POND SITING REPORT

Florida Department of Transportation
District Five

I-75 (S.R.93)
from South of S.R. 44 to S.R. 200
Sumter County, Florida

Financial Management Number: 452074-2

ETDM Number: 14541

April 2024

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 USC § 327 and a Memorandum of Understanding dated May 26, 2022, and executed by the Federal Highway Administration and FDOT.

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FDOT

Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
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2	4/15	TAM	DPS	TAM	Incorporate comments from final report

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Thomas A McLendon
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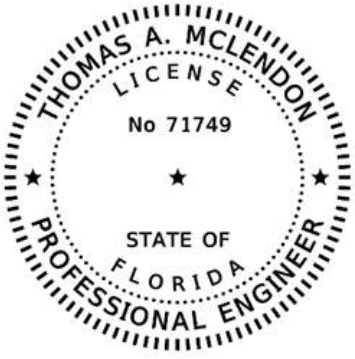

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The above named Professional Engineer shall be responsible for the following sheets in accordance with Rule 61G15-23.004, F.A.C.

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Executive Summary

The Florida Department of Transportation (FDOT), District Five, initiated a Project Development and Environmental (PD&E) Study of State Road (SR) 93/ Interstate 75 (I-75) from South of SR 44 to SR 200 in Sumter and Marion Counties. The basis for this project is to improve regional mobility and accommodate the future traffic needs of I-75.

This Pond Siting Report is being prepared for the Sumter County portion of the project from South of SR 44 to the Marion County Line, approximately 8 miles in length. I-75 is currently a six-lane divided rural facility that serves as the vital north/south principal arterial-interstate for the FDOT's highway system through Sumter County. The proposed improvements primarily consist of adding an auxiliary lane in each direction to this limited access facility.

The proposed drainage design for this segment of I-75 features open and closed conveyance systems for the roadway runoff, multiple side drain and cross drain extensions as well as numerous new stormwater management facilities to serve the nine drainage basins. Proposed stormwater ponds will be designed for the ultimate condition, which is a 12-lane typical section. This will create approximately 270' of impervious surface across the 300' existing right-of-way. A permit modification will be required to construct the ultimate 12-lane condition pond as it is anticipated at this time to construct only the pond footprint required for the auxiliary lanes.

Stormwater management sites were located and evaluated based on functional ability, and potential environmental impacts (including wetlands and floodplains), utilities, construction and right of way costs and maintenance. Additional site-specific characteristics such as threatened or endangered species, Section 4(f), cultural resources, and potential hazardous waste contamination were also evaluated, but neglected as the alternatives were sited away from known areas of concern.

Preliminary rankings have been made based upon the general site suitability, right-of-way impacts, hydraulic issues, relative location to karst features and construction required. Estimated construction costs are also provided for each pond site alternative. Only the hydraulically feasible and environmentally permittable recommendations have been made regarding pond sites within each basin. Allowable hydraulic grade line (HGL) in relation to the proposed profile, stormwater conveyance feasibility, cost, and available uplands were key factors when considering the preferred alternative. Final pond location, size and configuration will be determined as the drainage design progresses for the project.

Table 1 – Pond Siting Alternatives Evaluation Matrix

Pond	Floodplain Impacts		Right-of-Way Costs		Environmental Impacts		Construction Cost		Hydraulic Issues?			Total Rank
	Rank	(Description)	Rank	(Cost)	Rank	(Description)	Rank	(Cost)	Rank	(Y/N)	(Description)	
0-1	1				1		1.1	$ 144,732	1	N		5.1
0-2	2	Minor Impacts			2	Some Impacts Possible	1.1	$ 163,500	1	N		7.1
0-3	1				2	Some Impacts Possible	1.1	$ 201,252	1	N		6.1
1-1	1				1		2.0	$ 1,792,206	1	N		8.7
1-2	1				1		2.6	$ 2,723,760	3	Y	Site Located Far From Basin Low Point	12.2
1-3A & 1-3B	1				1		2.4	$ 2,513,570	1	N		8.9
2-1	2	Minor Impacts			1		1.7	$ 1,217,827	2	Y	Site is Elevated	9.4
2-2	1				1		1.5	$ 831,242	1	N		6.3
2-3A & 2-3B	1				1		1.7	$ 1,296,891	1	N		8.0
3-1	1				1		3.4	$ 4,178,496	3	Y	Site Located Far From Basin Low Point and Site is Elevated	11.1
3-2	3	Minor Impacts			5	Significant Impacts	2.5	$ 2,696,620	1	N		16.1
3-3	1				5	Significant Impacts	4.3	$ 5,792,553	3	Y	Site Located Far From Basin Low Point and Site is Elevated	16.6
4-1	1				1		2.3	$ 2,194,932	1	N		7.0
4-2	2	Minimal Impacts			1		1.8	$ 1,435,307	1	N		7.2
4-3	5	Signficant Impacts			1		1.5	$ 865,968	1	N		9.9
5-1 / 6-1	1				1		3.5	$ 4,458,583	2	Y	Site Located Away From Basin Low Point	9.5
5-2 / 6-2	1				1		3.6	$ 4,547,291	3	Y	Site Located Away From Basin Low Point and Signficant Distance Off I-75 R/W	11.9
5-3	1				1		2.5	$ 2,641,304	2	Y	Site Located Away From Basin Low Point	8.6
** Preferred Alternative for Basin 5 is to Construct One Stormwater Pond (5-1 / 6-1) to Serve Both Basins 5 and 6.*												
6-1 / 5-1	1				1		3.5	$ 4,458,583	2	Y	Site Located Away From Basin Low Point	9.5
6-2 / 5-2	1				1		3.6	$ 4,547,291	3	Y	Site Located Away From Basin Low Point and Signficant Distance Off I-75 R/W	11.9
6-3A & 6-3B	1				1		2.9	$ 3,296,330	3	Y	Site 6-3B Located Signficant Distance Off I-75 R/W	11.3
** Preferred Alternative for Basin 6 is to Construct One Stormwater Pond (5-1 / 6-1) to Serve Both Basins 5 and 6.*												
7-1	1				1		2.1	$ 1,860,774	1	N		6.5
7-2	1				1		2.3	$ 2,237,477	1	N		6.7
7-3	1				1		2.4	$ 2,422,661	2	Y	Site Located Away From Basin Low Point	7.9
8-1	1				1		3.1	$ 3,703,904	3	Y	Site Located Away From Basin Low Point and Site is Elevated	9.5
8-2	2	Minor Impacts			1		3.1	$ 3,702,561	3	Y	Site Located Signficant Distance Off I-75 R/W and Site is Elevated	10.5
8-3A & 8-3B	1				1		2.9	$ 3,298,675	2	Y	Site 8-3A Located Away From Basin Low Point	8.4

NOTE: Yellow highlighted number designates the preferred alternative based on total rank.

1 Introduction

1.1 Purpose

Mott MacDonald (MM) has been authorized by Volkert, Inc. on behalf of the FDOT to prepare planning documents for the I-75 South improvements in Sumter County. This project begins South of SR 44 and continues north to the Marion County Line.

The development of a comprehensive Pond Siting Report (PSR) is essential in the preparation of the I-75 design improvements. The primary goal of the report is to provide information regarding potential stormwater management facilities or pond locations. It also serves to inform the FDOT of the background information including soils, wetlands, and floodplains and to identify potential impacts that the proposed improvements might cause to the project area.

This report contains drainage calculations, references, research and assumptions used in the process to evaluate multiple alternative pond sites for each drainage basin.

1.2 Project Description

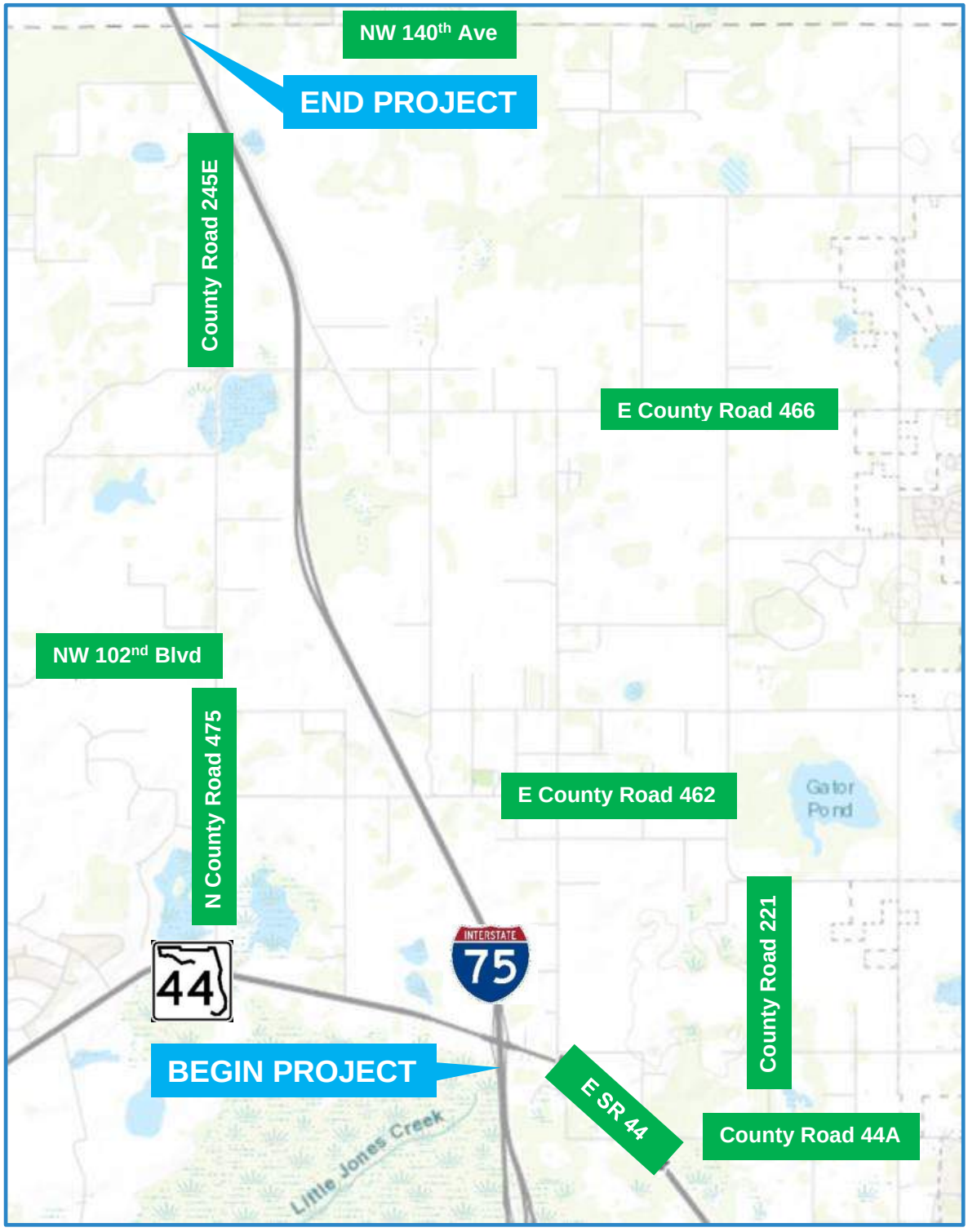
This project involves the improvement of I-75 from South of SR 44 to SR 200 in Sumter and Marion Counties, approximately 22.50 miles in total mainline length. This report is being prepared for the Sumter County portion of the project from South of SR 44 to the Marion County Line, approximately 8 miles in length. **Figure 1** below shows the project location map.

The existing roadway is classified as a rural principal arterial and is a six-lane, divided limited access roadway consisting of three 12-foot travel lanes with 12-foot outside paved shoulders in each direction. I-75 is also a designated Hurricane Evacuation Route that begins south in Miami Lakes and travels north into the state of Georgia.

The proposed improvements include constructing a new 12-foot auxiliary lane and reconstructing the 12-foot paved shoulder in each direction for the length of the project. This will primarily be achieved by adding these improvements between the existing interchanges. The purpose of the proposed roadway is to improve regional mobility by adding capacity to the mainline, which will also increase safety for motorists entering and exiting I-75 as well as increase emergency evacuation in the surrounding areas.

This project is located in Sections 4, 5, 9, 16, 21, 27, 28, and 34, Township 18 South, Range 22 East and Section 3, Township 19 South, Range 22 East. Elevations in this report are based on the 1988 North American Vertical Datum (NAVD).

Figure 1 – Project Location Map



2 Existing Conditions

2.1 Roadway

The existing roadway typical section is a six-lane, divided limited access roadway consisting of three 12-foot travel lanes, 10-foot inside and 12-foot outside paved shoulders in each direction. The travel lanes are separated by a 40-foot median with guardrail separating the divided highway for almost the entire length. One interchange at SR 44 is present and two side roads crossover I-75 at County Road (CR) 462 and 475.

2.2 Drainage

The existing drainage for SR 93 (I-75) from South of SR 44 to the Marion County Line was assessed by conducting field reviews throughout the corridor and reviewing existing as-built plans and other available FDOT construction plans, Straight Line Diagrams of Road Inventory, Geographic Information System (GIS) maps, and Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs). Further, existing permit information was obtained from the Florida Department of Environmental Protection (FDEP), the St. John's River Florida Water Management District (SJRWMD) and the Southwest Florida Water Management District (SWFWMD).

The project limits span over three primary drainage basins as defined by FDEP and discharge into one Hydrologic Unit Code (HUC) Basins. Little Jones Creek, Little Jones Spring, and Big Jones Creek drain into the Withlacoochee Basin (HUC 03100208). Little Jones Creek is also listed as an Outstanding Florida Water (OFW) and will be accounted for appropriately.

The land use is primarily agriculture with some rural residential, industrial, commercial, mixed use, wooded and conservation.

Stormwater runoff from the roadway is captured primarily in open conveyance ditches as well as on-site swales used for treatment and minor attenuation along I-75 and at the infields of the interchanges. There are many cross drains, side drains and small closed storm drain systems that convey and discharge runoff into numerous outfalls. Some subbasins have multiple isolated depressions and outfalls within the primary basin. Therefore, runoff is stored locally until it percolates into the ground or stages high enough to pop-off into an adjacent sub-basin.

2.2.1 *Basin Divides and Outfalls*

The existing drainage divides were determined using Sumter County contours, one-foot contours generated from LiDAR data from NOAA Coastal Service Center's Digital Coast Data Access Viewer and the USGS topographic quad maps.

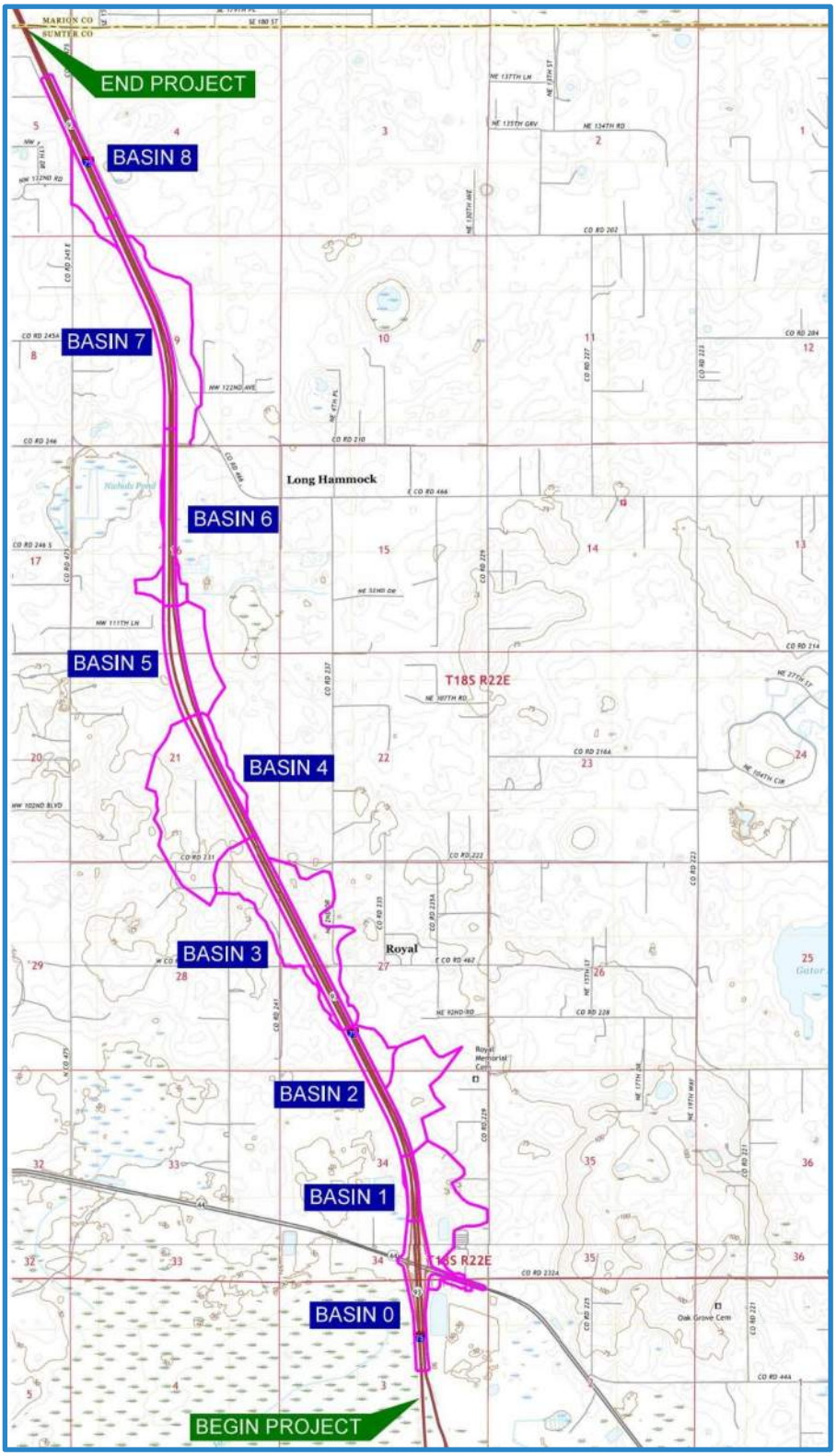
Overall, the project was delineated into 9 mainline subbasins as shown in **Figure 2** below. Most all of these basins are considered closed which drain to localized or isolated depressions, but a couple at the beginning of the project are open basins with downstream conveyances.

There are numerous outfalls within the project limits. Both open basins have one primary outfall, but most of the closed basins have multiple. For instance, runoff drains and is stored locally in a depression until it percolates into the ground or stages high enough to pop-off into an adjacent low-lying area or subbasin. **Table 2** below lists the limits of the existing drainage basins.

Table 2 – Existing Basin Limits

Basin	Existing Basin Limits		
0	1162+93	to	1201+00
1	1201+00	to	1217+82
2	1217+82	to	1253+53
3	1253+53	to	1307+83
4	1307+83	to	1342+00
5	1342+00	to	1371+08
6	1371+08	to	1416+08
7	1416+08	to	1471+95
8	1471+95	to	1511+25

Figure 2 – Regional Drainage Map



2.3 Soils

Soils information was determined from the Soil Survey for Sumter County by the National Resources Conservation Service (NRCS). The soils within the project limits vary with type but are fairly consistent as defined by their from Hydrologic Group. Group A soils have a high infiltration rate, whereas Hydrologic Soil Group A/D or C/D have a high or relatively high infiltration rates when the soils are drained, but very slow rate when undrained and are classified as Hydrologic Group D. **Table 3** below presents the general soils located within the project area and their associated physical properties.

Table 3 – Project Soils

Project Soils	Hydrologic Group	Depth to Water Table (ft)	Capacity of the most limiting layer to Transmit Water-KSAT (in/hr)
Milhopper Sand (Bouldery Subsurface)	A	3.5 - 6	0.06 - 1.98
Arredondo Fine Sand (Bouldery Subsurface)	A	>6.67	1.98 - 5.95
Tavares Fine Sand (0-5% Slopes)	A	3.5 - 5	5.95 - 19.98
Tavares Fine Sand (Bouldery Subsurface)	A	3.5 - 6	5.95 - 49.88
Candler Sand (0-5% Slopes)	A	>6.67	5.95 - 19.98
Candler Sand (Bouldery Subsurface)	A	>6.67	5.95 - 19.98
Sparr Fine Sand (0-5% Slopes)	A/D	1.5 - 3.5	0.06 - 0.57
Sumterville Fine Sand (0-5% Slopes)	C/D	1.5 - 3	0.06 - 0.20

The NRCS soils report for Sumter County is included in **Appendix A**.

2.4 Wetlands

The wetlands within the project limits have been determined by a desktop analysis of the National Wetlands Inventory database. Most of the wetlands are located within the existing floodplains, which have been avoided to the maximum extent possible. Therefore, potential impacts to the existing wetlands have also been avoided and minimized.

Complete site investigations for wetlands will be completed on preferred alternatives prior to final pond design. However, because wetlands will not be delineated for all pond alternatives the National Wetlands Inventory (NWI) shapefile from the U.S. Fish and Wildlife Service was used to approximate wetland impacts for this report.

2.5 Floodplains

Flood Insurance Rate Maps (FIRM) prepared by the Federal Emergency Management Agency (FEMA) were reviewed to determine potential floodplain involvement within the project limits. The current effective FIRMs for Sumter County dated 2013 were reviewed and showed that Zone A encroaches at a couple locations within the project area. Special Flood Hazard Zone A is defined as “No base flood elevation determined”. Zone A are areas that have a 1% probability of occurring (100-year floodplain) but predicted flood elevations have not been established. Therefore, these elevations were estimated using the contour data. Refer to Appendix **B** for the official FIRM Maps.

As required by the SWFWMD, projects must avoid a net reduction of flood storage volume within the 100-year floodplain. Based on the improvements for this project as well as the ultimate typical section of the roadway, all designated floodplains within the right-of-way are expected to be impacted. Therefore, floodplain compensation will be required. Floodplain Compensation (FPC) sites will be sited where necessary or included within the SMF’s. These

sites will be sized to provide equivalent volume compensation, “cup for cup” for the estimated encroachment volume calculated.

2.6 Contamination

A Contamination Screening Evaluation Report (CSER) is being completed as part of the PD&E Study. All the SMF alternative sites were screened and evaluated in relation to the identified potential contamination sites along the corridor. The preferred SMF site selected for each basin will likely have a low to no risk associated with the site. However, if the preferred pond site is changed within the preliminary design, an update to the CSER will be prepared. Detailed documentation is provided in the CSER.

2.7 Threatened and Endangered Species

The proposed project is not likely to adversely affect any endangered, threatened, or candidate species due to all the roadway improvements begin within the existing right-of-way. However, all the SMF alternative sites will be evaluated for potential impacts to protected species.

All commitments and avoidance/minimization measures can be found in the PD&E documents.

2.8 Cultural Resources

A Cultural Resources Desktop Analysis report for the SMF alternative site options was prepared for this project corridor. These results were used in the analysis of siting the proposed stormwater facilities.

2.9 Karst Feature Information

The existing alignment of I-75 lies within a designated karst area and has a high potential to encounter a karst feature. However, geotechnical information will not be obtained to confirm that no karst formations are found within any of the preferred SMF locations. Therefore, using the existing LiDAR, pond alternatives will be sited to avoid isolated depressions if possible. Further coordination with the FDOT District Environmental Management Office (DEMO) will confirm the buffer assumptions used for consistency with the remaining corridor.

2.10 Utilities

Most of the pond alternatives are located on undeveloped or pasture properties which have a low potential for utility impacts. However, within the I-75 corridor, several utility lines exist that will need to be coordinated due to the proposed improvements.

3 Proposed Conditions

3.1 Proposed Roadway Configuration

The proposed roadway improvements include constructing a new 12-foot auxiliary lane and reconstructing the 12-foot paved shoulder in each direction for the length of the project. This will primarily be achieved by adding these improvements between the existing interchanges. No changes to the horizontal or vertical alignment of I-75 are proposed for these improvements. **Figures 3** illustrates the proposed typical section of the roadway.

3.2 Proposed Drainage

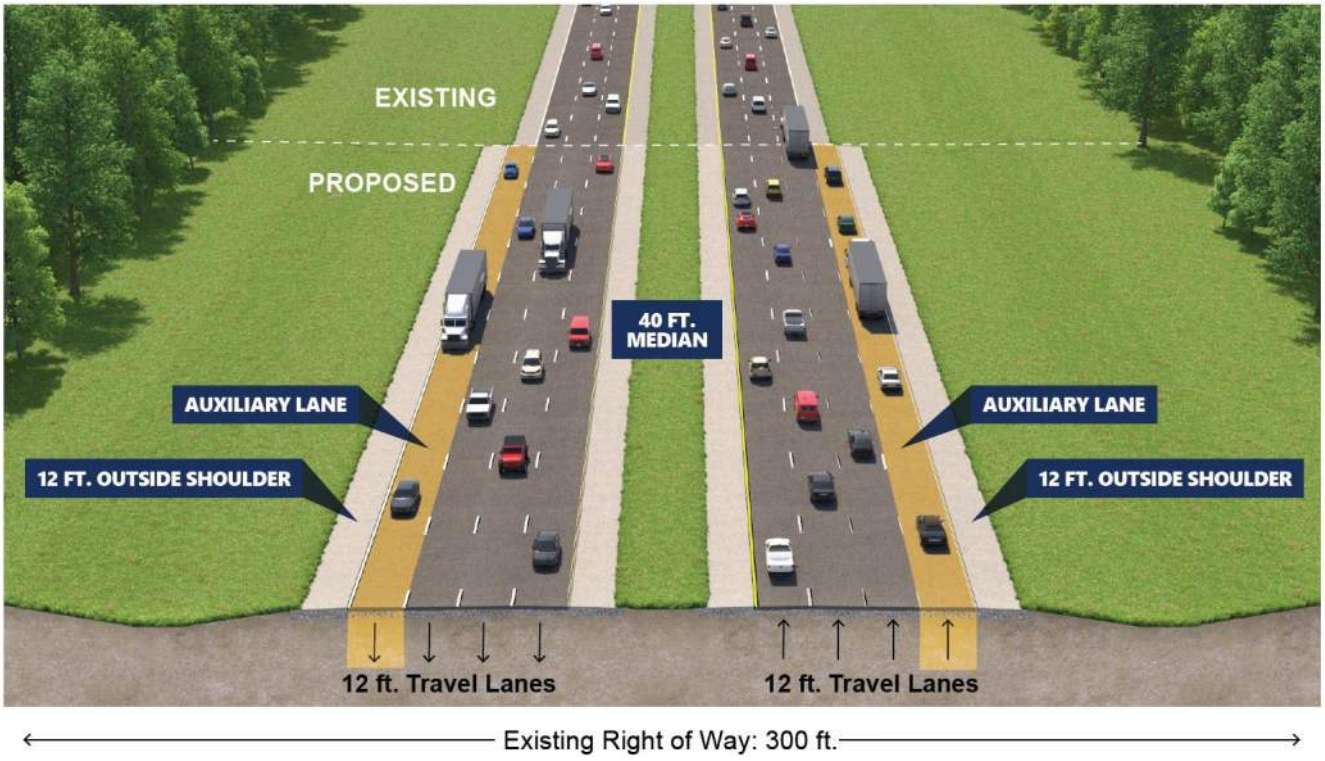
The proposed drainage basins will mainly mimic the same extents as in the existing condition. Minimal basin transfer is expected due to the majority of the basins being closed but will occur in some problematic or highly constrained basins.

Runoff from the proposed roadway will be collected and conveyed in both open and closed storm drain systems and routed to one of the SMF's along the corridor for treatment and attenuation. Offsite drainage patterns will remain unchanged and runoff that currently drains towards the Department's right of way will be collected and conveyed by diversion ditches to its existing outfall, where feasible, or be routed to one of the SMF's.

All existing cross drains are expected to remain in place. The extensions caused by the proposed widening will not significantly impact the hydraulics or function of these culverts. However, during design, it may be determined that some of these cross drains be upsized or replaced due to interchange modifications, conveyance changes within the basin or to fix erosion issues.

For the proposed bridge widening on I-75 at SR 44, inlets and shoulder gutter will be used to collect the runoff and convey it to the nearby stormwater pond.

Figure 3 – Roadway Typical Section



4 Governing Regulations

The final stormwater facilities will be required to meet the design criteria of the FDOT, and the regulatory requirements of the statewide Environmental Resource Permit (ERP) program. These requirements include regulations for both water quality and quantity of discharge and will dictate the required size, storage capacity and outfall design for stormwater ponds. This portion of the project within Sumter County falls within the jurisdiction of the SWFWMD; however, the remaining project area falls within the jurisdiction of the SJRWMD. Criteria for both agencies is discussed below and shown in the pond sizing calculations.

4.1 Water Quality Requirements

All FDOT projects must comply with the prevailing statewide regulations, including Chapter 62-330 of the Florida Administrative Code (F.A.C.). The required volume of runoff to be treated from a site is determined by the type of treatment system used, i.e. wet detention, detention with effluent filtration, on-line retention or off-line retention treatment systems.

SWFWMD requires the following:

- Wet Detention – treat one inch of runoff from the contributing area
- Offline Retention – treat the runoff from the first one inch of rainfall or for projects with drainage areas less than 100 acres, the first one-half inch of runoff
- Online Retention – treat the runoff from the first one inch of rainfall or for projects with drainage areas less than 100 acres, the first one-half inch of runoff

SJRWMD requires the following:

- Wet Detention – treat one inch of runoff over the drainage area or 2.5 inches times the impervious area (excluding water bodies) (whichever is greater)
- Offline Retention – treat the runoff from the first one-half inch of rainfall or 1.25 inches of runoff from the impervious area (whichever is greater)
- Online Retention – provide an additional one-half inch of runoff from the drainage area over that volume specified for offline treatment.

Further, if a project discharges directly into an Outstanding Florida Water (OFW), both agencies state that 50% additional treatment volume will also be required. Because Little Jones Creek is designated an OFW, 50% more treatment volume (and permanent pool volume for wet detention) must be provided for all ponds that directly discharge into it.

4.2 Water Quantity Requirements

The SWFWMD and SJRWMD Applicant's Handbook Volume II (Applicant's Handbook) states that reasonable assurance must be provided for that the proposed construction, alteration, operation, maintenance, removal or abandonment of the works will:

- Not cause adverse water quantity impacts to receiving waters and adjacent lands;
- Not cause adverse flooding to on-site of off-site property;
- Not cause adverse impacts to existing surface water storage and conveyance capabilities; and
- Not adversely impact the maintenance of surface or ground water levels or surface water flows established pursuant to Section 373.042, Florida Statue (F.S.).

Projects located within an open drainage basin, the allowable discharge is 1) the historic discharge, which is the peak rate at which runoff leaves a parcel of land by gravity under existing site conditions, or the legally allowable discharge at the time of permit application; or 2) amounts determined in previous District permit actions relevant to the project.

If SWFWMD is determined to be the responsible agency, the design storms below must be analyzed. Storms will utilize the NRCS Type II Florida Modified 24-hour rainfall distribution with an antecedent moisture condition II.

- Open Basins
  - 25-year, 24-hour storm using SWFWMD rainfall map
- Closed Basins
  - 100-year, 24-hour storm using SWFWMD rainfall map (ensure post developed volume of runoff does not exceed the pre-developed volume of runoff)

If SJRWMD is determined to be the responsible agency, the design storms below must be analyzed. All storms will use an antecedent moisture condition II. Allowable 24-hour storm rainfall depths and distributions are discussed in Section 35.1 of the SJRWMD Applicant's Handbook. Section 35.2 of the handbook provides the allowable rainfall depths and distributions for the 96-hour storm.

- Open Basins
  - Mean annual 24-hour storm for systems serving both of the following:
    - New construction area greater than 50% impervious (excluding waterbodies)
    - Projects for the construction of new developments that exceed the thresholds in paragraphs 62-330.020(2)(b) or (c), F.A.C.
  - 25-year, 24-hour storm
- Closed Basins
  - 25-year, 96-hour storm (ensure post developed volume of runoff does not exceed the pre-developed volume of runoff)

FDOT requirements will also be met for these proposed stormwater ponds. Open basins shall meet stage and attenuation requirements for the critical duration (1-hr through 24-hour) up to and including the 100-year frequency. Closed basins shall meet stage and attenuation requirements for the critical duration (1-hr through 10-day), up to and including the 100-year frequency. Closed basins must also ensure that the post developed volume of runoff does not exceed the pre-development volume of runoff for these events.

4.3 Additional Design Requirements

The FDOT and the statewide ERP program have several criteria which will impact the amount of right-of-way required for stormwater treatment. Some of these FDOT criteria are:

- Closed Basins – Retention Volume should recover at a rate that ½ of the volume is available in 7 days with the total volume available in 30 days.
  - Soil conditions may limit recovery rates of some ponds. A secondary approach and criterion may need to be used in problematic basins with approval from the District 5 Drainage Engineer.
- A minimum of 20-ft horizontal distance for pond maintenance between Normal Pool Level (NPL) and adjacent easement or right-of-way line.
- A minimum of 15-ft within this pond maintenance area shall be at a slope of 1:8 of flatter.

