natu	ral recruitment o	or regeneraltion	n in the plant comn	nunity.
w/o pres or						
current with	-					
7 0						
Score = sum of above scores/30 (if	If preservation as mitig	ation	For	imnact assess	sment areas	
uplands, divide by 20)				FL = delta x a	acres =	
current	Preservation adjustment factor =					
or w/o pres with	Adjusted mitigation del	ta =	0.6	67 x 0.23	= 0.15	
0.67 0.00]		L			
	If mitigation					
Delta = [with-current]	Time lag (t-factor) =		For n	nitigation asse	ssment areas	
			REG = d	elta//t-factor v :	risk) =	
-0.67 Risk factor = RFG = delta/(t-factor x risk) =					lion <i>) –</i>	

Site/Project Name US 98 from W Socrum Loop Rd to CF	Application Numbe	er	Assessment Area Name or Number Wetland 67 (FPC 4C)			
FLUCCs code 630 - Wetland Forested Mixed	Further classifica PFO1/2C leaved/Needl	ation (optional) - Palustine, Fores e-leaved Deciduo Flooded	ted, Broad- us, Seasonally	Impac	t or Mitigation Site?	Assessment Area Size (in acres) 1.30
Basin/Watershed Name/Number A Hillsborough River	ffected Waterbody (Clas	ss)	Special Classificati	ON (i.e.	OFW, AP, other local/state/federa	I designation of importance)
Geographic relationship to and hydro The assessment ar	blogic connection with ea is a forested wetlar	wetlands, other sond system surroun	urface water, uplai nded by residential	nds devel	opment to the north and	l west.
Assessment area description The dominant veg	etation within the can	opy of this wetland	d consists of red m	aple, r	water oak, and bald cyp	ress.
Significant nearby features The assessment area is located near the northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique			
Functions Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.			Mitigation for previous permit/other historic use None			
Anticipated Wildlife Utilization Based that are representative of the assess be found)	on Literature Review ment area and reason	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	by Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtle: ma	s, s <mark>nake</mark> s, song bir <mark>ds</mark> , mmals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utiliza	ation (List species dire	ectly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
No evidence of wildlife utilitzation observed.						
Additional relevant factors:						
		None				
Assessment conducted by: T. Norman			Assessment date 6/28/2021	e(s):		

Site/Project Name		Application Number	n Number Assessment Area Name or Number			
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			We	etland 67	
Impact or Mitigation		Assessment conducted by:	Assess	sment date:	1FC4C)	
Impa	ct	T. Norman		6/	/28/2021	
·			I			
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4	4)	Not Present	(0)
The scoring of each		Condition is less than			o	
indicator is based on what would be suitable for the	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to maintain most	Winimal level of s	water	provide wetland/	surface
type of wetland or surface	water functions	wetland/surface water	functions	5	water functio	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current with 6 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a f west. The assessment are available outside of the asse area is limited by the preser	orested wetland system that is a is located near the northbour essment area; however, wildlif nce of Pioneer Drive, residenti US : uS :	surrounded by resi nd US 98 right-of-w e access to and froi al development, priv 98.	dential devel ay. Wetland a m habitats ou vate fencing,	onal variation. Hy	orth and ats are essment ing and ydrologic
w/o pres or current with 7 0	conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches) Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.					. The
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of the plant cover construction of US 98 and alteration. Land manager	er within canopy is desirable platits associated stormwater mainent practices include the inst	ant species with inv nagement facilities allation of a pipe cu	asive, exotic (i.e., ditches) lvert within th	species present.) has resulted in h he wetland and ro	The nabitat outine
	maintenance within the ng	int-ol-way that may allect hatu	rai recruitment or re	generation	in the plant comm	iunity.
current with						
	4					
/ 0						
Score = sum of above scores/30 (if	If preservation as mitig	ation,	For imp	oact assessm	nent areas	
uplands, divide by 20)	Preservation adjustment	nt factor =	FL	= delta x ac	cres =	
current	with 0.67 x 120 - 0.97					
	Adjusted mitigation del	ta =	0.07	X 1.50	- 0.07	
0.00]					
	If mitigation		Ear mitia	ation assass	mont areas	
Delta = [with-current]	Time lag (t-factor) =		For mitig	auun assess	sment areas	
0.67	Pick factor -		RFG = delta/	(t-factor x ris	sk) =	
-0.07	RISK lactor =			-		

Site/Project Name Application US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)			er		Assessment Area Name or Number Wetland 68		
FLUCCs code 630 - Wetland Forested Mixed	Further classifica PFO1/2C leaved/Needl	I ation (optional) - Palustine, Fores e-leaved Deciduo Flooded	Impact or Mitigation Site? Sted, Broad- bus, Seasonally Impact		t or Mitigation Site? Impact	Assessment Area Size (in acres) 0.28	
Basin/Watershed Name/Number Withlacoochee River	Affected Waterbody (Clas	ss)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importanc None			l designation of importance)	
Geographic relationship to and hyd The assessi	rologic connection with nent area is a forested	wetlands, other s wetland system t	urface water, uplar hat is surrounded l	nds by Gat	or Creek Campground.		
Assessment area description Dominant ve	getation within the cano	opy consists of ba	ld cypress, red ma	iple, w	ater oak, and laurel oak	ζ.	
Significant nearby features The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground near the northbound US 98 right-of- way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique				
Functions Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.			Mitigation for previous permit/other historic use None				
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Amphibians, wading birds, turtle ma	es, snakes, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or	other signs such a	s track	ks, droppings, casings,	nests, etc.):	
	Evidence of	wildlife observed i	ncludes crayfish b	urrows	5.		
Additional relevant factors:							
		None					
Assessment conducted by: T. Norman			Assessment date 6/28/2021	e(s):			

Site/Project Name	Application Number	A	Assessment Area Name or Number			
US 98 from W Socrum Loop Rd	to CR 54 (FPID 436673-1)			l l	Wetland 68 (FPC 5B)	
Impact or Mitigation		Assessment conducted by:	A	ssessment date	:	
Impac	ot	T. Norman			6/28/2021	
						(*)
Scoring Guidance	Optimal (10)	Moderate(7)	Mini	mal (4)	Not Present	(0)
I ne scoring of each	Condition is optimal and fully	Condition is less than	Minimal law	al of a up nort of	Condition is insuff	Giolopt to
would be suitable for the	supports wotland/surface	optimal, but sufficient to	wotland/s	urface water	provide wetland/	surface
type of wetland or surface	water functions	wetland/surface water	wetianu/s		water function	ons
water assessed	water functions	functions	iun	000013	water fulletic	/13
Water assessed		lanotons				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a for a RV park/campground. Son wildlife access to and from h	ested wetland system that is le ne wetland and upland habitat labitats outside of the assessm and a large open v	ocated adjace s are available nent area is lin water SMF po	ent to the northbo e outside of the a mited by the can nd.	ound US 98 right-of assessment area; h npground facilities, '	-way and lowever, fencing,
5 0						
5 0						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure	Water level indicators and so conditions are affected by th Soil erosion observed indi	bil moisture appeared somewh ne adjacent US 98 and its ass cates alterations in points of d wetland receives m	at appropriate ociated storm ischarge resul unoff from US	e considering sea water managem lting from the co 98.	asonal variation. Hy ent facilities (i.e., di nstruction of US 98	/drologic itches). . The
1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 0	Plant cover within the can associated stormwater ma generally appropriate, but ro	opy is appropriate and desirab nagement facilities has resulte utine maintenance within RV p plant con	ole plant speci ed in habitat al oark may affec nmunity.	es. The surround Iteration. Land m ct natural recruitr	ding development a nanagement practic ment or regeneraltic	and its les are on in the
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.63 0.00	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, nt factor = a =	Fi (or impact assess FL = delta x a 0.63 x 0.28	sment areas acres = = 0.18	
Delta = [with-current]	Time lag (t-factor) =			i iniugauon asse		
-0.63	Risk factor =		RFG =	delta/(t-factor x	risk) =	

Site/Project Name Applic US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)			P		Assessment Area Name or Number Wetland 68 (FPC 5C)		
FLUCCs code 630 - Wetland Forested Mixed	Further classifica PFO1/2C leaved/Needl	ation (optional) - Palustine, Fores e-leaved Deciduo Flooded	sted, Broad- us, Seasonally Impact or Mitigation Si Impact or Mitigation Si		t or Mitigation Site? Impact	Assessment Area Size (in acres) 0.03	
Basin/Watershed Name/Number Withlacoochee River	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e. (OFW, AP, other local/state/federa	I designation of importance)	
Geographic relationship to and hyd The assess	rologic connection with ment area is a forested	wetlands, other s wetland system t	urface water, uplai hat is surrounded	nds by Gat	tor Creek Campground.		
Assessment area description Dominant ve	getation within the cano	opy consists of ba	ld cypress, red ma	iple, w	ater oak, and laurel oak	ς.	
Significant nearby features The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground near the northbound US 98 right-of- way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique				
Functions Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.			Mitigation for previous permit/other historic use None				
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Amphibians, wading birds, turtle m	es, snakes, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Utili:	zation (List species dire	ectly observed, or	other signs such a	s tracl	ks, droppings, casings, i	nests, etc.):	
Evidence of wildlife observed includes crayfish burrows.							
Additional relevant factors:							
		None					
Assessment conducted by: T. Norman			Assessment date 6/28/2021	e(s):			

Site/Project Name		Application Number	/	Assessment Area Name or Number			
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			l l	Vetland 68 (FPC 5C)		
Impact or Mitigation		Assessment conducted by:	/	Assessment date	:		
Impao	ct	T. Norman			6/28/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present (0))	
The scoring of each		Condition is less than					
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal lev	el of support of	Condition is insufficie	ent to	
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/surfa	face	
type of wetland or surface	water functions	wetland/surface water	fur	nctions	water functions		
water assessed		functions					
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a for a RV park/campground. Son wildlife access to and from h Water level indicators and so conditions are affected by th Soil erosion observed indi	ested wetland system that is le ne wetland and upland habitat labitats outside of the assess and a large open bil moisture appeared somewh ne adjacent US 98 and its ass cates alterations in points of d	ocated adjaci s are availabl nent area is li water SMF po SMF po ischarge resu	ent to the northbo le outside of the a imited by the can ond.	assessment area; howe assessment area; howe apground facilities, fend assonal variation. Hydro ent facilities (i.e., ditche nstruction of US 98. Th	ay and ever, cing, blogic es). he	
w/o pres or current with 7 0							
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover within the can associated stormwater ma generally appropriate, but ro	opy is appropriate and desirab nagement facilities has resulte utine maintenance within RV p plant com	ole plant spec ed in habitat a park may affe nmunity.	ies. The surround alteration. Land m ct natural recruitr	ding development and i nanagement practices a ment or regeneraltion ir	its are n the	
		plain con					
w/o pres or							
current with	4						
7 0							
Score = sum of above scores/30 (if	If preservation as mitiga	ation.	F	For impact assess	sment areas		
uplands, divide by 20)		,		FL = delta x :			
current	Preservation adjustmen	nt factor =					
or w/o pres with				0.63 x 0.03	= 0.02		
0.63	Adjusted mitigation deit	a =					
0.00							
	H						
	ir mitigation		Fo	or mitigation asse	ssment areas		
Delta = [with-current]	Time lag (t-factor) =			-			
				delta/(t.factor v	rick) =		
-0.63	Risk factor =		KFG -		113K) -		
L	J [L				

Site/Project Name US 98 from W Socrum Loop Rd to CR	Application Numbe	Pr		Assessment Area Name (Wetla (Pond	or Number and 69 2D-1)	
FLUCCs code 630 - Wetland Forested Mixed	Further classifica PFO1/2C Leaved/Needl	ation (optional) - Palustrine, Fores e-Leaved Deciduc Flooded	sted, Broad- bus, Seasonally Impact or Mitigation Site? Assessment Are Impact or Mitigation Site? Size (in acres 0.13			Assessment Area Size (in acres) 0.13
Basin/Watershed Name/Number Af Hillsborough River	fected Waterbody (Clas	ss)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) None			l designation of importance)
Geographic relationship to and hydro The assessment area is a smal devel	logic connection with portion of a forested opment and a large \$	wetlands, other si I system that exter SMF pond associa	urface water, uplar nds outside of the ited with the Gator	nds pond : Creel	site. Adjacent land use i k Campground.	nclude residential
Assessment area description	Dominant vegeta	tion includes cypre	ess, water oak, and	d red r	naple.	
Significant nearby features The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground near the northbound US 98 right-of- way. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Uniqueness (co landscape.)	nsider	ing the relative rarity in Not unique	relation to the regional
Functions Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.			Mitigation for previous permit/other historic use None			
Anticipated Wildlife Utilization Based that are representative of the assess be found)	on Literature Review nent area and reason	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	by Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtles man	, snakes, song birds, nmals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utiliza	tion (List species dire	ectly observed, or o	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
No evidence of wildlife utilitzation observed.						
Additional relevant factors:						
		None				
Assessment conducted by: T. Norman			Assessment date 9/21/2021	(s):		

Site/Project Name		Application Number	,	Assessment Area Name or Number			
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)				Wetland 69		
Impact or Mitigation		Assessment conducted by:		Assessment date	:		
Impa	ct	T. Norman			9/21/2021		
ļ							
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)	
The scoring of each		Condition is less than					
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal lev	vel of support of	Condition is insuf	ficient to	
type of wetland or surface	water functions	wetland/surface water	wettanu/s	nctions	water function	ons	
water assessed		functions			indion function		
					•		
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is a for a RV park/campground. Son wildlife access to and from h	ested wetland system that is la ne wetland and upland habitat nabitats outside of the assess and a large open v	ocated adjac s are availab nent area is I water SMF po	ent to the northbo le outside of the a imited by the can ond.	ound US 98 right-of assessment area; h npground facilities,	-way and nowever, fencing,	
current with	4						
6 0							
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 0	Water level indicators and so conditions are affected by the Soil erosion observed individual Plant cover within the can associated stormwater ma generally appropriate, but ro	bil moisture appeared somewh he adjacent US 98 and its ass cates alterations in points of d wetland receives re opy is appropriate and desirab nagement facilities has resulte utine maintenance within RV p plant con	ele plant spec ad in habitat a bark may affe munity.	te considering se nwater managem ulting from the co S 98. sies. The surround alteration. Land n act natural recruit	asonal variation. Hy ent facilities (i.e., d nstruction of US 98 ding development a nanagement practic ment or regeneraltio	ydrologic itches). The and its xes are on in the	
	1						
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	F	For impact asses	sment areas		
apiands, divide by 20)	Preservation adjustmer	nt factor =		FL = delta x	acres =		
or w/o pres with				0.67 x 0.13	= 0.09		
0.67 0.00	Adjusted mitigation del	a =					
	J						
	If mitigation		Ec	or mitigation asso	ssment areas		
Delta = [with-current]	Time lag (t-factor) =			a minganon asse			
-0.67	Risk factor =		RFG =	= delta/(t-factor x	risk) =		

Site/Project Name US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)			er		Assessment Area Name or Number Wetland 68 (FPC 5C)		
FLUCCs code	Further classification	tion (optional)	I	Impac	t or Mitigation Site?	Assessment Area	
621 - Cypress	PFO2C - Palı Decidu	ustine, Forested, I Jous, Seasonally I	Needle-leaved Flooded		Impact	Size (in acres) 0.04	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificatio	on (i.e. 0	DFW, AP, other local/state/federa	al designation of importance)	
Withlacoochee River	III				None		
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplan	ds			
The assessment area is a fores	ted wetland system that	is surrounded by	residential develop	oment	and located on north s	ide of Rockridge Rd.	
Assessment area description							
	Dominant vegeta	ation within the car	nopy consists of bal	ld cyp	ress.		
Significant nearby features			Uniqueness (con landscape.)	isideri	ing the relative rarity in	relation to the regional	
The assessment area is located approximately 0.2 mile northeast of US 98 adjacent to the north side of Rockridge Rd. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique				
Functions			Mitigation for prev	ious p	permit/other historic use	9	
Natural water storage and conv improvement; flo	eyance; foraging habita od attenuation; refuge.	t; water quality	None				
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utilizat classification (E, T assessment area)	tion b ⁻ , SSC	y Listed Species (List s C), type of use, and inte	pecies, their legal ensity of use of the	
Amphibians, wading birds, turtl m	es, sn <mark>ake</mark> s, song bir <mark>ds</mark> , ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):	
	Evidence of	wildlife observed i	includes crayfish bu	irrows	5.		
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date(s):			
T. Norman			6/28/2021				

Site/Project Name		Application Number Assessment Area Name or Number			
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 68 (FPC 5C)	
Impact or Mitigation		Assessment conducted by:	Assessment	date:	
Impae	ct	T. Norman		6/28/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)	
I ne scoring of each	Condition is optimal and fully	condition is less than	Minimal level of support	of Condition is insufficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface	
type of wetland or surface	water functions	wetland/surface water	functions	water functions	
water assessed		functions			
				•	
.500(6)(a) Location and Landscape Support	The assessment area is a f residential development. Sor wildlife access to and from h	orested wetland system that is ne wetland and upland habitat abitats outside of the assessm and Rockı	s located adjacent to the n s are available outside of ent area is limited by the r idge Rd.	orth side of Rockridge Rd and the assessment area; however, esidential development, US 98,	
with					
current with					
5 0					
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 0	Water level indicators and so conditions are affected by t Soil erosion observed indi	bil moisture appeared somewh he adjacent US 98 and its ass cates alterations in points of d wetland receives m opy is appropriate and desirab nagement facilities has resulte ut routine maintenance within regeneraltion in the	at appropriate considering ociated stormwater manages ischarge resulting from the unoff from US 98.	y seasonal variation. Hydrologic gement facilities (i.e., ditches). construction of US 98. The bunding development and its d management practices are ffect natural recruitment or	
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with	If preservation as mitig: Preservation adjustmer Adjusted mitigation del	ation, nt factor = ta =	For impact as FL = delt 0.63 x 0	sessment areas a x acres = .04 = 0.03	
0.00]				
	If mitigation		_		
Dolta - [with ourroat]	Time log (t fester) -		For mitigation a	ssessment areas	
	Time lag (t-lactor) =				
-0.63	Risk factor =		RFG = delta/(t-facto	or x risk) =	

Site/Project Name	Site/Project Name Application N		er	Assessment Area Name or Number		
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)				(Pond	2C-2)
FLUCCs code	Further classifica	ation (optional) Palustrine Fores	ted Broad-	Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	d Leaved/Needl	e-Leaved Deciduo Flooded	bus, Seasonally		Impact	0.89
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e.	OFW, AP, other local/state/federa	l designation of importance)
Hillsborough River					None	
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplai	nds		
The assessment area is a f	orested system that ext	ends outside of th	e pond site. Adjac	net la	nd use include residenti	al development.
Assessment area description						
	Dominant vegetat	tion includes cypre	ess, water oak, and	d red r	naple.	
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located near the northbound US 98 right-of-way approximately 0.1 mile southeast of Earnest Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for pre-	vious	permit/other historic use)
Natural water storage and conv improvement; flo	eyance; foraging habita ood attenuation; refuge.	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reasor	List of species	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading birds, turtl m	es, s <mark>nake</mark> s, song bir <mark>ds</mark> , aammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
No evidence of wildlife utilitzation observed.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s) [.]		
T. Norman			9/21/2021	<u>`-</u> /·		

Site/Project Name		Application Number	Assessment Are	a Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 71		
Impact or Mitigation		Assessment conducted by:	Assessment date	(FONU 20-2) e:		
Impac	ct	T. Norman		9/21/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each		Condition is less than				
indicator is based on what would be suitable for the	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to maintain most	Minimal level of support of wetland/surface water	condition is insufficient to		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		functions				
						
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is a consists of residential and pa however, wildlife access to a	forested wetland located near asture. Minimal weltand and u and from habitats outside of th way fencing, US 98, and	the northbound US 98 right-o pland habitat is available outs e assessment area is limited residential/pasture use.	of-way. Adjacent land uses ide of the assessment area; by the presence of right-of-		
5 0						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0	Water level indicators and so conditions are affected by the ditches). Soil erosion observ	bil moisture appeared somewh e adjacent residences, US 98 red indicates alterations in poin The wetland receives	at appropriate considering se and its associated stormwate nts of discharge resulting from s runoff from US 98.	asonal variation. Hydrologic r management facilities (i.e., n the construction of US 98.		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of the plant cover wi the subcanopy/groundcover ditches) has resulted in habi of-way and installation of pi	thin the canopy is comprised of r. The construction of US 98 at tat alteration. Land manageme pe culverts and cross drains th	of desirable plant species with nd its associated stormwater ent practices include routine n nat may affect natural recruitn prunity.	n invasive, exotic species in management facilities (i.e., naintenance within the right- nent or regeneraltion in the		
w/o pres or		plant con	initianity.			
current with						
6 0						
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.60	If preservation as mitigation and preservation adjustmer Adjusted mitigation delt	ation, nt factor = ta =	For impact asses FL = delta x 0.60 x 0.89	sment areas acres = = 0.53		
Delta = [with-current]	It mitigation Time lag (t-factor) =		For mitigation asse	essment areas		
-0.60	Risk factor =		RFG = delta/(t-factor x	risk) =		

Site/Project Name US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)	Application Numbe	er		Assessment Area Name o Wetla (FPC	or Number and 72 C 7B)
FLUCCs code 630 - Wetland Forested Mixed	Further classifica PFO1/2C leaved/Needlo	ition (optional) - Palustine, Fores e-leaved Deciduo Flooded	ted, Broad- us, Seasonally	Impac	t or Mitigation Site? Impact	Assessment Area Size (in acres) 0.01
Basin/Watershed Name/Number Hillsborough River	Affected Waterbody (Clas	ss)	Special Classification	ON (i.e. (OFW, AP, other local/state/federa	I designation of importance)
Geographic relationship to and hyd The assessment area is a small for	rologic connection with rested system. A cross	wetlands, other sidden and the sidden and the second second second second second second second second second se	urface water, uplar derneath US 98 cc	nds onnect	s this wetland to other c	offsite wetland systems.
Assessment area description Domi	nant vegetation within t	this wetland consis	sts of cypre <mark>ss</mark> , red	maple	e, and water oak.	
Significant nearby features The assessment area is located near the northbound US 98 right-of-way approximately 0.4 mile northwest of Perkle Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique			
Functions Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			Mitigation for previous permit/other historic use None			
Anticipated Wildlife Utilization Base that are representative of the asses be found) Amphibians, wading b	d on Literature Review ssment area and reasor irds, turtles, small mam	(List of species nably expected to mals	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			pecies, their legal nsity of use of the Heron (ST, foraging); Stork (FT, foraging); aging)
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): No evidence of wildlife observed.						
Additional relevant factors:		None		(0):		
Assessment conducted by: T. Norman			Assessment date 6/28/2021	(s):		