- A 1-ft minimum freeboard is required between the maximum design pond stage and inside maintenance berm top of bank.
- Fences should only be installed when a documented maintenance need for restricted access has been demonstrated.

5 Proposed Stormwater Management Facilities

Stormwater runoff will be directly treated and attenuated per regulatory requirements. Preliminary pond sizes have been calculated using the treatment volumes and design storms discussed in Section 4 for open and closed basins. All ponds except for Ponds 0-2 and 0-3, which are existing wet detention ponds, are assumed to be dry retention facilities. The pond sizing calculations do not consider percolation of the soil below the pond bottom. Therefore, some of the ponds can provide the required volume in a smaller footprint due to high permeability rates and vertical separation between the pond bottom and the water table/confining layer. Alternatives that can use a smaller area than estimated in the calculations will be further evaluated in design. These calculations are summarized in **Appendix C**. Estimated right-of-way requirements include provisions for standard FDOT maintenance berms and freeboard. Final pond configurations and right-of-way requirements will be determined during design. Refer to **Appendix D** for the Pond Alternative Maps.

Each basin within the project limits has been analyzed to determine the preferred method of stormwater treatment and attenuation. The different possible methods are listed as “Options” and typically involve some degree of basin transfer to eliminate a pond by combining multiple basins. Additionally, multiple pond site locations were analyzed for each basin and are referred to as “Alternatives”.

5.1 Basin 0

This basin begins south of SR 44 near Sta. 1162+93 and ends north of the interchange at Sta. 1201+00, approximately 3800 ft. Runoff contributing areas from this basin consists of the roadway right-of-way between those stations, the areas within the interchange and along SR 44 as well as offsite contributions from the northeast quadrant of the interchange. In the existing conditions, runoff from Basin 0 is collected in both open and closed storm drain systems and conveyance via swales throughout the interchange ramps, that discharge into one of two wet ponds or directly into Little Jones Creek. The northeast portion of the basin contributes to a wet pond in the southeast quadrant of the interchange, while the northwest portion drain into a separate wet pond (Pond A per FPID 18130-3425) located 0.6 miles west of the SR 44/ I-75 Interchange. The rest of the basin is collected and discharges directly towards Little Jones Creek and ultimately into Lake Panasoffkee.

Basin 0 is an open basin and discharges to an OFW. Based on the current topography, the runoff from this basin drains towards the west and has its primary positive outfall near Sta. 1178+50 which is an existing 36” cross drain. The low point along the existing edge of pavement is located south near the beginning of the basin.

Preliminary calculations indicate that an attenuation volume of 1.06 ac-ft and a treatment volume of 0.33 ac-ft will be required for the basin. A site of 0.96 acres is required to accommodate the required volume.

5.1.1 *Pond Alternatives for Basin 0*

As most of the runoff in Basin 0 is already being treated and attenuated by multiple existing stormwater ponds surrounding the SR 44 Interchange, locating brand new pond alternatives were not as critical. However, three pond alternatives were considered.

Pond 0-1 consists of grading a new infield pond in the southwest quadrant of the existing interchange. Currently, this area has vegetation with trees throughout. This relatively small areas for direct treatment and attenuation work in conjunction with Basin 1 to accommodate the new impervious area from the interchange reconfiguration. Due to the proximity of Pond 1-1 and Ramp A, removing portions of I-75 that currently down south into Basin 0 and into the existing ponds can likely be offset with this option and would not require further modifications.

Pond 0-2 consists of expanding the existing stormwater pond in the southeast quadrant of the interchange to the east. This pond is currently a permitted facility through SWFWMD and sits on two parcels based on the Sumter County property appraiser. The western portion is owned by FDOT and the eastern majority by a private owner, however it is assumed the FDOT has an easement over the eastern portion including the pond berm. This expansion option has been sized to accommodate the new impervious area but would potentially require significant conveyance modifications.

The third alternative evaluated is **Pond 0-3**, which consists of expanding the existing stormwater pond west of the interchange, on the south side of SR 44. This pond is also a permitted stormwater facility through SWFWMD and sits on a large single parcel owned by FDOT. The existing site does have existing wetlands and floodplains but should be able to be expanded without encroaching upon them. Like Pond 0-2, this pond option would also require significant modifications to the existing conveyance system along SR 44 if the majority of the new impervious was collected and routed to it.

5.1.2 *Estimated Construction Costs for Basin 0*

Table 4 below summarizes the estimated construction costs for the pond alternatives within Basin 0.

Table 4 – Construction Costs for Basin 0 Options

Cost Item	Pond Site 0-1			Pond Site 0-2			Pond Site 0-3		
	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost
Excavation (cy)	1719	$ 13.00	$ 22,347	2904	$ 13.00	$ 37,752	5808	$ 13.00	$ 75,504
Sodding (sy)	2440	$ 4.00	$ 9,760	6437	$ 4.00	$ 25,748	6437	$ 4.00	$ 25,748
Pipe (lf)	175	$ 175.00	$ 30,625	0	$ 175.00	$ -	0	$ 175.00	$ -
Structure (ea)	4	$ 8,000	$ 32,000	0	$ 8,000	$ -	0	$ 8,000	$ -
Clearing & Grubbing (ac)	1.00	$ 50,000	$ 50,000	2.00	$ 50,000	$ 100,000	2.00	$ 50,000	$ 100,000
Total Construction Cost			**$ 144,732**			**$ 163,500**			**$ 201,252**

5.1.3 *Preferred Alternative for Basin 0*

Pond 0-1 is the preferred alternative based on no cultural impacts and lower construction costs.

5.2 Basin 1

Basin 1 extends from north of SR 44, approximately from Sta. 1201+00 to Sta. 1217+82 (1,682 ft). Runoff areas from this basin consists of the roadway right-of-way between those stations and offsite contributions from the east side of the R/W. The existing onsite basin area is 11.58 acres, from which 3.48 ac are impervious area. Preliminary Flood Compensation is estimated at 2.16 ac-ft. for this basin. In the existing conditions, runoff from Basin 1 flows to two primary points of discharge. The majority of I-75 drains west into conveyance swales along Ramp D of the interchange and then into a storm drain system along SR 44 that discharges to the wet pond

located in Basin 0 (Pond A per FPID 18130-3425) located 0.6 miles west side of the SR 44/ I-75 Interchange. The eastern portion of the basin along with the offsite drains east into the swale along Ramp A, and discharges into the wet pond located in the southeast quadrant of the interchange in Basin 0.

Basin 1 is an open basin and discharges to an OFW. Based on the current layout, the runoff is routed through one of two wet detention ponds and discharges west into Little Jones Creek. The low points along the existing edge of pavement are located on both Ramps A and D of the interchange.

Preliminary calculations indicate that an attenuation volume of 6.05 ac-ft and a treatment volume of 2.28 ac-ft will be required for the basin. A site of 7.68 acres is required to accommodate the required volume.

5.2.1 *Pond Alternatives for Basin 1*

Three alternatives have been identified for Basin 1. **Pond 1-1** is located just east of Ramp A in the northeast quadrant of the I-75/SR 44 Interchange on a large single parcel. The pond runs parallel with the R/W from the northern limit of Basin 0 north for a few thousand feet. Runoff from I-75 currently drains to the median and west side of the roadway due to the superelevation within the basin. Therefore, additional conveyance systems would likely be required to utilize this site. However, this site would also be able to collect runoff from northern portion of Basin 0 and reduce the pond size required for that basin.

Pond 1-2 is located on the same parcel but located further to the north near an offsite low area. This site has the same challenges as Pond 1-1 due to the roadway superelevation but would also be required to accept more offsite area due to its location within the basin.

The third alternative evaluated for this basin is located on the west side of I-75, just north of the TA Travel Center. However, based on the topography and existing floodplains, this option required multiple ponds to accommodate the volume**, Pond 1-3A** and **Pond 1-3B**. Pond 1-3A is in a low-lying area in between an offsite pond and an isolated depression. Pond 1-3B is located just north of the TA Travel Center's stormwater pond, adjacent to the I-75 R/W.

5.2.2 *Estimated Construction Costs for Basin 1*

Table 5 below summarizes the estimated construction costs for the pond alternatives within Basin 1.

Table 5 – Construction Costs for Basin 1 Options

Cost Item	Pond Site 1-1			Pond Site 1-2			Pond Site 1-3A and 1-3B		
	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost
Excavation (cy)	67954	$ 13.00	$ 883,402	75504	$ 13.00	$ 981,552	78408	$ 13.00	$ 1,019,304
Sodding (sy)	42326	$ 4.00	$ 169,304	27177	$ 4.00	$ 108,708	46004	$ 4.00	$ 184,016
Pipe (lf)	300	$ 175.00	$ 52,500	5800	$ 175.00	$ 1,015,000	2650	$ 175.00	$ 463,750
Structure (ea)	4	$ 8,000	$ 32,000	15	$ 8,000	$ 120,000	15	$ 8,000	$ 120,000
Clearing & Grubbing (ac)	13.10	$ 50,000	$ 655,000	9.97	$ 50,000	$ 498,500	14.53	$ 50,000	$ 726,500
Total Construction Cost			**$ 1,792,206**			**$ 2,723,760**			**$ 2,513,570**

5.2.3 *Preferred Alternative for Basin 1*

Pond 1-1 is the preferred alternative due to its lower construction costs and location within the basin.

5.3 Basin 2

Basin 2 extends from approximately Sta. 1217+82 to Sta. 1253+53 (3,571 ft). Runoff contributing areas from this basin consists of the roadway right-of-way between those stations and offsite contributions from both sides of the R/W. The existing onsite basin area is 24.59 acres, from which 7.38 ac are impervious area. Preliminary Flood Compensation is estimated at 0.02 ac-ft. for this basin. In the existing conditions, runoff from Basin 2 flows to conveyance swales along both sides of R/W then flows into a local low point just outside the R/W on the west side of I-75.

Basin 2 is considered a Closed Basin as water is stored locally and must stage prior to receiving relief. Based on the current topography, the runoff drains towards the middle of the basin near its outfall at Sta. 1234+00. The low point along the existing edge of pavement is located near this station where there is an existing 24” cross drain under the roadway that conveys the runoff from the low point of the road towards the outfall. Additionally, there are two (2) 18” cross drains that convey the runoff from one side of the road to the roadside swales. These cross drains are located near STA 1220+00 (east side), and 1248+50 (west side).

Preliminary calculations indicate that an attenuation volume of 18.47 ac-ft and a treatment volume of 3.23 ac-ft will be required for the basin. A site of 8.80 acres is required to accommodate the required volume.

5.3.1 *Pond Alternatives for Basin 2*

Pond 2-1 is located on the east side of I-75 on the same large parcel as the Pond 1-1 alternative. Located approximately 3,000 feet north, this pond sits adjacent to I-75 and the Royal Community boundary. The pond is shaped to fit between the north boundary line and the floodplain to the south, therefore sits at a higher elevation than the roadway and would require more excavation.

Pond 2-2 is located on the west side of I-75 on the same large parcel as the Pond 1-3A and 1-3B alternatives. Located approximately 1,000 feet north of Pond 1-3A, this site is in a low-lying area, adjacent to the primary outfall for the overall basin. Therefore, it would easily receive runoff from the I-75 R/W and provide for the greatest volumetric discharge in the post condition.

Pond 2-3 is also located on the west side of the alignment. This site is just to the north of the Pond 2-2 alternative and abuts the northern property line of the same large parcel. Most of this location is relatively the same elevation as the roadway or just lower and would easily receive runoff. However, based on the required pond size, this site would extent to the north and cover a small area that drains to a secondary isolated depression/outfall which would lower the post discharge release.

5.3.2 *Estimated Construction Costs for Basin 2*

Table 6 below summarizes the estimated construction costs for the pond alternatives within Basin 2.

Table 6 – Construction Costs for Basin 2 Pond Alternatives

Cost Item	Pond Site 2-1			Pond Site 2-2			Pond Site 2-3		
	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost
Excavation (cy)	49345	$ 13.00	$ 641,485	16971	$ 13.00	$ 220,623	36707	$ 13.00	$ 477,191
Sodding (sy)	23898	$ 4.00	$ 95,592	25686	$ 4.00	$ 102,744	31300	$ 4.00	$ 125,200
Pipe (lf)	250	$ 175.00	$ 43,750	225	$ 175.00	$ 39,375	380	$ 175.00	$ 66,500
Structure (ea)	4	$ 8,000	$ 32,000	5	$ 8,000	$ 40,000	5	$ 8,000	$ 40,000
Clearing & Grubbing (ac)	8.10	$ 50,000	$ 405,000	8.57	$ 50,000	$ 428,500	11.76	$ 50,000	$ 588,000
Total Construction Cost			**$ 1,217,827**			**$ 831,242**			**$ 1,296,891**

5.3.3 *Preferred Alternative for Basin 2*

Pond 2-2 is the preferred alternative due to its low construction costs and location within the parcel. Siting the pond at this location, adjacent to the primary outfall, would provide for the greatest post volumetric discharge allowed.

5.4 Basin 3

Basin 3 extends from south of CR 462, approximately from Sta. 1253+53 to 1307+83 (5,130 ft). Runoff contributing areas from this basin consists of the roadway right-of-way between those stations and offsite contributions from both sides of the R/W. The existing onsite basin area is 37.40 acres, of which 11.22 ac are impervious area. Preliminary Flood Compensation is estimated at 9.13 ac-ft. for this basin. In the existing conditions, runoff from Basin 3 flows to conveyance swales along both sides of the existing R/W. CR 462 bridges over I-75 near Sta. 1271+12. The bridge and a portion of CR 462 discharges the runoff to Basin 3.

Basin 3 is a Closed Basin therefore there is no positive outfall for this basin. The low point along the existing edge of pavement is located near Sta. 1285+00. There is an existing 24” cross drain near Sta. 1290+00 connecting the swales on both sides of the road. Additionally, there are three (3) cross drains that convey the runoff from one side of the road to the roadside swales. These cross drains are located near Sta. 1270+00 (18” pipe, west side), 1293+50 (18” pipe, east side), 1296+50 (unknown size, east side). At the I-75/CR 462 interchange, there are two (2) 24” side drains near Sta. 1271+00; one side drain at each side of the road. Each one of these side drains connects the swales under the CR 462 bridge so the conveyance would not be interrupted by the bridge.

Preliminary calculations indicate that an attenuation volume of 31.55 ac-ft and a treatment volume of 4.91 ac-ft will be required for this basin. A site of 17.77 acres is required to accommodate the attenuation and treatment volumes.

5.4.1 *Pond Alternatives for Basin 3*

The viable pond site alternatives are very limited in Basin 3 due to the limits lying fully within the Royal Community. The Community of Royal is one of Florida’s oldest rural communities and dates back to 1865. Although all pond alternatives are carefully selected, avoidance and minimization to this historic community is a priority.

Pond 3-1 is located adjacent to the southern boundary line of the Royal Community on the west side of I-75, which is just south of CR 462. However, this site is located approximately 2,500 feet south of the low point in the basin. Therefore, the existing conveyance system would require modifications to route the runoff back to the pond location and would likely need to be piped in a closed storm drain system. This location would also require conveyance upgrades at

the bridge location to construct these improvements and could require a jack and bore operation. However, this pond alternative would achieve the goal of not acquiring a pond site within the Royal Community.

Pond 3-2 is located on the east side of the alignment, just north of the CR 462 bridge. As there are no other viable pond locations south of the Royal Community boundary on either side of I-75, Pond 3-2 lies within. The site is slightly wooded, located near the existing low point in the basin and would not require extensive modifications to the existing conveyance system. However, based on the required size, it will impact three parcels as well as a minor floodplain.

Pond 3-3 is located on the east side of I-75, across the alignment from **Pond 3-1**. This area is currently heavily wooded and requires a greater pond footprint based on the proposed change in land use. This alternative site currently sites on a single large parcel but is also located within the Royal Community limits.

5.4.2 *Estimated Construction Costs for Basin 3*

Table 7 below summarizes the estimated construction costs for the pond alternatives within Basin 3.

Table 7 – Construction Costs for Basin 3 Pond Alternatives

Cost Item	Pond Site 3-1			Pond Site 3-2			Pond Site 3-3		
	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost
Excavation (cy)	176888	$ 13.00	$ 2,299,544	118576	$ 13.00	$ 1,541,488	241241	$ 13.00	$ 3,136,133
Sodding (sy)	43113	$ 4.00	$ 172,452	34658	$ 4.00	$ 138,632	67230	$ 4.00	$ 268,920
Pipe (lf)	4000	$ 175.00	$ 700,000	1000	$ 175.00	$ 175,000	5100	$ 175.00	$ 892,500
Structure (ea)	17	$ 8,000	$ 136,000	7	$ 8,000	$ 56,000	21	$ 8,000	$ 168,000
Clearing & Grubbing (ac)	17.41	$ 50,000	$ 870,500	15.71	$ 50,000	$ 785,500	26.54	$ 50,000	$ 1,327,000
Total Construction Cost			**$ 4,178,496**			**$ 2,696,620**			**$ 5,792,553**

5.4.3 *Preferred Alternative for Basin 3*

Pond 3-1 is the preferred alternative due to the location being outside the Royal Community even though the construction costs are higher.

5.5 Basin 4

Basin 4 extends approximately from Sta. 1307+83 to 1342+00 (3,417 ft). Runoff contributing areas from this basin consists of the roadway right-of-way between those stations and offsite contributions from both sides of the R/W. The existing onsite basin area is 23.53 acres, of which 7.06 ac are impervious area. Preliminary Flood Compensation is estimated at 0.18 ac-ft. for this basin. In the existing conditions, runoff from Basin 4 flows to conveyance swales along both sides of the R/W. There is a linear pond in the median from approximately Sta. 1333+50 to 1344+00. A portion of the linear pond is located within the next basin (Basin 5). This linear pond accepts runoff from both NB and SB of I-75.

Basin 4 is a Closed Basin therefore there is no positive outfall. The low point along the existing edge of pavement is located near Sta. 1316+00, where there is an existing 24” cross drain that connects the swales on both sides of the roadway. Additionally, there are two (2) 18” cross drains that convey the runoff from one side of the road to the roadside swales. These cross drains are both at the west side of the road and located near Sta. 1314+50 and 1318+50.

Preliminary calculations indicate that an attenuation volume of 20.99 ac-ft and a treatment volume of 3.09 ac-ft will be required for this basin. A site of 12.61 acres is required to accommodate the attenuation and treatment volumes.

5.5.1 *Pond Alternatives for Basin 4*

Pond 4-1 is located adjacent to the northern boundary line of the Royal Community on the east side of I-75. This site consists of a large single parcel with open pastureland and no current improvements. The location of the pond is near the existing low point in the basin and would not require significant modifications to the existing conveyance system to route the runoff to it.

Pond 4-2 is located on the west side of the alignment, just north Royal Community boundary line on a very large tract. The site consists of mostly open farmland with some minor improvement located nearby. It is also located near the existing low point in the basin and would not require extensive modifications to the existing conveyance system.

Also located on the west side of I-75 is **Pond 4-3.** This site is just south of Pond 4-2 on the same parcel and slightly overlaps it to the north. It is located at the low point in the basin, however, will encroach on a small floodplain area which will require a larger pond footprint to offset this impact. However, it would essentially encompass the existing outfall and require very minor modifications to the existing conveyance system.

5.5.2 *Estimated Construction Costs for Basin 4*

Table 8 below summarizes the estimated construction costs for the pond alternatives within Basin 4.

Table 8 – Construction Costs for Basin 4 Pond Alternatives

Cost Item	Pond Site 4-1			Pond Site 4-2			Pond Site 4-3		
	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost
Excavation (cy)	85052	$ 13.00	$ 1,105,676	52411	$ 13.00	$ 681,343	19132	$ 13.00	$ 248,716
Sodding (sy)	41439	$ 4.00	$ 165,756	20866	$ 4.00	$ 83,464	22563	$ 4.00	$ 90,252
Pipe (lf)	600	$ 175.00	$ 105,000	1200	$ 175.00	$ 210,000	400	$ 175.00	$ 70,000
Structure (ea)	5	$ 8,000	$ 40,000	7	$ 8,000	$ 56,000	5	$ 8,000	$ 40,000
Clearing & Grubbing (ac)	15.57	$ 50,000	$ 778,500	8.09	$ 50,000	$ 404,500	8.34	$ 50,000	$ 417,000
Total Construction Cost			**$ 2,194,932**			**$ 1,435,307**			**$ 865,968**

5.5.3 *Preferred Alternative for Basin 4*

Pond 4-1 is the preferred alternative due to its lower construction costs and proximity to the outfall.

5.6 Basin 5

Basin 5 extends approximately from Sta. 1342+00 to 1371+08 (2,908 ft). Runoff contributing areas from this basin consists of the roadway right-of-way between those stations and offsite contributions from both sides of the R/W. The existing onsite basin area is 20.03 acres, of which 6.01 ac are impervious area. Preliminary Flood Compensation is estimated at 12.27 ac-ft. for this basin. In the existing conditions, runoff from Basin 5 flows to conveyance swales along both sides of R/W. There is a linear pond in the median at approximately Sta. 1344+50. Only a small portion of the linear pond is located within Basin 5 as the majority of the linear pond lies within the previous basin (Basin 4). This linear pond accepts runoff from both NB and SB of I-75. The rest of the

wide median within Basin 5 is heavily wooded and provides volume for the runoff although it does not have well-defined contours as a pond.

Basin 5 is a Closed Basin; therefore, there is no positive outfall for this basin. The low point along the existing edge of pavement is located near Sta. 1355+00, where two (2) existing 24" cross drains connect the roadside swales on both sides of the road to the median.

Preliminary calculations indicate that an attenuation volume of 21.16 ac-ft and a treatment volume of 2.63 ac-ft will be required for this basin. A site of 14.88 acres is required to accommodate the attenuation and treatment volumes.

5.6.1 *Pond Alternatives for Basin 5*

The viable pond alternatives for Basin 5 are limited due to the extensive floodplain involvement. As a result, the runoff will need to be conveyed north into Basin 6 for stormwater treatment and attenuation. Therefore, two of the three alternatives for Basin 5 are combinations with the Basin 6 alternatives.

Pond 5-1 is sited in combination with Pond 6-1 on the west side of I-75 just north of the Basin 5 boundary limits. This site consists of a large single parcel with open pastureland with minor improvements but is adjacent to the R/W. However, this site is located approximately 4,000 feet north of the low point in Basin 5. Therefore, the existing conveyance system would require modifications to route the runoff back to the pond location and would likely need to be piped in a closed storm drain system.

Pond 5-2 is sited in combination with Pond 6-2 and is also located on the west side of I-75 north of the Basin 5 boundary limits. This site consists of a large single-family parcel with open pastureland and is located off the I-75 R/W. Similar to Pond 5-1, this site is located approximately 4,000 feet north of the low point in Basin 5. Therefore, the existing conveyance system within the I-75 corridor would require modifications to route the runoff back to the pond location and would also require a new drainage system/easement to pipe it from the R/W west to the pond site. Lastly, based on the required volume, this alternative will also impact the existing home on the parcel.

The third alternative for Basin 5 is **Pond 5-3** which is located on the east side of I-75 just north of the basin boundary. This site is open and appears to be used in conjunction with a commercial business from an adjacent parcel to the east. Large dirt piles/mounds are present across the entire site. Similar to the previous alternatives, this location is roughly 4,000 feet north of the low point for Basin 5. Therefore, the existing conveyance system would require modifications to route the runoff back to the pond location and would likely need to be piped in a closed storm drain system.

5.6.2 *Estimated Construction Costs for Basin 5*

Table 9 below summarizes the estimated construction costs for the pond alternatives within Basin 5.

Table 9 - Construction Costs for Basin 5 Pond Alternatives

Cost Item	Pond Site 5-1			Pond Site 5-2			Pond Site 5-3		
	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost
Excavation (cy)	196647	$ 13.00	$ 2,556,411	179351	$ 13.00	$ 2,331,563	71647	$ 13.00	$ 931,411
Sodding (sy)	46893	$ 4.00	$ 187,572	45182	$ 4.00	$ 180,728	42942	$ 4.00	$ 171,768
Pipe (lf)	3352	$ 175.00	$ 586,600	5000	$ 175.00	$ 875,000	3555	$ 175.00	$ 622,125
Structure (ea)	16	$ 8,000	$ 128,000	22	$ 8,000	$ 176,000	16	$ 8,000	$ 128,000
Clearing & Grubbing (ac)	20.00	$ 50,000	$ 1,000,000	19.68	$ 50,000	$ 984,000	15.76	$ 50,000	$ 788,000
Total Construction Cost			**$ 4,458,583**			**$ 4,547,291**			**$ 2,641,304**

5.6.3 *Preferred Alternative for Basin 5*

Pond 5-1 is the preferred alternative due to its position relative to the basin boundary and overall lower construction costs when taking into account that the pond would serve both Basins 5 and 6.

5.7 Basin 6

Basin 6 extends approximately from Sta. 1371+08 to 1416+08 (4,500 ft). Runoff contributing areas from this basin consists of the roadway right-of-way between those stations and offsite contributions from both sides of the R/W. The existing onsite basin area is 30.99 acres, of which 9.30 ac are impervious area. Preliminary Flood Compensation is estimated at 0.46 ac-ft. for this basin. In the existing conditions, runoff from Basin 6 flows to conveyance swales along both sides of R/W. CR 475 bridges over I-75 near Sta. 1412+00. The bridge and a small portion of CR 475 discharge runoff to Basin 6.

Basin 6 is a Closed Basin, therefore, there is no positive outfall for this basin. The low point along the existing edge of pavement is located near Sta. 1384+00, where an existing 24” cross drain connects the swales on both sides of the roadway. Additionally, there are three (3) 18” cross drains that convey the runoff from one side of the road to the roadside swales. These cross drains are located near Stations 1381+50, 1400+00, and 1414+00 and are all on the east side of the roadway.

Preliminary calculations indicate that an attenuation volume of 23.10 ac-ft and a treatment volume of 4.07 ac-ft will be required for this basin. A site of 10.88 acres is required to accommodate the attenuation and treatment volumes.

5.7.1 *Pond Alternatives for Basin 6*

Basin 6 also has extensive floodplains surrounding the low point and throughout the basin which minimizes the viable pond alternatives.

Pond 6-1 is sited in combination with Pond 5-1 as previously mentioned on the west side of I-75 just within the southern boundary limits for Basin 6. This site consists of a large single parcel with open pastureland with minor improvements but is adjacent to the R/W. This site is located approximately 2,000 feet south of the low point for Basin 6. Therefore, the existing conveyance system would require modifications to route the runoff back to the pond location and would likely need to be piped in a closed storm drain system.

Pond 6-2 is sited in combination with Pond 5-2 and is also located on the west side of I-75 north of the Basin 5 boundary limits. This site consists of a large single-family parcel with open pastureland and is located off the I-75 R/W. Similar to Pond 6-1, this site is located approximately 2,000 feet south of the low point in Basin 6. Therefore, the existing conveyance

system within the I-75 corridor would require modifications to route the runoff back to the pond location and would also require a new drainage system/easement to pipe it from the R/W west to the pond site. Lastly, based on the required volume, this alternative will also impact the existing home on the parcel.

Pond 6-3A and **Pond 6-3B** are the last alternative option for Basin 6. Based on the topography and existing floodplains throughout the basin, this option required multiple ponds to accommodate the required volume. Pond 6-3A is located on the east side of I-75 just south of CR 475 but requires impacts to four parcels to achieve the calculated area. All these parcels are open pastureland with no current improvements. However, this site is located approximately 4,000 feet north of the low point in Basin 6. Therefore, the existing conveyance system would require modifications to route the runoff back to the pond location and would likely need to be piped in a closed storm drain system. Pond 6-3B is located near the existing low point in the basin but is west of the I-75 R/W due to the adjacent existing floodplains. Therefore, the existing conveyance system within the I-75 corridor would likely not require modifications, but a new drainage system/easement to pipe it from the R/W west to the pond site would be.

5.7.2 *Estimated Construction Costs for Basin 6*

Table 10 below summarizes the estimated construction costs for the pond alternatives within Basin 6.

Table 10 - Construction Costs for Basin 6 Pond Alternatives

Cost Item	Pond Site 6-1			Pond Site 6-2			Pond Site 6-3A and 6-3B		
	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost
Excavation (cy)	196647	$ 13.00	$ 2,556,411	179351	$ 13.00	$ 2,331,563	102709	$ 13.00	$ 1,335,217
Sodding (sy)	46893	$ 4.00	$ 187,572	45182	$ 4.00	$ 180,728	45522	$ 4.00	$ 182,088
Pipe (lf)	3352	$ 175.00	$ 586,600	5000	$ 175.00	$ 875,000	4823	$ 175.00	$ 844,025
Structure (ea)	16	$ 8,000	$ 128,000	22	$ 8,000	$ 176,000	23	$ 8,000	$ 184,000
Clearing & Grubbing (ac)	20.00	$ 50,000	$ 1,000,000	19.68	$ 50,000	$ 984,000	15.02	$ 50,000	$ 751,000
Total Construction Cost			**$ 4,458,583**			**$ 4,547,291**			**$ 3,296,330**

5.7.3 *Preferred Alternative for Basin 6*

Pond 6-1 is the preferred alternative due to its position relative to the basin boundary and overall lower construction costs when taking into account that the pond would serve both Basins 5 and 6.

5.8 Basin 7

Basin 7 extends approximately from Sta. 1416+08 to 1471+95 (5,587 ft). Runoff contributing areas from this basin consists of the roadway right-of-way between those stations and offsite contributions from both sides of the R/W. The existing onsite basin area is 38.48 acres, of which 11.54 ac are impervious area. In the existing conditions, runoff from Basin 7 flows to conveyance swales along both sides of R/W.

Basin 7 is a Closed Basin, therefore, has no positive outfall. The low point along the existing edge of pavement is located near Sta. 1460+00. Here, there is an existing cross drain consisting of three (3) 24” pipes connecting the swales on both sides of the roadway. Additionally, there are six (6) cross drains that convey the runoff from the west side of the road to the roadside swales.

These cross drains are located near Stations 1430+15 (30” pipe), 1440+50 (24” pipe), 1445+00 (unknown size), 1453+50 (18” pipe), 1461+40 (18” pipe), and 1467+40 (18” pipe).

Preliminary calculations indicate that an attenuation volume of 29.96 ac-ft and a treatment volume of 5.05 ac-ft will be required for this basin. A site of 15.12 acres is required to accommodate the attenuation and treatment volumes.

5.8.1 *Pond Alternatives for Basin 7*

Three alternatives have been identified for Basin 7. **Pond 7-1** is located approximately 0.8 mi north of CR 475 on the east side of I-75. This site consists of a large single parcel with open pastureland and no current improvements. The location of the pond is near the existing low point in the basin and would not require significant modifications to the existing conveyance system to route the runoff to it. However, since it lands on the east side of CR 475, it will require an additional drainage system and easement to convey the runoff in and out of the pond.

Pond 7-2 is located on the west side of the alignment, just south of the existing low point in the basin and adjacent to the I-75 R/W. The site consists of mostly open pastureland with some trees and no improvements. Located about 2,000 feet south of the low point, some conveyance modifications would be required to route the runoff back to this pond site.

Located on the same parcel as Pond 7-1, but further south is **Pond 7-3**. This site is located on the east side of CR 475 and consists mainly of open pastureland with no current improvements. However, it is located approximately 3,000 feet south of the basin low point and would require modifications to route the runoff back to this pond site. Similar to Pond 7-1, this site would also require an additional drainage system and easement to convey the runoff in and out of the pond.

5.8.2 *Estimated Construction Costs for Basin 7*

Table 11 below summarizes the estimated construction costs for the pond alternatives within Basin 7.

Table 11 – Construction Costs for Basin 7 Pond Alternatives

Cost Item	Pond Site 7-1			Pond Site 7-2			Pond Site 7-3		
	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost
Excavation (cy)	72275	$ 13.00	$ 939,575	86946	$ 13.00	$ 1,130,298	71125	$ 13.00	$ 924,625
Sodding (sy)	28131	$ 4.00	$ 112,524	31476	$ 4.00	$ 125,904	38084	$ 4.00	$ 152,336
Pipe (lf)	701	$ 175.00	$ 122,675	1473	$ 175.00	$ 257,775	3044	$ 175.00	$ 532,700
Structure (ea)	6	$ 8,000	$ 48,000	8	$ 8,000	$ 64,000	13	$ 8,000	$ 104,000
Clearing & Grubbing (ac)	12.76	$ 50,000	$ 638,000	13.19	$ 50,000	$ 659,500	14.18	$ 50,000	$ 709,000
Total Construction Cost			**$ 1,860,774**			**$ 2,237,477**			**$ 2,422,661**

5.8.3 *Preferred Alternative for Basin 7*

Pond 7-1 is the preferred alternative due to its relative location to the outfall and lower construction costs.

5.9 Basin 8

Basin 8 extends approximately from Sta. 1471+95 to 1511+25 (3,930 ft). Runoff contributing areas from this basin consists of the roadway right-of-way between those stations and offsite contributions from both sides of the R/W. The existing onsite basin area is 27.07 acres, of which 8.12 ac are impervious area. Preliminary Flood Compensation is estimated at 0.64 ac-ft. for this basin. In the existing conditions, runoff from Basin 8 flows to conveyance swales along both sides of R/W.

Basin 8 is a Closed Basin, therefore, there is no positive outfall. The low point along the existing edge of pavement is located near Sta. 1487+00, where an existing 30" cross drain connects the swales on both sides of the roadway. Additionally, there are five (5) 18" cross drains that convey the runoff from the east side of the roadway into the roadside swales. These cross drains are located near Stations 1478+50, 1484+50, 1488+68, 1496+00, and 1502+00.

Preliminary calculations indicate that an attenuation volume of 21.94 ac-ft and a treatment volume of 3.55 ac-ft will be required for this basin. A site of 11.73 acres is required to accommodate the attenuation and treatment volumes.

5.9.1 *Pond Alternatives for Basin 8*

Basin 8 also has extensive floodplains surrounding the low point which minimizes the viable pond alternatives directly adjacent to the outfall, however three alternatives were evaluated.

Pond 8-1 is located approximately 0.5 mi south of the Marion County Line on the east side of I-75. This site consists of a large single parcel with open pastureland, a mixture of trees and no current improvements. The location of the pond is about 2,000 feet north of the existing low point in the basin and would require minor modifications to the existing conveyance system to route the runoff to it. Also, since it lands on the east side of CR 475, it will require an additional drainage system and easement to convey the runoff in and out of the pond.

Pond 8-2 is also located on the east side of the alignment, near the existing low point and outfall for the basin. However, the site is over 1,000 feet east of CR 475 and will require a separate easement to route the runoff to and from the pond from I-75. The site is located on the same large parcel as Pond 8-1 and consists of open pastureland and no improvements.

Pond 8-3A and **Pond 8-3B** are the last alternative option for Basin 8. Based on the topography and existing floodplains surrounding the low point in the basin, this option will flank the floodplain with multiple ponds to the south and north. Pond 8-3A is a smaller pond located on the east side of I-75 and CR 475 about 1,000 feet north of the low point. The site is located on the same large parcel as Pond 8-1 and consists of open pastureland and no improvements. Based on this location, the existing conveyance system within the I-75 corridor would not require many modifications to route the runoff back to the pond location. Pond 8-3B is a larger pond located approximately 2,000 feet south of the existing low point in the basin and just outside the existing floodplains. Like Pond 83-A, the existing conveyance system within the I-75 R/W would likely not require modifications, but a new drainage system/easement to pipe it from the R/W east to both of the pond sites would be.

5.9.2 *Estimated Construction Costs for Basin 8*

Table 12 below summarizes the estimated construction costs for the pond alternatives within Basin 8.

Table 12 – Construction Costs for Basin 8 Pond Alternatives

Cost Item	Pond Site 8-1			Pond Site 8-2			Pond Site 8-3A and 8-3B		
	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost	Quantity	Unit Cost	Cost
Excavation (cy)	160824	$ 13.00	$ 2,090,712	150543	$ 13.00	$ 1,957,059	86516	$ 13.00	$ 1,124,708
Sodding (sy)	45373	$ 4.00	$ 181,492	56938	$ 4.00	$ 227,752	67473	$ 4.00	$ 269,892
Pipe (lf)	2824	$ 175.00	$ 494,200	2650	$ 175.00	$ 463,750	3429	$ 175.00	$ 600,075
Structure (ea)	14	$ 8,000	$ 112,000	13	$ 8,000	$ 104,000	18	$ 8,000	$ 144,000
Clearing & Grubbing (ac)	16.51	$ 50,000	$ 825,500	19.00	$ 50,000	$ 950,000	23.20	$ 50,000	$ 1,160,000
Total Construction Cost			**$ 3,703,904**			**$ 3,702,561**			**$ 3,298,675**

5.9.3 *Preferred Alternative for Basin 8*

Pond 8-3A and 8-3B are the preferred alternative the location to the low point and lower construction costs.

5.10 Pond Site Evaluation

Based upon the information collected, a thorough review of the project corridor, and the proposed roadway profile, multiple pond site alternatives have been presented for each roadway basin. An Evaluation Matrix was compiled to summarize the engineering data and analysis for these pond alternatives. Several major factors, as shown in **Table 13**, were identified to compare each basin alternative with the purpose of selecting a preferred alternative site. These factors were then assigned values that will be used to determine the total ranking within the matrix.

Table 13 – Pond Ranking and Values

Factor	Best Case		Average Case		Worst Case	
Floodplain Impacts?	1	None	3	Minor Impacts	5	Significant Impacts
Right-Of-Way Costs						
Environmental Impacts?	1	Little to None	3	Medium Impacts	5	Significant Impacts
Construction Cost	1	0			5	$7,000,000
Hydraulic Issues?	1	Pond Will Function Properly as Shown	3	Pond is Located on Elevated Site and/or Signficant Distance from Basin Low Point	5	Pond Will Not Function Properly Without Major Modifications

The cost evaluation for the stormwater management alternatives in this report only detail construction costs. The construction costs include quantities for clearing and grubbing, earthwork, sod, drainage structures and piping which are summarized for each alternative

throughout the report in detail. These estimated construction costs for the project alternatives were applied using a scale of 1 to 5, with 1 being the most cost effective and 5 the most expensive.

Property or right-of-way costs for each alternative have also been ranked 1 to 5, with 1 being the most cost effective. However, many of the alternatives within each basin are situated on the same parcel so the cost of each take will likely be very similar. Factored right-of-way costs were provided by the Department for all alternative sites except those in Basin 0. Ponds 0-1 and 0-3 are within Department right-of-way so no property costs are needed. The Sumter County Property Appraiser's latest assessed market value was used to estimate right-of-way cost for the Pond 0-2 expansion.

Table 14 – Estimated Property Cost

Pond	Parcel Number	Land Use	Assessed Market Value	Original Parcel Area (Acres)	Required R/W (Acres)	Remaining Area (Acres)	Factored R/W Cost
0-1	-	Within FDOT R/W		-	-	-	
0-2	C34-014	I-75/Hwy 44 Exc S F		67.95	13.64	54.31	
0-3	F03-001	FDOT Parcel		-	-	-	
1-1	C34-003	Improved Pasture		73.00	13.12	59.88	
1-2	C34-003	Improved Pasture		73.00	10.04	62.96	
1-3A	C34-015	Native Pasture		249.20	5.11	234.62	
1-3B	C34-015	Native Pasture			9.47		
2-1	C-34-003	Improved Pasture		73.00	8.48	64.52	
2-2	C34-015	Native Pasture		249.20	8.51	240.69	
2-3A & 2-3B	C34-015	Native Pasture		249.20	11.81	237.39	
3-1	C27-034	Hay Field		47.11	13.64	33.47	
	C27-276	Native Pasture		5.16	5.16	0	
3-2	C27-063	N/A		7.00	7.00	0	
	C27-061	N/A		7.00	7.00	0	
	C27-057	Improved Pasture		11.00	11.00	0	
3-3	C27-042	Hardwood		51.60	26.54	25.058	
4-1	C21-024	Hay Field		29.87	15.56	14.31	
4-2	C21-006	Homesite		232.00	8.09	223.91	
4-3	C21-006	Homesite		232.00	8.35	223.65	
5-1/6-1	C16-047	Horse Farm		20.00	20.00	0	
5-2/6-2	C16-044	Homesite		15.00	15.00	0	
	C16-047	Horse Farm		20.00	4.68	15.32	
5-3	C16-077	Compost Company		69.07	15.76	53.31	
6-3A	C16-008	Improved Pasture		13.37	2.63	10.74	
	C16-079	N/A		2.50	2.50	0	
	C16-017	N/A		0.88	0.88	0	
	C16-004	N/A		8.19	1.99	6.2	
6-3B	C16-015	Improved Pasture		19.54	7.02	12.52	
7-1	C09-035	Improved Pasture		116.48	12.76	103.72	
7 -2	C09-034	Improved Pasture		84.06	13.19	70.87	
7-3	C09-035	Improved Pasture		116.48	14.18	102.3	
8-1	C4-001	Improved Pasture		406.94	16.51	390.43	
8-2	C4-001	Improved Pasture		406.94	19.00	387.94	
8-3A	C4-001	Improved Pasture		406.94	17.89	383.74	
8-3B	C4-001	Improved Pasture			5.31		

= Factored R/W cost not provided for Pond 0-2. Assessed value used to provide R/W cost estimate.

Impact to floodplains was a key factor that was considered in the pond siting process. There are significant floodplain impacts to some portions of this proposed project. A thorough review

of all the floodplains was completed, including estimated flood depths and impacts. These impacts were scaled from 1 to 5, with 1 being none and 5 being significant impacts.

Another factor that was considered included impacts the environment. Cultural Resources, contamination and known threatened and endangered species were screened and evaluated as part of this pond siting effort. If there were known issues for any pond alternative, those impacts whether minor or significant were estimated in our evaluation. A value of 1 meant little to no impacts where a value of 5 was assigned if a pond alternative has significant impacts.

The final factor evaluated and quantified in **Table 13** above is hydraulic issues corresponding to each pond alternative. Hydraulic issues could involve either raising the roadway profile, letting a portion of the roadway basin drain directly to the outfall to get the pond to function properly, or the site being located significantly off the right of way. Refer to **Appendix E** for preliminary hydraulic gradient calculations comparing the low point of each basin to the assumed and calculated pond bottom.

Some factors were evaluated for each basin alternative but were omitted from the evaluation matrix as all the pond alternatives would have the same level of potential for these characteristics and will not influence site selection. Upon further investigation and development of this report, if an alternative site is determined to exhibit a higher level for one of these characteristics, the evaluation matrix can be revised to include that factor.

6 Conclusion

A pond siting investigation was completed for this project and multiple pond alternatives were evaluated for each drainage basin. The analysis was performed in accordance with published FDOT guidelines and standards. The preferred pond sites selected represent the most viable location to provide stormwater treatment and attenuation for this project and are based on quantitative and qualitative engineering judgement. This report is preliminary and should be used as a tool for comparing alternative pond sites. Any assumptions made within this report will be verified and updated throughout the design process which may alter the exact pond size, configuration, and location. The recommended or preferred pond sites were selected from the total lowest ranking for each basin, which were calculated from the sum of the major categories evaluated as shown in **Table 15** below.

Table 15 – Pond Siting Alternatives Evaluation Matrix

Pond	Floodplain Impacts		Right-of-Way Costs		Environmental Impacts		Construction Cost		Hydraulic Issues?			Total Rank
	Rank	(Description)	Rank	(Cost)	Rank	(Description)	Rank	(Cost)	Rank	(Y/N)	(Description)	
0-1	1				1		1.1	$ 144,732	1	N		5.1
0-2	2	Minor Impacts			2	Some Impacts Possible	1.1	$ 163,500	1	N		7.1
0-3	1				2	Some Impacts Possible	1.1	$ 201,252	1	N		6.1
1-1	1				1		2.0	$ 1,792,206	1	N		8.7
1-2	1				1		2.6	$ 2,723,760	3	Y	Site Located Far From Basin Low Point	12.2
1-3A & 1-3B	1				1		2.4	$ 2,513,570	1	N		8.9
2-1	2	Minor Impacts			1		1.7	$ 1,217,827	2	Y	Site is Elevated	9.4
2-2	1				1		1.5	$ 831,242	1	N		6.3
2-3A & 2-3B	1				1		1.7	$ 1,296,891	1	N		8.0
3-1	1				1		3.4	$ 4,178,496	3	Y	Site Located Far From Basin Low Point and Site is Elevated	11.1
3-2	3	Minor Impacts			5	Significant Impacts	2.5	$ 2,696,620	1	N		16.1
3-3	1				5	Significant Impacts	4.3	$ 5,792,553	3	Y	Site Located Far From Basin Low Point and Site is Elevated	16.6
4-1	1				1		2.3	$ 2,194,932	1	N		7.0
4-2	2	Minimal Impacts			1		1.8	$ 1,435,307	1	N		7.2
4-3	5	Signficant Impacts			1		1.5	$ 865,968	1	N		9.9
5-1 / 6-1	1				1		3.5	$ 4,458,583	2	Y	Site Located Away From Basin Low Point	9.5
5-2 / 6-2	1				1		3.6	$ 4,547,291	3	Y	Site Located Away From Basin Low Point and Signficant Distance Off I-75 R/W	11.9
5-3	1				1		2.5	$ 2,641,304	2	Y	Site Located Away From Basin Low Point	8.6
** Preferred Alternative for Basin 5 is to Construct One Stormwater Pond (5-1 / 6-1) to Serve Both Basins 5 and 6.*												
6-1 / 5-1	1				1		3.5	$ 4,458,583	2	Y	Site Located Away From Basin Low Point	9.5
6-2 / 5-2	1				1		3.6	$ 4,547,291	3	Y	Site Located Away From Basin Low Point and Signficant Distance Off I-75 R/W	11.9
6-3A & 6-3B	1				1		2.9	$ 3,296,330	3	Y	Site 6-3B Located Signficant Distance Off I-75 R/W	11.3
** Preferred Alternative for Basin 6 is to Construct One Stormwater Pond (5-1 / 6-1) to Serve Both Basins 5 and 6.*												
7-1	1				1		2.1	$ 1,860,774	1	N		6.5
7-2	1				1		2.3	$ 2,237,477	1	N		6.7
7-3	1				1		2.4	$ 2,422,661	2	Y	Site Located Away From Basin Low Point	7.9
8-1	1				1		3.1	$ 3,703,904	3	Y	Site Located Away From Basin Low Point and Site is Elevated	9.5
8-2	2	Minor Impacts			1		3.1	$ 3,702,561	3	Y	Site Located Signficant Distance Off I-75 R/W and Site is Elevated	10.5
8-3A & 8-3B	1				1		2.9	$ 3,298,675	2	Y	Site 8-3A Located Away From Basin Low Point	8.4

NOTE: Yellow highlighted number designates the preferred alternative based on total rank.

APPENDIX A – Soils Reports

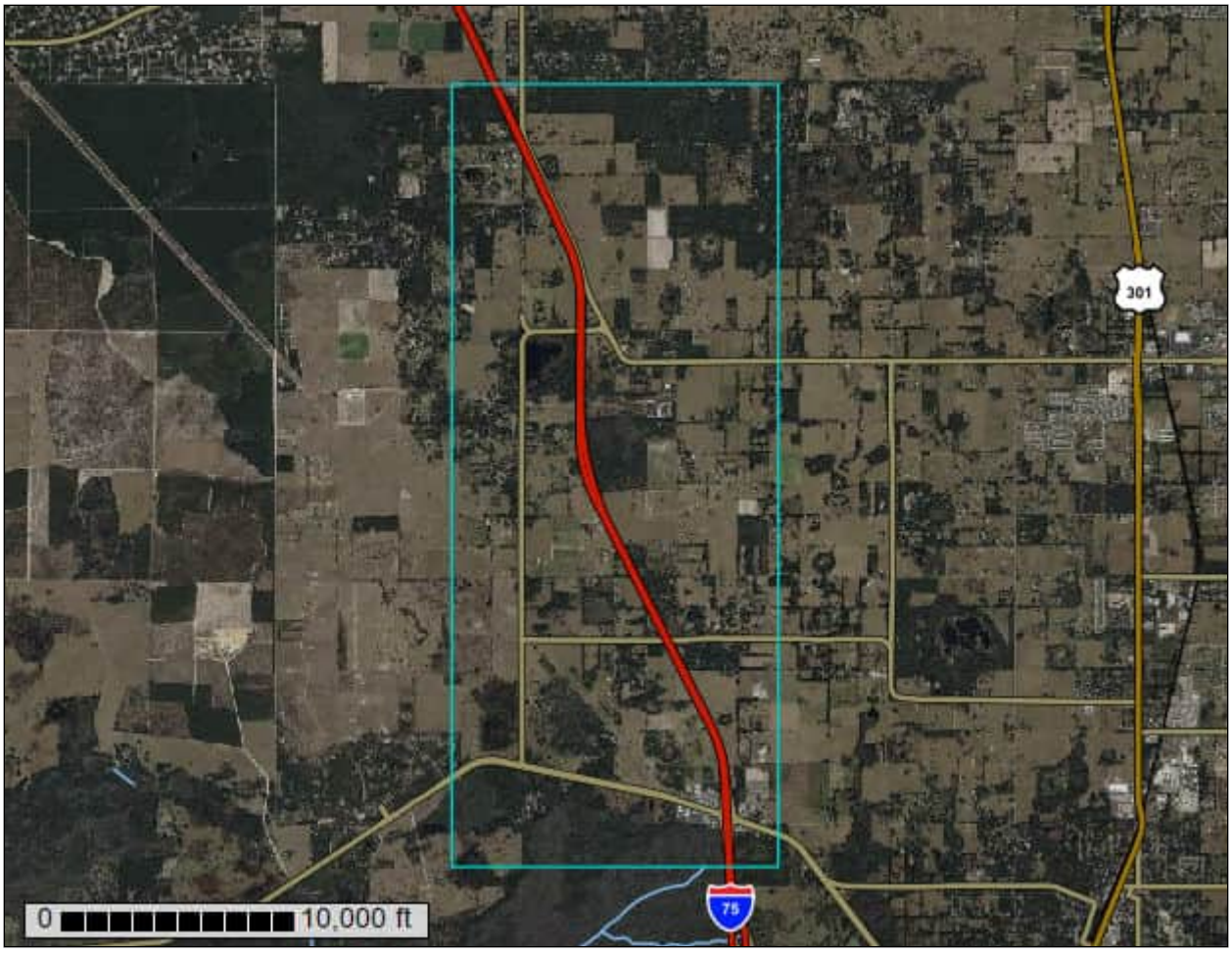
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Sumter County, Florida



February 28, 2024

Preface

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

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

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

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

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

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

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Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

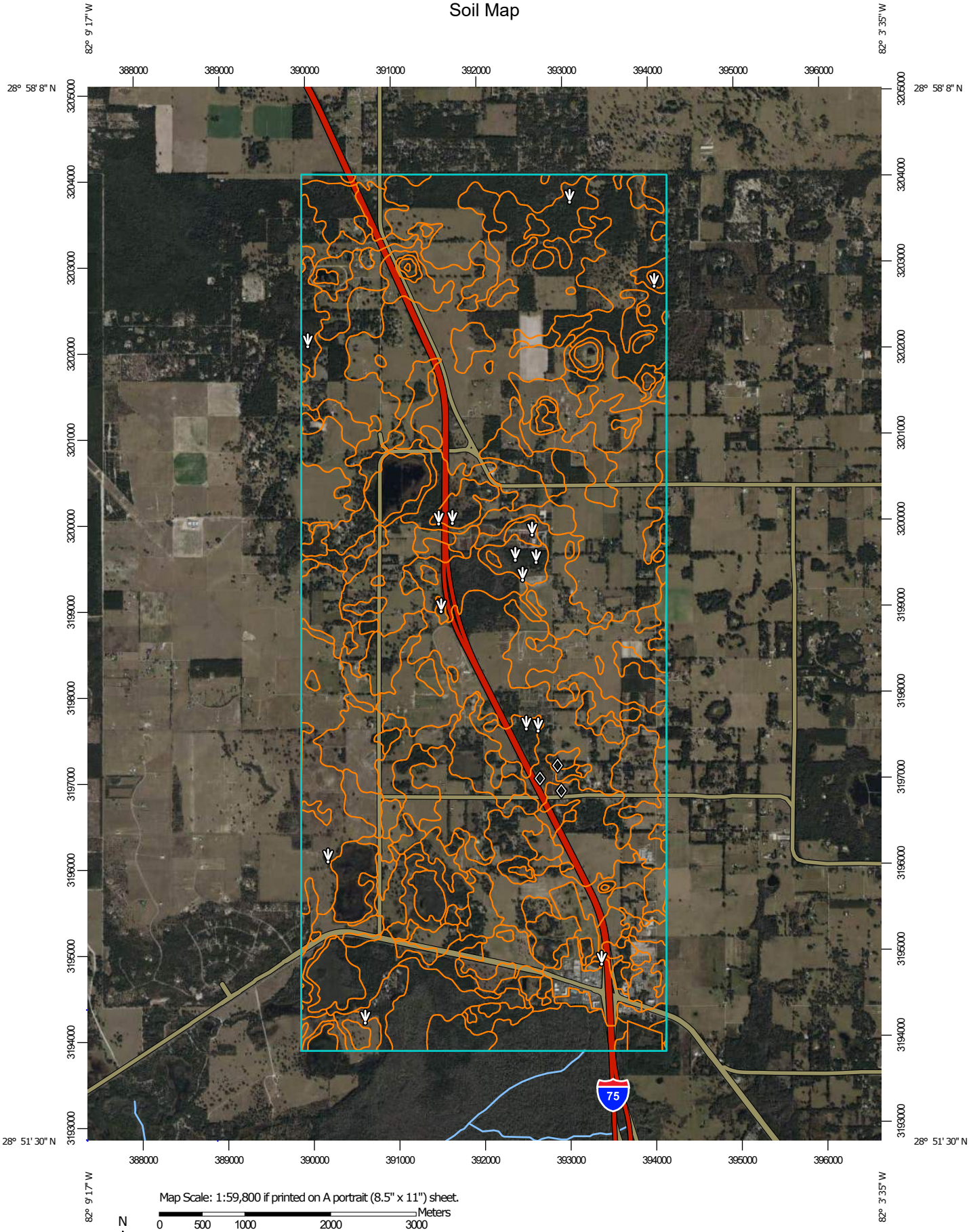
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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

Soil Map

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

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

Soil Survey Area: Sumter County, Florida
Survey Area Data: Version 22, Sep 6, 2023

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

Date(s) aerial images were photographed: Jan 6, 2022—Jan 30, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Arredondo fine sand, 0 to 5 percent slopes	207.6	1.9%
4	Candler sand, 0 to 5 percent slopes	874.5	8.1%
5	Candler sand, 5 to 8 percent slopes	52.6	0.5%
6	Kendrick fine sand, 0 to 5 percent slopes	363.6	3.4%
8	Lake fine sand, 0 to 5 percent slopes	124.4	1.2%
9	Paisley fine sand, bouldery subsurface	96.1	0.9%
10	Sparr fine sand, 0 to 5 percent slopes	342.6	3.2%
11	Millhopper sand, 0 to 5 percent slopes	107.3	1.0%
13	Tavares fine sand, 0 to 5 percent slopes	565.3	5.2%
15	Adamsville fine sand, bouldery subsurface	113.5	1.1%
16	Apopka fine sand, 0 to 5 percent slopes	91.4	0.8%
17	Sumterville-Mabel-Tavares association, bouldery subsurface, 0 to 5 percent slopes	0.9	0.0%
18	Okeelanta muck	15.2	0.1%
21	EauGallie fine sand, bouldery subsurface	54.3	0.5%
22	Smyrna-Smyrna, wet, fine sand, 0 to 2 percent slopes	20.5	0.2%
23	Ona-Ona, wet, fine sand, 0 to 2 percent slopes	14.6	0.1%
24	Basinger fine sand, 0 to 2 percent slopes	18.5	0.2%
25	Kanapaha sand, bouldery subsurface	97.8	0.9%
26	Wabasso fine sand, bouldery subsurface	19.2	0.2%
27	Sumterville fine sand, bouldery subsurface, 0 to 5 percent slopes	402.7	3.7%
30	Placid fine sand, frequently ponded, 0 to 1 percent slopes	156.5	1.5%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
31	Myakka-Myakka, wet, sands, 0 to 2 percent slopes	160.4	1.5%
32	Pompano fine sand	55.5	0.5%
33	Sparr fine sand, bouldery subsurface, 0 to 5 percent slopes	608.8	5.6%
36	Floridana mucky fine sand, frequently ponded, 0 to 1 percent slopes	97.2	0.9%
39	Mabel fine sand, bouldery subsurface, 0 to 5 percent slopes	192.7	1.8%
40	Millhopper sand, bouldery subsurface, 0 to 5 percent slopes	1,479.5	13.7%
42	Adamsville fine sand, 0 to 2 percent slopes	7.0	0.1%
43	Basinger fine sand, depressional, 0 to 1 percent slopes	5.4	0.1%
44	Oldsmar fine sand, bouldery subsurface	129.2	1.2%
45	Electra fine sand, bouldery subsurface	15.5	0.1%
46	Ft. Green fine sand, bouldery subsurface	86.2	0.8%
49	Terra Ceia muck, 0 to 1 percent slopes, frequently flooded	184.8	1.7%
50	Immokalee sand	77.5	0.7%
51	Pits-Dumps complex	106.3	1.0%
53	Tavares fine sand, bouldery subsurface, 0 to 5 percent slopes	1,327.1	12.3%
54	Monteocha fine sand, depressional	29.6	0.3%
55	Pomello fine sand, 0 to 5 percent slopes	146.6	1.4%
57	Gator muck, 0 to 1 percent slopes, frequently flooded	334.8	3.1%
60	Delray fine sand, depressional	3.3	0.0%
61	EauGallie fine sand	11.2	0.1%
62	Urban land, 0 to 2 percent slopes	100.0	0.9%
64	Gator muck, frequently ponded, 0 to 1 percent slopes	43.6	0.4%
65	Candler sand, bouldery subsurface, 0 to 5 percent slopes	672.7	6.2%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
66	Arredondo fine sand, bouldery subsurface, 0 to 5 percent slopes	1,146.4	10.6%
99	Water	19.0	0.2%
Totals for Area of Interest		**10,779.6**	**100.0%**

Map Unit Descriptions

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

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

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

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

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

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

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

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

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

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

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

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

Sumter County, Florida

1—Arredondo fine sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2w0q0
Elevation: 30 to 160 feet
Mean annual precipitation: 44 to 56 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Arredondo and similar soils: 82 percent
Minor components: 18 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arredondo

Setting

Landform: Hills on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, interfluve, riser
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Parent material: Sandy marine deposits and/or loamy marine deposits

Typical profile

A - 0 to 8 inches: fine sand
E - 8 to 62 inches: fine sand
Bt1 - 62 to 69 inches: loamy fine sand
Bt2 - 69 to 80 inches: sandy clay

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)

Hydric soil rating: No

Minor Components

Candler

Percent of map unit: 7 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, tread
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear, concave
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Lake

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

Sparr

Percent of map unit: 4 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

Fort meade

Percent of map unit: 2 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear, convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

4—Candler sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2t3z1
Elevation: 10 to 260 feet
Mean annual precipitation: 47 to 56 inches

Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 280 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Candler and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Candler

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, interfluve, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Eolian deposits and/or sandy and loamy marine deposits

Typical profile

A - 0 to 6 inches: sand
E - 6 to 63 inches: sand
E and Bt - 63 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on ridges and dunes of xeric uplands (G155XB111FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R155XY002FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G155XB111FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Minor Components

Millhopper

Percent of map unit: 5 percent
Landform: Ridges on marine terraces
Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

Tavares

Percent of map unit: 5 percent
Landform: Ridges on marine terraces
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave, convex
Across-slope shape: Linear
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

5—Candler sand, 5 to 8 percent slopes

Map Unit Setting

National map unit symbol: bvsl
Elevation: 30 to 150 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Candler

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Eolian deposits and/or sandy and loamy marine deposits

Typical profile

Ap - 0 to 6 inches: sand
E - 6 to 56 inches: sand
E and Bt - 56 to 80 inches: sand

Properties and qualities

Slope: 5 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained

Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Minor Components

Astatula

Percent of map unit: 7 percent
Landform: Hills on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Sand Pine Scrub (R154XY001FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Apopka

Percent of map unit: 7 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Lake

Percent of map unit: 6 percent
Landform: Hills, marine terraces, ridges
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

6—Kendrick fine sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2v17l
Elevation: 30 to 300 feet
Mean annual precipitation: 44 to 56 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 300 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Kendrick

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits over loamy marine deposits

Typical profile

A - 0 to 7 inches: fine sand
E - 7 to 28 inches: fine sand
Bt - 28 to 73 inches: sandy clay loam
BC - 73 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A

Forage suitability group: Sandy over loamy soils on knolls and ridges of mesic uplands (G154XB211FL)
Other vegetative classification: Sandy over loamy soils on knolls and ridges of mesic uplands (G154XB211FL), Upland Hardwood Hammock (R154XY008FL)
Hydric soil rating: No

Minor Components

Candler
Percent of map unit: 7 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G155XB111FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL)
Hydric soil rating: No

Micanopy
Percent of map unit: 5 percent
Landform: Rises on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Hydric soil rating: No

Blichton
Percent of map unit: 4 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy, loamy, or clayey soils on flats and rises of hydric uplands (G154XB441FL)
Hydric soil rating: No

Nobleton
Percent of map unit: 4 percent
Landform: Rises on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on rises and knolls of mesic uplands (G154XB231FL)
Hydric soil rating: No

8—Lake fine sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2v17f
Elevation: 10 to 200 feet
Mean annual precipitation: 44 to 56 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 300 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Lake

Setting

Landform: Hills on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Eolian deposits or sandy marine deposits

Typical profile

A - 0 to 9 inches: fine sand
C - 9 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 50.02 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)

Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Minor Components

Arredondo
Percent of map unit: 8 percent
Landform: Hills on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Linear, convex
Across-slope shape: Convex
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Tavares
Percent of map unit: 5 percent
Landform: Flats on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL)
Hydric soil rating: No

Jonesville
Percent of map unit: 2 percent
Landform: Rises on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Shallow or moderately deep, sandy or loamy soils on rises and ridges of mesic uplands (G154XB521FL)
Hydric soil rating: No

9—Paisley fine sand, bouldery subsurface

Map Unit Setting
National map unit symbol: bvt9
Elevation: 30 to 130 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Paisley

Setting

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

Typical profile

A - 0 to 5 inches: fine sand
E - 5 to 16 inches: fine sand
Btg - 16 to 80 inches: sandy clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F155XY140FL - Loamy and Clayey Hardwood Hammocks
Forage suitability group: Loamy and clayey soils on flats of hydric or mesic lowlands (G154XB341FL)
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats of hydric or mesic lowlands (G154XB341FL)
Hydric soil rating: Yes

Minor Components

Floridana, depressional

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps

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

Eaugallie, non-hydric
Percent of map unit: 4 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Mabel, bouldery subsurface
Percent of map unit: 3 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F155XY160FL - Sandy over Loamy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Hydric soil rating: No

Ft. green, non-hydric
Percent of map unit: 3 percent
Landform: Knolls on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL)
Hydric soil rating: No

Wabasso, non-hydric
Percent of map unit: 3 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Sumterville, bouldery subsurface
Percent of map unit: 3 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Ecological site: F155XY160FL - Sandy over Loamy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Hydric soil rating: No

10—Sparr fine sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: bvr9
Elevation: 40 to 150 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Sparr

Setting

Landform: Knolls on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 9 inches: fine sand
E - 9 to 45 inches: fine sand
Btg1 - 45 to 51 inches: fine sandy loam
Btg2 - 51 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

Minor Components

Eaugallie, non-hydric

Percent of map unit: 7 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Millhopper

Percent of map unit: 7 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

Wabasso, non-hydric

Percent of map unit: 6 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

11—Millhopper sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2w0q5
Elevation: 30 to 160 feet
Mean annual precipitation: 44 to 56 inches
Mean annual air temperature: 66 to 75 degrees F
Frost-free period: 270 to 330 days

Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Millhopper

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, interfluve, tread
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 9 inches: sand
E - 9 to 58 inches: sand
Bt1 - 58 to 64 inches: loamy sand
Btg2 - 64 to 89 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 2.00 in/hr)
Depth to water table: About 42 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

Minor Components

Candler

Percent of map unit: 5 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, interfluve, tread
Down-slope shape: Convex
Across-slope shape: Convex

Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R155XY002FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Tavares

Percent of map unit: 4 percent
Landform: Knolls on marine terraces, flats on marine terraces, flatwoods on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Interfluve, base slope
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

Arredondo

Percent of map unit: 3 percent
Landform: Hills on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, interfluve, riser
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Gainesville

Percent of map unit: 1 percent
Landform: Hills on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Sumterville, bouldery subsurface

Percent of map unit: 1 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Hydric soil rating: No

Kanapaha

Percent of map unit: 1 percent
Landform: Rises on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: Yes

13—Tavares fine sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2w0pz
Elevation: 30 to 160 feet
Mean annual precipitation: 44 to 56 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Tavares

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve, side slope, tread, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Eolian or sandy marine deposits

Typical profile

A - 0 to 5 inches: fine sand
C - 5 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)

Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

Minor Components

Candler

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

Apopka

Percent of map unit: 4 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Shoulder, summit, footslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Narcoossee

Percent of map unit: 3 percent
Landform: Knolls on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Hydric soil rating: No

Zolfo

Percent of map unit: 3 percent
Landform: Knolls on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Other vegetative classification: North Florida Flatwoods (R154XY004FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Hydric soil rating: No

15—Adamsville fine sand, bouldery subsurface

Map Unit Setting

National map unit symbol: bvrf
Elevation: 10 to 150 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Adamsville, Bouldery Subsurface

Setting

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

Typical profile

A - 0 to 5 inches: fine sand
C - 5 to 80 inches: fine sand

Properties and qualities

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

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A
Ecological site: F155XY150FL - Sandy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Forage suitability group: Sandy soils on rises and knolls of mesic uplands (G154XB131FL)