Site/Project Name		Application Number	Assess	Assessment Area Name or Number		
US 98 from W Socrum Loop Rd	I to CR 54 (FPID 436673-1)			Wetland 72		
Impact or Mitigation		Assessment conducted by:	Assess	ment date:		
Impac	st	T. Norman	T. Norman		6/28/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4) Not Presen	t (0)	
The scoring of each		Condition is less than	NC			
would be suitable for the	supports wetland/surface	optimal, but sufficient to maintain most	wetland/surface	water provide wetland	/surface	
type of wetland or surface	water functions	wetland/surface water	functions	water functi	ons	
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current with</u> 6 0	The assessment area is a fo improved pasture. Mlnimal w to and from habitats outsid	rested wetland near the northl etland and upland habitats are le of the assessment area is lin	bound US 98 right-o available outside of nited by the presence	f-way. Adjacent land uses or f the assessment area; wildli ce of US 98, and improved p	onsists of ife access pasture.	
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic conditionare affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosit observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receive runoff from US 98. w/o pres or current with 7 0						
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 0	Majority of plant cover is con routine maintenance within	nprised of desirable/appropria the improved pasture that ma comm	te species present. y affect natural recru unity.	Land management practices uitment or regeneraltion in th	s include ne plant	
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.67 0.00	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, nt factor = ta =	For imp FL 0.67	act assessment areas = delta x acres = x 0.01 = 0.01		
Delta = [with-current]	Time lag (t-factor) =		For mitiga	ation assessment areas		
			REC - dolta	(t factor x risk) =		
-0.67	Risk factor =		KFG = delta/(I-IACTOF X FISK) =		

Site/Project Name Application N		Application Numbe	Assessment Area Name or Number			or Number
US 98 from W Socrum Loop Rd to C	R 54 (FPID 436673-1)			(Pond 3D-2		
FLUCCs code	Further classifica	ation (optional) Palustrine Fores	on (optional) Impac		t or Mitigation Site?	Assessment Area Size (in acres)
630 - Wetland Forested Mixed	leaved/Needl	e-leaved Deciduo Flooded	us, Seasonally		Impact	1.94
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	l designation of importance)
Hillsborough River					None	
Geographic relationship to and hyd	ologic connection with	wetlands, other s	urface water, uplar	nds		
The assessment area consists o	f a forested wetaInd th	at is adjacent to th	ne right-of-way of L	JS 98,	planted pine, and the Q	Green Swamp WMA.
Assessment area description						
	Dominant vegeta	tion includes cypre	ess, red maple, an	d wate	er oak.	
Significant nearby features			Uniqueness (con landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located near the northbound US 98 right-of-way approximately 0.7 miles northwest of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side US 98.			f Not unique			
Functions			Mitigation for prev	vious	permit/other historic use)
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reaso	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	by Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading bi	rds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
No evidence of wildlife observed.						
Additional relevant factors:						
None.						
Assessment conducted by:			Assessment date	(s):		
T. Norman			9/24/2021			

Site/Project Name			Application Number Assessment Area Name or Number					
US 98 from W Socrum Lo	oop Rd	to CR 54 (FPID 436673-1)			Wetland 73) (Pond 3D-2			
Impact or Mitigation			Assessment conducted by:		Assessment date):		
	Impac	t	T. Norman			9/24/2021		
	1						(*)	
Scoring Guidance		Optimal (10)	Moderate(7)	MI	nimai (4)	Not Present	(0)	
indicator is based on what		Condition is optimal and fully	optimal, but sufficient to	Minimal le	evel of support of	Condition is insuf	ficient to	
would be suitable for the		supports wetland/surface	maintain most	wetland	/surface water	provide wetland/	surface	
type of wetland or surface		water functions	wetland/surface water	fu	unctions	water function	ons	
water assessed			functions					
.500(6)(a) Location and	d							
Landscape Support		The assessment area is a for pine and Green Swamp WM wildlife access to and from ha	prested wetland that is located A. Wetland and upland habitat abitats outside of the assessm	adjacent to ts are availa ent area is l	the northbound l ble outside of the imited by the pres	JS 98 right-of-way, assessment area; I ence of right-of-way	planted nowever, / fencing,	
N/o pros or			US	98.				
w/o pres or current w	with							
	0							
0	0							
500(6)(b)Water Environm	oont							
(n/a for uplands)	ICIII		vel indicators and sail maintum anneared annearing considering accountly writting. Underlaging					
		water level indicators a	Motland 25 included surface	propriate cor	high water table	I variation. Hydrolog	gical	
		affected by the adjacent	S 98 and its associated storm	water mana	dement facilities (i	.e., ditches). The w	etland	
			receives runof	f from US 98	в.	,		
w/o pres or	with							
current v	with							
7	0							
.500(6)(c)Community struc	cture							
1. Vegetation and/or		Majority of plant cover consi	ists of desirable and appropria	ite species v	with minimal invas	ive/exotic species p	present.	
2. Benthic Community	/	The construction of US 98 ar	nd its associated stormwater n	nanagemeni	t facilities (i.e., dito	ches) has resulted i	n habitat	
		alterat	tion. Land management praction	ces appear	somewhat approp	riate.		
w/opresor								
current v	with							
7	0							
1	0							
Score = sum of above scores/	'30 (if	If preservation as mitiga	ation,		For impact asses	sment areas		
uplands, divide by 20)		- ······	· · · · · · · · · · · · · · · · · · ·		FL = delta x	acres =		
current		Preservation adjustmer	nt factor =					
or w/o pres v	with	Adjusted mitigation delt	a =		0.67 x 1.94	= 1.29		
0.67 0	0.00			L				
		If mitigation						
				F	or mitigation asse	ssment areas		
Delta = [with-current]		Time lag (t-factor) =						
-0.67		Risk factor =		RFG	= delta/(t-factor x	risk) =		
				L				

Site/Project Name		Application Number	ber Assessment Area Name or Number			
US 98 from W Socrum Loop Rd to CR	54 (FPID 436673-1)			Wetland 74 (Pond 4C-2)		
FLUCCs code	Further classification	ition (optional)	Ir	npact or Mitigation Site?	Assessment Area	
621 - Cypress	PFO2C - Palu Decidu	PFO2C - Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded		Impact	Size (in acres) 0.43	
Basin/Watershed Name/Number Af	fected Waterbody (Clas	ss)	Special Classification	i (i.e. OFW, AP, other local/state/feder	al designation of importance)	
Hillsborough River	III			None		
Geographic relationship to and hydro	ogic connection with	wetlands, other s	urface water, upland	s		
The asses	sment area is compr	ised of a forested	wetland system with	in an improved pasture.		
Assessment area description						
	Dominant veç	getation within this	s wetland consists cy	press.		
Significant nearby features			Uniqueness (cons landscape.)	sidering the relative rarity in	relation to the regional	
The assessment area is located near the northbound US 98 right-of-way approximately 0.2 mile southeast of Old Dade City Rd. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for previo	ous permit/other historic use	e	
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			None			
Anticipated Wildlife Utilization Based that are representative of the assess be found)	on Literature Review nent area and reasor	(List of species hably expected to	Anticipated Utilizati classification (E, T, assessment area)	on by Listed Species (List s SSC), type of use, and inte	species, their legal ensity of use of the	
Amphibians, wading bird	s, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliza	tion (List species dire	ctly observed, or	other signs such as	tracks, droppings, casings,	nests, etc.):	
	Evidence of w	ildlife observed we	ere small fish and ta	dpoles.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date(s	e):		
T. Norman			9/21/2021			

Site/Project Name	Application Number	/	Assessment Area Name or Number			
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 74 (Pond 4C-2)		
Impact or Mitigation		Assessment conducted by:	/	(Fond 40-2)		
Impa	ct	T. Norman		9/21/20		
Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present	(0)
The scoring of each		Condition is less than				.
indicator is based on what would be suitable for the	Supports wetland/surface	optimal, but sufficient to maintain most	wetland/s	/el of support of	provide wetland	ficient to
type of wetland or surface	water functions	wetland/surface water	fur	nctions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support The assessment area is a forested wetland located near the northbound US 98 right-of-way. Adjacent la consists of the improved pasture. Minimal wetland and upland habitats are available outside of the assessment area is limited by the presence of fencing, U w/o pres or current with 5 0					f-way. Adjacent lan ide of the assessm ence of fencing, US	d uses ent area; S 98, and
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic condition are affected by the improved pasture drainage and adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.						onditions ement
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is con stormwater management include routine maintenance	nprised of desirable/appropria facilities (i.e., ditches) has res e within the improved pasture t plant con	te species . T ulted in habita that may affect nmunity.	The construction of at alteration. Lanct natural recruiting	of US 98 and its as d management pra nent or regeneraltic	sociated ctices on in the
w/o pres or			-			
current with						
7 0						
	1					
Score = sum of above scores/30 (if uplands, divide by 20) (if current current with 0.63 0.00	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, ht factor = ta =	F	For impact assess FL = delta x 0.63 x 0.43	sment areas acres = = 0.27	
Delta = [with-current]	If mitigation Time lag (t-factor) =		Fo	or mitigation asse	ssment areas	
-0.63	Risk factor =		RFG =	= delta/(t-factor x	risk) =	
3.00						

Site/Project Name US 98 from W Socrum Loop Rd to CR 5	4 (FPID 436673-1)	Application Number			Assessment Area Name or Number Wetland 75 (FPC 12A)	
FLUCCs code 630 - Wetland Forested Mixed	Further classifica PFO1/2C - Leaved/Needl	ition (optional) · Palustrine, Fores e-Leaved Deciduc Flooded	sted, Broad- ous, Seasonally	Broad- Seasonally Impact or Mitigation Site? Assess Size Impact 0.1		Assessment Area Size (in acres) 0.17
Basin/Watershed Name/Number Affe Hillsborough River	ected Waterbody (Clas	ss)	Special Classificati	ON (i.e. (OFW, AP, other local/state/federa	al designation of importance)
Geographic relationship to and hydrolo The a	gic connection with ssessment area is	wetlands, other so a forested system	urface water, uplar that extends outsi	nds ide of i	the pond site.	
Assessment area description	Dominant vegetat	tion includes cypre	ess, water o <mark>ak</mark> , and	d red r	maple.	
Significant nearby features The assessment area is located near the southbound US 98 right-of-way approximately 0.1 mile southeast of Old Dade City Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique			
Functions Natural water storage and conveyar improvement; flood a	t; water quality	Mitigation for previous permit/other historic use None				
Anticipated Wildlife Utilization Based o that are representative of the assessm be found)	n Literature Review ent area and reasor	(List of species hably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	by Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtles, s mamr	snakes, song birds, nals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utilization	on (List species dire	ectly observed, or	other signs such a	s tracł	ks, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	1.		
Additional relevant factors:						
		None				
Assessment conducted by: T. Norman			Assessment date 9/21/2021	(s):		

Site/Project Name	Application Number	Assessment Area Name or Number				
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)		Wetland 75 (EPC 12A)			
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impa	ct	T. Norman			9/21/2021	
			ļ			
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	: (0)
The scoring of each	Condition is ontimal and fully	Condition is less than	Minimalla	val of our name of	Condition is insuit	ficientte
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland	/surface
type of wetland or surface	water functions	wetland/surface water	fu	inctions	water functi	ons
water assessed		functions				
r						
.500(6)(a) Location and Landscape Support	The assessment area is a f includes residential devel however, wildlife access to a	The assessment area is a forested wetland located near the southbound US 98 right-of-way. Adjacacent land use includes residential development; Wetland and upland habitats are available outside of the assessment area; owever, wildlife access to and from habitats outside of the assessment area is limited by the presence of residential development and US 98				
w/o pres or						
current with	4					
5 0						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 0	5 0 500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. H conditions are affected by the adjacent residences, US 98 and its associated stormwater management facil ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction on The wetland receives runoff from US 98. pres or 0 500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community 1. Vegetation and/or 2. Benthic Community Majority of plant cover is by appropriate and desirable plant species. Minimal invasive/exotic species prese management practices are generally appropriate.					ydrologic ities (i.e., f US 98.
Score = sum of above scores/30 (if	If preservation as mitiga	ation,		For impact asses	sment areas	
uplands, divide by 20)	Dresen/sticn_sticn_t	at factor -		FL = delta x	acres =	
current	Preservation adjustmen	nt factor =				
pr w/o pres with	Adjusted mitigation delt	ta =		0.63 x 0.17	= 0.11	
0.63 0.00			L			
	If mitigation					
Delta = [with-current]	Time lag (t-factor) =		F	For mitigation assessment areas		
			RFG :	= delta/(t-factor x	risk) =	
-0.63	Risk factor =		14 0			

Site/Project Name Application			ber Assessment Area Name or Number			
US 98 from W Socrum Loop Rd to Cl	R 54 (FPID 436673-1)		Wetland 76 (FPC 11A)		and 76 C 11A)	
FLUCCs code	Further classifica	tion (optional)	Imp	act or Mitigation Site?	Assessment Area	
621 - Cypress	PFO2C - Palu Decidu	PFO2C - Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded		Impact	Size (in acres) 0.02	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification (i	.e. OFW, AP, other local/state/feder	al designation of importance)	
Hillsborough River	III			None		
Geographic relationship to and hydr	ologic connection with	wetlands, other s	urface water, uplands			
The assessment area is comprised	of a portion of a forest offsite wetland syste	ed wetland system ems. Adjacent land	n. A cross drain that ru d use included improve	ins underneath US 98 cor ed pasture.	nnects this area to other	
Assessment area description						
	Dominant veç	getation within this	wetland consists cyp	ess.		
Significant nearby features			Uniqueness (consid landscape.)	lerin <mark>g the</mark> relative rarity in	relation to the regional	
The assessment area is located near the southbound US 98 right-of-way approximately 0.1 mile northwest of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for previou	s permit/other historic use	9	
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			None			
Anticipated Wildlife Utilization Based that are representative of the assess be found)	d on Literature Review sment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading bir	ds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ctly observed, or	other signs such as tra	acks, droppings, casings,	nests, etc.):	
Evidence of wildlife observed were small fish and tadpoles.						
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date(s):			
T. Norman			9/21/2021			

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	I to CR 54 (FPID 436673-1)			Wetland 76 (EPC 11A)		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impac	ot	T. Norman			9/21/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)
The scoring of each		Condition is less than				
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal lev	vel of support of	Condition is insuf	ficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/	surface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a focus of the residential habitats are available outsid assessment area is	forested wetland located near I facilities that are bounded will le of the assessment area; ho limited by the presence of rigit bil moisture appeared appropried pasture drainage and adjac	the southbouth fencing an wever, wildlif nt-of-way fen	ind US 98 right-o d improved pastu e access to and f cing, US 98, and	f-way. Adjacent lan re. Wetland and up rom habitats outsid improved pasture.	d uses bland e of the onditions ement
w/o pres or current with 7 0					5.	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is con stormwater management include routine maintenance	nprised of desirable/appropria facilities (i.e., ditches) has res e within the improved pasture t	te species . 1 ulted in habit hat may affe	The construction of at alteration. Land	of US 98 and its as d management prav nent or regeneraltio	sociated ctices n in the
	·	plant com	nmunity.			
w/o pres or						
current with						
	1					
/ 0						
· · · · ·	-					
	a r					
Score = sum of above scores/30 (if	If preservation as mitiga	ation,	I	For impact asses	sment areas	
uplands, divide by 20)	uplands, divide by 20) EL = delta x acres =					
current	Preservation adjustmer	nt factor =				
pr w/o pres with	Adjusted mitigation dat			0.63 x 0.02	= 0.01	
0.63 0.00	Aujusted mitigation dell	.a –				
0.00						
	IT mitigation		Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =			5		
				- dalta //t ft-	rial() –	
-0.63	Risk factor =		KFG =	- ueita/(t-factor x	iisk) =	
L			L			

Site/Project Name US 98 from W Socrum Loop Rd to CR	54 (FPID 436673-1)	Application Numbe	er	Assessment Area Name or Number Wetland 77 (Pond 4D-1)		
FLUCCs code	Further classifica	ation (optional)		Impact or	r Mitigation Site?	, Assessment Area
643 - Wet Prairie	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 3.35
Basin/Watershed Name/Number A	ffected Waterbody (Cla	ss)	Special Classification	ON (i.e. OFV	V, AP, other local/state/federa	l designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hydro	logic connection with e assessment area is	wetlands, other s comprised of a w	urface water, uplan et prairie within an	nds improve	d pasture.	
Assessment area description						
Dominant vegetatio	on within this wetland	consists bahia gra	ass, smartweed, ye	ellow-eye	d grass, and maiden	cane.
Significant nearby features			Uniqueness (con landscape.)	nsidering	the relative rarity in	relation to the regional
The assessment area is located near the southbound US 98 right-of-way approximately 0.3 mile southeast of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	vious per	mit/other historic use)
Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation			None			
Anticipated Wildlife Utilization Based that are representative of the assess be found)	on Literature Review ment area and reaso	(List of species nably expected to	Anticipated Utiliza classification (E, T assessment area)	ation by L T, SSC),)	isted Species (List s type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading bird	ls, turtles, small marr	nmals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliza	tion (List species dire	ectly observed, or	other signs such as	s tracks,	droppings, casings, r	nests, etc.):
	Ν	No evidence of wild	dlife observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date((s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 77 (Pond 4D-1)		
Impact or Mitigation		Assessment conducted by:) Assessment date	sessment date:	
Impa	ct	T. Norman			9/21/2021	
· · ·						
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present (0))
The scoring of each		Condition is less than				
indicator is based on what would be suitable for the	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to	Minimal lev	vel of support of	provide wetland/sur	ent to
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water functions	6
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is an uses consists of the improve area; wildlife access to and	n herbaceous wetland located ed pasture. Some wetland and from habitats outside of the as 98, and impro	near the sou upland habi ssessment ar ved pasture.	thbound US 98 ri tats are available rea is limited by th	ght-of-way. Adjacent I outside of the assess he presence of fencing	land sment g, US
w/o pres or current with 5 0						ter
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of plant cover is con stormwater management include routine maintenand	nprised of desirable/appropria facilities (i.e., ditches) has res ce within the improved pasture regeneration in the	te species . T ulted in habit and cow gra	The construction of at alteration. Lane azing that may aff	of US 98 and its assoc d management practic ject natural recruitmen	ciated ces nt or
w/o pres or		regeneration in the	plant comm	anty.		
current with						
6	1					
0						
	, <u> </u>				ï	
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	F	For impact assess	sment areas	
current	Preservation adjustmer	nt factor =		FL = delta x a	acres =	
or w/o pres with	Adjusted mitigation del	ta =		0.53 x 3.35	= 1.79	
0.53 0.00	, ajuetea maganen aen					
<u> </u>		<u> </u>				
	IT mitigation		Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.53	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Site/Project Name US 98 from W Socrum Loop Rd to Cl	R 54 (FPID 436673-1)	Application Numbe	ber Assessment Area N.		Assessment Area Name (Wetla (FPC)	or Number and 78 C 9A)	
FLUCCs code 630 - Wetland Forested Mixed	Further classifica PFO1/2C Leaved/Needl	Further classification (optional) PFO1/2C - Palustrine, Forestec Leaved/Needle-Leaved Deciduous Flooded		Impact or Mitigation Site? Impact		Assessment Area Size (in acres) 1.18	
Basin/Watershed Name/Number / Hillsborough River	Affected Waterbody (Cla III	ss)	Special Classificati	on (i.e. (e. OFW, AP, other local/state/federal designation of importance)		
Geographic relationship to and hydr	ologic connection with e assessment area is	wetlands, other s a forested system	urface water, uplai that extends outs	nds ide of t	the pond site.		
Assessment area description Domina	ant vegetation includes	s cypress, water o	ak, swamp bay, lat	ural oa	ak, and red maple.		
Significant nearby features The assessment area is located near the southbound US 98 right-of-way directly southeast of the Duke Energy utility easement. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Uniqueness (considering the relative rarity in relation to the regional landscape.)				
Functions Natural water storage and conveyance; foraging habitat; water quality improvement; flood attenuation; refuge.			Mitigation for previous permit/other historic use None				
Anticipated Wildlife Utilization Based that are representative of the assess be found)	d on Literature Review sment area and reason	(List of species nably expected to	Anticipated Utiliza classification (E, assessment area	ation b T, SS(ı)	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the	
Amphibians, wading birds, turtle ma	s, s <mark>nake</mark> s, song bir <mark>ds</mark> , mmals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or	other signs such a	is tracł	ks, droppings, casings,	nests, etc.):	
	No evi	dence of wildlife u	tilitzation observed	d.			
Additional relevant factors:							
		None					
Assessment conducted by: T. Norman			Assessment date 9/21/2021	e(s):			
Site/Project Name	Application Number Assessment Area Name or Nun				a Name or Number		
--	---	--	--	---	---	-----------------------------	--
US 98 from W Socrum Loop Ro	I to CR 54 (FPID 436673-1)			Wetland 78 (FPC 9A)			
Impact or Mitigation		Assessment conducted by:		Assessment date):		
Impac	st	T. Norman			9/21/2021		
Searing Quidenes	Ontimal (10)	Mederate (7)	Min	aimal (A)	Not Drocont	(0)	
The scoring of each	Optimal (10)	Condition is less than	IVIII	nimai (4)	Not Present	(0)	
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal le	vel of support of	Condition is insuffic	cient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/si	urface	
type of wetland or surface	water functions	wetland/surface water	fu	inctions	water function	ıs	
water assessed		Idifcaolis					
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a fo the southbound US 98 right upland habitats are available of the assess	prested wetland that connects -of-way. Adjacacent land use i e outside of the assessment ar ment area is limited by the pre	to offsite we includes the rea; however esence of rig	tlands. The asses Duke Energy utili r, wildlife access t ht-of-way fencing	ssment area is locate ty easement; Wetlan o and from habitats o and US 98.	d near Id and butside	
6 0							
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure	ment Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. with 0					frologic ches). The	
1. Vegetation and/or 2. Benthic Community w/o pres or current 7 0					t. Land		
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.67 0.00 Delta = [with-current]	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt If mitigation Time lag (t-factor) =	ation, at factor = a =	Fe	For impact assess FL = delta x 0.67 x 1.18 or mitigation asse	sment areas acres = = 0.79 essment areas		
			REG	= delta//t-factor v	risk) =		
-0.67	Risk factor =		KFG -		113N/ -		

Site/Project Name US 98 from W Socrum Loop Rd to (CR 54 (FPID 436673-1)	Application Numbe	Assessment Area Name or Number Wetland 79 (Pond 3D-1)			
FLUCCs code	Further classifica	ation (optional)		Impact or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed	Impact	Size (in acres) 0.22	
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classification	0n (i.e. OFW, AP, other local/state/federa	al designation of importance)	
Hillsborough River				None		
Geographic relationship to and hyd	drologic connection with e assessment area is ar	wetlands, other s	urface water, uplan ous system within a	ds an improved pasture.		
Assessment area description						
	Dominant ve	getation includes l	bahia grass <mark>an</mark> d so	ft rush.		
Significant nearby features			Uniqueness (con landscape.)	nsidering the relative rarity in	relation to the regional	
The assessment area is located near the southbound US 98 right-of-way on the east side of Keen Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	ious permit/other historic use	9	
Natural water storage and conv improvement; flo	reyance; foraging habita bod attenuation; refuge.	ıt; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reaso	(List of species nably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading birds, turtl m	es, snakes, song birds, nammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Util	ization (List species dire	ectly observed, or	other signs such as	s tracks, droppings, casings,	nests, etc.):	
	No evi	dence of wildlife u	tilitzation observed			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date((s):		
T. Norman			9/21/2021			