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

Minor Components

Ona, non-hydric
Percent of map unit: 4 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Pompano
Percent of map unit: 4 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R154XY011FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: Yes

Sparr
Percent of map unit: 4 percent
Landform: Knolls on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F154XA004FL - Moist Sandy Pine-Hardwood Woodlands
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

Tavares
Percent of map unit: 3 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R155XY180FL - Sandy Scrub on Rises, Ridges, and Knolls of Mesic Uplands
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

16—Apopka fine sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2shkg
Elevation: 10 to 260 feet
Mean annual precipitation: 45 to 56 inches
Mean annual air temperature: 66 to 75 degrees F
Frost-free period: 287 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Apopka

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Shoulder, summit, footslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Eolian or sandy marine deposits over loamy marine deposits

Typical profile

A - 0 to 7 inches: fine sand
E - 7 to 50 inches: fine sand
Bt1 - 50 to 67 inches: fine sandy loam
Bt2 - 67 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 12.0
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A

Forage suitability group: Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Minor Components

Candler
Percent of map unit: 5 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, tread
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear, concave
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G155XB111FL)
Hydric soil rating: No

Sparr
Percent of map unit: 5 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

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

17—Sumterville-Mabel-Tavares association, bouldery subsurface, 0 to 5 percent slopes

Map Unit Setting
National map unit symbol: bvrh
Elevation: 30 to 110 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

Sumterville, bouldery subsurface, and similar soils: 55 percent
Mabel, bouldery subsurface, and similar soils: 25 percent
Tavares, bouldery subsurface, and similar soils: 15 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sumterville, Bouldery Subsurface

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and clayey marine deposits

Typical profile

A - 0 to 7 inches: fine sand
E - 7 to 25 inches: fine sand
Btg - 25 to 76 inches: sandy clay

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F155XY160FL - Sandy over Loamy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Forage suitability group: Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Hydric soil rating: No

Description of Mabel, Bouldery Subsurface

Setting

Landform: Rises on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy, loamy, and clayey marine deposits

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 14 inches: fine sand
Bt - 14 to 52 inches: sandy clay
Ck - 52 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F155XY160FL - Sandy over Loamy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Forage suitability group: Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Hydric soil rating: No

Description of Tavares, Bouldery Subsurface

Setting

Landform: Flats on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Eolian or sandy marine deposits

Typical profile

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

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 49.88 in/hr)
Depth to water table: About 42 to 72 inches
Frequency of flooding: None
Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: R155XY180FL - Sandy Scrub on Rises, Ridges, and Knolls of Mesic Uplands
Forage suitability group: Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

Minor Components

Millhopper, bouldery subsurface

Percent of map unit: 5 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F154XA004FL - Moist Sandy Pine-Hardwood Woodlands
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

18—Okeelanta muck

Map Unit Setting

National map unit symbol: bvrj
Elevation: 30 to 100 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Okeelanta

Setting

Landform: Depressions on marine terraces

Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Herbaceous organic material over sandy marine deposits

Typical profile

Oa - 0 to 38 inches: muck
Cg - 38 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very high (about 17.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Forage suitability group: Organic soils in depressions and on flood plains (G154XB645FL)
Other vegetative classification: Freshwater Marshes and Ponds (R154XY010FL), Organic soils in depressions and on flood plains (G154XB645FL)
Hydric soil rating: Yes

Minor Components

Pompano, depressional

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R154XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G154XB145FL)
Hydric soil rating: Yes

Placid

Percent of map unit: 4 percent
Landform: Drainageways on marine terraces, depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

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

Gator

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R154XY010FL), Organic soils in depressions and on flood plains (G154XB645FL)
Hydric soil rating: Yes

Terra ceia

Percent of map unit: 3 percent
Landform: Depressions on flood plains on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Organic soils in depressions and on flood plains (G154XB645FL)
Hydric soil rating: Yes

21—EauGallie fine sand, bouldery subsurface

Map Unit Setting

National map unit symbol: bvrm
Elevation: 30 to 110 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

Eaugallie, non-hydric, and similar soils: 60 percent
Eaugallie, hydric, and similar soils: 20 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eaugallie, Non-hydric

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf

Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 8 inches: fine sand
E - 8 to 25 inches: fine sand
Bh - 25 to 36 inches: fine sand
E' - 36 to 57 inches: fine sand
Cg - 57 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

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

Description of Eaugallie, Hydric

Setting

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

Typical profile

A - 0 to 8 inches: fine sand
E - 8 to 25 inches: fine sand
Bh - 25 to 36 inches: fine sand
E' - 36 to 57 inches: fine sand
Cg - 57 to 80 inches: sandy clay loam

Properties and qualities

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

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

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

Minor Components

Paisley
Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY140FL - Loamy and Clayey Hardwood Hammocks
Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G154XB341FL), Upland Hardwood Hammock (R154XY008FL)
Hydric soil rating: Yes

Myakka, non-hydric
Percent of map unit: 5 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Mabel, bouldery subsurface
Percent of map unit: 5 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F155XY160FL - Sandy over Loamy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Hydric soil rating: No

Wabasso, non-hydric

Percent of map unit: 5 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

22—Smyrna-Smyrna, wet, fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2v171
Elevation: 0 to 150 feet
Mean annual precipitation: 38 to 62 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 300 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Smyrna, non-hydric, and similar soils: 76 percent
Smyrna, hydric, and similar soils: 20 percent
Minor components: 4 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Smyrna, Non-hydric

Setting

Landform: Flats on marine terraces, flatwoods on marine terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
E - 4 to 17 inches: fine sand
Bh - 17 to 27 inches: loamy fine sand
C - 27 to 80 inches: fine sand

Properties and qualities

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

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 3.8 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Description of Smyrna, Hydric

Setting
Landform: Flats on marine terraces, flatwoods on marine terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile
A - 0 to 4 inches: fine sand
E - 4 to 17 inches: fine sand
Bh - 17 to 27 inches: loamy fine sand
C - 27 to 80 inches: fine sand

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 3.8 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)

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

Minor Components

Basinger, depressional
Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Eaugallie, hydric
Percent of map unit: 1 percent
Landform: Flatwoods on marine terraces, flats on marine terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: Yes

Pomona, non-hydric
Percent of map unit: 1 percent
Landform: Flatwoods on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

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

Map Unit Setting
National map unit symbol: 2w4gx
Elevation: 10 to 130 feet
Mean annual precipitation: 46 to 56 inches
Mean annual air temperature: 66 to 77 degrees F

Frost-free period: 325 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Ona and similar soils: 75 percent
Ona, wet, and similar soils: 12 percent
Minor components: 13 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ona

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Description of Ona, Wet

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Minor Components

Myakka

Percent of map unit: 5 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Immokalee

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Basinger, hydric

Percent of map unit: 4 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

24—Basinger fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2svym
Elevation: 0 to 100 feet
Mean annual precipitation: 42 to 63 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Basinger

Setting

Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, convex
Across-slope shape: Concave, linear
Parent material: Sandy marine deposits

Typical profile

Ag - 0 to 2 inches: fine sand
Eg - 2 to 18 inches: fine sand
Bh/E - 18 to 36 inches: fine sand
Cg - 36 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 to 12 inches

Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Minor Components

Myakka

Percent of map unit: 6 percent
Landform: Drainageways on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Pompano

Percent of map unit: 4 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Immokalee

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Placid

Percent of map unit: 4 percent
Landform: Depressions on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave

Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Anclote

Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Convex, concave
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Felda

Percent of map unit: 1 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

25—Kanapaha sand, bouldery subsurface

Map Unit Setting

National map unit symbol: bvrr
Elevation: 10 to 110 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

Kanapaha, non-hydric, and similar soils: 70 percent
Kanapaha, hydric, and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kanapaha, Non-hydric

Setting

Landform: Rises on marine terraces, flats on marine terraces

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

Typical profile

A - 0 to 6 inches: sand
E - 6 to 45 inches: sand
Btg - 45 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Description of Kanapaha, Hydric

Setting

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

Typical profile

A - 0 to 6 inches: sand
E - 6 to 45 inches: sand
Btg - 45 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None

Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: Yes

Minor Components

Eaugallie, non-hydric

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Sparr, bouldery subsurface

Percent of map unit: 5 percent
Landform: Knolls on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

Pompano

Percent of map unit: 5 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Slough (R154XY011FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: Yes

26—Wabasso fine sand, bouldery subsurface

Map Unit Setting

National map unit symbol: bvrs
Elevation: 30 to 130 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

Wabasso, non-hydric, and similar soils: 70 percent
Wabasso, hydric, and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wabasso, Non-hydric

Setting

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

Typical profile

A - 0 to 4 inches: fine sand
E - 4 to 15 inches: fine sand
Bh - 15 to 21 inches: loamy fine sand
Btg - 21 to 60 inches: sandy clay
Ckg - 60 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 12 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Description of Wabasso, Hydric

Setting

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

Typical profile

A - 0 to 4 inches: fine sand
E - 4 to 15 inches: fine sand
Bh - 15 to 21 inches: loamy fine sand
Btg - 21 to 60 inches: sandy clay
Ckg - 60 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: Yes

Minor Components

Paisley

Percent of map unit: 5 percent
Landform: Flats on marine terraces

Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY140FL - Loamy and Clayey Hardwood Hammocks
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats of hydric or mesic lowlands (G154XB341FL)
Hydric soil rating: Yes

Eaugallie, non-hydric

Percent of map unit: 5 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Mabel, bouldery subsurface

Percent of map unit: 5 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F155XY160FL - Sandy over Loamy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Hydric soil rating: No

27—Sumterville fine sand, bouldery subsurface, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: bvrt
Elevation: 50 to 100 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Sumterville, Bouldery Subsurface

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and clayey marine deposits

Typical profile

A - 0 to 9 inches: fine sand
E - 9 to 29 inches: fine sand
Btg - 29 to 80 inches: sandy clay

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F155XY160FL - Sandy over Loamy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Forage suitability group: Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Hydric soil rating: No

Minor Components

Sparr, bouldery subsurface

Percent of map unit: 10 percent
Landform: Knolls on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F154XA004FL - Moist Sandy Pine-Hardwood Woodlands
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

Mabel, bouldery subsurface

Percent of map unit: 10 percent
Landform: Knolls on marine terraces, ridges on marine terraces

Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F155XY160FL - Sandy over Loamy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Hydric soil rating: No

30—Placid fine sand, frequently ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2tzx9
Elevation: 0 to 160 feet
Mean annual precipitation: 44 to 61 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Placid

Setting

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

Typical profile

A - 0 to 24 inches: fine sand
Cg - 24 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Minor Components

Basinger

Percent of map unit: 7 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Myakka

Percent of map unit: 5 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Gentry

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Samsula

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave

Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Felda

Percent of map unit: 2 percent
Landform: Drainageways on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

31—Myakka-Myakka, wet, sands, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2twt1
Elevation: 10 to 130 feet
Mean annual precipitation: 43 to 62 inches
Mean annual air temperature: 64 to 75 degrees F
Frost-free period: 280 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Myakka and similar soils: 75 percent
Myakka, wet, and similar soils: 15 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Myakka

Setting

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

Typical profile

A - 0 to 6 inches: sand
E - 6 to 20 inches: sand
Bh - 20 to 36 inches: sand
C - 36 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Description of Myakka, Wet

Setting

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

Typical profile

A - 0 to 6 inches: sand
E - 6 to 20 inches: sand
Bh - 20 to 36 inches: sand
C - 36 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)

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

Minor Components

Basinger
Percent of map unit: 5 percent
Landform: Drainageways on marine terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Linear, convex
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Eaugallie
Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Placid, depressional
Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Convex, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

32—Pompano fine sand

Map Unit Setting
National map unit symbol: bvs0
Elevation: 10 to 100 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition
Pompano and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pompano

Setting

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

Typical profile

A - 0 to 5 inches: fine sand
C - 5 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Other vegetative classification: Slough (R154XY011FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: Yes

Minor Components

Basinger

Percent of map unit: 7 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R154XY011FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: Yes

Adamsville

Percent of map unit: 7 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve, talf

Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

Placid

Percent of map unit: 6 percent
Landform: Drainageways on marine terraces, depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R154XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G154XB145FL)
Hydric soil rating: Yes

33—Sparr fine sand, bouldery subsurface, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: bvs1
Elevation: 30 to 110 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Sparr, Bouldery Subsurface

Setting

Landform: Knolls on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 8 inches: fine sand
E - 8 to 46 inches: fine sand
Btg1 - 46 to 58 inches: sandy clay loam
Btg2 - 58 to 80 inches: sandy clay

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

Minor Components

Eaugallie, non-hydric

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Millhopper, bouldery subsurface

Percent of map unit: 5 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

Adamsville, bouldery subsurface

Percent of map unit: 5 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

Mabel, bouldery subsurface

Percent of map unit: 5 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Hydric soil rating: No

36—Floridana mucky fine sand, frequently ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2sm4y
Elevation: 0 to 90 feet
Mean annual precipitation: 45 to 63 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 335 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Floridana

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Sandy and loamy marine deposits

Typical profile

A1 - 0 to 4 inches: mucky fine sand
A2 - 4 to 15 inches: fine sand
Eg - 15 to 32 inches: fine sand
Btg - 32 to 44 inches: sandy clay loam
BCg - 44 to 80 inches: sandy loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 inches

Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 4 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: C/D
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Minor Components

Holopaw

Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Felda

Percent of map unit: 4 percent
Landform: Flats on marine terraces, depressions on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Gator

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps

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

Placid

Percent of map unit: 2 percent
Landform: Drainageways on marine terraces, depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

39—Mabel fine sand, bouldery subsurface, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: bvs6
Elevation: 30 to 150 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Mabel, Bouldery Subsurface

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy, loamy, and clayey marine deposits

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 16 inches: fine sand
Bt1 - 16 to 24 inches: sandy clay loam
Bt2 - 24 to 30 inches: clay
Ck - 30 to 80 inches: clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained

Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F155XY160FL - Sandy over Loamy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Forage suitability group: Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Hydric soil rating: No

Minor Components

Paisley

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY140FL - Loamy and Clayey Hardwood Hammocks
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats of hydric or mesic lowlands (G154XB341FL)
Hydric soil rating: Yes

Wabasso, non-hydric

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Oldsmar, non-hydric

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)

Hydric soil rating: No

Sumterville, bouldery subsurface

Percent of map unit: 5 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY160FL - Sandy over Loamy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Other vegetative classification: Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL), Upland Hardwood Hammock (R154XY008FL)
Hydric soil rating: No

40—Millhopper sand, bouldery subsurface, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: bvs8
Elevation: 30 to 110 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Millhopper, Bouldery Subsurface

Setting

Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 7 inches: sand
E - 7 to 45 inches: fine sand
Btg - 45 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)
Depth to water table: About 42 to 72 inches

Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

Minor Components

Sumterville, bouldery subsurface

Percent of map unit: 4 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Hydric soil rating: No

Candler, bouldery subsurface

Percent of map unit: 4 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Mabel, bouldery subsurface

Percent of map unit: 4 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Hydric soil rating: No

Tavares, bouldery subsurface

Percent of map unit: 3 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

42—Adamsville fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2x9c0
Elevation: 0 to 130 feet
Mean annual precipitation: 42 to 57 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 345 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Adamsville and similar soils: 87 percent
Minor components: 13 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adamsville

Setting

Landform: Knolls on marine terraces, rises on marine terraces
Landform position (three-dimensional): Tread, rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 7 inches: fine sand
C - 7 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A
Ecological site: F155XY150FL - Sandy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Forage suitability group: Sandy soils on rises and knolls of mesic uplands (G155XB131FL)

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

Minor Components

Tavares

Percent of map unit: 4 percent
Landform: Knolls on marine terraces, hills on marine terraces, flats on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Side slope, interfluve, tread, rise
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Ecological site: R155XY180FL - Sandy Scrub on Rises, Ridges, and Knolls of Mesic Uplands
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R155XY002FL), Sand Pine Scrub (R155XY001FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL)
Hydric soil rating: No

Zolfo

Percent of map unit: 4 percent
Landform: Rises on marine terraces, flatwoods on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Hydric soil rating: No

Myakka

Percent of map unit: 3 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Pompano

Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

43—Basinger fine sand, depressional, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2v16t
Elevation: 0 to 150 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 287 to 317 days
Farmland classification: Not prime farmland

Map Unit Composition

Basinger, depressional, and similar soils: 92 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Basinger, Depressional

Setting

Landform: Depressions on marine terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy marine deposits

Typical profile

A - 0 to 3 inches: fine sand
E - 3 to 8 inches: fine sand
E/Bh - 8 to 24 inches: fine sand
C - 24 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 50.02 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D

Forage suitability group: Sandy soils on stream terraces, flood plains, or in depressions (G154XB145FL)
Other vegetative classification: Freshwater Marshes and Ponds (R154XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G154XB145FL)
Hydric soil rating: Yes

Minor Components

Smyrna
Percent of map unit: 3 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Immokalee, hydric
Percent of map unit: 3 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: Yes

Floridana, hydric
Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G154XB245FL)
Hydric soil rating: Yes

44—Oldsmar fine sand, bouldery subsurface

Map Unit Setting
National map unit symbol: bvsd
Elevation: 30 to 100 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

Oldsmar, non-hydric, and similar soils: 70 percent
Oldsmar, hydric, and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Oldsmar, Non-hydric

Setting

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

Typical profile

A - 0 to 9 inches: fine sand
E - 9 to 31 inches: fine sand
Bh - 31 to 48 inches: fine sand
Btg - 48 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

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

Description of Oldsmar, Hydric

Setting

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

Typical profile

A - 0 to 9 inches: fine sand
E - 9 to 31 inches: fine sand
Bh - 31 to 48 inches: fine sand
Btg - 48 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

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

Minor Components

Electra, bouldery subsurface

Percent of map unit: 4 percent
Landform: Rises on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

Immokalee, non-hydric

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Eaugallie, non-hydric

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Wabasso, non-hydric

Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

45—Electra fine sand, bouldery subsurface

Map Unit Setting

National map unit symbol: bvsf
Elevation: 50 to 80 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Electra, Bouldery Subsurface

Setting

Landform: Rises on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 3 inches: fine sand
E - 3 to 35 inches: fine sand

Bh - 35 to 40 inches: fine sand
BE - 40 to 46 inches: fine sand
Btg - 46 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F155XY150FL - Sandy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Forage suitability group: Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

Minor Components

Eaugallie, non-hydric

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Sparr, bouldery subsurface

Percent of map unit: 4 percent
Landform: Knolls on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F154XA004FL - Moist Sandy Pine-Hardwood Woodlands
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

Pomello

Percent of map unit: 4 percent
Landform: Rises on marine terraces, ridges on marine terraces

Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G154XB131FL), South Florida Flatwoods (R154XY003FL)
Hydric soil rating: No

Wabasso, non-hydric

Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

46—Ft. Green fine sand, bouldery subsurface

Map Unit Setting

National map unit symbol: bvsg
Elevation: 30 to 130 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

Ft. green, non-hydric, and similar soils: 70 percent
Ft. green, hydric, and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ft. Green, Non-hydric

Setting

Landform: Knolls on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 28 inches: fine sand
Btg1 - 28 to 38 inches: sandy clay loam
Btg2 - 38 to 58 inches: sandy clay loam

Cg - 58 to 80 inches: cobbly sandy clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL)
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL), Upland Hardwood Hammock (R154XY008FL)
Hydric soil rating: No

Description of Ft. Green, Hydric

Setting

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

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 28 inches: fine sand
Btg1 - 28 to 38 inches: sandy clay loam
Btg2 - 38 to 58 inches: sandy clay loam
Cg - 58 to 80 inches: cobbly sandy clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL)
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G154XB241FL)
Hydric soil rating: Yes

Minor Components

Paisley

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY140FL - Loamy and Clayey Hardwood Hammocks
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats of hydric or mesic lowlands (G154XB341FL)
Hydric soil rating: Yes

Wabasso, non-hydric

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Mabel, bouldery subsurface

Percent of map unit: 5 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F155XY160FL - Sandy over Loamy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Loamy and clayey soils on flats and rises of mesic lowlands (G154XB331FL)
Hydric soil rating: No

49—Terra Ceia muck, 0 to 1 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2svzm
Elevation: 0 to 130 feet
Mean annual precipitation: 43 to 55 inches
Mean annual air temperature: 68 to 79 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Terra ceia and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Terra Ceia

Setting

Landform: Flood plains on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear, convex
Across-slope shape: Linear
Parent material: Herbaceous organic material

Typical profile

Oa1 - 0 to 28 inches: muck
Oa2 - 28 to 80 inches: muck

Properties and qualities

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

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Ecological site: R155XY060FL - Organic Freshwater Floodplain Marshes and Swamps

Forage suitability group: Organic soils in depressions and on flood plains (G155XB645FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Minor Components

Gator

Percent of map unit: 3 percent
Landform: Depressions on flood plains on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY060FL - Organic Freshwater Floodplain Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Samsula

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Riviera

Percent of map unit: 2 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Okeelanta

Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Bluff

Percent of map unit: 1 percent
Landform: Flood plains on drainageways on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R155XY050FL - Loamy and Clayey Freshwater Floodplain Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R154XY010FL), Loamy and clayey soils on stream terraces, flood plains, or in depressions (G155XB345FL)
Hydric soil rating: Yes

Favoretta

Percent of map unit: 1 percent
Landform: Flood plains on drainageways on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R155XY050FL - Loamy and Clayey Freshwater Floodplain Marshes and Swamps
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G155XB345FL)
Hydric soil rating: Yes

50—Immokalee sand

Map Unit Setting

National map unit symbol: bvsm
Elevation: 30 to 100 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

Immokalee, non-hydric, and similar soils: 70 percent
Immokalee, hydric, and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Immokalee, Non-hydric

Setting

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

Typical profile

A - 0 to 5 inches: sand
E - 5 to 34 inches: sand
Bh - 34 to 46 inches: sand
C - 46 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

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

Description of Immokalee, Hydric

Setting

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

Typical profile

A - 0 to 5 inches: sand
E - 5 to 34 inches: sand
Bh - 34 to 46 inches: sand
C - 46 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

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

Minor Components

Oldsmar, non-hydric

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Myakka, non-hydric

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Basinger

Percent of map unit: 4 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R154XY011FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: Yes

Pomello

Percent of map unit: 3 percent
Landform: Rises on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Ecological site: F155XY150FL - Sandy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

51—Pits-Dumps complex

Map Unit Setting

National map unit symbol: bvsn
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

Dumps: 50 percent
Pits: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dumps

Setting

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

Interpretive groups

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

Description of Pits

Setting

Landform: Marine terraces
Landform position (three-dimensional): Interfluve, dip
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Altered marine deposits

Interpretive groups

Land capability classification (irrigated): None specified
Forage suitability group: Forage suitability group not assigned (G154XB999FL)

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

Minor Components

Aquents, non-hydric
Percent of map unit: 5 percent
Landform: Marine terraces
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Forage suitability group not assigned (G154XB999FL)
Hydric soil rating: No

Aquents, hydric
Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Forage suitability group not assigned (G154XB999FL)
Hydric soil rating: Yes

53—Tavares fine sand, bouldery subsurface, 0 to 5 percent slopes

Map Unit Setting
National map unit symbol: bvsq
Elevation: 50 to 110 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition
Tavares, bouldery subsurface, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tavares, Bouldery Subsurface

Setting
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Eolian or sandy marine deposits

Typical profile
A - 0 to 7 inches: fine sand

C - 7 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 49.88 in/hr)
Depth to water table: About 42 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: R155XY180FL - Sandy Scrub on Rises, Ridges, and Knolls of Mesic Uplands
Forage suitability group: Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

Minor Components

Millhopper, bouldery subsurface

Percent of map unit: 7 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F154XA004FL - Moist Sandy Pine-Hardwood Woodlands
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

Adamsville, bouldery subsurface

Percent of map unit: 7 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Upland Mesic Flatwoods and Hammocks on Rises and Knolls
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

Sparr, bouldery subsurface

Percent of map unit: 6 percent
Landform: Knolls on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve, rise

Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F154XA004FL - Moist Sandy Pine-Hardwood Woodlands
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

54—Monteocha fine sand, depressional

Map Unit Setting

National map unit symbol: bvsr
Elevation: 50 to 100 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Monteocha

Setting

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

Typical profile

A - 0 to 11 inches: fine sand
E - 11 to 28 inches: fine sand
Bh - 28 to 34 inches: fine sand
E' - 34 to 55 inches: fine sand
Btg - 55 to 80 inches: fine sandy loam

Properties and qualities

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

Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy soils on stream terraces, flood plains, or in depressions (G154XB145FL)
Other vegetative classification: Freshwater Marshes and Ponds (R154XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G154XB145FL)
Hydric soil rating: Yes

Minor Components

Floridana, depressional

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R154XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G154XB245FL)
Hydric soil rating: Yes

Placid

Percent of map unit: 4 percent
Landform: Drainageways on marine terraces, depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R154XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G154XB145FL)
Hydric soil rating: Yes

Okeelanta

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R154XY010FL), Organic soils in depressions and on flood plains (G154XB645FL)
Hydric soil rating: Yes

Wabasso, non-hydric

Percent of map unit: 4 percent
Landform: Flats on marine terraces

Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Basinger

Percent of map unit: 4 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R154XY011FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: Yes

55—Pomello fine sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2v16w
Elevation: 0 to 130 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 287 to 317 days
Farmland classification: Not prime farmland

Map Unit Composition

Pomello and similar soils: 91 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pomello

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser, rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
E - 4 to 55 inches: fine sand
Bh - 55 to 67 inches: fine sand
Bw - 67 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

Minor Components

Myakka, non-hydric

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Basinger, hydric

Percent of map unit: 2 percent
Landform: Drainageways
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, convex
Across-slope shape: Concave, linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Eaugallie, non-hydric

Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Sparr

Percent of map unit: 1 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G154XB131FL)
Hydric soil rating: No

57—Gator muck, 0 to 1 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2tzx0
Elevation: 0 to 100 feet
Mean annual precipitation: 45 to 61 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Gator, frequently flooded, and similar soils: 82 percent
Minor components: 18 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gator, Frequently Flooded

Setting

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

Typical profile

Oa - 0 to 34 inches: muck
Cg1 - 34 to 46 inches: sandy clay loam
Cg2 - 46 to 52 inches: stratified fine sandy loam to sandy clay loam to loamy fine sand
Cg3 - 52 to 60 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 inches

Frequency of flooding: Frequent
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very high (about 17.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: C/D
Ecological site: R155XY060FL - Organic Freshwater Floodplain Marshes and Swamps
Forage suitability group: Organic soils in depressions and on flood plains (G155XB645FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Minor Components

Terra ceia, frequently flooded

Percent of map unit: 6 percent
Landform: Flood plains on marine terraces, depressions on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear, convex, concave
Across-slope shape: Linear, concave
Ecological site: R155XY060FL - Organic Freshwater Floodplain Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Floridana, frequently flooded

Percent of map unit: 5 percent
Landform: Drainageways on marine terraces, flood plains on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: R155XY040FL - Sandy over Loamy Freshwater Floodplain Marshes and Swamps
Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Pompano

Percent of map unit: 3 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Tequesta

Percent of map unit: 2 percent

Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R156BY010FL), Organic soils in depressions and on flood plains (G156AC645FL)
Hydric soil rating: Yes

St. johns

Percent of map unit: 2 percent
Landform: Flats on marine terraces, depressions on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

60—Delray fine sand, depressional

Map Unit Setting

National map unit symbol: bvsz
Elevation: 10 to 100 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Delray

Setting

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

Typical profile

A1 - 0 to 6 inches: fine sand
A2 - 6 to 16 inches: fine sand
Eg - 16 to 60 inches: fine sand
Btg - 60 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy soils on stream terraces, flood plains, or in depressions (G154XB145FL)
Other vegetative classification: Freshwater Marshes and Ponds (R154XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G154XB145FL)
Hydric soil rating: Yes

Minor Components

Placid

Percent of map unit: 5 percent
Landform: Depressions on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R154XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G154XB145FL)
Hydric soil rating: Yes

Basinger

Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R154XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G154XB145FL)
Hydric soil rating: Yes

Pompano

Percent of map unit: 5 percent
Landform: Drainageways on marine terraces, flats on marine terraces

Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R154XY011FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: Yes

Floridana, depressional

Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R154XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G154XB245FL)
Hydric soil rating: Yes

61—EauGallie fine sand

Map Unit Setting

National map unit symbol: bvt0
Elevation: 50 to 100 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

Eaugallie, non-hydric, and similar soils: 70 percent
Eaugallie, hydric, and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eaugallie, Non-hydric

Setting

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

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 21 inches: fine sand
Bh - 21 to 34 inches: fine sand

E' - 34 to 50 inches: fine sand
Btg - 50 to 65 inches: sandy clay loam
Cg - 65 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.8 inches)

Interpretive groups

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

Description of Eaugallie, Hydric

Setting

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

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 21 inches: fine sand
Bh - 21 to 34 inches: fine sand
E' - 34 to 50 inches: fine sand
Btg - 50 to 65 inches: sandy clay loam
Cg - 65 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.8 inches)

Interpretive groups

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

Minor Components

Oldsmar, hydric

Percent of map unit: 4 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: Yes

Immokalee, non-hydric

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Myakka, non-hydric

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

Wabasso, non-hydric

Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks

Other vegetative classification: South Florida Flatwoods (R154XY003FL), Sandy soils on flats of mesic or hydric lowlands (G154XB141FL)
Hydric soil rating: No

62—Urban land, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2x9fc
Elevation: 0 to 200 feet
Mean annual precipitation: 40 to 68 inches
Mean annual air temperature: 68 to 79 degrees F
Frost-free period: 345 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform: Knolls on marine terraces, rises on marine terraces, hills on marine terraces, flatwoods on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope, riser, rise, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: No parent material

Interpretive groups

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

Minor Components

Matlacha

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

St. augustine

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

Myakka

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

Pomello

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

Immokalee

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

Brynwood

Percent of map unit: 1 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Adamsville

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

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

Eaugallie

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

Paola

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

Apopka

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

Cypress lake

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

64—Gator muck, frequently ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2tzwz

Elevation: 0 to 100 feet
Mean annual precipitation: 42 to 56 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Gator and similar soils: 83 percent
Minor components: 17 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gator

Setting

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

Typical profile

Oa - 0 to 18 inches: muck
Cg1 - 18 to 36 inches: sandy clay loam
Cg2 - 36 to 55 inches: fine sandy loam
Cg3 - 55 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very high (about 13.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Forage suitability group: Organic soils in depressions and on flood plains (G155XB645FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Minor Components

Terra ceia

Percent of map unit: 5 percent

Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Convex, concave
Across-slope shape: Linear, concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Chobee

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY090FL - Loamy and Clayey Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Loamy and clayey soils on stream terraces, flood plains, or in depressions (G155XB345FL)
Hydric soil rating: Yes

Tequesta

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R156BY010FL), Organic soils in depressions and on flood plains (G156AC645FL)
Hydric soil rating: Yes

Felda

Percent of map unit: 3 percent
Landform: Drainageways on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Pompano

Percent of map unit: 1 percent
Landform: Drainageways on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

65—Candler sand, bouldery subsurface, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: bvt4
Elevation: 30 to 150 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Candler, Bouldery Subsurface

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Eolian deposits and/or sandy and loamy marine deposits

Typical profile

A - 0 to 3 inches: sand
E - 3 to 65 inches: sand
E and Bt - 65 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)

Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Minor Components

Lake
Percent of map unit: 4 percent
Landform: Knolls, marine terraces, ridges
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Astatula
Percent of map unit: 4 percent
Landform: Hills on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Sand Pine Scrub (R154XY001FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Arredondo, bouldery subsurface
Percent of map unit: 4 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Tavares, bouldery subsurface
Percent of map unit: 4 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

Millhopper, bouldery subsurface
Percent of map unit: 4 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

66—Arredondo fine sand, bouldery subsurface, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: bvt5
Elevation: 40 to 150 feet
Mean annual precipitation: 45 to 53 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Arredondo, Bouldery Subsurface

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 8 inches: fine sand
E - 8 to 58 inches: fine sand
Bt - 58 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)

Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G154XB111FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL)
Hydric soil rating: No

Minor Components

Kendrick
Percent of map unit: 4 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy over loamy soils on knolls and ridges of mesic uplands (G154XB211FL)
Hydric soil rating: No

Tavares, bouldery subsurface
Percent of map unit: 4 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL), Longleaf Pine-Turkey Oak Hills (R154XY002FL)
Hydric soil rating: No

Lake
Percent of map unit: 4 percent
Landform: Knolls, marine terraces, ridges
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

Millhopper, bouldery subsurface
Percent of map unit: 4 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Upland Hardwood Hammock (R154XY008FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G154XB121FL)
Hydric soil rating: No

Candler, bouldery subsurface
Percent of map unit: 4 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R154XY002FL), Sandy soils on ridges and dunes of xeric uplands (G154XB111FL)
Hydric soil rating: No

99—Water

Map Unit Composition

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

Description of Water

Interpretive groups

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

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

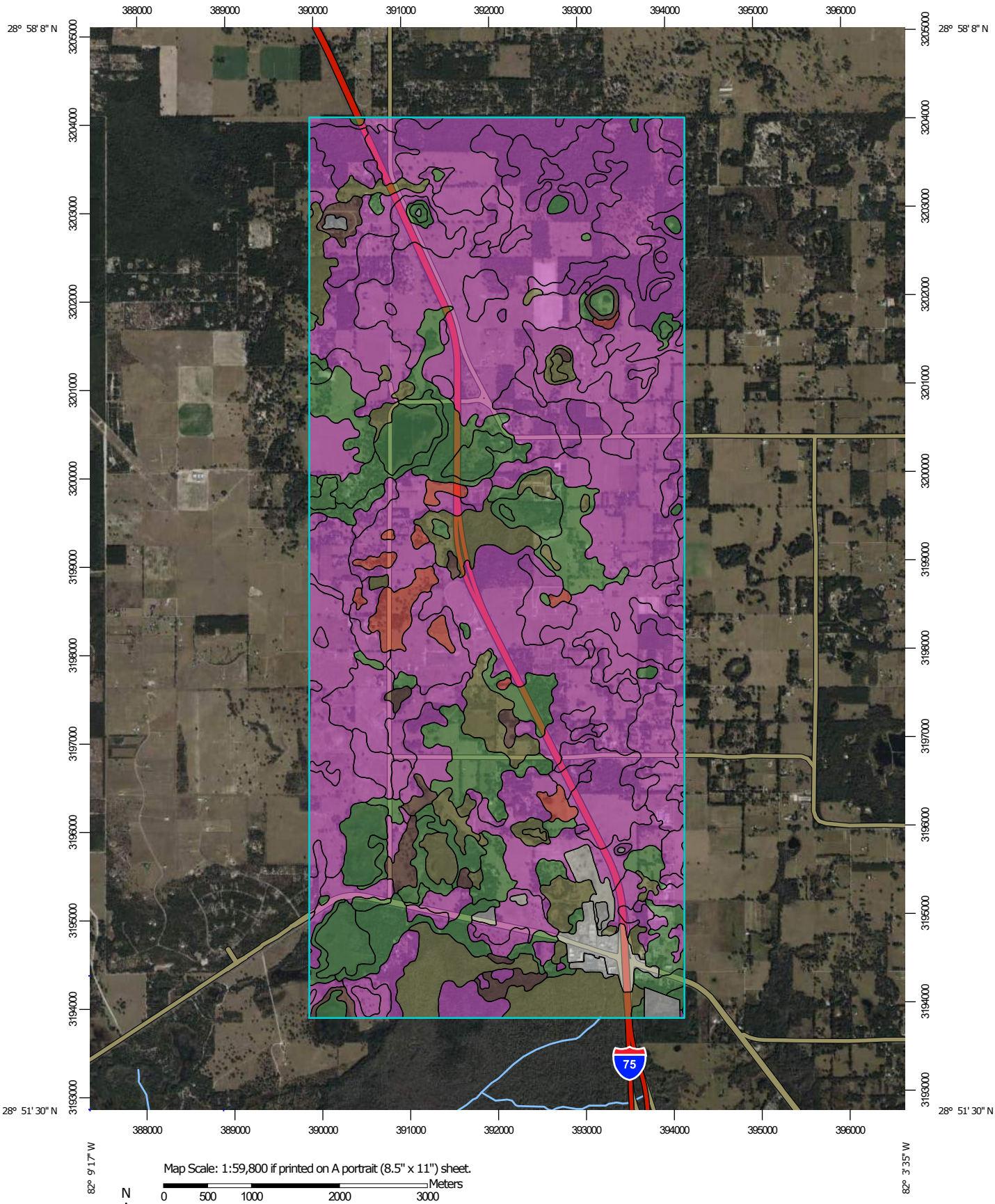
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Custom Soil Resource Report
Map—Hydrologic Soil Group



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

Soil Survey Area: Sumter County, Florida
Survey Area Data: Version 22, Sep 6, 2023

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

Date(s) aerial images were photographed: Jan 6, 2022—Jan 30, 2022

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

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1	Arredondo fine sand, 0 to 5 percent slopes	A	207.6	1.9%
4	Candler sand, 0 to 5 percent slopes	A	874.5	8.1%
5	Candler sand, 5 to 8 percent slopes	A	52.6	0.5%
6	Kendrick fine sand, 0 to 5 percent slopes	A	363.6	3.4%
8	Lake fine sand, 0 to 5 percent slopes	A	124.4	1.2%
9	Paisley fine sand, bouldery subsurface	B/D	96.1	0.9%
10	Sparr fine sand, 0 to 5 percent slopes	A/D	342.6	3.2%
11	Millhopper sand, 0 to 5 percent slopes	A	107.3	1.0%
13	Tavares fine sand, 0 to 5 percent slopes	A	565.3	5.2%
15	Adamsville fine sand, bouldery subsurface	A	113.5	1.1%
16	Apopka fine sand, 0 to 5 percent slopes	A	91.4	0.8%
17	Sumterville-Mabel-Tavares association, bouldery subsurface, 0 to 5 percent slopes	C/D	0.9	0.0%
18	Okeelanta muck	A/D	15.2	0.1%
21	EauGallie fine sand, bouldery subsurface	A/D	54.3	0.5%
22	Smyrna-Smyrna, wet, fine sand, 0 to 2 percent slopes	A/D	20.5	0.2%
23	Ona-Ona, wet, fine sand, 0 to 2 percent slopes	B/D	14.6	0.1%
24	Basinger fine sand, 0 to 2 percent slopes	A/D	18.5	0.2%
25	Kanapaha sand, bouldery subsurface	A/D	97.8	0.9%
26	Wabasso fine sand, bouldery subsurface	B/D	19.2	0.2%
27	Sumterville fine sand, bouldery subsurface, 0 to 5 percent slopes	C/D	402.7	3.7%
30	Placid fine sand, frequently ponded, 0 to 1 percent slopes	A/D	156.5	1.5%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
31	Myakka-Myakka, wet, sands, 0 to 2 percent slopes	A/D	160.4	1.5%
32	Pompano fine sand	A/D	55.5	0.5%
33	Sparr fine sand, bouldery subsurface, 0 to 5 percent slopes	A/D	608.8	5.6%
36	Floridana mucky fine sand, frequently ponded, 0 to 1 percent slopes	C/D	97.2	0.9%
39	Mabel fine sand, bouldery subsurface, 0 to 5 percent slopes	D	192.7	1.8%
40	Millhopper sand, bouldery subsurface, 0 to 5 percent slopes	A	1,479.5	13.7%
42	Adamsville fine sand, 0 to 2 percent slopes	A	7.0	0.1%
43	Basinger fine sand, depressional, 0 to 1 percent slopes	A/D	5.4	0.1%
44	Oldsmar fine sand, bouldery subsurface	A/D	129.2	1.2%
45	Electra fine sand, bouldery subsurface	A	15.5	0.1%
46	Ft. Green fine sand, bouldery subsurface	C/D	86.2	0.8%
49	Terra Ceia muck, 0 to 1 percent slopes, frequently flooded	A/D	184.8	1.7%
50	Immokalee sand	B/D	77.5	0.7%
51	Pits-Dumps complex		106.3	1.0%
53	Tavares fine sand, bouldery subsurface, 0 to 5 percent slopes	A	1,327.1	12.3%
54	Monteocha fine sand, depressional	A/D	29.6	0.3%
55	Pomello fine sand, 0 to 5 percent slopes	A	146.6	1.4%
57	Gator muck, 0 to 1 percent slopes, frequently flooded	C/D	334.8	3.1%
60	Delray fine sand, depressional	A/D	3.3	0.0%
61	EauGallie fine sand	A/D	11.2	0.1%
62	Urban land, 0 to 2 percent slopes		100.0	0.9%
64	Gator muck, frequently ponded, 0 to 1 percent slopes	C/D	43.6	0.4%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
65	Candler sand, bouldery subsurface, 0 to 5 percent slopes	A	672.7	6.2%
66	Arredondo fine sand, bouldery subsurface, 0 to 5 percent slopes	A	1,146.4	10.6%
99	Water		19.0	0.2%
Totals for Area of Interest			**10,779.6**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Water Features

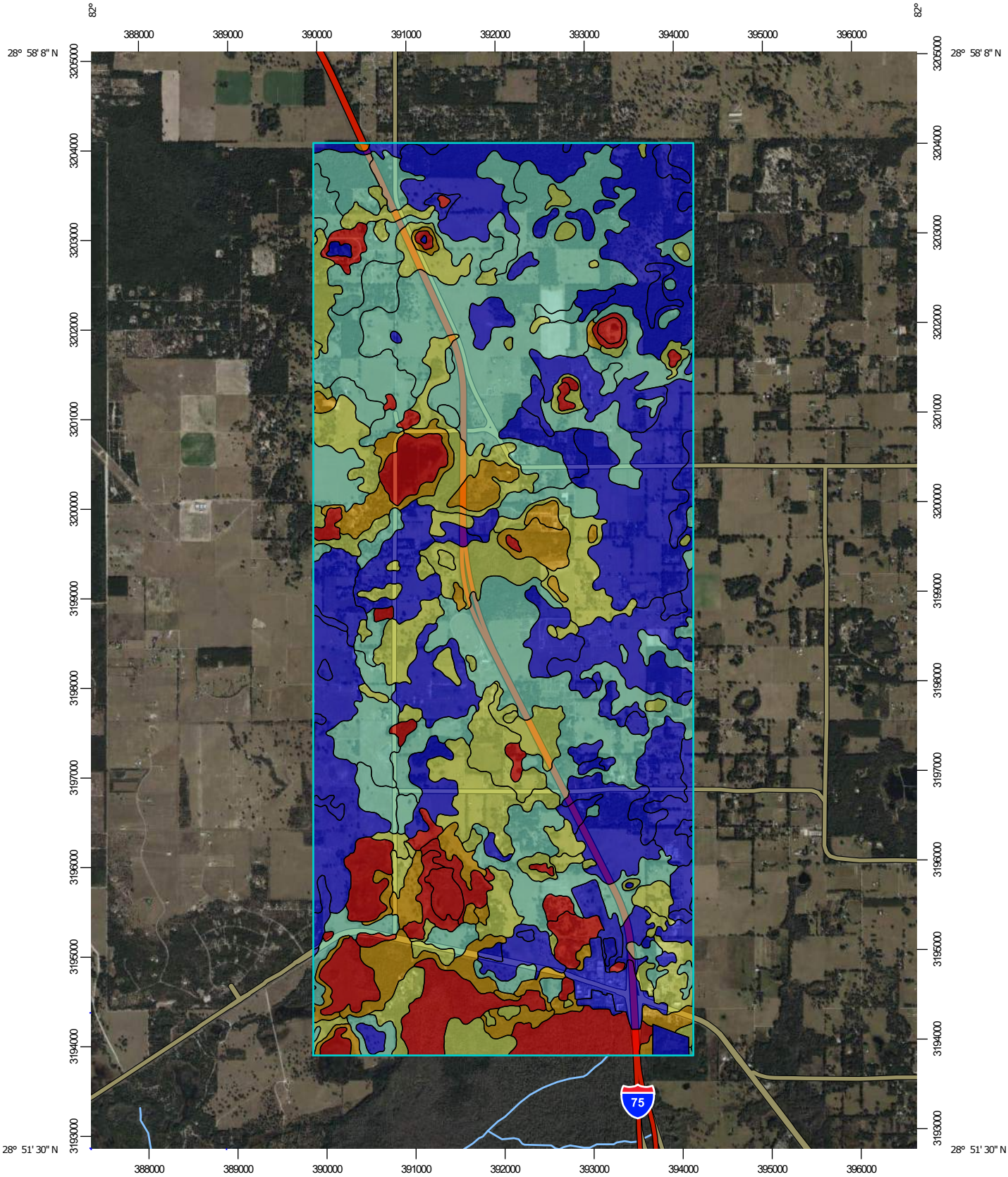
Water Features include ponding frequency, flooding frequency, and depth to water table.

Depth to Water Table

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Map—Depth to Water Table



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Lines

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Points

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

Soil Survey Area: Sumter County, Florida
Survey Area Data: Version 22, Sep 6, 2023

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

Date(s) aerial images were photographed: Jan 6, 2022—Jan 30, 2022

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

Table—Depth to Water Table

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
1	Arredondo fine sand, 0 to 5 percent slopes	>200	207.6	1.9%
4	Candler sand, 0 to 5 percent slopes	>200	874.5	8.1%
5	Candler sand, 5 to 8 percent slopes	>200	52.6	0.5%
6	Kendrick fine sand, 0 to 5 percent slopes	>200	363.6	3.4%
8	Lake fine sand, 0 to 5 percent slopes	>200	124.4	1.2%
9	Paisley fine sand, bouldery subsurface	8	96.1	0.9%
10	Sparr fine sand, 0 to 5 percent slopes	59	342.6	3.2%
11	Millhopper sand, 0 to 5 percent slopes	145	107.3	1.0%
13	Tavares fine sand, 0 to 5 percent slopes	127	565.3	5.2%
15	Adamsville fine sand, bouldery subsurface	84	113.5	1.1%
16	Apopka fine sand, 0 to 5 percent slopes	>200	91.4	0.8%
17	Sumterville-Mabel-Tavares association, bouldery subsurface, 0 to 5 percent slopes	59	0.9	0.0%
18	Okeelanta muck	0	15.2	0.1%
21	EauGallie fine sand, bouldery subsurface	31	54.3	0.5%
22	Smyrna-Smyrna, wet, fine sand, 0 to 2 percent slopes	31	20.5	0.2%
23	Ona-Ona, wet, fine sand, 0 to 2 percent slopes	31	14.6	0.1%
24	Basinger fine sand, 0 to 2 percent slopes	15	18.5	0.2%
25	Kanapaha sand, bouldery subsurface	31	97.8	0.9%
26	Wabasso fine sand, bouldery subsurface	31	19.2	0.2%
27	Sumterville fine sand, bouldery subsurface, 0 to 5 percent slopes	59	402.7	3.7%
30	Placid fine sand, frequently ponded, 0 to 1 percent slopes	0	156.5	1.5%

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
31	Myakka-Myakka, wet, sands, 0 to 2 percent slopes	31	160.4	1.5%
32	Pompano fine sand	15	55.5	0.5%
33	Sparr fine sand, bouldery subsurface, 0 to 5 percent slopes	59	608.8	5.6%
36	Floridana mucky fine sand, frequently ponded, 0 to 1 percent slopes	0	97.2	0.9%
39	Mabel fine sand, bouldery subsurface, 0 to 5 percent slopes	69	192.7	1.8%
40	Millhopper sand, bouldery subsurface, 0 to 5 percent slopes	145	1,479.5	13.7%
42	Adamsville fine sand, 0 to 2 percent slopes	76	7.0	0.1%
43	Basinger fine sand, depressional, 0 to 1 percent slopes	0	5.4	0.1%
44	Oldsmar fine sand, bouldery subsurface	31	129.2	1.2%
45	Electra fine sand, bouldery subsurface	84	15.5	0.1%
46	Ft. Green fine sand, bouldery subsurface	31	86.2	0.8%
49	Terra Ceia muck, 0 to 1 percent slopes, frequently flooded	0	184.8	1.7%
50	Immokalee sand	31	77.5	0.7%
51	Pits-Dumps complex	>200	106.3	1.0%
53	Tavares fine sand, bouldery subsurface, 0 to 5 percent slopes	145	1,327.1	12.3%
54	Monteocha fine sand, depressional	0	29.6	0.3%
55	Pomello fine sand, 0 to 5 percent slopes	84	146.6	1.4%
57	Gator muck, 0 to 1 percent slopes, frequently flooded	0	334.8	3.1%
60	Delray fine sand, depressional	15	3.3	0.0%
61	EauGallie fine sand	31	11.2	0.1%
62	Urban land, 0 to 2 percent slopes	>200	100.0	0.9%
64	Gator muck, frequently ponded, 0 to 1 percent slopes	0	43.6	0.4%

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
65	Candler sand, bouldery subsurface, 0 to 5 percent slopes	>200	672.7	6.2%
66	Arredondo fine sand, bouldery subsurface, 0 to 5 percent slopes	>200	1,146.4	10.6%
99	Water	>200	19.0	0.2%
Totals for Area of Interest			**10,779.6**	**100.0%**

Rating Options—Depth to Water Table

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December

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APPENDIX B – FEMA Flood Insurance Rate Maps

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management. Stillwater Elevations may be shown to the nearest tenth of a foot. Users should refer to the Flood Insurance Study (FIS) for detailed flood elevation information.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

Base map information shown on this FIRM was provided in digital format by the Southwest Florida Water Management District. The original orthophotos was provided in color with a one-foot pixel resolution at a scale of 1" = 200' from photography flown December 2008 - January 2009.

This map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

DATUM INFORMATION

The **projection** used in the preparation of this map was Florida State Plane West FIPS Zone 0902 (Feet). The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Base Flood elevations (BFEs) on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

Example Datum Offset Calculation
using datum offset table below
NAVD88 = NAVD29 + (datum offset value)

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange (FMIX) at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

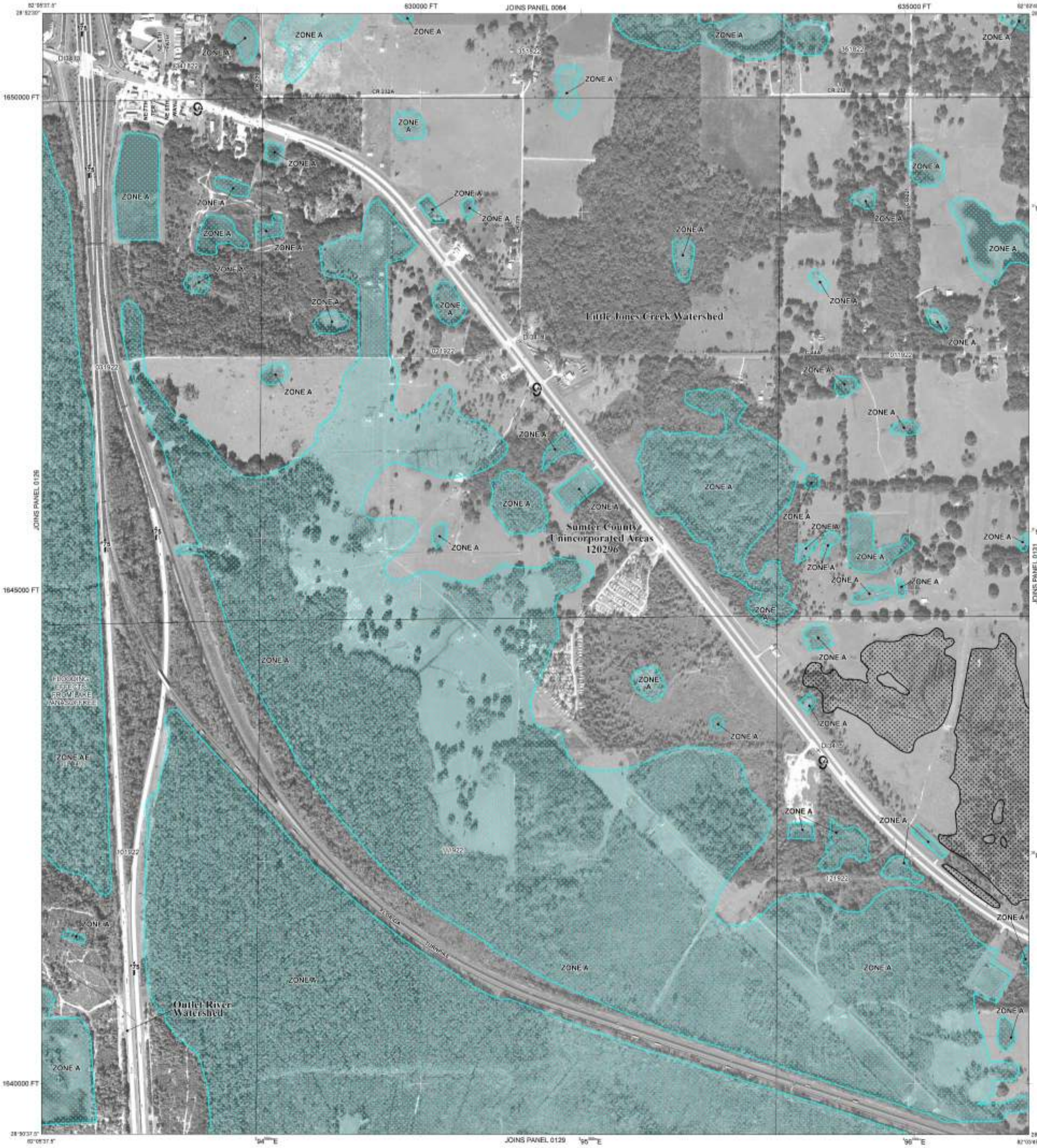
Watershed Table

Watershed	Datum Offset (ft)	Study Type	Total Rainfall Volume (in) 1 Day 100yr	Multi-Day Rainfall Used[1]	Date of Model
1. Big Jones Creek	-0.86	Digital Conversion	11.3	NO	09/15/81
2. Big Prairie	-0.87	Digital Conversion	11.3	NO	09/15/81
3. Bushnell	-0.84	Digital Conversion	11.3	NO	09/15/81
4. Clearwater Lake Outlet	-0.86	Digital Conversion	11.3	NO	09/15/81
5. Devils Creek	-0.86	Digital Conversion	11.3	NO	09/15/81
6. Garl Lake	-0.84	Digital Conversion	11.3	NO	09/15/81
7. Gator Hole Slough	-0.86	Digital Conversion	11.3	NO	09/15/81
8. Gum Slough	-0.86	Digital Conversion	11.3	NO	09/15/81
9. Gum Swamp	-0.86	Digital Conversion	11.3	NO	09/15/81
10. Half Moon	-0.86	Digital Conversion	11.3	NO	09/15/81
11. Helena Run	-0.86	Digital Conversion	11.3	NO	09/15/81
12. Jumper Creek Canal	-0.86	Digital Conversion	11.3	NO	09/15/81
13. Lady Lake	-0.86	Digital Conversion	11.3	NO	09/15/81
14. Lake Deaton Outlet	-0.86	Digital Conversion	11.3	YES	09/15/81
15. Lake Miona Outlet	-0.86	Digital Conversion	11.3	YES	09/15/81
16. Lake Okahumpka Outlet	-0.86	Digital Conversion	11.3	YES	09/15/81
17. Little Jones Creek	-0.86	Digital Conversion	11.3	NO	09/15/81
18. Little Withlacoochee	-0.86	Digital Conversion	11.3	NO	09/15/81
19. Outlet River	-0.86	Digital Conversion	11.3	NO	09/15/81
20. Robinson Lake Outlet	-0.86	Digital Conversion	11.3	NO	09/15/81
21. Shady Brook	-0.86	Digital Conversion	11.3	NO	09/15/81
22. Webster	-0.86	Digital Conversion	11.3	NO	09/15/81
23. Withlacoochee River	-0.86	Digital Conversion	11.3	NO	09/15/81

[1] Multi-Day event used only in specific sub-basins, refer to the FIS report.

[2] Zone X (shaded) 0.2% annual chance floodplain is delineated only in watersheds where the Study Type is Redelineation or Coastal. The 0.2% annual chance floodplain is not delineated in watersheds where the Study Type is Detailed. Refer to the Watershed table for Study Type.

This digital Flood Insurance Rate Map (FIRM) was produced through a cooperative partnership between the Southwest Florida Water Management District (SWFWMD), Sumter County, Federal Emergency Management Agency (FEMA), and the associated communities within Sumter County.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot; and areas protected by levees from 1% annual chance flood. See additional note in Watershed Table on left collar [2]

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

	1% annual chance floodplain boundary
	0.2% annual chance floodplain boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
~~ 513 ~~~	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

(A)———(A)	Cross section line
(23)- - - -(23)	Transect line
87°07'30", 32°22'30"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
4275000m E	1000-meter Universal Transverse Mercator grid ticks, Zone 17 N
6000000 FT	5000-foot grid values: Florida State Plane coordinate system, West zone (FIPSZONE 0902), Transverse Mercator projection
DX5510 x	Bench mark (see explanation in Notes to Users section of this FIRM panel)
• M1.5	River Mile
222218	Section - Township - Range
7NX1000 ♦	Junction - Points defining locations of flow accumulation or hydraulic connectivity. The first two characters of the Junction name represents the specific watershed (as shown in the map collar locator map) in which the Junction is located (note that boundary Junctions, without an associated floodplain, are also shown).
- - - - -	Watershed Boundary

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
SEPTEMBER 27, 2013

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET

150 0 150 300 METERS

NATIONAL FLOOD INSURANCE PROGRAM

NFIP

PANEL 0127D

FIRM
FLOOD INSURANCE RATE MAP

SUMTER COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 127 OF 440
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SUMTER COUNTY	120296	0127	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12119C0127D

EFFECTIVE DATE
SEPTEMBER 27, 2013

Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management. Stillwater Elevations may be shown to the nearest tenth of a foot. Users should refer to the Flood Insurance Study (FIS) for detailed flood elevation information.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

Base map information shown on this FIRM was provided in digital format by the Southwest Florida Water Management District. The original orthophotos was provided in color with a one-foot pixel resolution at a scale of 1" = 200' from photography flown December 2008 - January 2009.

This map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

DATUM INFORMATION

The **projection** used in the preparation of this map was Florida State Plane West FIPS Zone 0902 (Feet). The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Base Flood elevations (BFEs) on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

Example Datum Offset Calculation
using datum offset table below
NAVD88 = NAVD29 + (datum offset value)

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, A Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products or the National Flood Insurance Program in general, please call the FEMA Map information eXchange (FMIX) at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

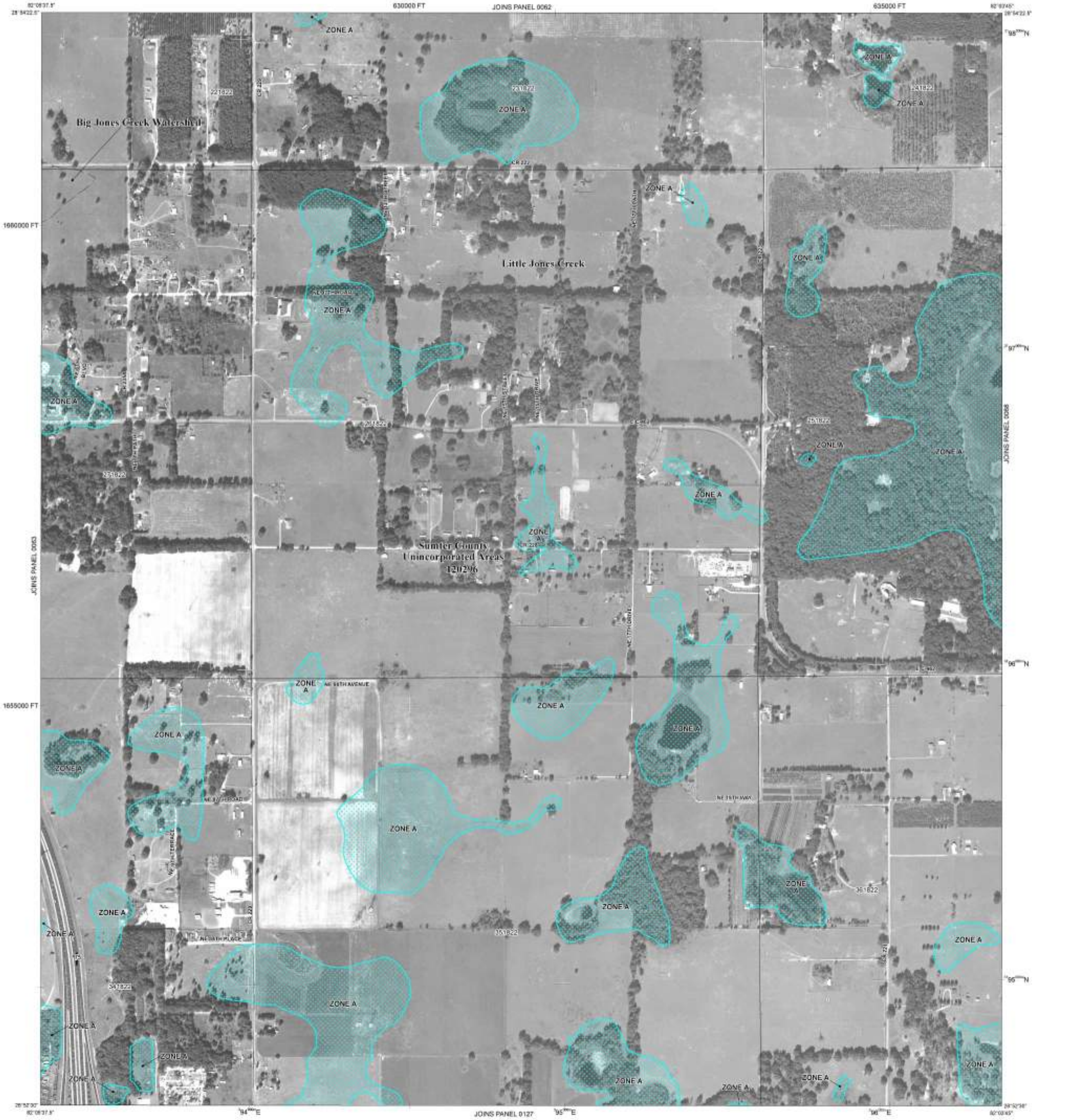
Watershed Boundary

Watershed Table

Watershed	Datum Offset (ft)	Study Type	Total Rainfall Volume (in) 1 Day 100yr	Multi-Day Rainfall Used[1]	Date of Model
1. Big Jones Creek	-0.86	Digital Conversion	11.3	NO	09/15/11
2. Big Prairie	-0.87	Digital Conversion	11.3	NO	09/15/11
3. Bushnell	-0.84	Digital Conversion	11.3	NO	09/15/11
4. Clearwater Lake Outlet	-0.86	Digital Conversion	11.3	NO	09/15/11
5. Devils Creek	-0.86	Digital Conversion	11.3	NO	09/15/11
6. Garl Lake	-0.84	Digital Conversion	11.3	NO	09/15/11
7. Gator Hole Slough	-0.86	Digital Conversion	11.3	NO	09/15/11
8. Gum Slough	-0.86	Digital Conversion	11.3	NO	09/15/11
9. Gum Swamp	-0.86	Digital Conversion	11.3	NO	09/15/11
10. Half Moon	-0.86	Digital Conversion	11.3	NO	09/15/11
11. Helena Run	-0.86	Digital Conversion	11.3	NO	09/15/11
12. Jumper Creek Canal	-0.86	Digital Conversion	11.3	NO	09/15/11
13. Lady Lake	-0.86	Digital Conversion	11.3	NO	09/15/11
14. Lake Deaton Outlet	-0.86	Digital Conversion	11.3	YES	09/15/11
15. Lake Miona Outlet	-0.86	Digital Conversion	11.3	YES	09/15/11
16. Lake Okahumpka Outlet	-0.86	Digital Conversion	11.3	YES	09/15/11
17. Little Jones Creek	-0.86	Digital Conversion	11.3	NO	09/15/11
18. Little Withlacoochee	-0.86	Digital Conversion	11.3	NO	09/15/11
19. Outlet River	-0.86	Digital Conversion	11.3	NO	09/15/11
20. Robinson Lake Outlet	-0.86	Digital Conversion	11.3	NO	09/15/11
21. Shady Brook	-0.86	Digital Conversion	11.3	NO	09/15/11
22. Webster	-0.86	Digital Conversion	11.3	NO	09/15/11
23. Withlacoochee River	-0.86	Digital Conversion	11.3	NO	09/15/11

[1] Multi-Day event used only in specific sub-basins; refer to the FIS report.
[2] Zone X (shaded) 0.2% annual chance floodplain is delineated only in watersheds where the Study Type is Redelineation or Coastal. The 0.2% annual chance floodplain is not delineated in watersheds where the Study Type is Detailed. Refer to the Watershed table for Study Type.

This digital Flood Insurance Rate Map (FIRM) was produced through a cooperative partnership between the Southwest Florida Water Management District (SWFWMD), Sumter County, Federal Emergency Management Agency (FEMA), and the associated communities within Sumter County.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot; and areas protected by levees from 1% annual chance flood. See additional note in Watershed Table on left collar [2]

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

	1% annual chance floodplain boundary
	0.2% annual chance floodplain boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
~~ 513 ~~~	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

(A)——(A)	Cross section line
(23)- - -(23)	Transect line
87°07'30", 32°22'30"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
4275000mE	1000-meter Universal Transverse Mercator grid ticks, Zone 17 N
6000000 FT	5000-foot grid values: Florida State Plane coordinate system, West zone (FIPSZONE 0902), Transverse Mercator projection
DX5510 ×	Bench mark (see explanation in Notes to Users section of this FIRM panel)
• M1.5	River Mile
222218	Section - Township - Range
7NX1000 ♦	Junction - Points defining locations of flow accumulation or hydraulic connectivity. The first two characters of the Junction name represents the specific watershed (as shown in the map collar locator map) in which the Junction is located (note that boundary Junctions, without an associated floodplain, are also shown).
- - - - -	Watershed Boundary

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
SEPTEMBER 27, 2013

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET

150 0 150 300 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0064D

FIRM

FLOOD INSURANCE RATE MAP

SUMTER COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 64 OF 440

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SUMTER COUNTY	120296	0064	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12119C0064D

EFFECTIVE DATE
SEPTEMBER 27, 2013

Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management. Stillwater Elevations may be shown to the nearest tenth of a foot. Users should refer to the Flood Insurance Study (FIS) for detailed flood elevation information.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

Base map information shown on this FIRM was provided in digital format by the Southwest Florida Water Management District. The original orthophotos was provided in color with a one-foot pixel resolution at a scale of 1" = 200' from photography flown December 2008 - January 2009.