Site/Project Name			Application Number		Assessment Area	a Name or Number	
US 98 from W Socrum	1 Loop Rd	I to CR 54 (FPID 436673-1)			Wetland 79 (Pond 3D-1)		
Impact or Mitigation			Assessment conducted by:		Assessment date	e:	
	Impac	ot	T. Norman		9/21/2021		
Scoring Guidance		Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)
The scoring of each			Condition is less than				
indicator is based on what	at	Condition is optimal and fully	optimal, but sufficient to	Minimal le	vel of support of	Condition is insuf	ficient to
would be suitable for the		supports wetland/surface	maintain most	wetland/	sufface water	provide wetland/	surrace
type of wetland of surface	е	water functions	functions	Iu	inctions	water function	ons
water assessed			lunctions				
.500(6)(a) Location : Landscape Suppo w/o pres or	and ort	The assessment area is an is land use includes Keen Ro outside of the assessment ar presence of rig	solated, herbaceous wetland lo ad, an RV lot, and improved p ea; wildlife access to and from ht-of-way fencing, the RV lot,	ocated near asture;limite n habitats ou Keen Road,	the southbound L d wetland and upl tside of the asses improved pasture	JS 98 right-of-way. / land habitats are av ssment area is limite e, and US 98.	Adjacent /ailable ed by the
current	with						
5	0						
Ũ	ů				•		
.500(6)(b)Water Enviro (n/a for uplands) w/o pres or current 6 .500(6)(c)Community si	onment) with 0 tructure	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and Keen Rd, and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98 and Keen Rd.					ydrologic acilities on of US
1. Vegetation and/or 2. Benthic Community w/o pres or current with					oractices tural		
0	U						
Score = sum of above score	es/30 (if	If preservation as mitiga	ation,		For impact asses	sment areas	
uplands, divide by 2	:0)		·		Fl = delta v	acres =	
current		Preservation adjustmer	nt factor =			40165 -	
pr w/o pres	with				0.57 x 0.22	= 0.12	
0.57	0.00	Adjusted mitigation delt	a –				
0.01	0.00						
		If mitigation					
		ii mugadon		F	or mitigation asse	essment areas	
Delta = [with-current	nt]	Time lag (t-factor) =			-		
-0.57		Risk factor =		RFG	= delta/(t-factor x	risk) =	
		I L		L			

Site/Project Name US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)	Application Numbe	er	Assessment Area N	Name or Number Wetland 80 (FPC 8A)	
FLUCCs code	Further classifica	tion (optional)	In	npact or Mitigation Site?	Assessment Area	
641 - Freshwater Marsh	PEM1C - Pa	ilustrine, Emerger Seasonally Floode	nt, Persistent, ed	Impact	Size (in acres) 0.06	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	(i.e. OFW, AP, other local/stat	te/federal designation of importance)	
Hillsborough River	III			None		
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, upland	s		
The assessment area is an herba	ceous system that exte	nds into a foreste RV lot, and	d wetland system. A US 98.	djacent land use consi	ists of improved pasture, an	
Assessment area description						
	Dominant vege	etation includes V	irginia chain fern, so	ft rush.		
Significant nearby features			Uniqueness (cons landscape.)	iderin <mark>g the</mark> relative rai	rity in relation to the regional	
The assessment area is located near the southbound US 98 right-of-way approximately 0.1 mile southeast of Keen Road. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for previo	ous permit/other histor	ic use	
Natural water storage and conv improvement; flo	eyance; foraging habita od attenuation; refuge.	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review ssment area and reasor	(List of species hably expected to	Anticipated Utilizati classification (E, T, assessment area)	on by Listed Species (SSC), type of use, an	(List species, their legal id intensity of use of the	
Amphibians, wading birds, turtl m	es, sn <mark>ake</mark> s, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	other signs such as	tracks, droppings, cas	ings, nests, etc.):	
	No evi	dence of wildlife u	tilitzation observed.			
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date(s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number	Assessment Area Name or Number				
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 80 (EPC 84)			
Impact or Mitigation		Assessment conducted by:	Assessment date	Assessment date:			
Impa	ct	T. Norman		9/21/2021			
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)			
The scoring of each	O	Condition is less than	Minimal Issuel of summant of				
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface			
type of wetland or surface	water functions	wetland/surface water	functions	water functions			
water assessed		functions					
.500(6)(a) Location and Landscape Support w/o pres or <u>current with</u> 5 0 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is an h includes Keen Road, an RV the assessment area; howey prese Water level indicators and so	ierbaceous wetland located ne / lot, and improved pasture;lim rer, wildlife access to and from ance of right-of-way fencing, th ill moisture appeared somewh	ear the southbound US 98 rig ited wetland and upland habi habitats outside of the asses e RV lot, Keen Road, and US	nt-of-way. Adjacent land use tats are available outside of sment area is limited by the 98.			
w/o pres or current with 6 0	o pres or current with 6 0						
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community The plant cover within the canopy consists of appropriate and desirable plant species. The groundcover/underst consists of invasive/exotic species. Land management practices are generally appropriate, but the routine maintenace within the pasture and cow grazing may affect natural recruitment or regeneration in the plant							
w/o pres or							
current with							
6 0							
Score = sum of above scores/30 (if uplands, divide by 20) (if current br w/o pres or w/o pres with 0.57 0.00	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, nt factor = a =	For impact asses FL = delta x 0.57 x 0.06	sment areas acres = = 0.03			
Delta = [with-current]	IT mitigation Time lag (t-factor) =		For mitigation asse	essment areas			
			REG = delta/(t-factor x	risk) =			
-0.57	Risk factor =			,			

Site/Project Name US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)	Application Numbe	er	Assessment Area Name or Number Wetland 81 (FPC 6C)		
FLUCCs code	Further classifica	ation (optional)		Impact	or Mitigation Site?	Assessment Area
621 - Cypress	PFO2C - Palu Decidu	istrine, Forested, l uous, Seasonally l	l, Needle-Leaved Impact Size (in ad y Flooded 0.11			Size (in acres) 0.11
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	ON (i.e. C	DFW, AP, other local/state/federa	al designation of importance)
Hillsborough River					None	
Geographic relationship to and hyc	Irologic connection with	wetlands, other s	urface water, uplan	nds		
The assessm	ent area is a forested s	ystem surounded	by improved pastur	re and	residential developme	nt.
Assessment area description						
	Dominant ve	getation within the	e canopy includes c	ypress	5.	
Significant nearby features			Uniqueness (cor landscape.)	nsideri	ng the relative rarity in	relation to the regional
The assessment area is located north of Old Soldier Road. Green located on nor	near the southbound US Swamp WMA and Gato theast side of US 98.	6 98 right-of-way or Creek Reserve	X		Not unique	
Functions			Mitigation for prev	/ious p	ermit/other historic use	2
Natural water storage and conv improvement; flc	eyance; foraging habita od attenuation; refuge.	t; wat <mark>er</mark> quality			None	
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reaso	(List of species hably expected to	Anticipated Utiliza classification (E, 1 assessment area)	ation by T, SSC)	y Listed Species (List s), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtl m	es, s <mark>nake</mark> s, song bir <mark>ds</mark> , ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	itilitzation observed	1.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
T. Norman			9/21/2021			

Site/Project Name	oject Name Assessment Area Name or Number Assessment Area Name or Number					
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 81 (FPC 6C)		
Impact or Mitigation		Assessment conducted by:	As	ssessment date	e:	
Impao	ot	T. Norman			9/21/2021	
Searing Cuidenes	Ontimal (10)	Moderate (7)	Minim	nol (4)	Not Present (0)	
The scoring of each	Optimal (10)	Condition is less than	winin	nai (4)	Not Present (0)	
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level	l of support of	Condition is insufficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water provide wetland/su			
type of wetland or surface	water functions	wetland/surface water	func	tions	water functions	
water assessed		lunctions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a fo use includes residential dev available outside of the asse area is limited by the pre	prested wetland and is located velopment, improved pasture, essment area; however, wildlif sence of rresidential developm	near the south and Old Soldie e access to and rent/improved (bound US 98 r er Road; Wetlar d from habitats pasture, Old So	ight-of-way. Adjacent land nd and upland habitats are outside of the assessment oldier Road, and US 98.	
6 0						
				Ť		
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrolog conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.					asonal variation. Hydrologic ent facilities (i.e., ditches). nstruction of US 98. The	
.500(6)(c)Community structure						
 Vegetation and/or Benthic Community 	The plant cover within the cover within the cover within the cover invasive/exotic species prese within adjacent land	anopy and understory consists nt. Land management practic d uses may affect natural recru	s of appropriate ses are general uitment or rege	e and desirable ly appropriate, eneraltion in the	plant species with minimal but the routine maintenance plant community.	
v/o pres or						
current with						
7 0						
Score = sum of above scores/30 /if	If preservation as mitig	ation	Fo	r impact asses	sment areas	
uplands, divide by 20)			10	FI = delta v	acres =	
current	Preservation adjustmer	nt factor =			uoroo =	
or w/o pres with	Adjusted mitigation delt	a =	0.	67 x 0.11	= 0.07	
0.67 0.00						
<u> </u>	1					
	If mitigation		For	mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =		101			
0.07	Diels feature -		RFG = d	delta/(t-factor x	risk) =	
-0.67	KISK TACTOR =			,	,	

Site/Project Name US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)	Application Numbe	er	Assessment Area Name or Number Wetland 82 (FPC 6C)		
FLUCCs code	Further classifica	ation (optional)		Impact	or Mitigation Site?	Assessment Area
621 - Cypress	PFO2C - Palu Decidu	istrine, Forested, l uous, Seasonally l	, Needle-Leaved Impact Size (in ac y Flooded 0.13			Size (in acres) 0.13
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e. O	FW, AP, other local/state/federa	al designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, uplan	nds		
The assessm	ent area is a forested s	ystem surounded	by improved pastu	re and	residential developme	nt.
Assessment area description						
	Dominant ve	getation within the	e canopy includes c	ypress		
Significant nearby features			Uniqueness (cor landscape.)	nsiderii	ng the relative rarity in	relation to the regional
The assessment area is located north of Old Soldier Road. Green located on nor	near the southbound US Swamp WMA and Gato theast side of US 98.	6 98 right-of-way or Creek Reserve	X		Not unique	
Functions			Mitigation for prev	/ious p	ermit/other historic use	2
Natural water storage and conv improvement; flo	reyance; foraging habita bod attenuation; refuge.	t; wat <mark>er</mark> quality			None	
Anticipated Wildlife Utilization Base that are representative of the asse be found)	ed on Literature Review ssment area and reaso	(List of species hably expected to	Anticipated Utiliza classification (E, 1 assessment area)	ation by T, SSC)	/ Listed Species (List s), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turt m	les, snakes, song birds, nammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Util	ization (List species dire	ectly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	1.		
Additional relevant factors:						
		None	ı.			
Assessment conducted by:			Assessment date	(s):		
T. Norman			9/21/2021			

Site/Project Name	oject Name Application Number Assessment Area Name or Number					
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 82 (FPC 6C)		
Impact or Mitigation		Assessment conducted by:	Asses	sment date:		
Impac	ct	T. Norman		9/21/2021		
	0	M = 1 = ((=)			(()	
Scoring Guidance	Optimal (10)	Condition is less than	Minimai ((4) Not Present	t (U)	
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level of s	support of Condition is insu	fficient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water provide wetland/sur			
type of wetland or surface	water functions	wetland/surface water	functions	s water functi	ions	
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a fo use includes residential dev available outside of the asse area is limited by the pre	prested wetland and is located velopment, improved pasture, essment area; however, wildlif sence of rresidential developm	near the southbou and Old Soldier Ro e access to and fro eent/improved past	und US 98 right-of-way. Adjac bad; Wetland and upland habi om habitats outside of the ass ture, Old Soldier Road, and U	cent land itats are essment S 98.	
6 0						
				•		
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrolog conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches) Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.					lydrologic ditches). 8. The	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The plant cover within the cr invasive/exotic species prese	anopy and understory consists nt. Land management practic	of appropriate and es are generally ap	d desirable plant species with ppropriate, but the routine ma	minimal intenance	
	within adjacent land	d uses may affect natural recru	uitment or regenera	altion in the plant community.		
w/o pres or						
current with						
7 0						
, 9						
					_	
Score = sum of above scores/30 (if	If preservation as mitiga	ation,	For im	pact assessment areas		
uplands, divide by 20)	Preservation adjustmen	nt factor =	FI	L = delta x acres =		
current			0.07			
pr w/o pres with	Adjusted mitigation delt	a =	0.67	x 0.13 = 0.09		
0.67 0.00			L			
	If mitigation				I	
			For mitig	gation assessment areas		
Delta = [with-current]	Time lag (t-factor) =					
-0.67	Risk factor =		RFG = delta	/(t-factor x risk) =		

Site/Project Name		Application Number	or .		Assessment Area Name	or Number
		Application Number	51	Wetland 83		
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				(FPC	C 6A)
FLUCCs code	Eurther classifica	ation (optional)		Impac	t or Mitigation Site?	Assessment Area
	PFO1/2C	- Palustrine, Fores	sted Broad-	шрас	t of miligation Site?	Size (in acres)
630 - Wetland Forested Mixe	d Leaved/Needl	e-Leaved Deciduo	ous, Seasonally		Impact	0.39
		Flooded	-		•	
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classificati	on (i.e.	OFW. AP. other local/state/federa	al designation of importance)
Hillsborough River					None	с і <i>,</i>
Thisborough River					None	
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, upla	nds		
5 1 1 5	Ū	,	<i>2</i> 1			
	The as	ssessment area is	a forested system	۱.		
Assessment area description						
	Dominant vegetation	within the canopy	/ includes cypress	and re	ed maple.	
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional
			landscape.)			
The assessment area is located	near the southbound US	5 98 right-of-way			N. 4	
across from Earnest Road. Green	1 Swamp WMA and Gate	or Creek Reserve			Not unique	
located on no						
Functions			Mitigation for pre	vious	permit/other historic use	9
			5 1			
Natural water storage and conv	veyance; foraging habita	t; water quality			Nama	
improvement; fl	ood attenuation; refuge.				None	
Anticipated Wildlife Utilization Bas	ed on Literature Review	List of species	Anticipated Utiliza	ation t T SSI	by Listed Species (List s	pecies, their legal
be found)		lably expected to	assessment area	1, 00. I)		
,				,		
Anarkikiana wadina kinda tum	daa ayadaa aaya biyda	neutene encell				is a law of Llaware (CT
Amphibians, wading birds, tur	lies, snakes, song birds, nammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (ET, foraging/nesting);			
	naminais		ioraging,	nesti		aging/nesting/,
Observed Evidence of Wildlife Uti	lization (List species dire	ectly observed, or	other signs such a	s trac	ks, droppings, casings,	nests, etc.):
	No ovi	donao of wildlife u	tilitzation obconvo	4		
	IND EVI			J.		
Additional relevant factors:						
Additional relevant factors.						
		None	·.			
Assessment conducted by:			Assessment date	e(s):		
A. Blakely			9/21/2021			
			1			

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 83 (FPC 6A)		
Impact or Mitigation		Assessment conducted by:		Assessment date	:	
Impao	ct	A. Blakely			9/21/2021	
Searing Quidenes	Ontimal (10)	Madarata/7)	Mi	aimal (A)	Not Drocont	(0)
The scoring of each	Optimal (10)	Condition is less than	IVIII	nimai (4)	Not Present	(0)
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal le	vel of support of	Condition is insuf	ficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/	surface
type of wetland or surface	water functions	wetland/surface water	fu	inctions	water function	ons
water assessed		tunctions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a f upland habitats are available	forested wetland and is located e outside of the assessment ar of the assessment area is limit	d near the sc rea; however ed by the pre	outhbound US 98 r, wildlife access t esence of US 98.	right-of-way. Wetla o and from habitats	nd and outside
6 0						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 0 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrodic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditch addition to surface water, hydrologic indicators observed included water-stained leaves, moss, and elevated lines. Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98 wetland receives runoff from US 98.					ydrologic ches). In d lichen 98. The
with						
7 0						
	•					
	16	-4:		F i		
Score = sum ot above scores/30 (if uplands, divide by 20)	if preservation as mitiga	alion,		For impact asses	sment areas	
ourront	Preservation adjustmer	nt factor =		FL = delta x	acres =	
br w/o pres with				0.67 x 0.39	= 0.26	
0.67 0.00	Adjusted mitigation del	a =				
0.00]					
	If mitigation		_	an mitination of	coment error	
Delta = [with-current]	Time lag (t-factor) =		F	or mitigation asse	ssinent areas	
. ,	<u> </u>		REG	= delta/(t-factor v	risk) =	
-0.67	Risk factor =		N G	- Gena/(t-laciol X	non) –	

APPENDIX I.4

UMAM Worksheets – Preliminary Pond Sites Secondary

Impacts

Site/Project Name		Application Number	٩r		Assessment Area Name	or Number
		, approvation realise	FPC 13A			13A
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				(Secondar	y Impacts)
FLUCCs code	Further classifica	tion (optional)		Impact	or Mitigation Site?	Assessment Area
	PF01/2C -	PFO1/2C – Palustrine, Forested, Broad-			er miligalien ener	Size (in acres)
630 – Wetland Forested Mixe	d Leaved/Needl	e-Leaved Deciduo	ous, Seasonally		Impact	0.12
		Flooded				
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	on (i.e. C	FW, AP, other local/state/federa	l designation of importance)
Hillsborough River					None	
					Hono	
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, uplar	nds		
The assessment area is comprise	d of a forested wetland s	system. A cross dr system	rain that runs unde is.	erneath	US 98 connects this w	etland to other wetland
Accompany area description		-,				
Assessment area description						
	The forested wet	land canony consi	ists of overose and	l rod m	anlo	
	The forested Wet	iand canopy consi			api c .	
			Uniqueness (co	ncidori	ng the relative rarity in	relation to the regional
Significant nearby features			landscape.)	ISIUCII		
The assessment area is located v	within the southbound U	S 98 right-of-way				
approximately 260 feet southeast	of CR 54. Green Swamp	WMA and Gator			Not unique	
Creek Reserve locate	d on northeast side of U	S 98.				
Functions			Mitigation for prev	vious p	ermit/other historic use	
			3 1			
Natural water storage and conv	veyance; foraging h <mark>abi</mark> ta	t; wat <mark>er</mark> quality			News	
improvemen	nt; flood attenuation		None			
	a d an Literatura Daviera			- 4 ¹		
Anticipated wildlife Utilization Bas	ed on Literature Review	(LIST OF Species	classification (F	ation by	y Listed Species (List s	pecies, their legal
be found)	soment area and reason		assessment area)			
,				,		
			Little Blue Hero	on (ST	, foraging); Tricolored I	Heron (ST, foraging);
Amphibians, wading l	oirds, tu <mark>rtles</mark> , small mam	mals	Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging);			
				Evergl	ade Snail Kite (FE, fora	aging)
Observed Evidence of Wildlife Litil	instice (List species dies			- 4		anata ata \.
Observed Evidence of Wildlife Oth	ization (List species dire	cuy observed, or	other signs such a	STACK	s, droppings, casings, i	nesis, eic.).
	No evi	dence of wildlife i	utilization observed	1		
				••		
Additional relevant factors:						
		Nono				
		NOTE	•			
				(-)		
Assessment conducted by:			Assessment date	e(S):		
S. Szatyari			9/24/2021			

Site/Project Name		Application Number	/	Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			(Sec	FPC 13A	
Impact or Mitigation		Assessment conducted by:	/	Assessment date		
Impa	ct	S. Szatvari	S Szatvari 9/24/20		9/24/2021	
·		,				
Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present	(0)
The scoring of each		Condition is less than				
indicator is based on what would be suitable for the	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to maintain most	Winimal lev	/el of support of	provide wetland/	ficient to
type of wetland or surface	water functions	wetland/surface water	functions water function			ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current with 5 4 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a southbound US 98 right- however, wildlife access to a way fencing, US 98, and C	a forested wetland system adja of-way. Wetland and upland h and from habitats outside of th R 54. The adjacent uplands w ruderal species ove	acent to CR 5 labitats are an le assessmer vithin the right rlaying fill ma	i4. The assessme vailable outside o nt area is limited l t-of-way consist o terial.	ent area is located a of the assessment a by the presence of of mowed and main	at the area; right-of- tained 021 field
w/o pres or current with 7 7	<pre>reviews, the soils observed within Wetland 33 consisted of a dark surface with muck present. Hydrological indicators observed included surface water and a high water table. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98.</pre>					
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover within the under canopy. The construction of U habitat alteration. Land ma affe	erstory is comprised of invasiv JS 98 and its associated storm anagement practices include th act natural recruitment or reger	e, exotic spea nwater manag ne routine ma neraltion in th	cies with presenc gement facilities (intenance within ie plant communi	e of native species (i.e., ditches) has re the right-of-way the ty.	in the esulted in at may
w/o pres or						
current with	4					
6 5						
Score = sum of above scores/30 (if	If preservation as mitig	ation,	F	or impact asses	sment areas	
uplands, divide by 20)		at factor -		FL = delta x	acres =	
current	Preservation adjustmer	IL IACTOF =		0.07 0.15		
pr w/o pres with	Adjusted mitigation del	ta =		U.U/ X 0.12	= 0.01	
0.53						
	If mitigation		_			
Delta = [with-current]	Time lag (t-factor) =		Fo	or mitigation asse	ssment areas	
			RFG =	- delta/(t-factor x	risk) =	
-0.07	RISK TACTOR =			,		

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Pon	d 1A
					(Secondar	ry Impacts)
FLUCCs code	Further classifica	ation (optional)		Impac	t or Mitigation Site?	Assessment Area
	PFO1/2C	- Palustine, Fores	ted, Broad-			Size (in acres)
630 - Wetland Forested Mixe	d leaved/Needl	e-leaved Deciduo	us, Seasonally		Impact	0.09
	I	Tibbaea				
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	l designation of importance)
Withlacoochee River					None	
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, upla	nds		
The assessme	nt area is a forested we	tland that extends	offsite and is adja	cent to	o the Gator Creek Rese	rve.
Assessment area description						
Do	minant vegetation withir	the assessment	area consists of re	d map	ble and cypress.	
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional
The assessment area is located	within the northbound U	S 98 right-of-way	landscape.)			
approximately 0.1 mile southeast	of the entrance to Gator	Creek Preserve.			Not unique	
Green Swamp WMA and Gator Ci	reek Reserve located on	northeast side of			Not unique	
	05 98.					
Functions			Mitigation for pre	vious	permit/other historic use)
Natural water storage and conv	vovanco: foraging habita	t: water quality				
improvement; flo	bod attenuation; refuge.	it, water quality			None	
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliza	ation b	by Listed Species (List s	pecies, their legal
that are representative of the asser-	ssment area and reason	hably expected to	classification (E,	1, 550	c), type of use, and inte	nsity of use of the
so lound)				·)		
Amphibians, wading birds, turt	ies, snakes, song birds, nammals	raptors, small	foraging	ron (S nestin	o I, foraging/nesting); I r	aging/nesting):
			ioraging,	neotin		uging/neoting/,
Observed Evidence of Wildlife Litil	ization (List appairs dire	athy abaamyad ar	athar aigna auch a	o trool	ka dranninga againga	nanta ata):
Observed Evidence of Wildlife Oth	ization (List species dire	cuy observed, or	other signs such a	straci	ks, droppings, casings,	nesis, eic.).
	No evi	dence of wildlife u	tilitzation observed	d.		
Additional relevant factors:						
None.						
Assessment conducted by:			Assessment date	e(s) [.]		
T. Normon			6/20/2024	(0).		
T. NUTHAH			0/20/2021			