This map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

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DATUM INFORMATION

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NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

Exemple Datum Offset Calculation
using datum offset table below:
NAVD88 = NAVD29 + (datum offset value)

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

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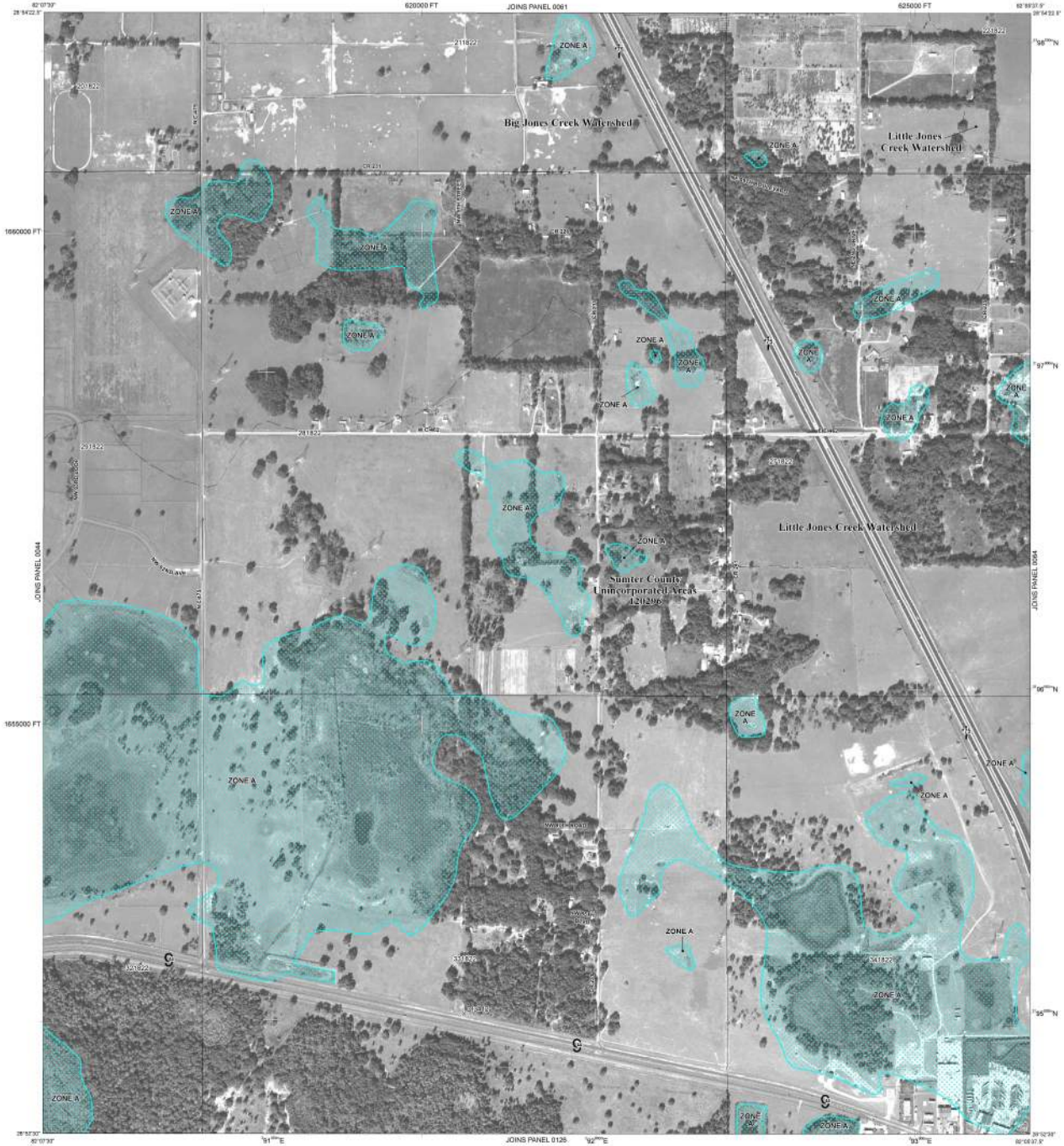
Watershed Boundary

Watershed Table

Watershed	Datum Offset (ft)	Study Type	1 Day 100yr	Total Rainfall Volume (in) Multi-Day Rainfall Used?	Date of Model
1. Big Jones Creek	-0.66	Digital Conversion	11.3	NO	03/15/91
2. Big Prairie	-0.57	Digital Conversion	11.3	NO	03/15/91
3. Bucknell	-0.64	Digital Conversion	11.3	NO	03/15/91
4. Clearwater Lake Outlet	-0.66	Digital Conversion	11.3	NO	03/15/91
5. Devils Creek	-0.66	Digital Conversion	11.3	NO	03/15/91
6. Gant Lake	-0.64	Digital Conversion	11.3	NO	03/15/91
7. Gum Slough (Slough)	-0.66	Digital Conversion	11.3	NO	03/15/91
8. Gum Slough	-0.66	Digital Conversion	11.3	NO	03/15/91
9. Gum Swamp	-0.66	Digital Conversion	11.3	NO	03/15/91
10. Half Moon	-0.66	Digital Conversion	11.3	NO	03/15/91
11. Helena Run	-0.66	Digital Conversion	11.3	NO	03/15/91
12. Jumper Creek Canal	-0.66	Digital Conversion	11.3	NO	03/15/91
13. Lady Lake	-0.66	Digital Conversion	11.3	NO	03/15/91
14. Lake Deaton Outlet	-0.66	Digital Conversion	11.3	YES	03/15/91
15. Lake Rhoop Outlet	-0.66	Digital Conversion	11.3	YES	03/15/91
16. Lake Okahumpka Outlet	-0.66	Digital Conversion	11.3	YES	03/15/91
17. Little Jones Creek	-0.64	Digital Conversion	11.3	NO	03/15/91
18. Little Withlacoochee	-0.66	Digital Conversion	11.3	NO	03/15/91
19. Outlet River	-0.66	Digital Conversion	11.3	NO	03/15/91
20. Robinson Lake Outlet	-0.66	Digital Conversion	11.3	NO	03/15/91
21. Shady Brook	-0.66	Digital Conversion	11.3	NO	03/15/91
22. Wekiva	-0.66	Digital Conversion	11.3	NO	03/15/91
23. Withlacoochee River	-0.66	Digital Conversion	11.3	NO	03/15/91

* Multi-Day event used only in specific sub-basins, refer to the FIS report.
† Zone A (shaded) 0.2% annual chance floodplain is delineated only in watersheds where the Study Type is Redelineation or Coastal. The 0.2% annual chance floodplain is not delineated in watersheds where this Study Type is Detailed. Refer to the Watershed table for Study Type.

This digital Flood Insurance Rate Map (FIRM) was produced through a cooperative partnership between the Southwest Florida Water Management District (SWFWMD), Sumter County, Federal Emergency Management Agency (FEMA), and the associated communities within Sumter County.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot; and areas protected by levees from 1% annual chance flood. See additional note in Watershed Table on left color †

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary
0.2% annual chance floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
513 (EL 987) Base Flood Elevation line and value; elevation in feet*
Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

A — A Cross section line
23 — 23 Transect line
87°07'30", 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
4775mE 1000-meter Universal Transverse Mercator grid ticks, Zone 17 N
6000000 FT 5000-foot grid values: Florida State Plane coordinate system, West zone (FIPSZONE 0902), Transverse Mercator projection
DX5510 Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 River Mile
222218 Section - Township - Range
7NX1000 Junction - Points defining locations of flow accumulation or hydraulic connectivity. The first two characters of the Junction name represents the specific watershed (as shown in the map color locator map) in which the Junction is located (note that boundary Junctions, without an associated floodplain, are also shown).
Watershed Boundary

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 27, 2013

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'
250 0 500 1000 FEET
150 0 150 300 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0063D

FIRM

FLOOD INSURANCE RATE MAP

SUMTER COUNTY, FLORIDA AND INCORPORATED AREAS

PANEL 63 OF 440

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SUMTER COUNTY	120296	0063	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12119C0063D

EFFECTIVE DATE
SEPTEMBER 27, 2013

Federal Emergency Management Agency

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Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

DATUM INFORMATION

The **projection** used in the preparation of this map was Florida State Plane West FIPS Zone 0902 (Feet). The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Base Flood elevations (BFEs) on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9202
13.15 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

Example Datum Offset Calculation
using datum offset table below:
NAVD88 = NAVD29 + (datum offset value)

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, A Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange (FMIX) at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

Watershed Boundary

Watershed Table

Watershed	Datum Offset (ft)	Study Type	1 Day 100-yr Rainfall (inches)	Total Rainfall Volume (cf) Multi-Day Rainfall Used?	Date of Model
1. Big Jones Creek	-0.06	Digital Conversion	11.3	NO	09/15/11
2. Big Prairie	-0.07	Digital Conversion	11.3	NO	09/15/11
3. Bushnell	-0.04	Digital Conversion	11.3	NO	09/15/11
4. Clearwater Lake Outlet	-0.06	Digital Conversion	11.3	NO	09/15/11
5. Devils Creek	-0.06	Digital Conversion	11.3	NO	09/15/11
6. Gant Lake	-0.04	Digital Conversion	11.3	NO	09/15/11
7. Gum Slough (Slough)	-0.05	Digital Conversion	11.3	NO	09/15/11
8. Gum Slough	-0.06	Digital Conversion	11.3	NO	09/15/11
9. Gum Swamp	-0.06	Digital Conversion	11.3	NO	09/15/11
10. Half Moon	-0.06	Digital Conversion	11.3	NO	09/15/11
11. Helena Run	-0.06	Digital Conversion	11.3	NO	09/15/11
12. Jumper Creek Canal	-0.06	Digital Conversion	11.3	NO	09/15/11
13. Lady Lake	-0.06	Digital Conversion	11.3	NO	09/15/11
14. Lake Okahumpka Outlet	-0.06	Digital Conversion	11.3	YES	09/15/11
15. Lake Sloop Outlet	-0.06	Digital Conversion	11.3	YES	09/15/11
16. Lake Okahumpka Outlet	-0.06	Digital Conversion	11.3	YES	09/15/11
17. Little Jones Creek	-0.06	Digital Conversion	11.3	NO	09/15/11
18. Little Withlacoochee	-0.06	Digital Conversion	11.3	NO	09/15/11
19. Outlet River	-0.05	Digital Conversion	11.3	NO	09/15/11
20. Robinson Lake Outlet	-0.06	Digital Conversion	11.3	NO	09/15/11
21. Shady Brook	-0.06	Digital Conversion	11.3	NO	09/15/11
22. Webster	-0.06	Digital Conversion	11.3	NO	09/15/11
23. Withlacoochee River	-0.06	Digital Conversion	11.3	NO	09/15/11

* Multi-Day event used only in specific sub-basins, refer to the FIS report.
† Zone X (shaded) 0.2% annual chance floodplain is delineated only in watersheds where the Study Type is Redelineation or Coastal. The 0.2% annual chance floodplain is not delineated in watersheds where the Study Type is Detailed. Refer to the Watershed table for Study Type.

This digital Flood Insurance Rate Map (FIRM) was produced through a cooperative partnership between the Southwest Florida Water Management District (SWFWMD), Sumter County, Federal Emergency Management Agency (FEMA), and the associated communities within Sumter County.

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot; and areas protected by levees from 1% annual chance flood. See additional note in Watershed Table on left color †

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- 23 — 23 — Transect line
- 87°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4775000 mE — 1000-meter Universal Transverse Mercator grid ticks, Zone 17 N
- 6000000 FT — 5000-foot grid values: Florida State Plane coordinate system, West zone (FIPSZONE 0902), Transverse Mercator projection
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile
- 222218 — Section - Township - Range
- 7NX1000 — Junction - Points defining locations of flow accumulation or hydraulic connectivity. The first two characters of the Junction name represents the specific watershed (as shown in the map color locator map) in which the Junction is located (note that boundary Junctions, without an associated floodplain, are also shown).
- Watershed Boundary

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
SEPTEMBER 27, 2013

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'
250 0 500 1000 FEET
150 0 150 300 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0061D

FIRM

FLOOD INSURANCE RATE MAP

SUMTER COUNTY, FLORIDA AND INCORPORATED AREAS

PANEL 61 OF 440

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SUMTER COUNTY	120296	0061	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12119C0061D

EFFECTIVE DATE
SEPTEMBER 27, 2013

Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management. Stillwater Elevations may be shown to the nearest tenth of a foot. Users should refer to the Flood Insurance Study (FIS) for detailed flood elevation information.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

Base map information shown on this FIRM was provided in digital format by the Southwest Florida Water Management District. The original orthophotos was provided in color with a one-foot pixel resolution at a scale of 1" = 200' from photography flown December 2008 - January 2009.

This map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

DATUM INFORMATION

The **projection** used in the preparation of this map was Florida State Plane West FIPS Zone 0902 (Feet). The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

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NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

Example Datum Offset Calculation
using datum offset table below
NAVD88 = NAVD29 + (datum offset value)

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

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Watershed Boundary

Watershed Table

Watershed	Datum Offset (ft)	Study Type	1 Day 100-Yr Rainfall (inch)*	Total Rainfall Volume (in) Multi-Day Rainfall Used*	Date of Model
1. Big Jones Creek	-0.56	Digital Conversion	11.3	NO	03/15/91
2. Big Prairie	-0.57	Digital Conversion	11.3	NO	03/15/91
3. Bushnell	-0.54	Digital Conversion	11.3	NO	03/15/91
4. Clearwater Lake Outlet	-0.55	Digital Conversion	11.3	NO	04/15/91
5. Devils Creek	-0.56	Digital Conversion	11.3	NO	03/15/91
6. Gant Lake	-0.54	Digital Conversion	11.3	NO	03/15/91
7. Gum Root Slough	-0.55	Digital Conversion	11.3	NO	03/15/91
8. Gum Slough	-0.56	Digital Conversion	11.3	NO	03/15/91
9. Gum Swamp	-0.55	Digital Conversion	11.3	NO	03/15/91
10. Half Moon	-0.56	Digital Conversion	11.3	NO	03/15/91
11. Helena Run	-0.56	Digital Conversion	11.3	NO	03/15/91
12. Jumper Creek Canal	-0.56	Digital Conversion	11.3	NO	03/15/91
13. Lady Lake	-0.56	Digital Conversion	11.3	NO	03/15/91
14. Lake Okahumpka Outlet	-0.56	Digital Conversion	11.3	YES	03/15/91
15. Lake Sloop Outlet	-0.55	Digital Conversion	11.3	YES	03/15/91
16. Lake Okahumpka Outlet	-0.56	Digital Conversion	11.3	YES	03/15/91
17. Little Jones Creek	-0.54	Digital Conversion	11.3	NO	03/15/91
18. Little Withlacoochee	-0.56	Digital Conversion	11.3	NO	03/15/91
19. Outlet River	-0.55	Digital Conversion	11.3	NO	03/15/91
20. Robinson Lake Outlet	-0.55	Digital Conversion	11.3	NO	03/15/91
21. Shady Brook	-0.56	Digital Conversion	11.3	NO	03/15/91
22. Webster	-0.56	Digital Conversion	11.3	NO	03/15/91
23. Withlacoochee River	-0.56	Digital Conversion	11.3	NO	03/15/91

* Multi-Day event used only in specific sub-basins, refer to the FIS report.
† Zone X (shaded) 0.2% annual chance floodplain is delineated only in watersheds where the Study Type is Redelineation or Coastal. The 0.2% annual chance floodplain is not delineated in watersheds where the Study Type is Detailed. Refer to the Watershed table for Study Type.

This digital Flood Insurance Rate Map (FIRM) was produced through a cooperative partnership between the Southwest Florida Water Management District (SWFWMD), Sumter County, Federal Emergency Management Agency (FEMA), and the associated communities within Sumter County.

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot; and areas protected by levees from 1% annual chance flood. See additional note in Watershed Table on left color †

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
- 513 (EL 987) — Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- 23 — 23 — Transect line
- 87°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4775000mE — 1000-meter Universal Transverse Mercator grid ticks, Zone 17 N
- 6000000 FT — 5000-foot grid values: Florida State Plane coordinate system, West zone (FIPSZONE 0902), Transverse Mercator projection
- DX510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile
- 222218 — Section - Township - Range
- 7NX1000 — Junction - Points defining locations of flow accumulation or hydraulic connectivity. The first two characters of the Junction name represent the specific watershed (as shown in the map color locator map) in which the Junction is located (note that boundary Junctions, without an associated floodplain, are also shown).
- Watershed Boundary

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 27, 2013

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'
250 0 500 1000 FEET
150 0 150 300 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0053D

FIRM

FLOOD INSURANCE RATE MAP

SUMTER COUNTY, FLORIDA AND INCORPORATED AREAS

PANEL 53 OF 440

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SUMTER COUNTY	120296	0053	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12119C0053D

EFFECTIVE DATE
SEPTEMBER 27, 2013

Federal Emergency Management Agency

APPENDIX C – Pond Sizing Spreadsheets

Pond Sizing – Basin 0

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 0
Pond Name:	Pond 0
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

Blue cells require input

EXISTING RUNOFF PARAMETERS

Basin Area	65,540 ft^2	1.50 acres	Area of basin that will be new impervious in the post condition
Pond Parcel Area	41,818 ft^2	0.96 acres	
Total Area	107,358 ft^2	2.46 acres	

Exist. Basin Limits	
1162+93	1201+00

*Assume 300' of R/W

EXISTING CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**A**	**B**	**C**	**D**		**(Ft^2)**	**(acres)**
Open Space - Good Condition (grass cover > 75%)	41,818	38.95%		0.00%		0.00%		0.00%	39	61	74	80	1,630,902	41,818	0.96
Open Space - Good Condition (grass cover > 75%)	65,540	61.05%		0.00%		0.00%		0.00%	39	61	74	80	2,556,060	65,540	1.50
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**107,358**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**		**COMPOSITE CN =**		**39**	**4,186,962**	**107,358**	**2.46**

EXISTING RUNOFF DEPTH :

Rainfall Depth for 25yr-24hr (P) (inch) = 7.79
NOAA Atlas 14

Potential Abstraction (S) = 15.64
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 1.07
Q = (P - 0.2S)^2 / (P + 0.8S)

Estimated Runoff Volume: 9,576 ft^3 0.22 acre-ft
Peak Volume = Area x C

PROPOSED RUNOFF PARAMETERS

Basin Area	65,540 ft^2	1.50 acres	Area of basin that will be new impervious in the post condition
Pond Parcel Area	41,818	0.96 acres	41,818
Total Area	107,358	2.46 acres	

Prop. Basin Limits	
1162+93	1201+00

*Assume 300' of R/W

PROPOSED CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**A**	**B**	**C**	**D**		**(Ft^2)**	**(acres)**
retention/detention Pond (Impervious)	20,909	19.48%		0.00%		0.00%		0.00%	100	100	100	100	2,090,900	20,909	0.48
retention/detention Pond (Pervious)	20,909	19.48%		0.00%		0.00%		0.00%	39	61	74	80	815,451	20,909	0.48
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way)	65,540	61.05%		0.00%		0.00%		0.00%	98	98	98	98	6,422,920	65,540	1.50
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**107,358**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**		**COMPOSITE CN =**		**87**	**9,329,271**	**107,358**	**2.46**

PROPOSED RUNOFF DEPTH :

Rainfall Depth for 25yr-24hr (P) (inch) = 7.79
NOAA Atlas 14

Potential Abstraction (S) = 1.51
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 6.23
Q = (P - 0.2S)^2 / (P + 0.8S)

Estimated Runoff Volume: 55,768 ft^3 1.28 acre-ft

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 0
Pond Name:	Pond 0
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

POND SIZING CALCULATIONS

1.) Treatment Volume: (Proposed Basin Area x 1" Runoff)

Assume Wet or Dry Pond?	**Dry Pond**	
Area Inside R/W:	2.46	acres
Weighted C	0.81	
Impervious Area (C = 0.95)	1.50	acres
Pervious Area (C = 0.2)	0.48	acres
Water / Pond (C = 1.0)	0.48	acres
Discharge to OFW (If yes, additional 50% Treatment)	Yes	

Southwest Florida Water Management District (SWFWMD) Retention Criteria - Greater of the Following:

a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	0.25	ac-ft	(whichever is greater)
b) Minimum 0.5" over Contributing Area (0.5" x Area)	0.15	ac-ft	

St. John's River Water Management District (SJRWMD) Retention Criteria - Greater of the Following:

a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	0.25	ac-ft	(whichever is greater)
b) 1.75" over the Impervious Area (1.75" x Impervious Area)	0.33	ac-ft	

Required Treatment for Watershed (Max. of SWFWMD and SJRWMD Values):	**14,337**	ft^3	**0.33** ac-ft

2.) Estimated Peak Attenuation Volume

Existing Runoff Volume =	9,576	ft^3	0.22 ac-ft
Prosposed Runoff Volume =	55,768	ft^3	1.28 ac-ft
E.P.A.V. = Proposed Runoff Vol. - Existing Runoff Vol.	**46,191**	ft^3	**1.06** ac-ft

3.) Floodplain Compensation

0 ft^3 **0.00** ac-ft

4.) Total Storage

46,191 ft^3 **1.06** ac-ft

5.) Analysis of Site Required

Assumed Pond Configuration:

Pond Maintenance Berm Width (ft):	20	Freeboard Desired (ft):	1
L/W Ratio:	2	Pond Side Slopes (X:1):	4
Max. Treatment Volume Depth (ft):	1.5	Discharge to OFW:	Yes
Anticipated Max Pond Depth(ft):	3.0		

6.) Assuming Treatment Volume Controls

Pond is sized to provide calculated treatment volume in the depth listed above for "Max. Treatment Volume Depth". The total pond volume from the pond bottom to the depth listed above for "Anticipated Max Pond Depth" is then checked to see if it is more or less than the calculated attenutation volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Treatment Volume Requirement

L_{Rect} (ft): 138.3
W_{Rect} (ft): 69.1

Pond Dimensions at Peak Design Stage Considering Side Slopes and Treatment Volume

L_{Rect} (ft): 156.3
W_{Rect} (ft): 87.1

Volume between Permanent Pool Elevation and Peak Design Stage to Check Attenuation Requirement

$V_{Available\ for\ Total\ Storage}$ (ft^3) 32,514.77 (<--- Highlights in red if less than attenuation volume required)
0.75 acre-ft Area of basin that will be new impervious in the post condition

7.) Assuming Total Volume Controls

Pond is sized to for the total pond volume to equal the calculated attenuation volume using the depth listed above for "Anticipated Max Pond Depth". The volume provided from the bottom to the depth listed above for "Max. Treatment Volume Depth" is then checked to see if it is more or less than the calculated treatment volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Volume Requirement

L_{Rect} (ft):	175.5
W_{Rect} (ft):	87.7

Pond Dimensions at Peak Design Stage Considering Sides Slopes

L_{Rect} (ft):	187.5
W_{Rect} (ft):	99.7

Volume in First "X" Feet above Perm. Pool to Check Treatment Requirement

$V_{Available\ for\ Treatment}$ (ft^3) 20,780.70 (<--- Highlights in red if less than treatment volume required)
0.48 acre-ft

8.) Does Treatment or Total Volume Control?

Is there enough total volume provided when sized for the treatment volume? **No**
Is there enough treatment volume provided when sized for the total volume? **Yes**

Should dimensions from step 4 (treatment volume controls) or from step 5 (total volume controls) be used? **Step 7**

Pond Site Dimensions Considering Freeboard and Maintenance Berm

L_{Rect} (ft):	235.00
W_{Rect} (ft):	148.00
Area (Ac):	0.80

Estimated Site Size Including 20% Factor Of Safety

L_{Rect} (ft):	289.20
W_{Rect} (ft):	144.60
Area (ac):	0.96

Pond Volume Required = Attenuation Volume + Treatment Volume

Anticipated Pond $Depth_{Dry}$ = Depth To SHGWT - Distance From Pond Bottom To SHGWT - Freeboard

Anticipated Pond $Depth_{Wet}$ = Depth To SHGWT - Freeboard

$$L_{Rect} = \sqrt{\frac{V}{H}(L/W\ Ratio)} + 2*0.5*H*Side\ Slope + 2*Berm\ Width$$

$$W_{Rect} = L*(L/W\ Ratio) + 2*0.5*H*Side\ Slope + 2*Berm\ Width$$

Pond Sizing – Basin 1

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 1
Pond Name:	Pond 1
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

Blue cells require input

EXISTING RUNOFF PARAMETERS

Basin Area	504,600 ft^2	11.58 acres	
Pond Parcel Area	334,325 ft^2	7.68 acres	
Total Area	838,925 ft^2	19.26 acres	

Exist. Basin Limits
1201+00 1217+82
*Assume 300' of R/W

EXISTING CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**A**	**B**	**C**	**D**		**(Ft^2)**	**(acres)**
Woods - Good		0.00%		0.00%		0.00%	167,163	19.93%	30	55	70	77	12,871,513	167,163	3.84
Open Space - Good Condition (grass cover > 75%	167,163	19.93%		0.00%		0.00%		0.00%	39	61	74	80	6,519,338	167,163	3.84
Open Space - Good Condition (grass cover > 75%	353,220	42.10%		0.00%		0.00%		0.00%	39	61	74	80	13,775,580	353,220	8.11
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way)	151,380	18.04%		0.00%		0.00%		0.00%	98	98	98	98	14,835,240	151,380	3.48
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**671,763**	**80.07%**	**0**	**0.00%**	**0**	**0.00%**	**167,163**	**19.93%**			**COMPOSITE CN =**	**57**	**48,001,670**	**838,925**	**19.26**

EXISTING RUNOFF DEPTH :

Rainfall Depth for 25yr-24hr (P) (inch) = 7.79
NOAA Atlas 14

Potential Abstraction (S) = 7.48
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 2.88
$Q = (P - 0.2S)^2 / (P + 0.8S)$

Estimated Runoff Volume: 201,138 ft^3 4.62 acre-ft
Peak Volume = Area x Q

PROPOSED RUNOFF PARAMETERS

Basin Area	504,600 ft^2	11.58 acres	
Pond Parcel Area	334,325	7.68 acres	334,325
Total Area	838,925	19.26 acres	

Prop. Basin Limits
1201+00 1217+82
*Assume 300' of R/W

PROPOSED CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**A**	**B**	**C**	**D**		**(Ft^2)**	**(acres)**
retention/detention Pond (Impervious)	234,028	27.90%		0.00%		0.00%		0.00%	100	100	100	100	23,402,750	234,028	5.37
retention/detention Pond (Pervious)	50,149	5.98%		0.00%		0.00%	50,149	5.98%	39	61	74	80	5,967,701	100,298	2.30
Open Space - Good Condition (grass cover > 75%	50,460	6.01%		0.00%		0.00%		0.00%	39	61	74	80	1,967,940	50,460	1.16
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way)	454,140	54.13%		0.00%		0.00%		0.00%	98	98	98	98	44,505,720	454,140	10.43
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**788,776**	**94.02%**	**0**	**0.00%**	**0**	**0.00%**	**50,149**	**5.98%**			**COMPOSITE CN =**	**90**	**75,844,111**	**838,925**	**19.26**

PROPOSED RUNOFF DEPTH :

Rainfall Depth for 25yr-24hr (P) (inch) = 7.79
NOAA Atlas 14

Potential Abstraction (S) = 1.06
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 6.65
$Q = (P - 0.2S)^2 / (P + 0.8S)$

Estimated Runoff Volume: 464,690 ft^3 10.67 acre-ft

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 1
Pond Name:	Pond 1
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

POND SIZING CALCULATIONS

1.) Treatment Volume: (Proposed Basin Area x 1" Runoff)

Assume Wet or Dry Pond?		**Dry Pond**	
Area Inside R/W:		19.26	acres
Weighted C		0.83	
	Impervious Area (C = 0.95)	10.43	acres
	Pervious Area (C = 0.2)	3.46	acres
	Water / Pond (C = 1.0)	5.37	acres
Discharge to OFW (If yes, additional 50% Treatment)		Yes	

Southwest Florida Water Management District (SWFWMD) Retention Criteria - Greater of the Following:

a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	2.00	ac-ft	(whichever is greater)
b) Minimum 0.5" over Contributing Area (0.5" x Area)	1.20	ac-ft	

St. John's River Water Management District (SJRWMD) Retention Criteria - Greater of the Following:

a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	2.00	ac-ft	(whichever is greater)
b) 1.75" over the Impervious Area (1.75" x Impervious Area)	2.28	ac-ft	

Required Treatment for Watershed (Max. of SWFWMD and SJRWMD Values):	**99,343**	ft^3	**2.28**	ac-ft

2.) Estimated Peak Attenuation Volume

Existing Runoff Volume =	201,138	ft^3	4.62	ac-ft
Prosposed Runoff Volume =	464,690	ft^3	10.67	ac-ft
E.P.A.V. = Proposed Runoff Vol. - Existing Runoff Vol.	**263,552**	ft^3	**6.05**	ac-ft

3.) Floodplain Compensation

	94,090	ft^3	**2.16**	ac-ft

4.) Total Storage

	357,642	ft^3	**8.21**	ac-ft

5.) Analysis of Site Required

Assumed Pond Configuration:

Pond Maintenance Berm Width (ft):	20	Freeboard Desired (ft):	1
L/W Ratio:	2	Pond Side Slopes (X:1):	4
Max. Treatment Volume Depth (ft):	1.5	Discharge to OFW:	Yes
Anticipated Max Pond Depth(ft):	2.0		

6.) Assuming Treatment Volume Controls

Pond is sized to provide calculated treatment volume in the depth listed above for "Max. Treatment Volume Depth". The total pond volume from the pond bottom to the depth listed above for "Anticipated Max Pond Depth" is then checked to see if it is more or less than the calculated attenutation volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Treatment Volume Requirement

L_{Rect} (ft): 363.9
W_{Rect} (ft): 182.0

Pond Dimensions at Peak Design Stage Considering Side Slopes and Treatment Volume

L_{Rect} (ft): 373.9
W_{Rect} (ft): 192.0

Volume between Permanent Pool Elevation and Peak Design Stage to Check Attenuation Requirement

$V_{Available\ for\ Total\ Storage}$ (ft^3) 134,649.18 (<--- Highlights in red if less than attenuation volume required)
3.09 acre-ft

7.) Assuming Total Volume Controls

Pond is sized to for the total pond volume to equal the calculated attenuation volume using the depth listed above for "Anticipated Max Pond Depth". The volume provided from the bottom to the depth listed above for "Max. Treatment Volume Depth" is then checked to see if it is more or less than the calculated treatment volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Volume Requirement

L_{Rect} (ft):	598.0
W_{Rect} (ft):	299.0

Pond Dimensions at Peak Design Stage Considering Sides Slopes

L_{Rect} (ft):	606.0
W_{Rect} (ft):	307.0

Volume in First "X" Feet above Perm. Pool to Check Treatment Requirement

$V_{Available\ for\ Treatment}$ (ft^3) 265,546.40 (<--- Highlights in red if less than treatment volume required)
6.10 acre-ft

8.) Does Treatment or Total Volume Control?