Site/Project Name			Application Number	Asses	ssment Area	a Name or Number	
US 98 from W Socrum L	.oop Rd	to CR 54 (FPID 436673-1)	(1			Pond 1A (Secondary Impacts)	
Impact or Mitigation			Assessment conducted by:	Asses	ssment date	e:	
	Impac	xt	T. Norman			6/28/2021	
Cooring Cuidenee		Ontimal (10)	Mederate (7)	Minimal	(4)	Not Drocont	(0)
The scoring of each		Optimal (10)	Condition is less than	winimai	(4)	Not Present	(0)
indicator is based on what		Condition is optimal and fully	optimal, but sufficient to	Minimal level of	support of	Condition is insuffi	cient to
would be suitable for the		supports wetland/surface	maintain most	wetland/surfac	ce water	provide wetland/surfa	ace water
type of wetland or surface		water functions	wetland/surface water	functior	าร	functions	
water assessed			Tunctions				
.500(6)(a) Location and Landscape Support The assessment area is a forested weltand adjacent to the Gator Creek Preserve. The assessment area is lo the northbound US 98 right-of-way. Wetland and upland habitats are available outside of the assessment however, wildlife access to and from habitats outside of the assessment area is limited by the presence of right fencing and US 98. w/o pres or current with 6 5						cated at area; nt-of-way	
.500(6)(b)Water Environr (n/a for uplands) w/o pres or current 7	.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic indicators observed within the assessment area included elevated lichen lines, water-stained leaves, and water mark Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.						
.500(6)(c)Community stru 1. Vegetation and/or 2. Benthic Community	ucture r y	Majority of plant cover is b construction of US 98 and alteration. Land managemer	y appropriate and desirable pla d its associated stormwater ma t practices are generally appro	ant species. Minin anagement facilitio opriate, but routin	nal invasive, es (i.e., ditcl e maintenar	/exotic species preser hes) has resulted in ha nce within the right-of-	nt. The abitat way may
		aff	ect natural recruitment or rege	eneraltion in the pl	lant commu	nity.	
w/o pres or							
current	with						
7	6						
Score = sum of above scores	2/30 /if	If preservation as mitig	ation	Fori	impact asco	essment areas	
uplands, divide by 20)	, JU (II	ii preservation as miliga					
current		Preservation adjustmen	t factor =			A autes -	
or w/o pres	with	Adjusted mitigation dolt	a =	0.07	x 0.09	= 0.006	
0.67	0.60	Aujusted miligation delt	u =				
		1					
		If mitigation		Form	itination occ	sessment areas	
Delta = [with-current]]	Time lag (t-factor) =		Form	nugauon ass		
	-	Risk factor =		RFG = delta	a/(t-factor x	risk) =	
-0.07							

Site/Project Name US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1) Application Num			mber Assessment Area Name or Number Wetland 66 (FPC 4B) (Secondary Impacts			
FLUCCs code	Further classification	ation (optional)		Impac	t or Mitigation Site?	Assessment Area
641 - Freshwater Marsh	PEM1C - Pa	alustrine, Emerger Seasonally Floode	nt, Persistent, ed		Impact	Size (in acres) 0.15
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	ON (i.e. (DFW, AP, other local/state/federa	I designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hydr	ologic connection with	wetlands, other s	urface water, uplan	nds		
The asses	sment area is a disturb	ed herbaceous we	etland surrounded	by res	idential development.	
Assessment area description						
	The dominant vege	tation consists of	primrose willow and	d bahi	a grass.	
Significant nearby features	Uniqueness (cor landscape.)	nsideri	ing the relative rarity in	relation to the regional		
The assessment area is located near northbound US 98 right-of-way approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for prev	/ious p	permit/other historic use)
Natural water storage and conve improvement; floo	yance; foraging habita od attenuation; refuge.	t; water quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	d on Literature Review sment area and reasor	List of species	Anticipated Utiliza classification (E, 1 assessment area)	ation b F, SSC)	y Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtle ma	es, s <mark>nake</mark> s, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utiliz	ation (List species dire	ectly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):
No evidence of wildlife utilitzation observed.						
Additional relevant factors:						
None.						
Assessment conducted by:			Assessment date	(s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number	As	sessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 66 (FPC 4B) (Secondary Impacts		
Impact or Mitigation		Assessment conducted by:	As	sessment date		
Impa	ct	T. Norman			6/28/2021	
	-					
Scoring Guidance	Optimal (10)	Moderate(7)	Minim	nal (4)	Not Present	(0)
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal laval	of our port of	Condition is insuff	iciont to
would be suitable for the	supports wetland/surface	optimal, but sunicient to	wetland/su	ror support or	provide wetland/	ICIENT TO
type of wetland or surface	water functions	wetland/surface water	funct	tions	water function	ons
water assessed		functions	i di lo			
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is assessment area is located outside of the assessment limited by the pre	an herbaecous wetland system near northbound US 98 right-o area; however, wildlife access sence of Pioneer Drive, reside	n that is surrou f-way. Minimal to and from ha ntial developm	inded by reside wetland and u abitats outside (ent, private fen	ential development. pland habitats are a of the assessment a cing,and US 98.	The Ivailable area is
5 4						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 5 5 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	t Water level indicators and soil moisture appeared somewhat less than appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent development and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. Majority of plant cover consists of invasive/exotic species with few desirable species. The surrounding development					
	indiagonioni praola			sideritiai proper	nee ana reaamajer	
w/o pres or						
current with						
4 3						
· · · · · ·						
Score = sum of above scores/30 (if	If preservation as mitig	ation	Fo	r impact assess	sment areas	
uplands, divide by 20)		.,				
current	Preservation adjustmer	nt factor =		FL = deita X a	acres =	
or w/o pres with	A diversity of the state		0.0	07 x 0.15	= 0.01	
0.47 0.40	Adjusted mitigation del	a =				
0.40						
	If mitigation					
			For r	mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.07	Risk factor =		RFG = d	lelta/(t-factor x	risk) =	
				-		

Site/Project Name		Application Number	er		Assessment Area Name	or Number		
LIS 98 from W Socrum Loop Rd to (R 54 (FPID 436673-1)			Wetland 67 (FPC 4A Easement)				
	51(54 (1 FID 450075-1)				(Secondar	ry Impacts)		
FLUCCs code	Further classification	ation (optional)		Impac	t or Mitigation Site?	Assessment Area		
	PFO1/2C	- Palustine, Fores	ted, Broad-			Size (in acres)		
630 - Wetland Forested Mixed		e-leaved Deciduo Flooded	us, Seasonally		Impact	0.38		
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	al designation of importance)		
Hillsborough River		,			None			
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, uplai	nds				
The assessment a	area is a forested wetlar	nd system surroun	ided by residential	devel	opment to the north and	d west.		
Assessment area description								
The dominant ve	egetation within the can	opy of this wetland	d consists of red m	aple,	water oak, and bald cyp	ress.		
			Uniqueness (co	nsider	ring the relative rarity in	relation to the regional		
Significant nearby features		landscape.)			g			
The assessment area is locate	98 right-of-way							
approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98				Not unique				
Functions			Mitigation for pre-	vious	permit/other historic use	9		
Natural water storage and conv	ovanco: foraging habita	t: water quality						
improvement; flo	od attenuation; refuge.	it, water quality			None			
Antiginated Wildlife Litilization Deer	ad an Literature Deviau	(List of appairs	Antioinated Litilia	otion k	w Listed Species (Lists	nacion their legal		
that are representative of the asse	ssment area and reason	nably expected to	classification (E,	T, SS	C), type of use, and inte	nsity of use of the		
be found)			assessment area	ı)				
Amphibians, wading birds, turtl	es, snakes, song birds,	raptors, small	Little Blue He	eron (S	ST, foraging/nesting); Tr	icolored Heron (ST,		
m	lammais		foraging/	nestin	ig); Wood Stork (FT, for	aging/nesting);		
Observed Evidence of Wildlife Litili	zation (List species dire	octly observed or	other signs such a	e trac	ke droppinge casinge	nests etc.):		
			other signs such a	is liac	ks, droppings, casings,	nesis, eic. <i>j</i> .		
	No evi	dence of wildlife u	tilitzation observed	d.				
Additional relevant factors:								
None.								
				(-)				
Assessment conducted by:			Assessment date	e(S):				
i.ivorman			0/28/2021					

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 67	7 (FPC 4A Easeme	ent)
Impact or Mitigation		Assessment conducted by:		Assessment date	e:	
Impa	ct	T Norman			6/28/2021	
		1. Horman			0/20/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)
The scoring of each		Condition is less than				<u> </u>
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal lev	vel of support of	Condition is insuf	ficient to
type of wetland or surface	water functions	wetland/surface water	wetland/surface water provide wetla functions water fu			ons
water assessed		functions	functions			
	ľ					
.500(6)(a) Location and Landscape Support	The assessment area is a f west. The assessment are available outside of the asse area is limited by the preser	orested wetland system that is a is located near the northbour essment area; however, wildlif ice of Pioneer Drive, residenti US s	surrounded nd US 98 rig e access to a al developme 98.	by residential dev ht-of-way. Wetlan and from habitats ent, private fencin	velopment to the no id and upland habit outside of the asse g, right-of-way fend	orth and ats are essment cing and
current with						
6 5	1					
				•		
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrol conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditche Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. w/o pres or current with 7 7 .500(6)(c)Community structure Majority of the plant cover within canopy is desirable plant species with invasive, exotic species present. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habi alteration. Land management practices include the installation of a pipe culvert within the wetland and routin maintenance within the right-of-way that may affect natural recruitment or regeneraltion in the plant community						ydrologic itches). 3. The . The habitat butine nunity.
current with						
7 6]					
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.67 0.60	If preservation as mitigation as mitigation adjustment Preservation adjustment Adjusted mitigation del	ation, nt factor = ta =		For impact assess FL = delta x 0.07 x 0.38	sment areas acres = = 0.03	
	If mitigation		Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Site/Droject Name		Application Number	~r		Accompant Area Name	or Numbor	
Site/Project Name		Application Numbe			Assessment Area Name		
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				(Seconda)	ry Impacts)	
				-	(Occorrida	y impacts/	
FLUCCs code	Further classifica	ition (optional)		Impac	t or Mitigation Site?	Assessment Area	
	PFO1/2C	- Palustine, Fores	ted, Broad-			Size (in acres)	
630 - Wetland Forested Mixe	d leaved/Needl	e-leaved Deciduo	us, Seasonally		Impact	0.48	
		Flooded	•				
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ion (i.e.	OFW, AP, other local/state/federa	I designation of importance)	
Hillsborough River					None		
					Hono		
Geographic relationship to and hyperbolic sectors and hyperbolic sec	drologic connection with	wetlands, other s	urface water, upla	nds			
The assessment	area is a forested wetlar	nd system surrour	nded by residential	devel	onment to the north and	1 west	
The assessment		la system surrou				i west.	
Assessment area description							
The dominant v	egetation within the can	ony of this wetland	d consists of red m	anle i	water oak, and hald ovn	ress	
		opy of this would he		iupio,	valor oak, and bala oyp	1000.	
					in a the surfactions manifesting		
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional	
			lanuscape.)				
The assessment area is locate	d near northbound US	98 right-of-way					
approximately 0.2 mile southeast of Pioneer Drive. Green Swamp WMA			Not unique				
and Gator Creek Reserve I	ocated on northeast side	e of US 98.					
Functions			Mitigation for pre	vious	permit/other historic use	9	
Natural water storage and conv	veyance; foraging habita	t; wat <mark>er</mark> quality			None		
improvement; flo	bod attenuation; refuge.						
Antiginated Wildlife Litilization Dec	ad on Literature Daview	(List of apacies	Anticipated Litilia	otion h	williated Encoine (List a	nacion their local	
that are representative of the asse	eu on Literature Review	(List of species	classification (F	T SS	type of use and inte	nsity of use of the	
be found)	soment area and reason	lably expected to	assessment area	1, 000 1)			
				.)			
Amphibians, wading birds, turt	les, snakes, song birds,	raptors, small	Little Blue He	eron (S	ST, foraging/nesting); Tr	icolored Heron (ST,	
n	nammals		foraging	/nestin	g); Wood Stork (FT, for	aging/nesting);	
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed or	other signs such a	is tracl	ks droppings casings	nests etc.):	
		, ,			,	,	
	No evi	dence of wildlife u	tilitzation observed	ч			
	10 01			u.			
Additional relevant factors:							
None							
Nono.							
Assessment conducted by:			Assessment date	e(s):			
T. Norman			6/28/2021				

Site/Project Name		Application Number	A	Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 67 (FPC 4A)		
Impact or Mitigation		Assessment conducted by:	A	Assessment date	:	
Impac	ct	T. Norman		6/28/2021		
·						
Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present	(0)
The scoring of each		Condition is less than				
indicator is based on what	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to	Minimal lev	rel of support of	Condition is insuf	ficient to
type of wetland or surface	water functions	wetland/surface water	fur	nctions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current with</u> 6 5 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a f west. The assessment area available outside of the asse area is limited by the preser	orested wetland system that is a is located near the northbou essment area; however, wildlif nce of Pioneer Drive, residentia US y bil moisture appeared somewh he adjacent US 98 and its ass	a surrounded h nd US 98 righ e access to a al developme 98.	by residential dev nt-of-way. Wetlan ind from habitats int, private fencin e considering sea water managem	velopment to the no d and upland habit outside of the asse g, right-of-way fend g, right-of-way fend asonal variation. H ent facilities (i.e., d	orth and iats are essment cing and ydrologic litches).
w/o pres or current with 7 7	with 7					
.500(6)(c)Community structure	Majority of the plant cove	er within canopy is desirable pla	ant species w	/ith invasive, exo	tic species present	. The
2. Benthic Community w/o pres or current with	alteration. Land manager maintenance within the rig	Its associated stormwater man nent practices include the inst ht-of-way that may affect natu	nagement fac allation of a pi ral recruitmer	inties (i.e., ditche ipe culvert within nt or regeneraltion	es) has resulted in i the wetland and ro n in the plant comm	nabitat outine nunity.
7 6						
Score = sum of above scores/20 /if	If preservation as mitig	ation		or impact assoc	sment areas	
uplands, divide by 20)				FL = delta x	acres =	
current	Preservation adjustmer	nt factor =				
or w/o pres with	Adjusted mitigation del	ta =		0.07 x 0.48	= 0.03	
0.67 0.60						
			Fo	r mitigation asse	ssment areas	
Delta = [with-current]	I ime lag (t-factor) =					
-0.07	Risk factor =		RFG =	e delta/(t-factor x	risk) =	

Site/Project Name		Application Number	<u>ə</u> r		Assessment Area Name	or Number	
LIS 08 from W Socrum Loop Pd to				Wetland 67 (FPC 4B Easement)			
	CIV 34 (I FID 430073-1)				(Secondar	ry Impacts)	
FLUCCs code	Further classification	ation (optional)		Impac	t or Mitigation Site?	Assessment Area	
	PFO1/2C	- Palustine, Fores	ted, Broad-			Size (in acres)	
630 - Wetland Forested Mixe	d leaved/ineedi	e-leaved Deciduo Flooded	us, Seasonally		Impact	0.62	
Basin/Watershed Name/Number	Affected Waterbody (Cla	ee)	Special Classificati	ion (i.e.			
Hillsborough Divor		337		ion (i.e.	Nono	i designation of importance)	
					None		
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, upla	nds			
The assessment	area is a forested wetlar	nd system surrour	nded by residential	devel	opment to the north and	d west.	
Assessment area description							
The dominant v	egetation within the can	opy of this wetland	d consists of red m	aple,	water oak, and bald cyp	ress.	
Significant nearby features Uniqueness (considering the relative rarity in relative					relation to the regional		
The assessment area is locate	d near northbound US	98 right-of-way	, and a second sec				
approximately 0.2 mile southeast			Not unique				
and Gator Creek Reserve	ocated on northeast side	e of US 98.					
Functions			Mitigation for pro	vioue	normit/othor historic use	<u>,</u>	
			Wildgation for pre	vious		2	
Natural water storage and conv	veyance; foraging habita	t; wat <mark>er</mark> quality			Nono		
improvement; flo	ood attenuation; refuge.				None		
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliza	ation t	ov Listed Species (List s	pecies. their legal	
that are representative of the asse	ssment area and reason	nably expected to	classification (E,	T, SS	C), type of use, and inte	nsity of use of the	
be found)			assessment area	ı)			
		•					
Amphibians, wading birds, turt	les, snakes, song birds,	raptors, small	Little Blue He	eron (S /nostin	ST, foraging/nesting); Tr	icolored Heron (ST,	
	lammais		ioraging/	nesui		aging/nesting),	
Observed Evidence of Wildlife Litil	ization (List spacios dire	octly observed or	othor signs such a	e trac	ke droppinge casinge	nosts oto):	
	ization (List species une		other signs such a		ks, droppings, casings,	nesis, eic. <i>j</i> .	
	No evi	dence of wildlife u	tilitzation observed	d.			
Additional relevant factors:							
Nera							
NOILE.							
Assessment conducted by:			Assessment date	e(s):			
, T. Norman			6/28/2021	. /			

Site/Project Name		Application Number	,	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 67 (FPC 4B Easement)		
Impact or Mitigation		Assessment conducted by:		Assessment date	e:	
	t	T Norman			6/28/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)
The scoring of each		Condition is less than				
indicator is based on what	Condition is optimal and fully supports wetland/surface	optimal, but sufficient to	Minimal level of support of Condition			ficient to
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 5 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a for west. The assessment area available outside of the asse area is limited by the preser	orested wetland system that is a is located near the northbou essment area; however, wildlif nce of Pioneer Drive, residenti US :	e surrounded nd US 98 rigt e access to a al developme 98.	by residential dev ht-of-way. Wetlan and from habitats ent, private fencin	velopment to the n id and upland habit outside of the asso g, right-of-way fend asonal variation. H	orth and ats are essment cing and ydrologic
w/o pres or current with 7 7 7	conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.					
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Majority of the plant cove construction of US 98 and	er within canopy is desirable platits associated stormwater ma	ant species v nagement fa	with invasive, exo cilities (i.e., ditche	tic species present es) has resulted in	. The habitat
2. Dentric Community	alteration. Land manager maintenance within the rig	nent practices include the insta ht-of-way that may affect natu	allation of a p	oipe culvert within int or regeneraltio	i the wetland and ro n in the plant comm	outine nunity
w/o pres or		, ,, <u></u>		J	,	<i>j</i> .
current with						
7 6	1					
r	1					
Score = sum of above scores/30 (if uplands, divide by 20)	If preservation as mitiga	ation,		For impact asses	sment areas	
current	Preservation adjustmer	nt factor =		FL = delta x	acres =	
or w/o pres with	Adjusted mitigation del	ta =		0.07 x 0.62	= 0.04	
0.67 0.60						
	If mitigotion					
			Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Cite/Drainet Norma		Application Number				an Numah an
Site/Project Name		Application Numbe	Wetland 67 (EPC 4B			
US 98 from W Socrum Loop Rd to CR 54	(FPID 436673-1)				(Secondar	ry Impacts)
	Europhian alassifias	tion (ontional)		Ι.		
FLUCCS code	Further classifica	nion (opiionai)	tod Prood	Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	PFU1/2C leaved/Needl	- Palusune, Fores	us Seasonally		Impact	
		Flooded	uo, ocusonany		impuot	0.23
Pasin/M/atorohod Namo/Number Affect	tod Waterbody (Clay	20)	Spacial Classificati			•
		55)		OT (i.e.	OFW, AF, other local/state/ledera	a designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hydrolog	ic connection with	wetlands, other s	urface water, uplai	nds		
		,	,			
The assessment area is	s a forested wetlar	nd system surroun	ided by residential	devel	opment to the north and	d west.
		-	-			
Assessment area description						
The dominant vegetat	ion within the can	opy of this wetland	d consists of red m	aple,	water oak, and bald cyp	oress.
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional
		lanuscape.)				
The assessment area is located near t	Netwining					
and Gator Creek Reserve located	e of US 98.	Not unique				
Functions			Mitigation for pre-	vious	permit/other historic use	9
Natural water storage and conveyand	e; foraging habita	t; wat <mark>er</mark> quality			None	
improvement; flood at	tenuation; refuge.					
Anticipated Wildlife Litilization Based on	Literature Review	(List of species	Anticinated Litiliz	ation h	w Listed Species (List s	necies their legal
that are representative of the assessment	nt area and reason	nably expected to	classification (E,	T, SS	C), type of use, and inte	ensity of use of the
be found)			assessment area	ı)		
Amphibians, wading birds, turtles, sr	akes, song birds.	raptors, small	Little Blue He	eron (S	GT. foraging/nesting): Tr	icolored Heron (ST.
mamm	als	· - [,	foraging/	/nestin	ig); Wood Stork (FT, for	aging/nesting);
Observed Evidence of Wildlife Utilization	(List species dire	ctly observed or	other signs such a	is trac	ks droppings casings	nests etc.).
			outor olgito ouori a		ille, droppinge, edenige,	10010, 010.).
	No evi	dence of wildlife u	tilitzation observed	d.		
Additional relevant factors:						
None						
Assessment conducted by:			Assossment data	v(c):		
				(3).		
I. Norman			6/28/2021			