Is there enough total volume provided when sized for the treatment volume?	**No**
Is there enough treatment volume provided when sized for the total volume?	**Yes**
Should dimensions from step 4 (treatment volume controls) or from step 5 (total volume controls) be used?	**Step 7**

Pond Site Dimensions Considering Freeboard and Maintenance Berm

L_{Rect} (ft):	654.00
W_{Rect} (ft):	355.00
Area (Ac):	5.33

Estimated Site Size Including 20% Factor Of Safety

L_{Rect} (ft):	784.80
W_{Rect} (ft):	426.00
Area (ac):	7.68

Pond Volume Required = Attenuation Volume + Treatment Volume

Anticipated Pond $Depth_{Dry}$ = Depth To SHGWT - Distance From Pond Bottom To SHGWT - Freeboard

Anticipated Pond $Depth_{Wet}$ = Depth To SHGWT - Freeboard

$$L_{Rect} = \sqrt{\frac{V}{H}(L/W\,Ratio)} + 2*0.5*H*Side\,Slope + 2*Berm\,Width$$

$$W_{Rect} = L*(L/W\,Ratio) + 2*0.5*H*Side\,Slope + 2*Berm\,Width$$

Pond Sizing – Basin 2

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 2
Pond Name:	Pond 2
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

Blue cells require input

EXISTING RUNOFF PARAMETERS

Existing Basin Limits		
1217+82	1253+53	LT
1217+82	1253+53	RT

*Assume 300' of R/W

Basin Area	1,071,300 ft^2	24.59 acres
Pond Parcel Area	383,499 ft^2	8.80 acres
Total Area	1,454,799 ft^2	33.40 acres

EXISTING CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**A**	**B**	**C**	**D**		**(Ft^2)**	**(acres)**
Open Space - Good Condition (grass cover > 75%	383,499	26.36%		0.00%		0.00%		0.00%	39	61	74	80	14,956,461	383499	8.80
Open Space - Good Condition (grass cover > 75%	749,910	51.55%		0.00%		0.00%		0.00%	39	61	74	80	29,246,490	749910	17.22
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way)	321,390	22.09%		0.00%		0.00%		0.00%	98	98	98	98	31,496,220	321390	7.38
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**1,454,799**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**		**COMPOSITE CN =**		**52**	**75,699,171**	**1,454,799**	**33.40**

EXISTING RUNOFF DEPTH :

Rainfall Depth for 100yr-240hr (P) (inch) = 16.90
NOAA Atlas 14

Potential Abstraction (S) = 9.22
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 9.34
$Q = (P - 0.2S)^2 / (P + 0.8S)$

Estimated Runoff Volume: 1,132,169 ft^3 25.99 acre-ft
Peak Volume = Area x Q

PROPOSED RUNOFF PARAMETERS

Proposed Basin Limits		
1217+82	1253+53	LT
1217+82	1253+53	RT

*Assume 300' of R/W

Basin Area	1,071,300 ft^2	24.59 acres	
Pond Parcel Area	383,499 ft^2	8.80 acres	383,499
Total Area	1,454,799 ft^2	33.40 acres	

PROPOSED CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**A**	**B**	**C**	**D**		**(Ft^2)**	**(acres)**
retention/detention Pond (Impervious)	345,149	23.72%		0.00%		0.00%		0.00%	100	100	100	100	34,514,910	345,149	7.92
retention/detention Pond (Pervious	38,350	2.64%		0.00%		0.00%		0.00%	39	61	74	80	1,495,646	38,350	0.88
Open Space - Good Condition (grass cover > 75%	107,130	7.36%		0.00%		0.00%		0.00%	39	61	74	80	4,178,070	107,130	2.46
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way)	964,170	66.28%		0.00%		0.00%		0.00%	98	98	98	98	94,488,660	964,170	22.13
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**1,454,799**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**		**COMPOSITE CN =**		**93**	**134,677,286**	**1,454,799**	**33.40**

PROPOSED RUNOFF DEPTH :

Rainfall Depth for 100yr-240hr (P) (inch) = 16.90
NOAA Atlas 14

Potential Abstraction (S) = 0.80
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 15.97
$Q = (P - 0.2S)^2 / (P + 0.8S)$

Estimated Runoff Volume: 1,936,597 ft^3 44.46 acre-ft

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 2
Pond Name:	Pond 2
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

POND SIZING CALCULATIONS

1.) Treatment Volume: (Maximum of SWFWMD and SJRWMD Criterion)

Assume Wet or Dry Pond?	**Dry Pond**		
Area Inside R/W:	33.40	acres	
Weighted C	0.89		
Impervious Area (C = 0.95)	22.13	acres	
Pervious Area (C = 0.2)	3.34	acres	
Water / Pond (C = 1.0)	7.92	acres	
Discharge to OFW (If yes, additional 50% Treatment)	No		

Southwest Florida Water Management District (SWFWMD) Retention Criteria - Greater of the Following:

a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	2.47	ac-ft	(whichever is greater)
b) Minimum 0.5" over Contributing Area (0.5" x Area)	1.39	ac-ft	

St. John's River Water Management District (SJRWMD) Retention Criteria - Greater of the Following:

a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	2.47	ac-ft	(whichever is greater)
b) 1.75" over the Impervious Area (1.75" x Impervious Area)	3.23	ac-ft	

Required Treatment for Watershed (Max. of SWFWMD and SJRWMD Values):	**140,608**	ft^3	**3.23**	ac-ft

2.) Estimated Peak Attenuation Volume

Existing Runoff Volume =	1,132,169	ft^3	25.99	ac-ft
Prosposed Runoff Volume =	1,936,597	ft^3	44.46	ac-ft
E.P.A.V. = Proposed Runoff Vol. - Existing Runoff Vol.	**804,428**	ft^3	**18.47**	ac-ft

3.) Floodplain Compensation

	871	ft^3	**0.02**	ac-ft

4.) Total Storage

	805,299	ft^3	**18.49**	ac-ft

5.) Analysis of Site Required

Assumed Pond Configuration:

Pond Maintenance Berm Width (ft):	20	Freeboard Desired (ft):	1
L/W Ratio:	2	Pond Side Slopes (X:1):	4
Max. Treatment Volume Depth (ft):	1.5	Discharge to OFW:	No
Anticipated Max Pond Depth(ft):	4.0		

6.) Assuming Treatment Volume Controls

Pond is sized to provide calculated treatment volume in the depth listed above for "Max. Treatment Volume Depth". The total pond volume from the pond bottom to the depth listed above for "Anticipated Max Pond Depth" is then checked to see if it is more or less than the calculated attenutation volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Treatment Volume Requirement

L_{Rect} (ft):	433.0
W_{Rect} (ft):	216.5

Pond Dimensions at Peak Design Stage Considering Side Slopes and Treatment Volume

L_{Rect} (ft):	459.0
W_{Rect} (ft):	242.5

Volume between Permanent Pool Elevation and Peak Design Stage to Total Storage Requirement

$V_{Available\ for\ Total\ Storage}$ (ft^3) 401,334.20 (<--- Highlights in red if less than total volume required)

9.21 acre-ft

7.) Assuming Total Volume Controls

Pond is sized to for the total pond volume to equal the calculated attenuation volume using the depth listed above for "Anticipated Max Pond Depth". The volume provided from the bottom to the depth listed above for "Max. Treatment Volume Depth" is then checked to see if it is more or less than the calculated treatment volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Volume Requirement

L_{Rect} (ft): 634.5
W_{Rect} (ft): 317.3

Pond Dimensions at Peak Design Stage Considering Sides Slopes

L_{Rect} (ft): 650.5
W_{Rect} (ft): 333.3

Volume in First "X" Feet above Perm. Pool to Check Treatment Requirement

$V_{Available\ for\ Treatment}$ (ft^3) 287,859.99 (<--- Highlights in red if less than treatment volume required)
6.61 acre-ft

8.) Does Treatment or Total Volume Control?

Is there enough total volume provided when sized for the treatment volume? **No**
Is there enough treatment volume provided when sized for the total volume? **Yes**

Should dimensions from step 4 (treatment volume controls) or from step 5 (total volume controls) be used? **Step 7**

Pond Site Dimensions Considering Freeboard and Maintenance Berm

L_{Rect} (ft): 699.00
W_{Rect} (ft): 381.00
Area (Ac): 6.11

Estimated Site Size Including 20% Factor Of Safety

L_{Rect} (ft): 838.80
W_{Rect} (ft): 457.20

Area (ac): 8.80

Pond Volume Required = Attenuation Volume + Floodplain Compensation + Treatment Volume

Anticipated Pond $Depth_{Dry}$ = Depth To SHGWT - Distance From Pond Bottom To SHGWT - Freeboard

Anticipated Pond $Depth_{Wet}$ = Depth To SHGWT - Freeboard

$$L_{Rect} = \sqrt{\frac{V}{H}\left(L/W\ Ratio\right)} + 2*0.5*H*Side\ Slope + 2*Berm\ Width$$

$$W_{Rect} = L*\left(L/W\ Ratio\right) + 2*0.5*H*Side\ Slope + 2*Berm\ Width$$

Pond Sizing – Basin 3

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 3
Pond Name:	Pond 3
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

Blue cells require input

EXISTING RUNOFF PARAMETERS

Exist. Basin Limits	
1253+53	1307+83

*Assume 300' of R/W

Basin Area	1,629,000 ft^2	37.40 acres
Pond Parcel Area	774,252 ft^2	17.77 acres
Total Area	2,403,252 ft^2	55.17 acres

EXISTING CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**A**	**B**	**C**	**D**		**(Ft^2)**	**(acres)**
Open Space - Good Condition (grass cover > 75%)	774,252	32.22%		0.00%		0.00%		0.00%	39	61	74	80	30,195,828	774252	17.77
Open Space - Good Condition (grass cover > 75%)	1,140,300	47.45%		0.00%		0.00%		0.00%	39	61	74	80	44,471,700	1140300	26.18
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way)	488,700	20.33%		0.00%		0.00%		0.00%	98	98	98	98	47,892,600	488700	11.22
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**2,403,252**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**		**COMPOSITE CN =**		**51**	**122,560,128**	**2,403,252**	**55.17**

EXISTING RUNOFF DEPTH :

Rainfall Depth for 100yr-240hr (P) (inch) = 16.90
NOAA Atlas 14

Potential Abstraction (S) = 9.61
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 9.12
$Q = (P - 0.2S)^2 / (P + 0.8S)$

Estimated Runoff Volume: 1,827,403 ft^3 41.95 acre-ft
Peak Volume = Area x Q

PROPOSED RUNOFF PARAMETERS

Prop. Basin Limits	
1253+53	1307+83

*Assume 300' of R/W

Basin Area	1,629,000 ft^2	37.40 acres	
Pond Parcel Area	774,252 ft^2	17.77 acres	774,252
Total Area	2,403,252 ft^2	55.17 acres	

PROPOSED CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**A**	**B**	**C**	**D**		**(Ft^2)**	**(acres)**
retention/detention Pond (Impervious)	696,827	29.00%		0.00%		0.00%		0.00%	100	100	100	100	69,682,680	696,827	16.00
retention/detention Pond (Pervious)	77,425	3.22%		0.00%		0.00%		0.00%	39	61	74	80	3,019,583	77,425	1.78
Open Space - Good Condition (grass cover > 75%)	162,900	6.78%		0.00%		0.00%		0.00%	39	61	74	80	6,353,100	162,900	3.74
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way)	1,466,100	61.00%		0.00%		0.00%		0.00%	98	98	98	98	143,677,800	1,466,100	33.66
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**2,403,252**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**		**COMPOSITE CN =**		**93**	**222,733,163**	**2,403,252**	**55.17**

PROPOSED RUNOFF DEPTH :

Rainfall Depth for 100yr-240hr (P) (inch) = 16.90
NOAA Atlas 14

Potential Abstraction (S) = 0.79
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 15.99
$Q = (P - 0.2S)^2 / (P + 0.8S)$

Estimated Runoff Volume: 3,201,891 ft^3 73.51 acre-ft

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 3
Pond Name:	Pond 3
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

POND SIZING CALCULATIONS

1.) Treatment Volume: (Maximum of SWFWMD and SJRWMD Criterion)

Assume Wet or Dry Pond?	**Dry Pond**	
Area Inside R/W:	55.17 acres	
Weighted C	0.89	
Impervious Area (C = 0.95)	33.66 acres	
Pervious Area (C = 0.2)	5.52 acres	
Water / Pond (C = 1.0)	16.00 acres	
Discharge to OFW (If yes, additional 50% Treatment)	No	

Southwest Florida Water Management District (SWFWMD) Retention Criteria - Greater of the Following:

a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	4.09 ac-ft	(whichever is greater)
b) Minimum 0.5" over Contributing Area (0.5" x Area)	2.30 ac-ft	

St. John's River Water Management District (SJRWMD) Retention Criteria - Greater of the Following:

a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	4.09 ac-ft	(whichever is greater)
b) 1.75" over the Impervious Area (1.75" x Impervious Area)	4.91 ac-ft	

Required Treatment for Watershed (Max. of SWFWMD and SJRWMD Values):	**213,806** ft^3	**4.91** ac-ft

2.) Estimated Peak Attenuation Volume

Existing Runoff Volume =	1,827,403 ft^3	41.95 ac-ft
Proposed Runoff Volume =	3,201,891 ft^3	73.51 ac-ft
E.P.A.V. = Proposed Runoff Vol. - Existing Runoff Vol.	**1,374,488** ft^3	**31.55** ac-ft

3.) Floodplain Compensation

397,703 ft^3 **9.13** ac-ft

4.) Total Storage

1,772,190 ft^3 **40.68** ac-ft

5.) Analysis of Site Required

Assumed Pond Configuration:

Pond Maintenance Berm Width (ft):	20	Freeboard Desired (ft):	1
L/W Ratio:	2	Pond Side Slopes (X:1):	4
Max. Treatment Volume Depth (ft):	1.5	Discharge to OFW:	No
Anticipated Max Pond Depth(ft):	4.0		

6.) Assuming Treatment Volume Controls

Pond is sized to provide calculated treatment volume in the depth listed above for "Max. Treatment Volume Depth". The total pond volume from the pond bottom to the depth listed above for "Anticipated Max Pond Depth" is then checked to see if it is more or less than the calculated attenutation volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Treatment Volume Requirement

L_{Rect} (ft):	533.9
W_{Rect} (ft):	267.0

Pond Dimensions at Peak Design Stage Considering Side Slopes and Treatment Volume

L_{Rect} (ft):	559.9
W_{Rect} (ft):	293.0

Volume between Permanent Pool Elevation and Peak Design Stage to Total Storage Requirement

$V_{Available\ for\ Total\ Storage}$ (ft^3) 602,585.45 (<--- Highlights in red if less than total volume required)

13.83 acre-ft

7.) Assuming Total Volume Controls

Pond is sized to for the total pond volume to equal the calculated attenuation volume using the depth listed above for "Anticipated Max Pond Depth". The volume provided from the bottom to the depth listed above for "Max. Treatment Volume Depth" is then checked to see if it is more or less than the calculated treatment volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Volume Requirement

L_{Rect} (ft):	941.3
W_{Rect} (ft):	470.7

Pond Dimensions at Peak Design Stage Considering Sides Slopes

L_{Rect} (ft):	957.3
W_{Rect} (ft):	486.7

Volume in First "X" Feet above Perm. Pool to Check Treatment Requirement

$V_{Available\ for\ Treatment}$ (ft^3) 643,541.53 (<--- Highlights in red if less than treatment volume required)
14.77 acre-ft

8.) Does Treatment or Total Volume Control?

Is there enough total volume provided when sized for the treatment volume?	**No**
Is there enough treatment volume provided when sized for the total volume?	**Yes**
Should dimensions from step 4 (treatment volume controls) or from step 5 (total volume controls) be used?	**Step 7**

Pond Site Dimensions Considering Freeboard and Maintenance Berm

L_{Rect} (ft):	1005.00
W_{Rect} (ft):	535.00
Area (Ac):	12.34

Estimated Site Size Including 20% Factor Of Safety

L_{Rect} (ft):	1206.00
W_{Rect} (ft):	642.00
Area (ac):	17.77

Pond Volume Required = Attenuation Volume + Floodplain Compensation + Treatment Volume

Anticipated Pond $Depth_{Dry}$ = Depth To SHGWT - Distance From Pond Bottom To SHGWT - Freeboard

Anticipated Pond $Depth_{Wet}$ = Depth To SHGWT - Freeboard

$$L_{Rect} = \sqrt{\frac{V}{H}(L/W\ Ratio)} + 2*0.5*H*Side\ Slope + 2*Berm\ Width$$

$$W_{Rect} = L*(L/W\ Ratio) + 2*0.5*H*Side\ Slope + 2*Berm\ Width$$

Pond Sizing – Basin 4

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 4
Pond Name:	Pond 4-1
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

Blue cells require input

EXISTING RUNOFF PARAMETERS

Basin Area	1,025,100	ft^2	23.53	acres
Pond Parcel Area	549,343	ft^2	12.61	acres
Total Area	1,574,443	ft^2	36.14	acres

Exist. Basin Limits	
1307+83	1342+00

*Assume 300' of R/W

EXISTING CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**A**	**B**	**C**	**D**		**(Ft^2)**	**(acres)**
Open Space - Good Condition (grass cover > 75%	549,343	34.89%		0.00%		0.00%		0.00%	39	61	74	80	21,424,377	549343	12.61
Open Space - Good Condition (grass cover > 75%	717,570	45.58%		0.00%		0.00%		0.00%	39	61	74	80	27,985,230	717570	16.47
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way	307,530	19.53%		0.00%		0.00%		0.00%	98	98	98	98	30,137,940	307530	7.06
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**1,574,443**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**		**COMPOSITE CN =**		**51**	**79,547,547**	**1,574,443**	**36.14**

EXISTING RUNOFF DEPTH :

Rainfall Depth for 100yr-240hr (P) (inch) = 16.90
NOAA Atlas 14

Potential Abstraction (S) = 9.79
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 9.03
$Q = (P - 0.2S)^2 / (P + 0.8S)$

Estimated Runoff Volume: 1,184,242 ft^3 27.19 acre-ft
Peak Volume = Area x Q

PROPOSED RUNOFF PARAMETERS

Basin Area	1,025,100	ft^2	23.53	acres	
Pond Parcel Area	549,343	ft^2	12.61	acres	549,343
Total Area	1,574,443	ft^2	36.14	acres	

Prop. Basin Limits	
1307+83	1342+00

*Assume 300' of R/W

PROPOSED CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**A**	**B**	**C**	**D**		**(Ft^2)**	**(acres)**
retention/detention Pond (Impervious	494,409	31.40%		0.00%		0.00%		0.00%	100	100	100	100	49,440,870	494,409	11.35
retention/detention Pond (Pervious	54,934	3.49%		0.00%		0.00%		0.00%	39	61	74	80	2,142,438	54,934	1.26
Open Space - Good Condition (grass cover > 75%	102,510	6.51%		0.00%		0.00%		0.00%	39	61	74	80	3,997,890	102,510	2.35
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way	922,590	58.60%		0.00%		0.00%		0.00%	98	98	98	98	90,413,820	922,590	21.18
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**1,574,443**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**		**COMPOSITE CN =**		**93**	**145,995,018**	**1,574,443**	**36.14**

PROPOSED RUNOFF DEPTH :

Rainfall Depth for 100yr-240hr (P) (inch) = 16.90
NOAA Atlas 14

Potential Abstraction (S) = 0.78
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 15.99
$Q = (P - 0.2S)^2 / (P + 0.8S)$

Estimated Runoff Volume: 2,098,473 ft^3 48.17 acre-ft

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 4
Pond Name:	Pond 4-1
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

POND SIZING CALCULATIONS

1.) Treatment Volume: (Maximum of SWFWMD and SJRWMD Criterion)

Assume Wet or Dry Pond?		**Dry Pond**	
Area Inside R/W:		36.14	acres
Weighted C		0.89	
	Impervious Area (C = 0.95)	21.18	acres
	Pervious Area (C = 0.2)	3.61	acres
	Water / Pond (C = 1.0)	11.35	acres
Discharge to OFW (If yes, additional 50% Treatment)		No	

Southwest Florida Water Management District (SWFWMD) Retention Criteria - Greater of the Following:

a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	2.68	ac-ft	(whichever is greater)
b) Minimum 0.5" over Contributing Area (0.5" x Area)	1.51	ac-ft	

St. John's River Water Management District (SJRWMD) Retention Criteria - Greater of the Following:

a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	2.68	ac-ft	(whichever is greater)
b) 1.75" over the Impervious Area (1.75" x Impervious Area)	3.09	ac-ft	

Required Treatment for Watershed (Max. of SWFWMD and SJRWMD Values):	**134,544**	ft^3	**3.09**	ac-ft

2.) Estimated Peak Attenuation Volume

Existing Runoff Volume =	1,184,242	ft^3	27.19	ac-ft
Proposed Runoff Volume =	2,098,473	ft^3	48.17	ac-ft
E.P.A.V. = Proposed Runoff Vol. - Existing Runoff Vol.	**914,231**	ft^3	**20.99**	ac-ft

3.) Floodplain Compensation	**7,841**	ft^3	**0.18**	ac-ft
4.) Total Storage	**922,072**	ft^3	**21.17**	ac-ft

5.) Analysis of Site Required

Assumed Pond Configuration:

Pond Maintenance Berm Width (ft):	20	Freeboard Desired (ft):	1
L/W Ratio:	2	Pond Side Slopes (X:1):	4
Max. Treatment Volume Depth (ft):	1.5	Discharge to OFW:	No
Anticipated Max Pond Depth(ft):	3.0		

6.) Assuming Treatment Volume Controls

Pond is sized to provide calculated treatment volume in the depth listed above for "Max. Treatment Volume Depth". The total pond volume from the pond bottom to the depth listed above for "Anticipated Max Pond Depth" is then checked to see if it is more or less than the calculated attenutation volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Treatment Volume Requirement

L_{Rect} (ft):	423.5
W_{Rect} (ft):	211.8

Pond Dimensions at Peak Design Stage Considering Side Slopes and Treatment Volume

L_{Rect} (ft):	441.5
W_{Rect} (ft):	229.8

Volume between Permanent Pool Elevation and Peak Design Stage to Check Attenuation Requirement

$V_{Available\ for\ Total\ Storage}$ (ft^3) 280,632.53 (<--- Highlights in red if less than total volume required)

6.44 acre-ft

7.) Assuming Total Volume Controls

Pond is sized to for the total pond volume to equal the calculated attenuation volume using the depth listed above for "Anticipated Max Pond Depth". The volume provided from the bottom to the depth listed above for "Max. Treatment Volume Depth" is then checked to see if it is more or less than the calculated treatment volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Volume Requirement

L_{Rect} (ft): 784.0
W_{Rect} (ft): 392.0

Pond Dimensions at Peak Design Stage Considering Sides Slopes

L_{Rect} (ft): 796.0
W_{Rect} (ft): 404.0

Volume in First "X" Feet above Perm. Pool to Check Treatment Requirement

$V_{Available\ for\ Treatment}$ (ft^3) 450,505.40 (<--- Highlights in red if less than treatment volume required)
10.34 acre-ft

8.) Does Treatment or Total Volume Control?

Is there enough total volume provided when sized for the treatment volume? **No**
Is there enough treatment volume provided when sized for the total volume? **Yes**

Should dimensions from step 4 (treatment volume controls) or from step 5 (total volume controls) be used? **Step 7**

Pond Site Dimensions Considering Freeboard and Maintenance Berm

L_{Rect} (ft): 844.00
W_{Rect} (ft): 452.00
Area (Ac): 8.76

Estimated Site Size Including 20% Factor Of Safety

L_{Rect} (ft): 1012.80
W_{Rect} (ft): 542.40

Area (ac): 12.61

Pond Volume Required = Attenuation Volume + Floodplain Compensation + Treatment Volume

Anticipated Pond $Depth_{Dry}$ = Depth To SHGWT - Distance From Pond Bottom To SHGWT - Freeboard

Anticipated Pond $Depth_{Wet}$ = Depth To SHGWT - Freeboard

$$L_{Rect} = \sqrt{\frac{V}{H}(L/W\ Ratio)} + 2*0.5*H*Side\ Slope + 2*Berm\ Width$$

$$W_{Rect} = L*(L/W\ Ratio) + 2*0.5*H*Side\ Slope + 2*Berm\ Width$$

Pond Sizing – Basin 5

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 5
Pond Name:	Pond 5-3
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

Blue cells require input

EXISTING RUNOFF PARAMETERS

Basin Area	872,400 ft^2	20.03	acres
Pond Parcel Area	648,356 ft^2	14.88	acres
Total Area	1,520,756 ft^2	34.91	acres

Exist. Basin Limits	
1342+00	1371+08

*Assume 300' of R/W

EXISTING CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**A**	**B**	**C**	**D**		**(Ft^2)**	**(acres)**
Open Space - Good Condition (grass cover > 75%	648,356	42.63%		0.00%		0.00%		0.00%	39	61	74	80	25,285,884	648356	14.88
Open Space - Good Condition (grass cover > 75%	610,680	40.16%		0.00%		0.00%		0.00%	39	61	74	80	23,816,520	610680	14.02
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way)	261,720	17.21%		0.00%		0.00%		0.00%	98	98	98	98	25,648,560	261720	6.01
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**1,520,756**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**		**COMPOSITE CN =**		**49**	**74,750,964**	**1,520,756**	**34.91**

EXISTING RUNOFF DEPTH :

Rainfall Depth for 100yr-24hr (P) (inch) = 16.90
NOAA Atlas 14

Potential Abstraction (S) = 10.34
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 8.74
$Q = (P - 0.2S)^2 / (P + 0.8S)$

Estimated Runoff Volume: 1,107,262 ft^3 25.42 acre-ft
Peak Volume = Area x Q

PROPOSED RUNOFF PARAMETERS

Basin Area	872,400 ft^2	20.03	acres
Pond Parcel Area	648,356 ft^2	14.88	acres
Total Area	1,520,756 ft^2	34.91	acres

648,356

Prop. Basin Limits	
1342+00	1371+08

*Assume 300' of R/W

PROPOSED CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**A**	**B**	**C**	**D**		**(Ft^2)**	**(acres)**
retention/detention Pond (Impervious)	583,520	38.37%		0.00%		0.00%		0.00%	100	100	100	100	58,352,040	583,520	13.40
retention/detention Pond (Pervious	64,836	4.26%		0.00%		0.00%		0.00%	39	61	74	80	2,528,588	64,836	1.49
Open Space - Good Condition (grass cover > 75%	87,240	5.74%		0.00%		0.00%		0.00%	39	61	74	80	3,402,360	87,240	2.00
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way)	785,160	51.63%		0.00%		0.00%		0.00%	98	98	98	98	76,945,680	785,160	18.02
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**1,520,756**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**		**COMPOSITE CN =**		**93**	**141,228,668**	**1,520,756**	**34.91**

PROPOSED RUNOFF DEPTH :

Rainfall Depth for 100yr-24hr (P) (inch) = 16.90
NOAA Atlas 14

Potential Abstraction (S) = 0.77
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 16.01
$Q = (P - 0.2S)^2 / (P + 0.8S)$

Estimated Runoff Volume: 2,029,199 ft^3 46.58 acre-ft

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 5
Pond Name:	Pond 5-3
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

POND SIZING CALCULATIONS

1.) Treatment Volume: (Maximum of SWFWMD and SJRWMD Criterion)

Assume Wet or Dry Pond?	**Dry Pond**	
Area Inside R/W:	34.91 acres	
Weighted C	0.89	
Impervious Area (C = 0.95)	18.02 acres	
Pervious Area (C = 0.2)	3.49 acres	
Water / Pond (C = 1.0)	13.40 acres	
Discharge to OFW (If yes, additional 50% Treatment)	No	
Southwest Florida Water Management District (SWFWMD) Retention Criteria - Greater of the Following:		
a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	2.60 ac-ft	(whichever is greater)
b) Minimum 0.5" over Contributing Area (0.5" x Area)	1.45 ac-ft	
St. John's River Water Management District (SJRWMD) Retention Criteria - Greater of the Following:		
a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	2.60 ac-ft	(whichever is greater)
b) 1.75" over the Impervious Area (1.75" x Impervious Area)	2.63 ac-ft	
Required Treatment for Watershed (Max. of SWFWMD and SJRWMD Values):	**114,503** ft^3	**2.63** ac-ft

2.) Estimated Peak Attenuation Volume

Existing Runoff Volume =	1,107,262 ft^3	25.42 ac-ft
Proposed Runoff Volume =	2,029,199 ft^3	46.58 ac-ft
E.P.A.V. = Proposed Runoff Vol. - Existing Runoff Vol.	**921,938** ft^3	**21.16** ac-ft

3.) Floodplain Compensation

534,481 ft^3 | **12.27** ac-ft

4.) Total Storage

1,456,419 ft^3 | **33.43** ac-ft

5.) Analysis of Site Required

Assumed Pond Configuration:

Pond Maintenance Berm Width (ft):	20	Freeboard Desired (ft):	1
L/W Ratio:	2	Pond Side Slopes (X:1):	4
Max. Treatment Volume Depth (ft):	1.5	Discharge to OFW:	No
Anticipated Max Pond Depth(ft):	4.0		

6.) Assuming Treatment Volume Controls

Pond is sized to provide calculated treatment volume in the depth listed above for "Max. Treatment Volume Depth". The total pond volume from the pond bottom to the depth listed above for "Anticipated Max Pond Depth" is then checked to see if it is more or less than the calculated attenutation volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Treatment Volume Requirement

L_{Rect} (ft): 390.7
W_{Rect} (ft): 195.4

Pond Dimensions at Peak Design Stage Considering Side Slopes and Treatment Volume

L_{Rect} (ft): 416.7
W_{Rect} (ft): 221.4

Volume between Permanent Pool Elevation and Peak Design Stage to Check Attenuation Requirement

$V_{Available\ for\ Total\ Storage}$ (ft^3) 329,183.81 (<--- Highlights in red if less than total volume required)
7.56 acre-ft

7.) Assuming Total Volume Controls

Pond is sized to for the total pond volume to equal the calculated attenuation volume using the depth listed above for "Anticipated Max Pond Depth". The volume provided from the bottom to the depth listed above for "Max. Treatment Volume Depth" is then checked to see if it is more or less than the calculated treatment volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Volume Requirement

L_{Rect} (ft): 853.4
W_{Rect} (ft): 426.7

Pond Dimensions at Peak Design Stage Considering Sides Slopes

L_{Rect} (ft): 869.4
W_{Rect} (ft): 442.7

Volume in First "X" Feet above Perm. Pool to Check Treatment Requirement

$V_{Available\ for\ Treatment}$ (ft^3) 527,106.65 (<--- Highlights in red if less than treatment volume required)
12.10 acre-ft

8.) Does Treatment or Total Volume Control?