Site/Project Name		Application Number	A	Assessment Area	a Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 67 (FPC 4B) (Secondary Impacts)			
Impact or Mitigation		Assessment conducted by:	Assessment date:				
Impac	ct	T. Norman			6/28/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present (0))	
The scoring of each		Condition is less than			0		
would be suitable for the	Supports wetland/surface	optimal, but sufficient to maintain most	wetland/s	el of support of	provide wetland/sur	ent to	
type of wetland or surface	water functions	wetland/surface water	fur	nctions	water functions	6	
water assessed		functions					
.500(6)(a) Location and Landscape Support The assessment area is a forested wetland system that is surrounded by residential development to the west. The assessment area is located near the northbound US 98 right-of-way. Wetland and upland h available outside of the assessment area; however, wildlife access to and from habitats outside of the area is limited by the presence of Pioneer Drive, residential development, private fencing, right-of-way US 98. .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation conditions are affected by the adjacent US 98 and its associated stormwater management facilities (it					velopment to the north d and upland habitats outside of the assess g, right-of-way fencing asonal variation. Hydrr ent facilities (i.e., ditch	a and are ment g and rologic nes).	
w/o pres or current with 7 7	Soil erosion observed indi	cates alterations in points of d wetland receives re	ischarge resu unoff from US	Ilting from the co \$ 98.	nstruction of US 98. T	The	
.500(6)(c)Community structure	Majority of the plant cove construction of US 98 and	er within canopy is desirable platits associated stormwater mai	ant species w nagement fac	vith invasive, exo	tic species present. These species present. These species present and the seculted in the secu	he bitat	
2. Benthic Community	alteration. Land manager	nent practices include the insta	allation of a p	ipe culvert within	the wetland and routin	ine	
w/o pres or	maintenance within the fig	nt-or-way that may alleot fialu		nt of regeneration	n in the plant commun	nty.	
current with							
7 6							
, 0							
		<u>_</u>			a		
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	F	or impact asses	sment areas		
uplands, divide by 20)	Preservation adjustmer	Preservation adjustment factor = FL = delta x acres =					
pr w/o pres with		$0.07 \times 0.29 = 0.02$					
0.67 0.60	Aujusted mitigation dell	la –					
	J						
	If mitigation		Fo	or mitigation asse	ssment areas		
Delta = [with-current]	Time lag (t-factor) =						
-0.07	Risk factor =		RFG =	e delta/(t-factor x	risk) =		

Site/Project Name		Application Number	\r		Accessment Area Name	or Numbor	
Site/Project Name		Application Number	Wetland 67 (FPC 4C Easement			C 4C Fasement)	
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				(Secondar	ry Impacts)	
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area	
	PFO1/2C	- Palustine, Fores	ted, Broad-	impac	to magaion one.	Size (in acres)	
630 - Wetland Forested Mixe	d leaved/Needl	e-leaved Deciduo	us, Seasonally		Impact	0.38	
		Flooded					
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	al designation of importance)	
Hillsborough River					None		
					Hono		
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, upla	nds			
The assessment	area is a forested wetlar	nd system surrour	ded by residential	devel	opment to the north and	d west.	
Assessment area description							
.		6 1 1 1					
I he dominant v	egetation within the can	opy of this wetland	consists of red m	aple,	water oak, and bald cyp	ress.	
			Linday and the				
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional	
The second second second second			landooupo.)				
I he assessment area is located	t of Pioneer Drive Gree	98 right-of-way			Not unique		
and Gator Creek Reserve l	ocated on northeast side	e of US 98.			Not unique		
Functions			Mitigation for pre	vious	permit/other historic use	9	
Natural water storage and conv	eyance; foraging habita	t; wat <mark>er</mark> quality	None				
improvement; flo	ood attenuation; refuge.						
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliz	ation h	ov Listed Species (List s	pecies their legal	
that are representative of the asse	ssment area and reason	nably expected to	classification (E,	T, SS	C), type of use, and inte	nsity of use of the	
be found)			assessment area)				
Amphibians, wading birds, turt	les, snakes, song birds.	raptors, small	Little Blue Heron (ST_foraging/nesting): Tricolored Heron (ST				
n	nammals	· - [,	foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Litil	ization (List species dire	ctly observed or	other signs such a	s trac	ks droppings casings	nests etc.).	
				0 100		10010, 010.).	
	No evi	dence of wildlife u	tilitzation observed	d.			
Additional relevant factors:							
		None					
		1,0110	-				
Accomment conducted by:			A	(0):			
			Assessment date	s(S):			
I. Norman			6/28/2021				

Site/Project Name		Application Number	/	Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)		Wetland 67 (FPC 4C Easement)			
Impact or Mitigation		Assessment conducted by:	lucted by: Assessment date:			
Impor	ot	T. Norman		6/28/2021		
	51	T. Norman			0/20/2021	
Scoring Guidance	Ontimal (10)	Moderate(7)	Min	imal (1)	Not Present	(0)
The scoring of each		Condition is less than		iiiiai (+)	Not resent	. (•)
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal lev	el of support of	Condition is insut	fficient to
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland	/surface
type of wetland or surface	water functions	wetland/surface water	tur	nctions	water function	ons
Water assessed		Idiotoris				
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is a f west. The assessment are available outside of the asse area is limited by the preser	orested wetland system that is a is located near the northbour essment area; however, wildlif nce of Pioneer Drive, residenti US t	s surrounded nd US 98 righ e access to a al developme 98.	by residential dev nt-of-way. Wetlan and from habitats ent, private fencin	velopment to the n Id and upland habit outside of the asso g, right-of-way fend	orth and tats are essment cing and
current with						
6 5						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	ent Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydro conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditch Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. T wetland receives runoff from US 98. ith 7 ture Majority of the plant cover within canopy is desirable plant species with invasive, exotic species present. Th construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in bab					
	maintenance within the rig	ht-of-way that may affect natu	ral recruitmer	nt or regeneraltio	n in the plant comr	nunity.
w/o pres or						
current with						
7 6						
	ı ———					
Score = sum of above scores/30 (if	If preservation as mitig	ation,	F	or impact asses	sment areas	
apianas, divide by 20)	Preservation adjustment factor = FL = delta x acres =					
or w/o pres with				0.07 x 0.38	= 0.03	
0.67 0.60	Adjusted mitigation del	ia =				
0.00]					
	If mitigation		_			
Delta = [with-current]	Time lag (t-factor) =		Fo	or mitigation asse	ssment areas	
				dolto//t fastar	rick) –	
-0.07	Risk factor =	RFG = delta/(t-factor x risk) =				

Site/Droject Name		Application Number			Accompant Area Name	or Numbor	
Site/Project Name		Application Numbe	Wetland 67 (EPC 4C)				
US 98 from W Socrum Loop Rd to CF	R 54 (FPID 436673-1)				(Secondar	v Impacts)	
	Curther dessifier	tion (ontional)		1.		,	
FLUCUS code		Relucting Force	tod Broad	Impac	t or Mitigation Site?	Assessment Area	
630 - Wetland Forested Mixed	PFU1/2C leaved/Needl	- Palusune, Fores	us Seasonally		Impact	0.55	
		Flooded	do, occoording		impuot	0.00	
Resin/Watershed Name/Number	ffootod Waterbody (Cla	20)	Spacial Classificati	on (i.e.		l designation of improvements)	
	inected waterbody (Cla	55)		OTT (I.e.	OFW, AF, other local/state/ledera	i designation of importance)	
Hillsborough River	III				None		
Geographic relationship to and hydro	logic connection with	wetlands, other s	urface water, upla	nds			
		,	,				
The assessment are	ea is a forested wetlar	nd system surrour	ded by residential	devel	opment to the north and	d west.	
		-	-				
Assessment area description							
The dominant veg	etation within the can	opy of this wetland	l consists of red m	aple, v	water oak, and bald cyp	ress.	
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional	
			landscape.)				
The assessment area is located ne	ar the northbound US	S 98 right-of-way			Notupiquo		
and Gator Creek Reserve loc	ated on northeast side	e of US 98.			Not unique		
Functions			Mitigation for pre	vious	permit/other historic use)	
Natural water storage and convey	/ance; foraging h <mark>abi</mark> ta	t; wat <mark>er</mark> quality	None				
improvement; floo	d attenuation; refuge.		None				
Anticipated Wildlife Litilization Based	on Literature Review	(List of species	Anticinated Utiliz	ation h	y Listed Species (List s	necies their legal	
that are representative of the assess	ment area and reason	nably expected to	classification (E,	T, SS	C), type of use, and inte	nsity of use of the	
be found)			assessment area)				
Amphibians, wading birds, turtles	s, snakes, song birds.	raptors, small	Little Blue He	ron (S	GT. foraging/nesting): Tr	icolored Heron (ST.	
mai	nmals	· - [,	foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Utiliza	ation (List species dire	ctlv observed, or	other signs such a	s tracl	ks. droppings. casings.	nests. etc.):	
		,,				,	
	No evi	dence of wildlife u	tilitzation observed	d.			
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment data	(s)·			
				(3).			
I. Norman			0/28/2021				

Site/Project Name		Application Number	A	Assessment Area	a Name or Number	
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 67 (FPC 4C) (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:	Assessment date:			
Impac	ct	T. Norman		6/28/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Mini	imal (4)	Not Present (0	0)
The scoring of each		Condition is less than			0 111 1 1 10	
would be suitable for the	Supports wetland/surface	optimal, but sufficient to maintain most	Winimai leve	el of support of	provide wetland/su	ient to
type of wetland or surface	water functions	wetland/surface water	fun	nctions	water functions	S
water assessed		functions				
.500(6)(a) Location and Landscape Support The assessment area is a forested wetland system that is surrounded by residential development to the west. The assessment area is located near the northbound US 98 right-of-way. Wetland and upland here available outside of the assessment area; however, wildlife access to and from habitats outside of the available outside of the assessment area; however, wildlife access to and from habitats outside of the area is limited by the presence of Pioneer Drive, residential development, private fencing, right-of-way US 98. .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation					velopment to the north d and upland habitats outside of the assess g, right-of-way fencing asonal variation. Hydi ent facilities (i.e., ditcl	h and s are sment g and rologic hes).
w/o pres or current with 7 7	Soil erosion observed indi	cates alterations in points of d wetland receives ru	ischarge resul unoff from US	Iting from the co 98.	nstruction of US 98.	The
 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community 						he bitat ine
	maintenance within the hy	ni-oi-way inai may aneci natu		it of regeneration	n in the plant commu	my.
current with						
7	1					
/ 6						
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	F	or impact assess	sment areas	
uplands, divide by 20)	Preservation adjustment factor = FL = delta x acres =					
pr w/o pres with		$0.07 \times 0.55 = 0.04$				
0.67 0.60	Adjusted mitigation del	a =				
	J					
r	If mitigation		For	r mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.07	Risk factor =		RFG =	delta/(t-factor x	risk) =	

					A (A)	NI 1
Site/Project Name		Application Number	Assessment Area Name or Number			
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)			(Secondary Impacts)		
				1	(Secondal	y impacts)
FLUCCs code	Further classifica	ition (optional)		Impac	t or Mitigation Site?	Assessment Area
	PFO1/2C	- Palustine, Fores	ted, Broad-			Size (in acres)
630 - Wetland Forested Mixe	d leaved/Needl	e-leaved Deciduo	us, Seasonally		Impact	0.50
		Flooded				
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	l designation of importance)
Withlacoochee River					None	
Geographic relationship to and hyperbolic terms and hyperbolic relationship to and hyperbolic terms and hyperbolic	drologic connection with	wetlands. other s	urface water. upla	nds		
	5	,	, 1			
The assess	sment area is a forested	wetland system t	hat is surrounded	bv Gat	tor Creek Camporound	
		·····				
Assessment area description						
Dominant vo	egetation within the can	opy consists of ba	ld cypress, red ma	aple, w	ater oak, and laurel oak	
	0				·	
			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional
Significant nearby features			landscape.)	noidei		
The assessment area is locate	ed less than 0.1 mile so	utheast of the				
entrance to Gator Creek Campgro	und near the northbour	nd US 98 right-of-			Netunique	
way. Green Swamp WMA and Ga	ator Creek Reserve loca	ted on northeast			Not unique	
side	e of US 98.					
Functions			Mitigation for pre	vious	permit/other historic use	`
			initigation for pro	viouo j		
Natural water storage and conv	evance: foraging habita	t: water quality				
improvement: flo	ood attenuation: refuge.	t, water quality	None			
······································	,g					
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliza	ation b	y Listed Species (List s	pecies, their legal
that are representative of the asse	ssment area and reasor	nably expected to	classification (E, T, SSC), type of use, and intensity of use of the			
be found)			assessment area)			
Amphibians, wading birds, turt	les, snakes, song birds	raptors, small	Little Blue He	eron (S	T. foraging/nesting): Tr	icolored Heron (ST
n	nammals	·	foraging/nesting): Wood Stork (FT, foraging/nesting):			
			0.0			0 0 0,7
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such a	is traci	ks, droppings, casings, i	nests, etc.):
	Evidence of	wildlife observed i	ncludes crayfish b	urrows	S.	
Additional relevant factors:						
		Nono				
		NOTE	•			
Assessment conducted by:			Assessment date	e(s):		
T Norman			6/28/2021			
I. NOTHAN			5,20,2021			

Site/Project Name		Application Number	,	Assessment Area	Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 68 (FPC 5B) (Secondary Impacts)			
Impact or Mitigation		Assessment conducted by:		Assessment date	:		
Impao	ct	T. Norman			6/28/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present (0)		
The scoring of each		Condition is less than					
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal lev	el of support of	Condition is insufficient		
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	fui	nctions	water functions		
water assessed		functions					
.500(6)(a) Location and Landscape Support The assessment area is a forested wetland system that is located adjacent to the northbound US 98 right-o a RV park/campground. Some wetland and upland habitats are available outside of the assessment area; I wildlife access to and from habitats outside of the assessment area is limited by the campground facilities, and a large open water SMF pond. w/o pres or current with 5 4 .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. H conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., c					ound US 98 right-of-way a assessment area; howeve apground facilities, fencing asonal variation. Hydrolog ent facilities (i.e., ditches) nstruction of US 98. The		
w/o pres or current with 7 7		weiland receives in		5 90.			
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover within the can associated stormwater ma generally appropriate, but ro	opy is appropriate and desirab nagement facilities has resulte utine maintenance within RV p	ble plant spected in habitat a	sies. The surround alteration. Land n ct natural recruit	ding development and its nanagement practices are ment or regeneraltion in th		
		plant con	imunity.				
w/o pres or							
current with							
7 6							
Seere = our of above seeres/20 /if	If procentation on mitig	ation		For impost soos	mont croco		
uplands, divide by 20)	in preservation as miliga	auon,			Silleni aleas		
apianas, annas 25 20)	Preservation adjustmer	nt factor =		FL = delta x	acres =		
current							
	Adjusted mitigation delt	a =		0.07 X 0.50	- 0.03		
0.63 0.57			L				
<u> </u>							
	If mitigation		-	r mitigation acco	esmont areas		
Delta = [with-current]	Time lag (t-factor) =		FC	n milligation asse	Someni dieds		
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =		

Site/Project Name		Application Number	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)			Wetland 68 (FPC 5C)		
					(Secondai	ry Impacts)
FLUCCs code	Further classifica	ation (optional)	ted Broad-	Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	d leaved/Needl	e-leaved Deciduo Flooded	us, Seasonally		Impact	0.24
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	l designation of importance)
Withlacoochee River	III				None	
Geographic relationship to and hyd	Irologic connection with	wetlands, other s	urface water, upla	nds		
The assess	ment area is a forested	wetland system t	hat is surrounded	by Gat	tor Creek Campground.	
Assessment area description						
Dominant ve	egetation within the can	opy consists of ba	ld cypress, red ma	aple, w	ater oak, and laurel oak	Χ.
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional
The assessment area is locate	ed less than 0.1 mile so	utheast of the	iundoodpo.)			
entrance to Gator Creek Campgro way, Green Swamp WMA and Ga	und near the northbour	nd US 98 right-of-			Not unique	
side	of US 98.					
Functions			Mitigation for pre	vious	permit/other historic use)
Natural water storage and conv improvement; flo	eyance; foraging habita od attenuation; r <mark>ef</mark> uge.	ıt; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base	ed on Literature Review	(List of species	Anticipated Utiliza	ation b	ov Listed Species (List s	pecies, their legal
that are representative of the asse be found)	ssment area and reason	nably expected to	classification (E, assessment area	T, SS(1)	C), type of use, and inte	nsity of use of the
Amphibians, wading birds, turtl m	es, snakes, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utili	zation (List species dire	ectly observed, or	I other signs such a	is tracl	ks, droppings, casings,	nests, etc.):
	Evidence of	wildlife observed i	ncludes crayfish b	ourrows	S.	
Additional relevant factors:						
		Nono				
		None				
Assessment conducted by:			Assessment date	e(s):		
T. Norman			6/28/2021			

Site/Project Name		Application Number	,	Assessment Area	a Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 68 (FPC 5C) (Secondary Impacts)			
Impact or Mitigation		Assessment conducted by:		Assessment date	:		
Impao	ct	T. Norman			6/28/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Min	imal (4)	Not Present (0)		
The scoring of each		Condition is less than					
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal lev	el of support of	Condition is insufficient	t to	
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/surface	се	
type of wetland or surface	water functions	wetland/surface water	fui	nctions	water functions		
water assessed		functions					
.500(6)(a) Location and Landscape Support The assessment area is a forested wetland system that is located adjacent to the northbound US 98 right-o a RV park/campground. Some wetland and upland habitats are available outside of the assessment area; wildlife access to and from habitats outside of the assessment area is limited by the campground facilities, and a large open water SMF pond. w/o pres or current with 5 4 .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. F conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., o Soil arcsion abcorned integrate relations of the adjacent US 98 and its associated stormwater management facilities (i.e., o Soil arcsion abcorned integrate relations of dispacent use of the appeared somewhat appropriate considering the construction of the solution of the associated stormwater management facilities (i.e., o Soil arcsion a bcorned integrate relations of dispacent use of the appeared integrate relations of dispacent use of the appeared integrates relations of dispacent use of the associated stormwater management facilities (i.e., o soil arcsion appeared integrates relations of dispacent use of the appeared integrates relations of dispacent use of the appeared integrates relations of dispacent use of the appeared integrates of the appeared integrates appeared integrates of the appeared integrates of					ound US 98 right-of-way assessment area; howev apground facilities, fencir asonal variation. Hydrolo ent facilities (i.e., ditches nstruction of US 98. The	and /er, ng, ogic s). e	
w/o pres or current with 7 7		welland receives in		5 50.			
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Plant cover within the can associated stormwater ma generally appropriate, but ro	opy is appropriate and desirab nagement facilities has resulte utine maintenance within RV p	ole plant spec ed in habitat a park may affe	eies. The surround alteration. Land m ect natural recruitu	ding development and its nanagement practices ar ment or regeneraltion in f	s re the	
		plant com	nmunity.				
w/o pres or							
current with							
7 6	1						
· · · · · · · · · · · · · · · · · · ·							
		<i>c</i>		- · ·			
Score = sum of above scores/30 (If	Il preservation as miliga	auon,	r	-or impact asses	sment areas		
uplands, divide by 20)	Preservation adjustmer	nt factor =		FL = delta x	acres =		
current	,						
prw/o pres with	Adjusted mitigation del	a =		0.07 X 0.24	= 0.02		
0.63 0.57			L				
<u> </u>	4						
	If mitigation		-	r mitigation acco	sement areas		
Delta = [with-current]	Time lag (t-factor) =		FC	n milligation asse	Someni areas		
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =		

Site/Project Name Application Number Assessment Area Name or Number					or Number	
US 98 from W Socrum Loop Rd to CF	R 54 (FPID 436673-1)				Wetland 69 (Secondai	(Pond 2D-1) ry Impacts)
FLUCCs code	Further classifica	ation (optional)	tod Prood	Impac	t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	Leaved/Needl	e-Leaved Deciduo Flooded	bus, Seasonally		Impact	0.17
Basin/Watershed Name/Number A	ffected Waterbody (Cla	ss)	Special Classificati	ON (i.e.	OFW, AP, other local/state/federa	I designation of importance)
Hillsborough River	111				None	
Geographic relationship to and hydro	ologic connection with	wetlands, other s	urface water, uplar	nds		
The assessment area is a sma deve	Il portion of a forested lopment and a large \$	l system that exter SMF pond associa	nds outside of the ited with the Gator	pond : Creel	site. Adjacent land use i k Campground.	nclude residential
Assessment area description						
	Dominant vegeta	tion includes cypre	ess, water o <mark>ak</mark> , and	d red r	naple.	
Significant nearby features			Uniqueness (co landscape.)	nsider	ing the relative rarity in	relation to the regional
The assessment area is located less than 0.1 mile southeast of the entrance to Gator Creek Campground near the northbound US 98 right- way. Green Swamp WMA and Gator Creek Reserve located on northeas side of US 98.			Not unique			
Functions			Mitigation for pre-	vious	permit/other historic use)
Natural water storage and convey improvement; floo	vance; foraging habita d attenuation; refuge.	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Based that are representative of the assess be found)	on Literature Review ment area and reaso	List of species	Anticipated Utiliza classification (E, assessment area	ation b T, SS()	by Listed Species (List s C), type of use, and inte	pecies, their legal nsity of use of the
Amphibians, wading birds, turtles ma	s, s <mark>nake</mark> s, song birds, mmals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (FT, foraging/nesting);			
Observed Evidence of Wildlife Utiliza	ation (List species dire	ectly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):
	No evi	dence of wildlife u	tilitzation observed	J.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	(s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number	As	ssessment Area	a Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 69 (Pond 2D-1) (Secondary Impacts)			
Impact or Mitigation		Assessment conducted by: Assessment da			:		
Impao	ct	T. Norman			9/21/2021		
	0 // 1//0						
Scoring Guidance	Optimal (10)	Moderate(7)	Minin	mal (4)	Not Present (0)		
indicator is based on what	Condition is optimal and fully	optimal but sufficient to	Minimal leve	of support of	Condition is insufficient to		
would be suitable for the	supports wetland/surface	maintain most	wetland/su	urface water	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	func	ctions	water functions		
water assessed		functions					
.500(6)(a) Location and Landscape Support The assessment area is a forested wetland system that is located adjacent to the northbound US 98 right- a RV park/campground. Some wetland and upland habitats are available outside of the assessment area wildlife access to and from habitats outside of the assessment area is limited by the campground facilities and a large open water SMF pond.					ound US 98 right-of-way and assessment area; however, pground facilities, fencing,		
with							
current with	4						
6 5							
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 6	Water level indicators and so conditions are affected by ti Soil erosion observed indi Plant cover within the can associated stormwater ma generally appropriate, but ro	bil moisture appeared somewh he adjacent US 98 and its ass cates alterations in points of d wetland receives m opy is appropriate and desirab nagement facilities has resulte utine maintenance within RV p plant com	at appropriate ociated stormw ischarge result unoff from US s ele plant specie d in habitat alt park may affect nmunity.	considering sea water managem ting from the co 98. 98. es. The surround teration. Land m t natural recruit	asonal variation. Hydrologic ent facilities (i.e., ditches). nstruction of US 98. The ding development and its nanagement practices are ment or regeneraltion in the		
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.67 0.60	If preservation as mitigated Preservation adjustmer Adjusted mitigation delt	ation, ht factor = la =	Fo 0.	or impact assess FL = delta x a .07 x 0.17	sment areas acres = = 0.01		
Dolto = [uith oursent]	If mitigation		For	mitigation asse	ssment areas		
	Time lag (t-lactor) =		050	-1-14-1/4-5	riale) —		
-0.07	Risk factor =		RFG = c	deita/(t-factor x	risk) =		
Site/Project Name		Application Numbe	Assessment Area Name or Number			or Number	
---	--	--	---	--------------------------	-----------------------------------	------------------------------	--
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 6	8 (FPC 5C)	
					(Secondal	y impacts)	
FLUCCs code	Further classifica	tion (optional)		Impact	or Mitigation Site?	Assessment Area	
	PFO2C - Pal	ustine. Forested. I	Needle-leaved			Size (in acres)	
621 - Cypress	Decidu	ious, Seasonally I	Flooded		Impact	0.18	
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ion (i.e. C	OFW, AP, other local/state/federa	l designation of importance)	
Withlacoochee River					None		
					Nono		
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, uplar	nds			
	5	,	<i>,</i> 1				
The assessment area is a fores	sted wetland system that	is surrounded by	residential develo	pment	and located on north s	ide of Rockridae Rd.	
	,					<u>-</u>	
Assessment area description							
	Dominant vegeta	tion within the car	hopy consists of ba	ald cyp	ress.		
	-						
			Uniqueness (co	nsideri	no the relative rarity in	relation to the regional	
Significant nearby features			landscape.)			i chancer to nice rogiorial	
The assessment area is located a	approvimatoly 0.2 milo p	orthoast of US 08					
adjacent to the north side of Rockridge Rd. Green Swamp WMA and Gatol					Not unique		
Creek Reserve located on northeast side of US 98.							
Functions		Mitigation for pre-	vious p	ermit/other historic use)		
Natural water storage and con-	vevance: foraging habita	t: water quality					
improvement; fl	ood attenuation; refuge.	·, · · · · · · · · · · · · · · · · · ·			None		
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliza	ation b	y Listed Species (List s	pecies, their legal	
that are representative of the asse	essment area and reasor	hably expected to	classification (E,	T, SSC	c), type of use, and inte	nsity of use of the	
be tound)			assessment area	1)			
Amphibians, wading birds, tur	tles, snakes, song bir <mark>ds</mark> ,	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST,				
r	nammals		foraging/nesting); Wood Stork (FT, foraging/nesting);				
Observed Evidence of Wildlife Liti	lization (List species dire	octly observed or	other signs such a	s track	s dronnings casings	nests etc.):	
			other signs such a		s, droppings, casings,	10313, 010.).	
	Evidence of	wildlife observed i	ncludes cravfish h	urrowe			
	Evidence of		ficidues crayiish b	unows			
Additional relevant factors:							
		None					
				(-)			
Assessment conducted by:			Assessment date	e(S):			
T. Norman			6/28/2021				
			1				

Site/Project Name	Application Number Assessment Area Name or Number					
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 68 (FPC 5C)		
Impact or Mitigation		Assessment conducted by:		Assessment date:		
Impac	ct	T. Norman			6/28/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present (0	0)
The scoring of each		Condition is less than	Missionalla			
would be suitable for the	supports wetland/surface	iy optimal, but sufficient to winimal level of support of Condition is maintain most wetland/surface water provide we				ient to
type of wetland or surface	water functions	wetland/surface water	fui	nctions	water functions	s
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 4 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a f residential development. Sor wildlife access to and from ha	orested wetland system that is ne wetland and upland habitat abitats outside of the assessm and Rocki bil moisture appeared somewh he adjacent US 98 and its ass	s located adja is are availab ient area is lin ridge Rd.	acent to the north le outside of the mited by the resid the considering set nwater managem	side of Rockridge Rd assessment area; ho lential development, l asonal variation. Hydr ent facilities (i.e., ditcl	d and wever, US 98, US 98, rologic
w/o pres or current with 7 7	Soil erosion observed indi	cates alterations in points of d wetland receives ru	ischarge resu unoff from US	ulting from the co S 98.	nstruction of US 98.	The
 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community Plant cover within the canopy is appropriate and desirable plant species. The surrounding development and it associated stormwater management facilities has resulted in habitat alteration. Land management practices a generally appropriate, but routine maintenance within adjacent land uses may affect natural recruitment or					d its s are or	
N/o pres or		regeneration in the		annty.		
current with						
7 6						
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	F	For impact asses	sment areas	
uplands, divide by 20)	Preservation adjustmer	nt factor =		FL = delta x	acres =	
or w/o pres with	Adjusted mitigation dolt	io –		0.07 x 0.18	= 0.01	
0.63 0.57	Aujusted miligation del	la –				
	J		-			
	If mitigation		Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =	

Site/Project Name		Application Number	Assessment Area Name or Number			or Number	
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 71	(Pond 2C-2)	
				_	(Seconda	y impacis)	
FLUCCs code	Further classification	tion (optional)		Impac	t or Mitigation Site?	Assessment Area	
	PFO1/2C -	Palustrine, Fores	sted, Broad-			Size (in acres)	
630 - Wetland Forested Mixe	d Leaved/Needl	e-Leaved Deciduo	ous, Seasonally		Impact	0.10	
		Flooded					
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	Il designation of importance)	
Hillsborough River					None		
					None		
Geographic relationship to and by	drologic connection with	wetlands other s	urface water unla	nds			
			anaco nator, apia	lao			
The assessment area is a	forested system that ext	ends outside of th	e nond site Adiac	net la	nd use include residenti	al development	
			e pond site. Aujao				
Assessment area description				-			
	Dominant vegeta	ion includes cypre	ess, water oak, an	d red i	maple		
	Bonnant Vogota			arour	hapio.		
				neidor	ing the relative rarity in	rolation to the regional	
Significant nearby features			landscape)	nsiuei			
_			landoodpo.)				
The assessment area is located hear the northbound US 98 right-of-way					Notupiquo		
and Gator Creek Reserve located on northeast side of US 98							
		2 01 00 50.					
Functions			Mitigation for pre	vious	permit/other historic use	3	
			Willigation for pre-	vious		•	
Natural water storage and conv	wance: foreging babits	t: water quality					
improvement: flo	nod attenuation: refuge	i, water quality			None		
improvement, it	sou allonadion, rolago.						
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utilization	ation b	y Listed Species (List s	pecies, their legal	
that are representative of the asse	ssment area and reasor	hably expected to	classification (E,	assification (E, T, SSC), type of use, and intensity of use of the			
be found)			assessment area)				
Amphibians wading birds turt	les snakes song hirds	rantors small	Little Blue He	ron (S	T forgaina/nestina): Tr	icolored Heron (ST	
Amphibians, wading birds, turt	nammals	raptors, smail	foraging/nesting): Wood Stork (FT_foraging/nesting):				
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such a	s trac	ks, droppings, casings,	nests, etc.):	
	No evi	dence of wildlife u	tilitzation observed	d.			
Additional relevant factors:							
		Nama					
		ivone	•				
Assessment conducted by:			Assessment date	e(s):			
T. Norman			9/21/2021				

Site/Project Name		Application Number Assessment Area Name or Number				
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)			Wetland 71 (Pond 2C-2)		
Impact or Mitigation		Assessment conducted by: Assessme			sessment date:	
Impa	ct	T. Norman	9/21/2021			
ļ		ļ				
Scoring Guidance	Optimal (10)	Moderate(7)	Minir	mal (4)	Not Present	(0)
The scoring of each	Condition is optimal and fully	Condition is less than			Condition is insuff	iciont to
would be suitable for the	supports wetland/surface	e maintain most wetland/surface water provide wetland				
type of wetland or surface	water functions	wetland/surface water	func	ctions	water functio	ns
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is a consists of residential and pa however, wildlife access to a	forested wetland located near asture. Minimal weltand and u and from habitats outside of th way fencing, US 98, and	the northboun pland habitat is le assessment residential/pas	d US 98 right-oi s available outsi area is limited l sture use.	f-way. Adjacent lanc de of the assessme by the presence of r	d uses ent area; right-of-
current with						
5 4						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 6 5	Water level indicators and so conditions are affected by the ditches). Soil erosion observ Majority of the plant cover wi the subcanopy/groundcover ditches) has resulted in habi of-way and installation of pi	bil moisture appeared somewhere adjacent residences, US 98 ved indicates alterations in poin The wetland receives thin the canopy is comprised of r. The construction of US 98 at tat alteration. Land manageme pe culverts and cross drains th plant con	at appropriate and its associa ints of discharg s runoff from U	e considering sea ated stormwater je resulting from IS 98.	asonal variation. Hy management facilit the construction of invasive, exotic sp nanagement facilitie taintenance within the tent or regeneraltion	rdrologic ties (i.e., US 98. eccies in es (i.e., he right- n in the
	lf	ation	-			
Score = sum of above scores/30 (if uplands, divide by 20)	if preservation as mitiga	auon,	Fo	FI = delta v		
current	Preservation adjustmer	nt factor =			uores –	
or w/o pres with	Adjusted mitigation del	ta =	0.	.07 x 0.10	= 0.01	
0.60 0.53]	L			
	If mitigation					
Dolto - Invith averanti	Time log /t faster) =		For	mitigation asse	ssment areas	
Deita = [with-current]	i ime iag (t-tactor) =					
-0.07	Risk factor =		RFG = 0	delta/(t-factor x	risk) =	

Site/Project Name	Application Number	٩r		Assessment Area Name	or Number		
		, application rambe	Wetland 72 (FPC 7B)			2 (FPC 7B)	
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				(Secondar	y Împacts)	
FLUCCs code	Further classification	ation (optional)		Impac	t or Mitigation Site?	Assessment Area	
	PFO1/2C	- Palustine, Fores	ted, Broad-		· · · · · · · · · · · · · · · · · ·	Size (in acres)	
630 - Wetland Forested Mixe	d leaved/Needl	e-leaved Deciduo	us, Seasonally		Impact	0.07	
		Flooded					
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	I designation of importance)	
Hillsborough River	III				None		
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, uplar	nds			
The assessment area is a small fo	orested system. A cross	drain that runs un	derneath US 98 co	onnect	s this wetland to other o	offsite wetland systems.	
Assessment area description							
Dom	ninant vegetation within	this wetland consi	sts of cypress, red	maple	e, and water oak.		
	-						
Significant paarby factures			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional	
Significant hearby leatures			landscape.)		•		
The assessment area is located near the northbound US 98 right-of-way							
approximately 0.4 mile northwest of Perkle Road. Green Swamp WMA and					Not unique		
Gator Creek Reserve located on northeast side of US 98.							
Functions			Mitigation for prev	vious	permit/other historic use	3	
			initigation for pro	viouo j			
Natural water storage and conveyance; foraging habitat; water guality					Nama		
improvemen	nt; flood attenuation				None		
Antioinstad Wildlife Litilization Das	ad an Literatura Davieu	(List of aposics	Anticipated Litilize	otion h	w Listed Species (Lists	nacion their lagel	
that are representative of the asse	ssment area and reaso	ably expected to	classification (E, T, SSC), type of use, and intensity of use of the				
be found)		in the second se	assessment area)				
			Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging);				
Amphibians, wading I	pirds, turtles, small mam	mals	Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging);				
			Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Util	ization (List species dire	ectly observed, or	other signs such a	s tracl	ks droppings casings	nests etc.):	
			outor olgito ouorra	o nuoi	to, droppingo, odolingo,	10010, 010.7.	
	Ν	lo evidence of wild	dlife observed.				
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	e(s):			
T. Norman			6/28/2021				

Site/Project Name		Application Number	Assessment Area	Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)		Wet (Se	Wetland 72 (FPC 7B) (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:	Assessment date) /		
Impac	ot	T. Norman		6/28/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each		Condition is less than				
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level of support of	Condition is insufficient to		
would be suitable for the	supports wetland/surface	maintain most	functions	provide wetland/surface		
water assessed	water functions	functions	luictoris	water functions		
water assessed		lanotons				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a for improved pasture. Mlnimal w to and from habitats outsid	orested wetland near the north vetland and upland habitats an de of the assessment area is l	nbound US 98 right-of-way. Ac e available outside of the ass imited by the presence of US	djacent land uses consists of essment area; wildlife access 98, and improved pasture.		
	1					
б 5						
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). So observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland runoff from US 98. w/o pres or current with 7 7						
1. Vegetation and/or 2. Benthic Community w/o pres or	Majority of plant cover is co routine maintenance withi	omprised of desirable/appropri n the improved pasture that m comm	ate species present. Land ma ay affect natural recruitment c nunity.	nagement practices include or regeneraltion in the plant		
current with	4					
7 6						
Score = sum of above scores/30 (if	If preservation as mitig	ation	For impact asse	ssment areas		
uplands, divide by 20)						
,	Preservation adjustmer	nt factor =	FL = delta x	acres =		
	Adjusted mitigation delt	ta =	0.07 X 0.07	- 0.005		
0.67 0.60						
· · ·	• 					
	If mitigation		For mitigation and	essment areas		
Delta = [with-current]	Time lag (t-factor) =		For mitigation assessment areas			
-0.07	Risk factor =		RFG = delta/(t-factor x	risk) =		

Site/Project Name		Application Numbe	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 73)	(Pond 3D-2)
					(Secondar	y impacts)
FLUCCs code	Further classification	ation (optional)		Impac	t or Mitigation Site?	Assessment Area
	PFO1/2C ·	Palustrine, Fores	sted, Broad-			Size (in acres)
630 - Wetland Forested Mixe	d leaved/Needl	e-leaved Deciduo	us, Seasonally		Impact	0.55
		Flooded				
Basin/Watershed Name/Number	Affected Waterbody (Clas	ed Waterbody (Class) Special Classification (i.e. Of				I designation of importance)
Hillsborough River			Nono			
Thisborough River	111				None	
Geographic relationship to and by	drologic connection with	wetlands other s	urface water unla	nde		
		weitands, other s		103		
The assessment area consists	of a forested wotaind th	at is adjacent to th	o right of way of l	10 08	planted pipe, and the C	Froon Swamp W/MA
The assessment area consists			le fight-of-way of c	JS 90,	planted pline, and the G	Breen Swamp WWA.
Assessment area description						
· · · · · · · · · · · · · · · · · · ·						
	Dominant vogeta	tion includes over	ass rod maple an	d wate	ar ook	
	Dominant vegeta	uon includes cypre	ess, reu mapie, an	u wate	el Oak.	
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional
The assessment area is located	near the porthbound LIS	0.08 right of way	landscape.)			
approximately 0.7 miles porthwe	tility essement					
Green Swamp WMA and Gator C	northeast side of	F Not unique				
Functions			Mitigation for pre-	vious	permit/other historic use)
Natural water storage and conv	veyance; foraging habita	t; wat <mark>er</mark> quality			None	
Improvemei	nt; flood attenuation					
Anticipated Wildlife Litilization Bas	od on Litoraturo Poviow	(List of spacios	Anticipated Litiliz	ation h	v Listad Spacias (List s	nacios thair logal
that are representative of the asse	essment area and reason	ably expected to	classification (F	T SS	C) type of use and inte	nsity of use of the
be found)			assessment area)			
,				,		
			Little Blue Her	on (ST	foraging). Tricolored H	Heron (ST forgaing):
Amphibians, wading	pirds turtles small mam	mals	Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging);			
,			Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Util	ization (List species dire	ctlv observed. or	other signs such a	s tracl	ks. droppinas. casinas.	nests. etc.):
		,	0			. ,
	Ν	lo evidence of wild	llife observed			
	•					
Additional relevant factors:						
None.						
Assessment conducted by:			Assessment date	e(s):		
T. Norman			9/24/2021			
			[

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)		Wetland 73) (Pond 3D-2) (Secondary Impacts)			
Impact or Mitigation		Assessment conducted by:		Assessment date	Assessment date:	
Impa	ct	T. Norman		9/24/2021		
					(
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present	(0)
indicator is based on what	Condition is optimal and fully	optimal but sufficient to	Minimal lev	vel of support of	Condition is insuffi	icient to
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/s	surface
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water function	ns
water assessed		functions				
	1					
.500(6)(a) Location and Landscape Support	The assessment area is a for pine and Green Swamp WM, wildlife access to and from ha	prested wetland that is located A. Wetland and upland habitat abitats outside of the assessm US	l adjacent to ts are availat ent area is lin 98.	the northbound lole outside of the mited by the prese	JS 98 right-of-way, p assessment area; h ence of right-of-way	olanted owever, fencing,
w/o pres of						
6 5						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Water level indicators a indicators observed within affected by the adjacent U Majority of plant cover cons The construction of US 98 ar alterat	nd soil moisture appeared app Wetland 25 included surface S 98 and its associated storm receives runof	propriate con- water and a l water manag f from US 98 f from US 98	sidering seasona high water table. iement facilities (i ith minimal invas facilities (i.e., dito iomewhat approp	l variation. Hydrolog Hydrologic condition .e., ditches). The we ive/exotic species pr ive/exotic species pr ives) has resulted in riate.	ical is are etland resent. n habitat
w/o pres or						
current with						
7 6						
, ,						
Score = sum of above scores/30 (if	If preservation as mitigation	ation,	I	For impact asses	sment areas	
uplands, divide by 20)	Presonution adjustment	nt factor =		FL = delta x	acres =	
current	Freservation aujustmen					
pr w/o pres with	Adjusted mitigation delt	ta =		0.07 x 0.55	= 0.04	
0.67 0.60			L			
· · · · ·	۵ 		_			
	If mitigation		Fo	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =			5		
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =	
L	J [

Site/Project Name		Application Number	Wetland 74 (Pond 4C-2)			or Number	
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				(Secondar	(Pond 4C-2) v Impacts)	
ELLICCs code	Eurthor classifier	tion (optional)			()	
FLUCCS Code		luon (optional)		Impac	t or Mitigation Site?	Assessment Area Size (in acres)	
621 - Cypress	PFO2C - Palu	strine, Forested,	Needle-Leaved		Impact	0.26	
	Decidu	ious, Seasonally I	-looded		·		
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ON (i.e. (OFW, AP, other local/state/federa	l designation of importance)	
Hillsborough River		,			None		
					Hono		
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, uplar	nds			
The as	sessment area is compr	ised of a forested	wetland system wi	ithin ar	n improved pasture.		
Assessment area description							
Assessment area description							
	Dominant ver	etation within this	wetland consists	cypres	e.		
	Dominant veg			cypics			
			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional	
Significant nearby features			landscape.)	noiden		relation to the regional	
The assessment area is located							
approximately 0.2 mile southeast of Old Dade City Rd. The Green Swamp					Not unique		
WMA and Gator Creek Reser							
Functions			Mitigation for prev	vious p	permit/other historic use	9	
Netural water storage and con	www.	ti watar guality					
Natural water storage and con-	veyance; foraging habita	t; water quality			None		
	,						
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliza	ation b	y Listed Species (List s	pecies, their legal	
that are representative of the asse	essment area and reasor	hably expected to	classification (E, T, SSC), type of use, and intensity of use of the				
			assessment area)				
			Little Blue Heron (ST. foraging): Tricolored Heron (ST. foraging):				
Amphibians, wading	birds, turtles, small mam	mals	Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging);				
			Everglade Snail Kite (FE, foraging)				
Observed Evidence of Wildlife Uti	lization (List species dire	ctly observed, or	other signs such a	s track	ks, droppings, casings,	nests, etc.):	
	Evidence of w	ildlife abaamvad w	are small fish and t	todpol	~~		
	Evidence of w		ere small lish and i	laupoi	es.		
Additional relevant factors:							
		Nama					
		None					
			1 .	<i>,</i> ,,			
Assessment conducted by:			Assessment date	e(s):			
T. Norman			9/21/2021				

US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1) Wettand 74 (Pond 4-C-2) (Becondary Impacts) Impact or Mitigation Impact Assessment conducted by: T. Norman Assessment date: 9/21/2021 Scoring Guidance The scoring of each indicator is based on what work assessed Optimal (10) Moderato(7) Condition is is splinal and fully out of be suble for the support work and suble for the use of wetland for surface water functions Minimal (4) Not Present (0 Condition is is optimal use of wetland for surface water functions 500(6)(a) Location and Landscape Support The assessment area is a forested wetland located near the notiboard US 98 right-of-way. Adjacent land u onsists of the improved pasture. Minimal wetland and upland holitbairs are available outside of the assessment functions 500(6)(b)(b)(Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic cond are affected by the improved pasture drainage and adjacent US 98 and its associated stormwater managem facilities (i.e., diches) The wetland receives runoff from US 98. w/o pres or current Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic cond are affected by the improved pasture drainage and adjacent US 98 and its associated stormwater managem facilities (i.e., diches) The wetland receives runoff from US 98. v/o pres or current With 7 The construction of US 98 and its associated stormwater managem facilities (i.e., ditches) The wetland tareat natural recruitment or regeneration in	Site/Project Name		Application Number	Asse	Assessment Area Name or Number		
Impact or Mitigation Assessment conducted by: T. Norman Assessment data: 9/21/2021 Scoring Guidance The scoring of each indicator is based on what yould be suble for the yourd pasture. Maintail (a) yourd be suble yourd be suble yourd be suble yourd be suble for the yourd pasture (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic cond are affected by the improved pasture dranage and adjacent US 98 and its associated stormwater managem facilities (i.e., ditches). The wetland receives runoff from US 98 and its associated stormwater managem facilities (i.e., ditches). The wetland receives runoff from US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98 and its associated for multipast and the pastormmunity. No pres o	US 98 from W Socrum Loop Rd	to CR 54 (FPID 436673-1)			Wetland 74 (Pond 4C-2)		
Impact T. Norman 9/21/2021 Scoring Guidance Inteacring of each would be suitable for the water assessed Optimal (10) Moderate(7) Minimal (4) Not Present (0) Condition is optimal and fully upper of wetland or surface water assessed Optimal (12) Condition is insuffici- provide wetland/surface water functions Minimal level of support of functions Condition is insuffici- provide wetland/surface water functions .500(6)(a) Location and Landscape Support The assessment area is a forested wetland located near the northbound US 98 right-of-way, Adjacent Ilan u consists of the improved pasture. Minimal wetland and upland habitats are available cutside of the assessment weldlife access to and from habitats outside of the assessment area is improved pasture. .500(6)(b)(Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic cond are affected by the improved pasture drainage and adjacent US 98 and its associated stormwater managem facilities (i.e., ditches). The wetland receives runoff from US 98. v/o pres or current With 7 7 7 .500(6)(c)Community structure (). Vegetation and/or 2. Benthic Community Majority of plant cover is comprised of desirable/appropriate species. The construction of US 98 and its associated is not an anagement practic include routine montenance within the improved pasture than any affect natural reculturent or regeneration in plant community. wo pres or current wit	Impact or Mitigation		Assessment conducted by:	Asse	Assessment date:		
Scoring Guidance The scoring of each indicator is based on what would be subled for the support settinal/surface water functions Optimal (10) Moderate(7) Minimal (4) Not Present (0 Condition is less than optimal, but sufficient to maintain most water functions .500(6)(a) Location and Landscape Support Condition is optimal and fully support settinal/surface water water functions Minimal evel of support of wetland/surface water functions Condition is insuffici mestal most water functions .500(6)(a) Location and Landscape Support The assessment area is a forested wetland located near the northbound US 98 right-of-way. Adjacent land u consists of the improved pasture. Minimal wetland and upland habitats are assessment area is impled by the presence of fencing, US 99 improved pasture (n'a for uplands) w/o pres or current with .500(6)(b)(Water Environment (n'a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic cond are affected by the improved pasture dialities (i.e., diches). The wetland receives runoff from US 98 and its associated stormwater managem fabilities (i.e., diches). The wetland receives runoff from US 98 and its associated stormwater management fabilities (i.e., diches) has resulted in habitat alteration. Land management practic include routine maintenance within the improved pasture that may affect natural recruitment or regeneration if plant community. with 7 6 Score = sum of above scores/30. (if uplands, divide by 20). (urrent If preservation asmitigation, Preservation adjustment factor =	Impac	xt	T. Norman	9/21/2021			
Scoring Guidance The scoring of each indicator is based on what would be suitable for the support of wetland or surface water assessed Optimal (10) Moderate(7) Minimal (evel of support of wetland/surface water functions Condition is less than optimal, but sufficient to water functions Condition is less than optimal, but sufficient to water functions Condition is less than optimal, but sufficient to water functions Condition is insufficient water functions Minimal (evel of support of wetland/surface water functions Condition is insufficient water functions .500(6)(a) Location and Landscape Support The assessment area is a forested wetland located near the northbound US 98 right-of-way. Adjacent land u consists of the improved pasture. Minimal wetland and upland habitatis are available outside of the assessment wildlife access to and from habitats outside of the assessment area is limited by the presence of fencing, US 98 (mproved pasture. .500(6)(b)/Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic conc are affected by the improved pasture drainage and adjacent US 98 and its associated stormwater managem facilities (i.e., ditches). The wetland receives runoff from US 98. .500(6)(c)Community structure (). Vegetation and/or 2. Benthic Community Majority of plant cover is comprised of desirable/appropriate species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management praction include routine maintenance within the improved pasture that may affect natural recruitment or regeneration in plant community.	,						
The scoring of each minimal each of the score is comprised of desirable/appropriate species. The construction of US 98 and its associated at some anagement facilities (i.e., ditches) has resulted in habitat affectation. Hydrologic conc or community. Condition is insufficient or sufface water functions Condition is insufficient or sufface water functions Condition is insufficient or sufface water functions Condition is insufficient or water functions </td <td>Scoring Guidance</td> <td>Optimal (10)</td> <td>Moderate(7)</td> <td>Minima</td> <td>al (4)</td> <td>Not Present (</td> <td>0)</td>	Scoring Guidance	Optimal (10)	Moderate(7)	Minima	al (4)	Not Present (0)
Indicator is based on with type of wetland or surface water tunctions Contained is in and tuny optiminal point summary wetland/surface water tunctions Provide wetland/surface water tunctions world be subject water assessed Supports wetland/surface water tunctions Imminial wetland/surface water tunctions Provide wetland/surface water tunctions Provide wetland/surface water tunctions .500(6)(a) Location and Landscape Support The assessment area is a forested wetland located near the northbound US 98 right-of-way. Adjacent land u consists of the improved pasture. Minimal wetland and upland habitats area valiable outside of the assessment area is limited by the presence of fencing. US 98 improved pasture. w/o pres or current with 5 4 .500(6)(b)Water Environment (via for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic concare are affected by the improved pasture drainage and adjacent US 98 and its associated stormwater managem facilities (i.e., diches). The wetland receives runoff from US 98. */o pres or current with 1. Vegetation and/or 2. Benthic Community	The scoring of each	Condition is optimal and fully	Condition is less than	Minimal loval a	f aupport of	Condition is insuffic	viont to
type of wetland or surface water assessed water functions wetland/surface water functions functions wetland/surface water functions .500(6)(a) Location and Landscape Support The assessment area is a forested wetland located near the northbound US 98 right-of-way. Adjacent land u consists of the improved pasture. Minimal wetland and upland habitats are available outside of the assessment wildlife access to and from habitats outside of the assessment area is limited by the presence of fencing. US 98 improved pasture. .500(6)(b)/Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic conc are affected by the improved pasture dinatage and adjacent US 98 and its associated stormwater managem facilities (i.e., ditches). The wetland receives runoff from US 98. w/o pres or current Nighty of plant cover is comprised of desirable/appropriate species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98. .500(6)(c)Community structure Najority of plant cover is comprised of desirable/appropriate species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat atteration. Land management practic include routine maintenance within the improved pasture that may affect natural recruitment or regeneralition in plant community. v/o pres or current with f File detta x acres = Score = sum of above scores/20. (ff uplands, divide by 20). If preservation as mitigation, preservation adjustment factor = </td <td>would be suitable for the</td> <td>supports wetland/surface</td> <td>maintain most</td> <td>wetland/surfa</td> <td>ace water</td> <td>provide wetland/su</td> <td>urface</td>	would be suitable for the	supports wetland/surface	maintain most	wetland/surfa	ace water	provide wetland/su	urface
water assessed functions .500(6)(a) Location and Landscape Support The assessment area is a forested welland located near the northbound US 98 right-of-way. Adjacent land u consists of the improved pasture. Minimal welland and upland habitats are available outside of the assessment wid pres or current .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared appropriate considering seasonal variation. Hydrologic conc are affected by the improved pasture drainage and adjacent US 98 and its associated stormwater managem facilities (i.e., ditches). The welland receives runoff from US 98. .500(6)(c)Community structure Majority of plant cover is comprised of desirable/appropriate species. The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat atteration. Land management practic include routine maintenance within the improved pasture that may affect natural recruitment or regeneration in plant community. Wo pres or current with 7 6 Score = sum of above scores/30 (if updands, divide by 20) current If preservation as mitigation, Preservation adjustment factor = For impact assessment areas FL = delta x acres =	type of wetland or surface	water functions	wetland/surface water	functio	ons	water function	IS
.500(6)(a) Location and Landscape Support The assessment area is a forested wetland located near the northbound US 98 right-of-way. Adjacent land u consists of the improved pasture. Minimal wetland and upland habitats are available outside of the assessment wildlife access to and from habitats outside of the assessment area is limited by the presence of fencing. US 90 improved pasture. w/o pres or current with 5 4 .500(6)(b)Water Environment (n/a for uplands) Water level indicators and soll moisture appeared appropriate considering seasonal variation. Hydrologic conc are affected by the improved pasture dianage and adjocant US 98 and its associated stormwater managem facilities (i.e., ditches). The wetland receives runoff from US 98. v/o pres or current with 7 7 .500(6)(c)Community structure Majority of plant cover is comprised of desirable/appropriate species . The construction of US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98 and its associated stormwater management facilities (i.e., ditches). The wetland receives runoff from US 98 and its associated include routine maintenance within the improved pasture during that may affect natural recruitment or regeneraliton in plant community. w/o pres or current with 6 freeservation as mitigation, plant, divide by 20) freeservation as mitigation, Preservation and justment factor = Score = sum of above scores/30. (if uplands, divide by 20) freeservation as mitigation, Preservation adjustment factor =	water assessed		functions				
are affected by the improved pasture drainage and adjacent US 98 and its associated stormwater managem facilities (i.e., ditches). The wetland receives runoff from US 98. w/o pres or current with 7 7 .500(6)(c)Community structure Majority of plant cover is comprised of desirable/appropriate species . The construction of US 98 and its assoc stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practice include routine maintenance within the improved pasture that may affect natural recruitment or regeneraltion in plant community. w/o pres or current with 7 6 Score = sum of above scores/30 (if uplands, divide by 20) current If preservation as mitigation, Preservation adjustment factor =	.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 5 4 .500(6)(b)Water Environment (n/a for uplands)	The assessment area is a consists of the improved past wildlife access to and from ha	forested wetland located near ture. Minimal wetland and upla abitats outside of the assessm improved jumproved	the northbound l ind habitats are a ent area is limited pasture.	US 98 right-of available outs d by the prese seasonal vari	f-way. Adjacent land ide of the assessmen ence of fencing, US f	uses nt area; 98, and nditions
.500(6)(c)Community structure Majority of plant cover is comprised of desirable/appropriate species . The construction of US 98 and its assoc stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practice include routine maintenance within the improved pasture that may affect natural recruitment or regeneralition in plant community. w/o pres or current with 7 6 Score = sum of above scores/30 (if uplands, divide by 20) current If preservation as mitigation, preservation adjustment factor = Preservation adjustment factor = For impact assessment areas	w/o pres or current with 7 7	fac	silities (i.e., ditches). The wetla	nd receives runc	off from US 98	sumwater manager 3.	nen
w/o pres or current with 7 6 Score = sum of above scores/30 (if uplands, divide by 20) If preservation as mitigation, Preservation adjustment factor = For impact assessment areas FL = delta x acres = FL = delta x acres = FL = delta x acres =	.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community Majority of plant cover is comprised of desirable/appropriate species . The construction of US 98 and its associated stormwater management facilities (i.e., ditches) has resulted in habitat alteration. Land management practices include routine maintenance within the improved pasture that may affect natural recruitment or regeneraltion in the plant community						ociated ices in the
current with 7 6 Score = sum of above scores/30 (if uplands, divide by 20) current If preservation as mitigation, Preservation adjustment factor = For impact assessment areas FL = delta x acres =	w/o pres or						
7 6 Score = sum of above scores/30 (if uplands, divide by 20) If preservation as mitigation, Preservation adjustment factor = For impact assessment areas FL = delta x acres =	current with						
Score = sum of above scores/30 (if uplands, divide by 20) If preservation as mitigation, For impact assessment areas current Preservation adjustment factor = FL = delta x acres =	7 6						
Score = sum of above scores/30 (if uplands, divide by 20) If preservation as mitigation, For impact assessment areas current Preservation adjustment factor = FL = delta x acres =							
or w/o pres with 0.63 0.57	Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.63	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, nt factor = ia =	For i	mpact assess FL = delta x a 7 x 0.26	sment areas acres = = 0.02	
Delta = [with-current] Time lag (t-factor) =	Delta = [with-current]	Time lag (t-factor) =		For m	iligation asse	ssment areas	
-0.07 Risk factor = RFG = delta/(t-factor x risk) =	-0.07	Risk factor =		RFG = del	lta/(t-factor x ı	risk) =	

Site/Project Name		Application Number	er Assessment Area Name or Number			or Number	
US 98 from W Socrum Loop Rd to 0	CR 54 (FPID 436673-1)				Wetland /5	(FPC 12A)	
					(Secondar	y impacts)	
FLUCCs code	Further classification	tion (optional)		Impac	t or Mitigation Site?	Assessment Area	
	PFO1/2C -	Palustrine, Fores	sted, Broad-			Size (in acres)	
630 - Wetland Forested Mixed	d Leaved/Needl	e-Leaved Deciduo	ous, Seasonally		Impact	0.14	
		Flooded					
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	l designation of importance)	
Hillsborough Pivor					Nono		
					None		
Geographic relationship to and hyd	Irologic connection with	wetlands other s	urface water unla	nds			
			anaco nator, apia	luo			
Т	he accessment area is	a forested system	that extends outs	ide of	the nond site		
· · · · · · · · · · · · · · · · · · ·		a lorested system	that exterius outs		the polid site.		
Assessment area description							
	Dominant vegetat	tion includes cynre	ess water oak an	d red r	manle		
	Dominant vegeta	ion mendees cypro	cos, water oak, an	arcur	hapic.		
					in a the natative nanity in	nalation to the nexional	
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional	
			landscape.)				
The assessment area is located near the southbound US 98 right-of-way							
approximately 0.1 mile southeast of Old Dade City Road. Green Swamp					Not unique		
WINA and Galor Creek Reserv	e localed on nonneast	side of 03 96.					
Functions			Mitia atian fan ana		n a unait/ath an historia		
Functions			iviligation for pre	vious	permit/other historic use		
Natural water storage and conv	eyance; foraging habita	t; water quality			None		
improvement, itc	ou allenuation, reluye.						
Anticipated Wildlife Utilization Base	ed on Literature Review	(List of species	Anticipated Utiliz	ation b	v Listed Species (List s	pecies, their legal	
that are representative of the asse	ssment area and reason	nably expected to	classification (E,	T, SS	C), type of use, and inte	nsity of use of the	
be found)			assessment area	ı)			
Amphibiana wading birda turt	an analyse song hirds	rantara amall	Little Dius He	ron (C	T forgeing/posting); Tr	icolored Heren (ST	
Amphibians, wading birds, turti	es, shakes, song birds,	raptors, small	Little Blue Heron (ST, foraging/nesting); Theolored Heron (ST, foraging/nesting); Wood Stork (ET, foraging/nesting);				
	laminais		ioraging/	nestin		aging/nesting),	
Observed Evidence of Wildlife Utili	zation (List species dire	ctly observed, or	other signs such a	s tracl	ks, droppings, casings,	nests, etc.):	
	No evi	dence of wildlife u	tilitzation observed	d.			
Additional relevant factors:							
		None					
Assessment conducted by:			Assessment date	e(s):			
T. Norman			0/21/2021				
			5/21/2021				

Site/Project Name		Application Number	Assessment Area	a Name or Number		
US 98 from W Socrum Loop Ro	d to CR 54 (FPID 436673-1)		Wetland 75 (FPC 12A) (Secondary Impacts)			
Impact or Mitigation		Assessment conducted by:	Assessment date			
Impa	ct	T. Norman	9/21/2021			
	0				Not Description	(0)
Scoring Guidance	Optimal (10)	Moderate(7)	MII	nimai (4)	Not Present	(0)
indicator is based on what	Condition is optimal and fully	optimal but sufficient to	Minimal le	vel of support of	Condition is insut	ficient to
would be suitable for the	supports wetland/surface	maintain most	wetland	/surface water	provide wetland	surface
type of wetland or surface	water functions	wetland/surface water	fu	Inctions	water function	ons
water assessed		functions				
.500(6)(a) Location and Landscape Support	The assessment area is a f includes residential devel however, wildlife access to ar	orested wetland located near t opment; Wetland and upland nd from habitats outside of the	he southbou habitats are assessmen	und US 98 right-of available outside t area is limited by	-way. Adjacacent la of the assessment y the presence of r	and use area; esidential
,		development	and US 98.			
w/o pres or						
current with	4					
5 4						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Water level indicators and so conditions are affected by the ditches). Soil erosion observ	bil moisture appeared somewh e adjacent residences, US 98 ved indicates alterations in poin The wetland receives	at appropria and its asso of the solution of the solution of the species of the solution of the solution of the species of the solution of the solution of the species of the solution of the solution of the solution of the solution of the sol	te considering se ciated stormwater irge resulting from US 98. US 98.	asonal variation. H management facil the construction o	ydrologic ities (i.e., f US 98.
w/o pres or						
	4					
7 6						
r	1 .				1	
Score = sum of above scores/30 (if	If preservation as mitigation	ation,		For impact asses	sment areas	
uplands, divide by 20)	Preservation adjustmen	nt factor =		FL = delta x	acres =	
current						
pr w/o pres with	Adjusted mitigation delt	ta =		0.07 x 0.14	= 0.01	
0.63 0.57			L			
• <u>•</u>	ظ 					
	If mitigation		F	or mitigation asse	ssment areas	
Delta = [with-current]	Time lag (t-factor) =					
A			RFG	= delta/(t-factor x	risk) =	
-0.07	Risk factor =				··-··y	

Site/Project Name Application			Assessment Area Name or Number			
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)			(Secor	ndary Impacts)	
FLUCCs code	Further classifica	ition (optional)	Im	pact or Mitigation Site?	Assessment Area	
621 - Cypress	PFO2C - Palu Decidu	strine, Forested, I Jous, Seasonally F	I, Needle-Leaved Impact 0.13			
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classification	(i.e. OFW, AP, other local/state/f	ederal designation of importance)	
Hillsborough River	III			None		
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, upland	3		
The assessment area is comprised	of a portion of a forest offsite wetland syste	ed wetland system ems. Adjacent land	n. A cross drain that i d use included impro	runs underneath US 98 ved pasture.	connects this area to other	
Assessment area description						
	Dominant veç	getation within this	s wetland consists cy	press.		
Significant nearby features			Uniqueness (cons landscape.)	dering the relative rarit	y in relation to the regional	
The assessment area is located near the southbound US 98 right-of-way approximately 0.1 mile northwest of SR 471. The Green Swamp WMA and Gator Creek Reserve located on northeast side of US 98.			Not unique			
Functions			Mitigation for previo	us permit/other historic	use	
Natural water storage and convo improvemen	eyance; foraging habita t; flood attenuation	t; wat <mark>er</mark> quality	None			
Anticipated Wildlife Utilization Base that are representative of the asses be found)	ed on Literature Review esment area and reasor	(List of species hably expected to	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Amphibians, wading b	irds, turtles, small mam	mals	Little Blue Heron (ST, foraging); Tricolored Heron (ST, foraging); Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging); Everglade Snail Kite (FE, foraging)			
Observed Evidence of Wildlife Utiliz	zation (List species dire	ctly observed, or	other signs such as t	racks, droppings, casin	gs, nests, etc.):	
	Evidence of w	ildlife observed we	ere small fish and tac	lpoles.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date(s)):		
I. Norman			9/21/2021			

Site/Project Name		Application Number Assessment Area Name or Number			
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)		Wetland 76 (FPC 11A)		
Impact or Mitigation		Assessment conducted by:	Asses	sment date:	
Impa	ct	T. Norman		9	9/21/2021
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal ((4)	Not Present (0)
The scoring of each	O and this will be and the stand the line	Condition is less than			
would be suitable for the	supports wetland/surface	opumal, but sufficient to	wetland/surfac	support or e water	provide wetland/surface
type of wetland or surface	water functions	wetland/surface water	function	S	water functions
water assessed		functions			
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a consists of the residentia habitats are available outsic assessment area is	forested wetland located near I facilities that are bounded wil le of the assessment area; ho limited by the presence of rigl	the southbound US th fencing and impr wever, wildlife acce nt-of-way fencing, U	S 98 right-of roved pastu ess to and fr JS 98, and i	-way. Adjacent land uses re. Wetland and upland om habitats outside of the improved pasture.
5 4					
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 6	Water level indicators and so are affected by the improv fac Majority of plant cover is con stormwater management include routine maintenance	oil moisture appeared appropr ed pasture drainage and adjac cilities (i.e., ditches). The wetla nprised of desirable/appropriat facilities (i.e., ditches) has res e within the improved pasture t plant con	ate considering se ent US 98 and its a nd receives runoff te species . The co ulted in habitat alte hat may affect natu imunity.	easonal varia associated s from US 98 onstruction o ration. Land ural recruitm	ation. Hydrologic conditions stormwater management , of US 98 and its associated I management practices lent or regeneraltion in the
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.63 0.57 Delta = [with-current]	If preservation as mitiga Preservation adjustmer Adjusted mitigation delf If mitigation Time lag (t-factor) =	ation, nt factor = ta =	For im Fl 0.07 For mitig	pact assess L = delta x a x 0.13 gation asses	ement areas acres = = 0.01 ssment areas
[RFG = delta	/(t-factor x r	isk) =
-0.07	Risk factor =				10Ky -

Oite (Ducie et Name		A			A + A NI	
Site/Project Name		Application Number	Wetland 77 (Pond 4D-1)			Or Number
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				(Secondar	(Pond 4D-1) v Impacts)
				1		y impacts/
FLUCCs code	Further classifica	ition (optional)		Impac	t or Mitigation Site?	Assessment Area
	PF01/2C -	Palustrine, Fores	sted, Broad-			Size (in acres)
630 - Wetland Forested Mixe	d Leaved/Need	e-Leaved Deciduo	ous, Seasonally		Impact	0.60
		Flooded				
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	on (i.e.	OFW, AP, other local/state/federa	l designation of importance)
Hillsborough River					None	
Thilaborough Niver					None	
Geographic relationship to and by	drologic connection with	wetlands other s	urface water unla	nde		
				103		
The ease	amont area is comprise	d of a faraatad wa	tland avatam have	dad b	v an improved necture	
The asses	sment area is comprise	d of a forested we	tiand system bour		y an improved pasture.	
Assessment area description						
	D · · · · · ·					
	Dominant vegetation v	vithin this wetland	consists of red ma	aple ar	nd cypress.	
Significant nearby features			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional
			landscape.)			
The assessment area is located	near the southbound US	3 98 right-of-way				
approximately 0.3 mile southeast	of SR 471. The Green S	Swamp WMA and			Not unique	
Gator Creek Reserve loc	ated on northeast side o	of US 98.				
Functions			Mitigation for pre	vious į	permit/other historic use)
Natural water storage and conv	vevance: foraging habita	t: water quality				
improvemen	nt; flood attenuation	.,	None			
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utilization	ation b	y Listed Species (List s	pecies, their legal
that are representative of the asse	essment area and reason	nably expected to	classification (E, T, SSC), type of use, and intensity of use of the			
be found)			assessment area	ı)		
			Little Blue Her	on (ST	, foraging); Tricolored I	Heron (ST, foraging);
Amphibians, wading I	birds, tu <mark>rtles</mark> , small mam	mals	Florida Sandhill Crane (ST, foraging); Wood Stork (FT, foraging);			
				Everg	lade Snail Kite (FE, fora	aging)
Observed Evidence of Wildlife Util	ization (List species dire	ectly observed, or	other signs such a	s tracl	ks, droppings, casings, l	nests, etc.):
	Ν	lo evidence of wild	dlife observed.			
Additional valaviant factors						
Additional relevant factors.						
		None				
Assessment conducted by:			Assessment date	e(s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number Assessment Area Name or Number			Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 77 (Pond 4D-1) (Secondary Impacts)			
Impact or Mitigation		Assessment conducted by:		Assessment date:			
Impao	ot	T. Norman			9/21/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Min	nimal (4)	Not Present (0)		
I he scoring of each	Condition is optimal and fully	Condition is less than	Minimal Io	ol of support of	Condition is insufficion	nt to	
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/surfa	ace	
type of wetland or surface	water functions	wetland/surface water	fu	nctions	water functions		
water assessed		functions					
.500(6)(a) Location and Landscape Support	The assessment area is a consists of the improved pas wildlife access to and from ha	forested wetland located near sture. Some wetland and uplar abitats outside of the assessm improved	the southbound habitats a ent area is lin pasture.	und US 98 right-o re available outsion mited by the prese	f-way. Adjacent land use de of the assessment ar ence of fencing, US 98,	es rea; and	
w/o pres or							
current with	4						
5 4							
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 6 6 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 6	Water level indicators and so conditions are affected b managen Majority of plant cover is con stormwater management include routine maintenant	bil moisture appeared somewity the improved pasture drainanent facilities (i.e., ditches). The nprised of desirable/appropriation of the facilities (i.e., ditches) has reside the improved pasture regeneraltion in the	te species . T ulted in habit e plant comm	te considering se sent US 98 and its ceives runoff from Fhe construction of at alteration. Lana azing that may aff unity.	asonal variation. Hydrole associated stormwater n US 98. of US 98 and its associa d management practices iect natural recruitment o	ogic ited s or	
	1 .						
Score = sum of above scores/30 (if	If preservation as mitigation	ation,		For impact assess	sment areas		
	Preservation adjustment factor = FL = delta x acres =						
current or w/o pres with	with 0.07 x 0.60 - 0.04						
	Adjusted mitigation del	ta =		, X 0.00	- 0.07		
0.50 0.53]						
	If mitigation						
			Fo	or mitigation asse	ssment areas		
Delta = [with-current]	Time lag (t-factor) =						
-0.07	Risk factor =		RFG =	= delta/(t-factor x	risk) =		

Site/Project Name		Application Number	ar		Assessment Area Name	or Number
onen rojeet Name		Application Numbe	Wetland 78 (FPC 9A)			8 (FPC 9A)
US 98 from W Socrum Loop Rd to C	CR 54 (FPID 436673-1)				(Secondar	y Impacts)
FLUCCs code	Further classifica	ation (ontional)		Impoo	t or Mitigation Site?	Accompant Area
T LOCOS CODE	PEO1/2C	- Palustrine Fores	sted Broad-		t or Mitigation Site?	Assessment Area
630 - Wetland Forested Mixed	Leaved/Needl	e-Leaved Deciduo	ous. Seasonally		Impact	0.50
		Flooded	· · · · , · · · · · · · · · · · · · · ·			0.00
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classificati	on (i.e. (OFW, AP, other local/state/federa	l designation of importance)
Hillsborough River					None	,
					None	
Geographic relationship to and hyd	rologic connection with	wetlands, other s	urface water, upla	nds		
TI	ne assessment area is	a forested system	that extends outs	ide of t	the pond site.	
Assessment area description						
Assessment area description						
Domin	ant vegetation includes	s cypress water o	ak swamp bay la	ural oa	k and red maple	
Donini		o opproso, water of	ak, swamp buy, ia		in, and roa maple.	
			Uniqueness (co	nsider	ing the relative rarity in	relation to the regional
Significant nearby features			landscape.)			
The assessment area is located r	ear the southbound US	S 98 right-of-way				
directly southeast of the Duke Ener	gy utility easement. Gr	een Swamp WMA			Not unique	
and Gator Creek Reserve lo	cated on northeast side	e of US 98.				
Functions			Mitigation for pro		armit/athar historia usa	
Functions			willigation for pre	vious		:
Natural water storage and conve	evance: foraging habita	t: water quality				
improvement; flo	od attenuation; refuge.	.,	None			
Anticipated Wildlife Utilization Base	d on Literature Review	(List of species	Anticipated Utiliz	ation b	y Listed Species (List s	pecies, their legal
that are representative of the asses	Sillent area and reason	hably expected to	assessment area	1, 330 1)	<i>)</i> , type of use, and inte	risity of use of the
				•)		
						in a la ma de la mara (OT
Amphibians, wading birds, turtie	es, snakes, song birds, ammals	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (ET, foraging/nesting);			
			ioraging,	neoun	g), wood otont (r r, ior	uging/nooting/,
Observed Evidence of Wildlife Litili	nation (Linterpoine dine				a duanninga aasimaa	
Observed Evidence of Wildlife Utiliz	zation (List species dire	cuy observed, or	other signs such a	is trace	s, droppings, casings, i	nesis, elc.):
	No evi	dence of wildlife u	tilitzation observed	d.		
Additional relevant factors:						
		None				
Assessment conducted by:			Assessment date	e(s).		
			0/21/2024			
i.ivorman			9/21/2021			

Site/Project Name		Application Number		Assessment Area Name or Number		
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 78 (FPC 9A) (Secondary Impacts)		
Impact or Mitigation		Assessment conducted by:		Assessment date	e:	
Impac	ct	T. Norman			9/21/2021	
· · ·						
Scoring Guidance	Optimal (10)	Moderate(7)	Mii	nimal (4)	Not Present ((0)
The scoring of each	O	Condition is less than	Minimalia		O an alitica in in a first office	
would be suitable for the	supports wetland/surface	maintain most	wetland	/surface water	provide wetland/su	urface
type of wetland or surface	water functions	wetland/surface water	fu	inctions	water function	IS
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a fo the southbound US 98 right upland habitats are available of the assess	prested wetland that connects -of-way. Adjacacent land use i e outside of the assessment ar ment area is limited by the pre	to offsite we includes the rea; however esence of rig	tlands. The asses Duke Energy utili r, wildlife access t ht-of-way fencing	esment area is located ty easement; Wetlan o and from habitats o and US 98.	d near d and butside
6 5						
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrolog conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.					
w/o pres or						
current with						
7 6						
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres with 0.67 0.60	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, nt factor = ta =		For impact asses FL = delta x 0.07 x 0.50	sment areas acres = = 0.03	
Delta = [with-current]	Time lag (t-factor) =			e. magadon asse		
-0.07	Risk factor =		RFG	= delta/(t-factor x	risk) =	

Site/Project Name		Application Numbe	er		Assessment Area Name	or Number
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				Wetland 8 (Secondar	0 (FPC 8A) ry Impacts)
FLUCCs code	Further classifica	tion (optional)		Impac	t or Mitigation Site?	Assessment Area
	PFO1/2C	Palustrine Fores	sted Broad-	шрас	t or milligation Site?	Size (in acres)
630 - Wetland Forested Mixe	d Leaved/Needl	e-l eaved Deciduo	ous Seasonally		Impact	0.11
		Flooded	, , ,			••••
Basin/Watershed Name/Number	Affected Waterbody (Clas	ss)	Special Classificati	ion (i.e. (DFW, AP, other local/state/federa	I designation of importance)
Hillsborough River	ш				None	
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, upla	nds		
The assessment area	is a forested wetland sy	stem. Adjacent lar	nd use consists of	improv	ved pasture, an RV lot,	and US 98.
Assessment area description						
	Dominant v	egetation includes	s red maple and cy	/press.		
Ciamificant a contro for t			Uniqueness (co	nsideri	ing the relative rarity in	relation to the regional
Significant nearby features			landscape.)		, ,	5
The assessment area is located	near the southbound US	3 98 right-of-way				
approximately 0.1 mile southeast	of Keen Road. Green S	wamp WMA and			Not unique	
Gator Creek Reserve loc	ated on northeast side o	of US 98.				
Functions			Mitigation for pre	vious r	permit/other historic use	2
Natural water storage and conv	veyance; foraging habita	t; wat <mark>er</mark> quality			Nono	
improvement; flo	ood attenuation; refuge.		NUILE			
Anticipated Wildlife Utilization Base	ed on Literature Review	(List of species	Anticipated Utilization	ation b	y Listed Species (List s	pecies, their legal
that are representative of the asse	ssment area and reason	ably expected to	classification (E,	T, SSC	c), type of use, and inte	nsity of use of the
be found)			assessment area	a)		
Amphibians, wading birds, turt	les, snakes, song birds.	raptors. small	Little Blue He	eron (S	T. foraging/nesting): Tr	icolored Heron (ST.
n r	nammals	1 /	foraging	/nestin	g); Wood Stork (FT, for	aging/nesting);
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	I other signs such a	is track	s, droppings, casings,	nests, etc.):
	No ovi	donco of wildlife u	tilitzation obsonvo	Ч		
	NO EVI			u.		
Additional relevant factors:						
		None				
A						
Assessment conducted by:			Assessment date	e(s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number Assessment Area Name or Number					
US 98 from W Socrum Loop Ro	to CR 54 (FPID 436673-1)			Wetland 80 (FPC 8A) (Secondary Impacts)			
Impact or Mitigation		Assessment conducted by:	Assessment conducted by: Assessment date:				
Impao	ct	T. Norman		9/21/2021			
Scoring Guidance	Optimal (10)	Moderate(7)	Mini	imal (4)	Not Present	(0)	
I ne scoring of each	Condition is optimal and fully	condition is less than	Minimal lev	el of support of	Condition is insuffi	cient to	
would be suitable for the	supports wetland/surface	maintain most	wetland/s	surface water	provide wetland/s	surface	
type of wetland or surface	water functions	wetland/surface water	fun	nctions	water function	ns	
water assessed		functions					
				•			
.500(6)(a) Location and	The economic terms is a	forested wetland located near	the couthbou	ind US 09 right o	fway Adiacantian	duaa	
Landscape Support	includes Keen Road an RV	lot and improved pasture lim	ited wetland	and upland habit	ats are available out	u use tside of	
	the assessment area; however	ver, wildlife access to and from	habitats outs	side of the asses	sment area is limited	d by the	
	prese	ence of right-of-way fencing, th	e RV lot, Kee	en Road, and US	98.	,	
w/o pres or							
current with							
5 4							
.500(6)(b)Water Environment							
(n/a for uplands)	Water level indicators and so	il moisture appeared somewh	at appropriate	e considerina sea	asonal variation. Hv	drologic	
	conditions are affected by t	he adjacent US 98 and its ass	ociated storm	water managem	ent facilities (i.e., dit	tches).	
	Soil erosion observed indi	cates alterations in points of d	ischarge resu	Ilting from the co	nstruction of US 98.	The	
		wetland receives ru	unoff from US	98.			
N/o pres or							
current with							
6 6							
.500(6)(c)Community structure							
1 Vegetation and/or	The plant cover within the ca	anopy consists of appropriate	and desirable	plant species. T	he groundcover/und	lerstory	
2. Benthic Community	consists of invasive/exc	atic species. Land management	it practices ar	e generally appro	opriate, but the routi	ine	
,	maintenace within the p	commission commi	unitv.	eclulinent of reg	generation in the pla	anic	
N/o pres or							
current with							
	4						
7 6							
	If managementions are still	ation	-	an immact	amont are		
uplands. divide by 20)	ii preservation as mitiga	auon,	F	or impact assess	sment areas		
Preservation adjustment factor = FL = delta x acres =							
br w/o pres with $h_{\rm H}$ or $h_{\rm H}$ or $h_{\rm H}$ or $h_{\rm H}$							
0.60 0.53	Adjusted mitigation del	a =					
0.00]						
	If mitigation		_				
Delta = [with ourront]	Time lac (t factor) -		Fo	r mitigation asse	ssment areas		
			550				
-0.07	Risk factor =		RFG =	delta/(t-factor x	risk) =		
L	↓ ∟						

Site/Project Name		Application Number	or.	1	Accordent Area Name	or Numbor
		Application Number	51		Notland 8	
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				(Secondar	v Impacts)
511100					(00001144	<i>ypy</i>
FLUCUS code	Further classifica	ation (optional)	Impact or Mitigation Si		t or Mitigation Site?	Assessment Area
621 Cypross	PFO2C - Palu	ustrine, Forested, I	Needle-Leaved		Impact	Size (in acres)
021 - Cypress	Decidu	uous, Seasonally I	Flooded		Impact	0.15
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classification	on (i.e. 0	DFW, AP, other local/state/federa	I designation of importance)
Hillsborough River	III				None	
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, uplan	nds		
The assessm	nent area is a forested s	ystem surounded	by improved pastur	re and	residential developme	nt.
Assessment area description						
Assessment area description						
	Dominant va	actation within the		Vincos		
	Dominant ve	getation within the		ypres	5.	
				noidori	ng the relative rarity in	relation to the regional
Significant nearby features			landscape.)	Isiden	ng the relative rarity in	relation to the regional
The assessment area is located	poor the couthbound LIS	S 08 right of way				
north of Old Soldier Road, Green	Swamp WMA and Gate	or Creek Reserve			Not unique	
located on no	rtheast side of US 98.				Hot aniquo	
Functions			Mitigation for prev	/ious p	ermit/other historic use	•
Natural water storage and conv	veyance; foraging habita	at; wat <mark>er</mark> quality			None	
improvement; fl	ood attenuation; refuge.		None			
Anticipated Wildlife Litilization Bas	od on Litoraturo Poviov	(List of spacios	Anticipated Litiliza	tion h	v Listad Spacias (List s	pacies their legal
that are representative of the asse	essment area and reaso	nably expected to	classification (E.]	T. SSC), type of use, and inte	nsity of use of the
be found)		,	assessment area)			
Amphibians wading birds tur	los snakos song hirds	rantors small	Little Blue Her	ron (S	T forgaing/posting): Tr	icolorod Horon (ST
Amphibians, wading birds, tur	nammals	Taptors, smail	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST, foraging/nesting); Wood Stork (ET, foraging/nesting);			
					5,,	-99,
Observed Evidence of Wildlife Life	limation (List encoded dive					
Observed Evidence of Wildlife Oth	inzation (List species dire	ectly observed, or	other signs such as	strack	s, droppings, casings,	nesis, eic.).
	No evi	idence of wildlife u	tilitzation observed			
Additional relevant factors:						
		N				
		inone				
Assessment conducted by:			Assessment date	(s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number Assessment Area Name or Number				
US 98 from W Socrum Loop Re	d to CR 54 (FPID 436673-1)		Wetl	Wetland 81 (FPC 6C)		
Impact or Mitigation		Assessment conducted by:	Assessment conducted by: Assessment date:			
Impa	ct	T. Norman		9/21/2021		
Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)		
The scoring of each	Condition is optimal and fully	Condition is less than	Minimal level of support of	Condition is insufficient to		
would be suitable for the	supports wetland/surface	maintain most	wetland/surface water	provide wetland/surface		
type of wetland or surface	water functions	wetland/surface water	functions	water functions		
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or	The assessment area is a fo use includes residential dev available outside of the asse area is limited by the pre	prested wetland and is located velopment, improved pasture, sssment area; however, wildlif sence of rresidential developm	near the southbound US 98 and Old Soldier Road; Wetla e access to and from habitats nent/improved pasture, Old S	right-of-way. Adjacent land nd and upland habitats are coutside of the assessment oldier Road, and US 98.		
current with	4					
6 5						
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrol conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditche Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. Th wetland receives runoff from US 98. w/o pres or current with 7 7 .500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community						
w/o pres or						
current with	4					
7 6						
Score = sum of above scores/20 (if	If preservation as mitig	ation	For impact accord	sment areas		
uplands, divide by 20)			FI = delta x	acres =		
current	current Preservation adjustment factor =					
pr w/o pres with	Adjusted mitigation delt	a =	0.07 x 0.13	= 0.01		
0.67 0.60						
	If mitigation					
Delta = [with-current]	Time lag (t-factor) =		For mitigation asse	essment areas		
-0.07	Risk factor =		RFG = delta/(t-factor x	risk) =		
	J L					

Site/Project Name		Application Number	or	1	Assessment Area Name	or Number
onen rojeet Name		Application Number			Wetland 8	2 (FPC 6C)
US 98 from W Socrum Loop Rd to	CR 54 (FPID 436673-1)				(Secondar	ry Impacts)
FLUCCs code	Further classifica	ation (ontional)		Impost	or Mitigation Site?	Accompant Area
				Impaci	or miligation Site?	Size (in acres)
621 - Cypress	PFO2C - Palu	ustrine, Forested, I	Needle-Leaved		Impact	0.09
	Decidi	uous, Seasonally I	looded		•	
Basin/Watershed Name/Number	Affected Waterbody (Cla	ss)	Special Classification	ON (i.e. C	OFW, AP, other local/state/federa	Il designation of importance)
Hillsborough River		,			None	,
Timbberough tevel					None	
Geographic relationship to and hy	drologic connection with	wetlands, other s	urface water, uplan	nds		
The assessm	nent area is a forested s	ystem surounded	by improved pastur	re and	residential developme	nt.
Accompany area description						
Assessment area description						
	Dominant va	actation within the		Viproce		
	Dominant ve	getation within the	carlopy includes c	ypres	5.	
			Uniqueness (cor	neidori	ng the relative rarity in	relation to the regional
Significant nearby features			landscape.)	ISIGET		relation to the regional
The assessment area is located	near the southbound US	S 98 right-of-way				
north of Old Soldier Road. Green	Swamp WMA and Gate	or Creek Reserve			Not unique	
located on no	rtheast side of US 98.					
Functions			Mitigation for prev	/ious p	ermit/other historic use)
Natural water storage and conv improvement: fl	veyance; foraging habita	at; water quality	None			
improvement, in	ood allendation, relage.					
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliza	ation b	y Listed Species (List s	pecies, their legal
that are representative of the asse	essment area and reason	nably expected to	classification (E, 1	r, ssc	c), type of use, and inte	nsity of use of the
be found)			assessment area;)		
		•				
Amphibians, wading birds, tur	les, snakes, song birds,	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST,			
r	nammais		foraging/i	nestinę	g); Wood Stork (F1, for	aging/nesting);
Observed Evidence of Wildlife Uti	lization (List species dire	ectly observed, or	other signs such as	s track	s, droppings, casings,	nests, etc.):
	No. ovi	المعاملة والمعاملة والمعاملة والمعاملة والمعاملة والمعاملة والمعاملة والمعاملة والمعاملة والمعاملة والمعام				
	NO EVI	idence of wildlife u	itilitzation observed	Ι.		
Additional relevant factors:						
		NI.				
		None				
			1.			
Assessment conducted by:			Assessment date	(s):		
T. Norman			9/21/2021			

Site/Project Name		Application Number	A	ssessment Area Name or Number		
US 98 from W Socrum Loop Rd	I to CR 54 (FPID 436673-1)			Wetland 82 (FPC 6C)		
Impact or Mitigation		Assessment conducted by:	A	ssessment date		
Impac	ct	T. Norman			9/21/2021	
Scoring Guidance	Optimal (10)	Moderate(7)	Minir	mal (4)	Not Present (0)	
The scoring of each	O	Condition is less than	Minima - 1 1		O an dition is in a first first to	
would be suitable for the	supports wetland/surface	maintain most	wetland/su	urface water	provide wetland/surface	
type of wetland or surface	water functions	wetland/surface water	func	ctions	water functions	
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current with	The assessment area is a fo use includes residential dev available outside of the asse area is limited by the pre	prested wetland and is located velopment, improved pasture, essment area; however, wildliff sence of rresidential developm	near the south and Old Soldie e access to an nent/improved	hbound US 98 r er Road; Wetlar Id from habitats pasture, Old So	ight-of-way. Adjacent land nd and upland habitats are outside of the assessment Ildier Road, and US 98.	
6 5						
				Ť		
.500(6)(b)Water Environment (n/a for uplands) Water level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic conditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98. w/o pres or current with 7 7						
1. Vegetation and/or 2. Benthic Community w/o pres or current with						
I						
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.67 0.60	If preservation as mitiga Preservation adjustmer Adjusted mitigation delt	ation, nt factor = ta =	Fc	FL = delta x FL = delta x 0.07 x 0.09	sment areas acres = = 0.01	
	If mitigation		F	mitiantian as	coment erece	
Delta = [with-current]	Time lag (t-factor) =		For	mitigation asse	ssment areas	
-0.07	Risk factor =		RFG = 0	delta/(t-factor x	risk) =	

		• ·· ·· •								
Site/Project Name		Application Number	Application Number		Assessment Area Name or Number					
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)					vvetland 83 (FPC 6A)					
					(Secondar	y impacis)				
FLUCCs code	Further classification	ition (optional)		Impac	t or Mitigation Site?	Assessment Area				
	PFO1/2C ·	Palustrine, Fores	sted, Broad-			Size (in acres)				
630 - Wetland Forested Mixe	d Leaved/Needl	e-Leaved Deciduous, Seasonally		Impact		0.17				
		Flooded								
Basin/Watershed Name/Number	Affected Waterbody (Clas	(22	Special Classificati	ion (i e i		designation of importance)				
	Vincolou Walerbody (old	ed Waterbody (Class)			Special Classification (i.e. Orw, AP, other localistate/lederal designation of importance)					
Hillsborough River	igh River III			None						
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands										
The assessment area is a forested system.										
Assessment area description				-						
	Dominant vegetation	within the canopy	includes cypress	and re	ed maple					
	2 chinant regetation		,		a mapier					
				noidor	ing the relative rarity in	relation to the regional				
Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional									
The encounter is leasted	waan tha a suth have a LIC									
I he assessment area is located	near the southbound Us	5 98 right-of-way			Notunique					
located on no	rtheast side of LIS 08	of Cleek Reserve	Not unique							
located of ho										
Functions			Mitigation for pro	vioue	pormit/other historic use					
T unctions			initigation for pre	vious		;				
Network weter stere as and serve										
Natural water storage and conveyance; foraging habitat; water quality			None							
improvement, in	bou allenualion, reluge.									
Anticipated Wildlife Utilization Bas	ed on Literature Review	(List of species	Anticipated Utiliz	ation b	v Listed Species (List s	pecies their legal				
that are representative of the asse	essment area and reason	nably expected to	classification (E,	classification (E. T. SSC), type of use, and intensity of use of the						
be found)			assessment area)							
				(0						
Amphibians, wading birds, turt	les, snakes, song birds,	raptors, small	Little Blue Heron (ST, foraging/nesting); Tricolored Heron (ST,							
n	foraging/nesting); Wood Stork (FI, foraging/nesting);									
Observed Evidence of Wildlife Util	ization (List species dire	ctly observed, or	other signs such a	is tracl	ks, droppings, casings, I	nests, etc.):				
		-	-							
	No evi	dence of wildlife u	tilitzation observed	d						
Additional relevant factors:										
None.										
Assessment conducted by:			Assessment date(s):							
A. Blakely			9/21/2021							
-										

Site/Project Name	Application Number	Assessment Area Name or Number						
US 98 from W Socrum Loop Rd to CR 54 (FPID 436673-1)				Wetland 83 (FPC 6A) (Secondary Impacts)				
Impact or Mitigation		Assessment conducted by:		Assessment date:				
Impact		A. Blakely		9/21/2021				
						(2)		
Scoring Guidance	Optimal (10)	Moderate(7)	Mir	nimal (4)	Not Present	(0)		
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal level of support of		Condition is insuf	ficient to		
would be suitable for the	supports wetland/surface	maintain most	wetland/	surface water	provide wetland/	surface		
type of wetland or surface	water functions	wetland/surface water	fu	Inctions	water function	ons		
water assessed	functions							
.500(6)(a) Location and Landscape Support w/o pres or <u>current</u> with 6 5	The assessment area is a t upland habitats are available	forested wetland and is located e outside of the assessment ar of the assessment area is limit	d near the so rea; however ed by the pre	outhbound US 98 r, wildlife access t esence of US 98.	right-of-way. Wetla to and from habitats	nd and coutside		
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with	Water level indicators and so conditions are affected by the addition to surface water, hy lines. Soil erosion observed i	ater level indicators and soil moisture appeared somewhat appropriate considering seasonal variation. Hydrologic nditions are affected by the adjacent US 98 and its associated stormwater management facilities (i.e., ditches). In Idition to surface water, hydrologic indicators observed included water-stained leaves, moss, and elevated lichen as. Soil erosion observed indicates alterations in points of discharge resulting from the construction of US 98. The wetland receives runoff from US 98.						
7 7								
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	The plant cover within the canopy consists of appropriate and desirable plant species. Land management practices are generally appropriate							
w/o pres or								
current with								
7 6								
Score = sum of above scores/30 (if	If preservation as mitigation	ation,		For impact asses	sment areas			
uplands, divide by 20)	Descent for the form			FL = delta x	acres =			
current	Preservation adjustmer	IL IACTOF =						
or w/o pres with	Adjusted mitigation delt	ta =		0.07 x 0.17	= 0.01			
0.67 0.60			L					
	Df. an iti an a l'							
	ir miugation		F	or mitigation asse	essment areas			
Delta = [with-current]	Time lag (t-factor) =							
-0.07	Risk factor =		RFG :	= delta/(t-factor x	risk) =			