Is there enough total volume provided when sized for the treatment volume? **No**
Is there enough treatment volume provided when sized for the total volume? **Yes**

Should dimensions from step 4 (treatment volume controls) or from step 5 (total volume controls) be used? **Step 7**

Pond Site Dimensions Considering Freeboard and Maintenance Berm

L_{Rect} (ft): 917.00
W_{Rect} (ft): 491.00
Area (Ac): 10.34

Estimated Site Size Including 20% Factor Of Safety

L_{Rect} (ft): 1100.40
W_{Rect} (ft): 589.20

Area (ac): 14.88

Pond Volume Required = Attenuation Volume + Floodplain Compensation + Treatment Volume

Anticipated Pond $Depth_{Dry}$ = Depth To SHGWT - Distance From Pond Bottom To SHGWT - Freeboard

Anticipated Pond $Depth_{Wet}$ = Depth To SHGWT - Freeboard

$$L_{Rect} = \sqrt{\frac{V}{H}(L/W\ Ratio)} + 2*0.5*H*Side\ Slope + 2*Berm\ Width$$

$$W_{Rect} = L*(L/W\ Ratio) + 2*0.5*H*Side\ Slope + 2*Berm\ Width$$

Pond Sizing – Basin 5 and 6 Combined

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 5 and 6 Combined
Pond Name:	Pond 5-1/6-1 and Pond 5-2/6-2
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

Blue cells require input

EXISTING RUNOFF PARAMETERS

			Exist. Basin Limits	
Basin Area	2,222,400 ft²	51.02 acres	1342+00	1416+08
Pond Parcel Area	1,221,731 ft²	28.05 acres	*Assume 300' of R/W	
Total Area	3,444,131 ft²	79.07 acres		

EXISTING CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft²)**	**%**	**Area (Ft²)**	**%**	**Area (Ft²)**	**%**	**Area (Ft²)**	**%**	**A**	**B**	**C**	**D**		**(Ft²)**	**(acres)**
Open Space - Good Condition (grass cover > 75%	1,221,731	35.47%		0.00%		0.00%		0.00%	39	61	74	80	47,647,509	1221731	28.05
Open Space - Good Condition (grass cover > 75%	1,555,680	45.17%		0.00%		0.00%		0.00%	39	61	74	80	60,671,520	1555680	35.71
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way	666,720	19.36%		0.00%		0.00%		0.00%	98	98	98	98	65,338,560	666720	15.31
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**3,444,131**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**			**COMPOSITE CN =**	**50**	**173,657,589**	**3,444,131**	**79.07**

EXISTING RUNOFF DEPTH :

Rainfall Depth for 100yr-24hr (P) (inch) = 16.90
NOAA Atlas 14

Potential Abstraction (S) = 9.83
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 9.00
$Q = (P - 0.2S)^2 / (P + 0.8S)$

Estimated Runoff Volume: 2,584,377 ft³ 59.33 acre-ft
Peak Volume = Area x Q

PROPOSED RUNOFF PARAMETERS

				Prop. Basin Limits	
Basin Area	2,222,400 ft²	51.02 acres		1342+00	1416+08
Pond Parcel Area	1,221,731 ft²	28.05 acres	1,221,731	*Assume 300' of R/W	
Total Area	3,444,131 ft²	79.07 acres			

PROPOSED CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft²)**	**%**	**Area (Ft²)**	**%**	**Area (Ft²)**	**%**	**Area (Ft²)**	**%**	**A**	**B**	**C**	**D**		**(Ft²)**	**(acres)**
retention/detention Pond (Impervious	1,099,558	31.93%		0.00%		0.00%		0.00%	100	100	100	100	109,955,790	1,099,558	25.24
retention/detention Pond (Pervious	122,173	3.55%		0.00%		0.00%		0.00%	39	61	74	80	4,764,751	122,173	2.80
Open Space - Good Condition (grass cover > 75%	222,240	6.45%		0.00%		0.00%		0.00%	39	61	74	80	8,667,360	222,240	5.10
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way	2,000,160	58.07%		0.00%		0.00%		0.00%	98	98	98	98	196,015,680	2,000,160	45.92
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**3,444,131**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**			**COMPOSITE CN =**	**93**	**319,403,581**	**3,444,131**	**79.07**

PROPOSED RUNOFF DEPTH :

Rainfall Depth for 100yr-24hr (P) (inch) = 16.90
NOAA Atlas 14

Potential Abstraction (S) = 0.78
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 16.00
$Q = (P - 0.2S)^2 / (P + 0.8S)$

Estimated Runoff Volume: 4,590,847 ft³ 105.39 acre-ft

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 5 and 6 Combined
Pond Name:	Pond 5-1/6-1 and Pond 5-2/6-2
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

POND SIZING CALCULATIONS

1.) Treatment Volume: (Maximum of SWFWMD and SJRWMD Criterion)

Assume Wet or Dry Pond?	**Dry Pond**	
Area Inside R/W:	79.07	acres
Weighted C	0.89	
Impervious Area (C = 0.95)	45.92	acres
Pervious Area (C = 0.2)	7.91	acres
Water / Pond (C = 1.0)	25.24	acres
Discharge to OFW (If yes, additional 50% Treatment)	No	

Southwest Florida Water Management District (SWFWMD) Retention Criteria - Greater of the Following:

a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	5.87	ac-ft	(whichever is greater)
b) Minimum 0.5" over Contributing Area (0.5" x Area)	3.29	ac-ft	

St. John's River Water Management District (SJRWMD) Retention Criteria - Greater of the Following:

a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	5.87	ac-ft	(whichever is greater)
b) 1.75" over the Impervious Area (1.75" x Impervious Area)	6.70	ac-ft	

Required Treatment for Watershed (Max. of SWFWMD and SJRWMD Values):	**291,690**	ft^3	**6.70**	ac-ft

2.) Estimated Peak Attenuation Volume

Existing Runoff Volume =	2,584,377	ft^3	59.33	ac-ft
Proposed Runoff Volume =	4,590,847	ft^3	105.39	ac-ft
E.P.A.V. = Proposed Runoff Vol. - Existing Runoff Vol.	**2,006,470**	ft^3	**46.06**	ac-ft

3.) Floodplain Compensation

	554,519	ft^3	**12.73**	ac-ft

4.) Total Storage

	2,560,988	ft^3	**58.79**	ac-ft

5.) Analysis of Site Required

Assumed Pond Configuration:

Pond Maintenance Berm Width (ft):	20	Freeboard Desired (ft):	1
L/W Ratio:	2	Pond Side Slopes (X:1):	4
Max. Treatment Volume Depth (ft):	1.5	Discharge to OFW:	No
Anticipated Max Pond Depth(ft):	3.5		

6.) Assuming Treatment Volume Controls

Pond is sized to provide calculated treatment volume in the depth listed above for "Max. Treatment Volume Depth". The total pond volume from the pond bottom to the depth listed above for "Anticipated Max Pond Depth" is then checked to see if it is more or less than the calculated attenutation volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Treatment Volume Requirement

L_{Rect} (ft): 623.6
W_{Rect} (ft): 311.8

Pond Dimensions at Peak Design Stage Considering Side Slopes and Treatment Volume

L_{Rect} (ft): 645.6
W_{Rect} (ft): 333.8

Volume between Permanent Pool Elevation and Peak Design Stage to Check Attenuation Requirement

$V_{Available\ for\ Total\ Storage}$ (ft^3) 707,026.65 (<--- Highlights in red if less than total volume required)
16.23 acre-ft

7.) Assuming Total Volume Controls

Pond is sized to for the total pond volume to equal the calculated attenuation volume using the depth listed above for "Anticipated Max Pond Depth". The volume provided from the bottom to the depth listed above for "Max. Treatment Volume Depth" is then checked to see if it is more or less than the calculated treatment volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Volume Requirement

L_{Rect} (ft): 1209.7
W_{Rect} (ft): 604.9

Pond Dimensions at Peak Design Stage Considering Sides Slopes

L_{Rect} (ft): 1223.7
W_{Rect} (ft): 618.9

Volume in First "X" Feet above Perm. Pool to Check Treatment Requirement

$V_{Available\ for\ Treatment}$ (ft^3) 1,075,887.53 (<--- Highlights in red if less than treatment volume required)
24.70 acre-ft

8.) Does Treatment or Total Volume Control?

Is there enough total volume provided when sized for the treatment volume? **No**
Is there enough treatment volume provided when sized for the total volume? **Yes**

Should dimensions from step 4 (treatment volume controls) or from step 5 (total volume controls) be used? **Step 7**

Pond Site Dimensions Considering Freeboard and Maintenance Berm

L_{Rect} (ft): 1272.00
W_{Rect} (ft): 667.00
Area (Ac): 19.48

Estimated Site Size Including 20% Factor Of Safety

L_{Rect} (ft): 1526.40
W_{Rect} (ft): 800.40

Area (ac): 28.05

Pond Volume Required = Attenuation Volume + Floodplain Compensation + Treatment Volume

Anticipated Pond $Depth_{Dry}$ = Depth To SHGWT - Distance From Pond Bottom To SHGWT - Freeboard

Anticipated Pond $Depth_{Wet}$ = Depth To SHGWT - Freeboard

$$L_{Rect} = \sqrt{\frac{V}{H}(L/W\ Ratio)} + 2*0.5*H*Side\ Slope + 2*Berm\ Width$$

$$W_{Rect} = L*(L/W\ Ratio) + 2*0.5*H*Side\ Slope + 2*Berm\ Width$$

Pond Sizing – Basin 6

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 6
Pond Name:	Pond 6-3
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

Blue cells require input

EXISTING RUNOFF PARAMETERS

Exist. Basin Limits	
1371+08	1416+08

*Assume 300' of R/W

Basin Area	1,350,000 ft^2	30.99 acres
Pond Parcel Area	473,990 ft^2	10.88 acres
Total Area	1,823,990 ft^2	41.87 acres

EXISTING CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	Area (Ft^2)	%	Area (Ft^2)	%	Area (Ft^2)	%	Area (Ft^2)	%	A	B	C	D		(Ft^2)	(acres)
Open Space - Good Condition (grass cover > 75%	473,990	25.99%		0.00%		0.00%		0.00%	39	61	74	80	18,485,610	473990	10.88
Open Space - Good Condition (grass cover > 75%	945,000	51.81%		0.00%		0.00%		0.00%	39	61	74	80	36,855,000	945000	21.69
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way)	405,000	22.20%		0.00%		0.00%		0.00%	98	98	98	98	39,690,000	405000	9.30
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**1,823,990**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**		**COMPOSITE CN =**		**52**	**95,030,610**	**1,823,990**	**41.87**

EXISTING RUNOFF DEPTH :

Rainfall Depth for 100yr-24hr (P) (inch) = 16.90
NOAA Atlas 14

Potential Abstraction (S) = 9.19
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 9.35
$Q = (P - 0.2S)^2 / (P + 0.8S)$

Estimated Runoff Volume: 1,421,553 ft^3 32.63 acre-ft
Peak Volume = Area x Q

PROPOSED RUNOFF PARAMETERS

Prop. Basin Limits	
1371+08	1416+08

*Assume 300' of R/W

Basin Area	1,350,000 ft^2	30.99 acres	
Pond Parcel Area	473,990 ft^2	10.88 acres	473,990
Total Area	1,823,990 ft^2	41.87 acres	

PROPOSED CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	Area (Ft^2)	%	Area (Ft^2)	%	Area (Ft^2)	%	Area (Ft^2)	%	A	B	C	D		(Ft^2)	(acres)
retention/detention Pond (Impervious)	426,591	23.39%		0.00%		0.00%		0.00%	100	100	100	100	42,659,100	426,591	9.79
retention/detention Pond (Pervious	47,399	2.60%		0.00%		0.00%		0.00%	39	61	74	80	1,848,561	47,399	1.09
Open Space - Good Condition (grass cover > 75%	135,000	7.40%		0.00%		0.00%		0.00%	39	61	74	80	5,265,000	135,000	3.10
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way)	1,215,000	66.61%		0.00%		0.00%		0.00%	98	98	98	98	119,070,000	1,215,000	27.89
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**1,823,990**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**		**COMPOSITE CN =**		**93**	**168,842,661**	**1,823,990**	**41.87**

PROPOSED RUNOFF DEPTH :

Rainfall Depth for 100yr-24hr (P) (inch) = 16.90
NOAA Atlas 14

Potential Abstraction (S) = 0.80
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 15.97
$Q = (P - 0.2S)^2 / (P + 0.8S)$

Estimated Runoff Volume: 2,427,924 ft^3 55.74 acre-ft

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 6
Pond Name:	Pond 6-3
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

POND SIZING CALCULATIONS

1.) Treatment Volume: (Maximum of SWFWMD and SJRWMD Criterion)

Assume Wet or Dry Pond?		**Dry Pond**	
Area Inside R/W:		41.87 acres	
Weighted C		0.89	
	Impervious Area (C = 0.95)	27.89 acres	
	Pervious Area (C = 0.2)	4.19 acres	
	Water / Pond (C = 1.0)	9.79 acres	
Discharge to OFW (If yes, additional 50% Treatment)		No	
Southwest Florida Water Management District (SWFWMD) Retention Criteria - Greater of the Following:			
	a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	3.09 ac-ft	(whichever is greater)
	b) Minimum 0.5" over Contributing Area (0.5" x Area)	1.74 ac-ft	
St. John's River Water Management District (SJRWMD) Retention Criteria - Greater of the Following:			
	a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	3.09 ac-ft	(whichever is greater)
	b) 1.75" over the Impervious Area (1.75" x Impervious Area	4.07 ac-ft	
Required Treatment for Watershed (Max. of SWFWMD and SJRWMD Values):		**177,188** ft^3	**4.07** ac-ft

2.) Estimated Peak Attenuation Volume

Existing Runoff Volume =	1,421,553 ft^3	32.63 ac-ft
Proposed Runoff Volume =	2,427,924 ft^3	55.74 ac-ft
E.P.A.V. = Proposed Runoff Vol. - Existing Runoff Vol.	**1,006,371** ft^3	**23.10** ac-ft

3.) Floodplain Compensation

20,038 ft^3 **0.46** ac-ft

4.) Total Storage

1,026,409 ft^3 **23.56** ac-ft

5.) Analysis of Site Required

Assumed Pond Configuration:

Pond Maintenance Berm Width (ft):	20	Freeboard Desired (ft):	1
L/W Ratio:	2	Pond Side Slopes (X:1):	4
Max. Treatment Volume Depth (ft):	1.5	Discharge to OFW:	No
Anticipated Max Pond Depth(ft):	4.0		

6.) Assuming Treatment Volume Controls

Pond is sized to provide calculated treatment volume in the depth listed above for "Max. Treatment Volume Depth". The total pond volume from the pond bottom to the depth listed above for "Anticipated Max Pond Depth" is then checked to see if it is more or less than the calculated attenutation volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Treatment Volume Requirement

L_{Rect} (ft): 486.1
W_{Rect} (ft): 243.0

Pond Dimensions at Peak Design Stage Considering Side Slopes and Treatment Volume

L_{Rect} (ft): 512.1
W_{Rect} (ft): 269.0

Volume between Permanent Pool Elevation and Peak Design Stage to Check Attenuation Requirement

$V_{Available\ for\ Total\ Storage}$ (ft^3) 502,063.33 (<--- Highlights in red if less than total volume required)
11.53 acre-ft

7.) Assuming Total Volume Controls

Pond is sized to for the total pond volume to equal the calculated attenuation volume using the depth listed above for "Anticipated Max Pond Depth". The volume provided from the bottom to the depth listed above for "Max. Treatment Volume Depth" is then checked to see if it is more or less than the calculated treatment volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Volume Requirement

L_{Rect} (ft): 716.4
W_{Rect} (ft): 358.2

Pond Dimensions at Peak Design Stage Considering Sides Slopes

L_{Rect} (ft): 732.4
W_{Rect} (ft): 374.2

Volume in First "X" Feet above Perm. Pool to Check Treatment Requirement

$V_{Available\ for\ Treatment}$ (ft^3) 368,934.63 (<--- Highlights in red if less than treatment volume required)
8.47 acre-ft

8.) Does Treatment or Total Volume Control?

Is there enough total volume provided when sized for the treatment volume? **No**
Is there enough treatment volume provided when sized for the total volume? **Yes**

Should dimensions from step 4 (treatment volume controls) or from step 5 (total volume controls) be used? **Step 7**

Pond Site Dimensions Considering Freeboard and Maintenance Berm

L_{Rect} (ft): 780.00
W_{Rect} (ft): 422.00
Area (Ac): 7.56

Estimated Site Size Including 20% Factor Of Safety

L_{Rect} (ft): 936.00
W_{Rect} (ft): 506.40

Area (ac): 10.88

Pond Volume Required = Attenuation Volume + Floodplain Compensation + Treatment Volume

Anticipated Pond $Depth_{Dry}$ = Depth To SHGWT - Distance From Pond Bottom To SHGWT - Freeboard

Anticipated Pond $Depth_{Wet}$ = Depth To SHGWT - Freeboard

$$L_{Rect} = \sqrt{\frac{V}{H}(L/W\ Ratio)} + 2*0.5*H*Side Slope + 2*Berm Width$$

$$W_{Rect} = L*(L/W\ Ratio) + 2*0.5*H*Side\ Slope + 2*Berm Width$$

Pond Sizing – Basin 7

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 7
Pond Name:	Pond 7
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

Blue cells require input

EXISTING RUNOFF PARAMETERS

Exist. Basin Limits	
1416+08	1471+95

*Assume 300' of R/W

Basin Area	1,676,100 ft^2	38.48 acres
Pond Parcel Area	658,719 ft^2	15.12 acres
Total Area	2,334,819 ft^2	53.60 acres

EXISTING CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**A**	**B**	**C**	**D**		**(Ft^2)**	**(acres)**
Open Space - Good Condition (grass cover > 75%)	658,719	28.21%		0.00%		0.00%		0.00%	39	61	74	80	25,690,041	658719	15.12
Open Space - Good Condition (grass cover > 75%)	1,173,270	50.25%		0.00%		0.00%		0.00%	39	61	74	80	45,757,530	1173270	26.93
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way)	502,830	21.54%		0.00%		0.00%		0.00%	98	98	98	98	49,277,340	502830	11.54
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**2,334,819**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**		**COMPOSITE CN =**		**52**	**120,724,911**	**2,334,819**	**53.60**

EXISTING RUNOFF DEPTH :

Rainfall Depth for 100yr-24hr (P) (inch) = 16.90
NOAA Atlas 14

Potential Abstraction (S) = 9.34
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 9.27
$Q = (P - 0.2S)^2 / (P + 0.8S)$

Estimated Runoff Volume: 1,803,908 ft^3 41.41 acre-ft
Peak Volume = Area x Q

PROPOSED RUNOFF PARAMETERS

Prop. Basin Limits	
1416+08	1471+95

*Assume 300' of R/W

Basin Area	1,676,100 ft^2	38.48 acres	
Pond Parcel Area	658,719 ft^2	15.12 acres	658,719
Total Area	2,334,819 ft^2	53.60 acres	

PROPOSED CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**A**	**B**	**C**	**D**		**(Ft^2)**	**(acres)**
retention/detention Pond (Impervious)	592,847	25.39%		0.00%		0.00%		0.00%	100	100	100	100	59,284,710	592,847	13.61
retention/detention Pond (Pervious)	65,872	2.82%		0.00%		0.00%		0.00%	39	61	74	80	2,569,004	65,872	1.51
Open Space - Good Condition (grass cover > 75%)	167,610	7.18%		0.00%		0.00%		0.00%	39	61	74	80	6,536,790	167,610	3.85
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way)	1,508,490	64.61%		0.00%		0.00%		0.00%	98	98	98	98	147,832,020	1,508,490	34.63
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**2,334,819**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**		**COMPOSITE CN =**		**93**	**216,222,524**	**2,334,819**	**53.60**

PROPOSED RUNOFF DEPTH :

Rainfall Depth for 100yr-24hr (P) (inch) = 16.90
NOAA Atlas 14

Potential Abstraction (S) = 0.80
S = (1000/CN) - 10

Runoff Depth (Q) (Inch) = 15.98
$Q = (P - 0.2S)^2 / (P + 0.8S)$

Estimated Runoff Volume: 3,108,901 ft^3 71.37 acre-ft

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 7
Pond Name:	Pond 7
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

POND SIZING CALCULATIONS

1.) Treatment Volume: (Maximum of SWFWMD and SJRWMD Criterion)

Assume Wet or Dry Pond?		**Dry Pond**	
Area Inside R/W:		53.60 acres	
Weighted C		0.89	
	Impervious Area (C = 0.95)	34.63 acres	
	Pervious Area (C = 0.2)	5.36 acres	
	Water / Pond (C = 1.0)	13.61 acres	
Discharge to OFW (If yes, additional 50% Treatment)		No	
Southwest Florida Water Management District (SWFWMD) Retention Criteria - Greater of the Following:			
	a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	3.97 ac-ft	(whichever is greater)
	b) Minimum 0.5" over Contributing Area (0.5" x Area)	2.23 ac-ft	
St. John's River Water Management District (SJRWMD) Retention Criteria - Greater of the Following:			
	a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	3.97 ac-ft	(whichever is greater)
	b) 1.75" over the Impervious Area (1.75" x Impervious Area,	5.05 ac-ft	
Required Treatment for Watershed (Max. of SWFWMD and SJRWMD Values):		**219,988** ft^3	**5.05** ac-ft

2.) Estimated Peak Attenuation Volume

Existing Runoff Volume =	1,803,908 ft^3	41.41 ac-ft
Proposed Runoff Volume =	3,108,901 ft^3	71.37 ac-ft
E.P.A.V. = Proposed Runoff Vol. - Existing Runoff Vol.	**1,304,993** ft^3	**29.96** ac-ft

3.) Floodplain Compensation

0 ft^3 **0.00** ac-ft

4.) Total Storage

1,304,993 ft^3 **29.96** ac-ft

5.) Analysis of Site Required

Assumed Pond Configuration:

Pond Maintenance Berm Width (ft):	20	Freeboard Desired (ft):	1
L/W Ratio:	2	Pond Side Slopes (X:1):	4
Max. Treatment Volume Depth (ft):	1.5	Discharge to OFW:	No
Anticipated Max Pond Depth(ft):	3.5		

6.) Assuming Treatment Volume Controls

Pond is sized to provide calculated treatment volume in the depth listed above for "Max. Treatment Volume Depth". The total pond volume from the pond bottom to the depth listed above for "Anticipated Max Pond Depth" is then checked to see if it is more or less than the calculated attenutation volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Treatment Volume Requirement

L_{Rect} (ft): 541.6
W_{Rect} (ft): 270.8

Pond Dimensions at Peak Design Stage Considering Side Slopes and Treatment Volume

L_{Rect} (ft): 563.6
W_{Rect} (ft): 292.8

Volume between Permanent Pool Elevation and Peak Design Stage to Check Attenuation Requirement

$V_{Available\ for\ Total\ Storage}$ (ft^3) 536,276.32 (<--- Highlights in red if less than total volume required)
12.31 acre-ft

7.) Assuming Total Volume Controls

Pond is sized to for the total pond volume to equal the calculated attenuation volume using the depth listed above for "Anticipated Max Pond Depth". The volume provided from the bottom to the depth listed above for "Max. Treatment Volume Depth" is then checked to see if it is more or less than the calculated treatment volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Volume Requirement

L_{Rect} (ft): 863.5
W_{Rect} (ft): 431.8

Pond Dimensions at Peak Design Stage Considering Sides Slopes

L_{Rect} (ft): 877.5
W_{Rect} (ft): 445.8

Volume in First "X" Feet above Perm. Pool to Check Treatment Requirement

$V_{Available\ for\ Treatment}$ (ft^3) 543,834.82 (<--- Highlights in red if less than treatment volume required)
12.48 acre-ft

8.) Does Treatment or Total Volume Control?

Is there enough total volume provided when sized for the treatment volume? **No**
Is there enough treatment volume provided when sized for the total volume? **Yes**

Should dimensions from step 4 (treatment volume controls) or from step 5 (total volume controls) be used? **Step 7**

Pond Site Dimensions Considering Freeboard and Maintenance Berm

L_{Rect} (ft): 926.00
W_{Rect} (ft): 494.00
Area (Ac): 10.50

Estimated Site Size Including 20% Factor Of Safety

L_{Rect} (ft): 1111.20
W_{Rect} (ft): 592.80

Area (ac): 15.12

Pond Volume Required = Attenuation Volume + Floodplain Compensation + Treatment Volume

Anticipated Pond $Depth_{Dry}$ = Depth To SHGWT - Distance From Pond Bottom To SHGWT - Freeboard

Anticipated Pond $Depth_{Wet}$ = Depth To SHGWT - Freeboard

$$L_{Rect} = \sqrt{\frac{V}{H}(L/W\ Ratio)} + 2*0.5*H*Side\ Slope + 2*Berm\ Width$$

$$W_{Rect} = L*(L/W\ Ratio) + 2*0.5*H*Side\ Slope + 2*Berm\ Width$$

Pond Sizing – Basin 8

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 8
Pond Name:	Pond 8
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

Blue cells require input

EXISTING RUNOFF PARAMETERS

Exist. Basin Limits	
1471+95	1511+25

*Assume 300' of R/W

Basin Area	1,179,000 ft^2	27.07	acres
Pond Parcel Area	510,975 ft^2	11.73	acres
Total Area	1,689,975 ft^2	38.80	acres

EXISTING CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**A**	**B**	**C**	**D**		**(Ft^2)**	**(acres)**
Open Space - Good Condition (grass cover > 75%	510,975	30.24%		0.00%		0.00%		0.00%	39	61	74	80	19,928,025	510975	11.73
Open Space - Good Condition (grass cover > 75%	825,300	48.84%		0.00%		0.00%		0.00%	39	61	74	80	32,186,700	825300	18.95
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way)	353,700	20.93%		0.00%		0.00%		0.00%	98	98	98	98	34,662,600	353700	8.12
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**1,689,975**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**		**COMPOSITE CN =**		**51**	**86,777,325**	**1,689,975**	**38.80**

EXISTING RUNOFF DEPTH :

Rainfall Depth for 100yr-24hr (P) (inch) = NOAA Atlas 14	16.90	
Potential Abstraction (S) = S = (1000/CN) - 10	9.47	
Runoff Depth (Q) (Inch) = $Q = (P - 0.2S)^2 / (P + 0.8S)$	9.20	
Estimated Runoff Volume Peak Volume = Area x Q	1,295,280 ft^3	29.74 acre-ft

PROPOSED RUNOFF PARAMETERS

Prop. Basin Limits	
1471+95	1511+25

*Assume 300' of R/W

Basin Area	1,179,000 ft^2	27.07	acres	
Pond Parcel Area	510,975 ft^2	11.73	acres	510,975
Total Area	1,689,975 ft^2	38.80	acres	

PROPOSED CURVE NUMBER CALCULATION:

	Type A Soils		Type B Soils		Type C Soils		Type D Soils		CN, Soil Groups				CN*A	Total Area	
LAND USE	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**Area (Ft^2)**	**%**	**A**	**B**	**C**	**D**		**(Ft^2)**	**(acres)**
retention/detention Pond (Impervious)	459,878	27.21%		0.00%		0.00%		0.00%	100	100	100	100	45,987,750	459,878	10.56
retention/detention Pond (Pervious	51,098	3.02%		0.00%		0.00%		0.00%	39	61	74	80	1,992,803	51,098	1.17
Open Space - Good Condition (grass cover > 75%	117,900	6.98%		0.00%		0.00%		0.00%	39	61	74	80	4,598,100	117,900	2.71
Streets and Roads - Paved curbs and storm sewers (excluding right-of-way)	1,061,100	62.79%		0.00%		0.00%		0.00%	98	98	98	98	103,987,800	1,061,100	24.36
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
		0.00%		0.00%		0.00%		0.00%						0	0.00
TOTALS	**1,689,975**	**100.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**		**COMPOSITE CN =**		**93**	**156,566,453**	**1,689,975**	**38.80**

PROPOSED RUNOFF DEPTH :

Rainfall Depth for 100yr-24hr (P) (inch) = NOAA Atlas 14	16.90	
Potential Abstraction (S) = S = (1000/CN) - 10	0.79	
Runoff Depth (Q) (Inch) = $Q = (P - 0.2S)^2 / (P + 0.8S)$	15.98	
Estimated Runoff Volume	2,250,931 ft^3	51.67 acre-ft

Job Name:	FPID: 452074-2, I-75 Pond Siting
Location:	Basin 8
Pond Name:	Pond 8
Date:	27-Mar-24
MM Project #:	502101587
Designed By:	DPS
Checked By:	TAM

POND SIZING CALCULATIONS

1.) Treatment Volume: (Maximum of SWFWMD and SJRWMD Criterion)

Assume Wet or Dry Pond?	**Dry Pond**		
Area Inside R/W:	38.80	acres	
Weighted C	0.89		
Impervious Area (C = 0.95)	24.36	acres	
Pervious Area (C = 0.2)	3.88	acres	
Water / Pond (C = 1.0)	10.56	acres	
Discharge to OFW (If yes, additional 50% Treatment)	No		

Southwest Florida Water Management District (SWFWMD) Retention Criteria - Greater of the Following:

a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	2.87	ac-ft	(whichever is greater)
b) Minimum 0.5" over Contributing Area (0.5" x Area)	1.62	ac-ft	

St. John's River Water Management District (SJRWMD) Retention Criteria - Greater of the Following:

a) Runoff from 1st 1" of Rainfall (1" x Area x Weighted C)	2.87	ac-ft	(whichever is greater)
b) 1.75" over the Impervious Area (1.75" x Impervious Area)	3.55	ac-ft	

Required Treatment for Watershed (Max. of SWFWMD and SJRWMD Values):	**154,744**	ft^3	**3.55**	ac-ft

2.) Estimated Peak Attenuation Volume

Existing Runoff Volume =	1,295,280	ft^3	29.74	ac-ft
Proposed Runoff Volume =	2,250,931	ft^3	51.67	ac-ft
E.P.A.V. = Proposed Runoff Vol. - Existing Runoff Vol.	**955,651**	ft^3	**21.94**	ac-ft

3.) Floodplain Compensation	**27,878**	ft^3	**0.64**	ac-ft
4.) Total Storage	**983,529**	ft^3	**22.58**	ac-ft

5.) Analysis of Site Required

Assumed Pond Configuration:

Pond Maintenance Berm Width (ft):	20	Freeboard Desired (ft):	1
L/W Ratio:	2	Pond Side Slopes (X:1):	4
Max. Treatment Volume Depth (ft):	1.5	Discharge to OFW:	No
Anticipated Max Pond Depth(ft):	3.5		

6.) Assuming Treatment Volume Controls

Pond is sized to provide calculated treatment volume in the depth listed above for "Max. Treatment Volume Depth". The total pond volume from the pond bottom to the depth listed above for "Anticipated Max Pond Depth" is then checked to see if it is more or less than the calculated attenutation volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Treatment Volume Requirement

L_{Rect} (ft): 454.2
W_{Rect} (ft): 227.1

Pond Dimensions at Peak Design Stage Considering Side Slopes and Treatment Volume

L_{Rect} (ft): 476.2
W_{Rect} (ft): 249.1

Volume between Permanent Pool Elevation and Peak Design Stage to Check Attenuation Requirement

$V_{Available\ for\ Total\ Storage}$ (ft^3) 380,370.41 (<--- Highlights in red if less than total volume required)
8.73 acre-ft

7.) Assuming Total Volume Controls

Pond is sized to for the total pond volume to equal the calculated attenuation volume using the depth listed above for "Anticipated Max Pond Depth". The volume provided from the bottom to the depth listed above for "Max. Treatment Volume Depth" is then checked to see if it is more or less than the calculated treatment volume.

Dimensions of Equivalent Rectangular Pond with Vertical Sides to Meet Pond Volume Requirement

L_{Rect} (ft): 749.7
W_{Rect} (ft): 374.8

Pond Dimensions at Peak Design Stage Considering Sides Slopes

L_{Rect} (ft): 763.7
W_{Rect} (ft): 388.8

Volume in First "X" Feet above Perm. Pool to Check Treatment Requirement

$V_{Available\ for\ Treatment}$ (ft^3) 408,114.32 (<--- Highlights in red if less than treatment volume required)
9.37 acre-ft

8.) Does Treatment or Total Volume Control?

Is there enough total volume provided when sized for the treatment volume? **No**
Is there enough treatment volume provided when sized for the total volume? **Yes**

Should dimensions from step 4 (treatment volume controls) or from step 5 (total volume controls) be used? **Step 7**

Pond Site Dimensions Considering Freeboard and Maintenance Berm

L_{Rect} (ft): 812.00
W_{Rect} (ft): 437.00
Area (Ac): 8.15

Estimated Site Size Including 20% Factor Of Safety

L_{Rect} (ft): 974.40
W_{Rect} (ft): 524.40

Area (ac): 11.73

Pond Volume Required = Attenuation Volume + Floodplain Compensation + Treatment Volume

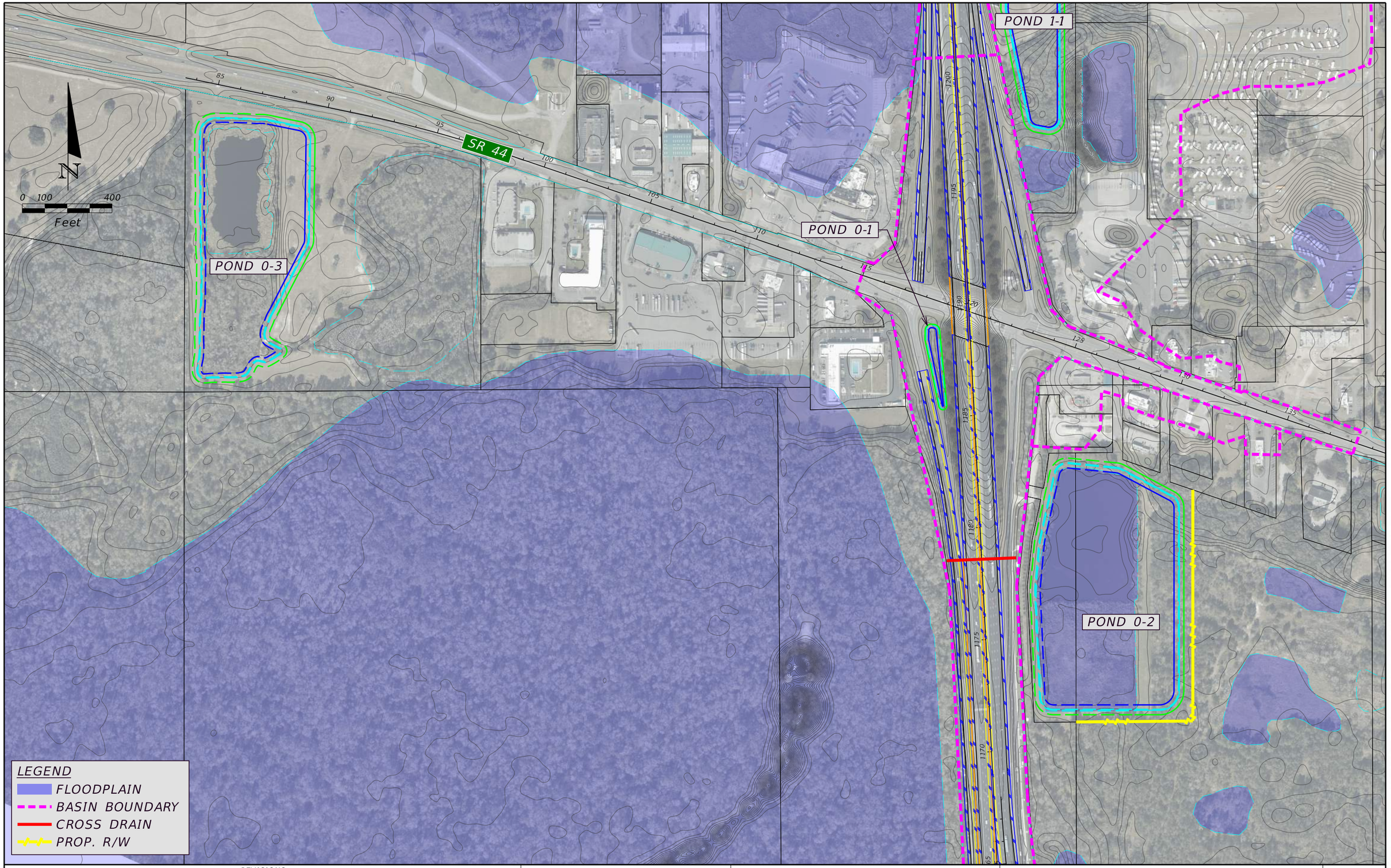
Anticipated Pond $Depth_{Dry}$ = Depth To SHGWT - Distance From Pond Bottom To SHGWT - Freeboard

Anticipated Pond $Depth_{Wet}$ = Depth To SHGWT - Freeboard

$$L_{Rect} = \sqrt{\frac{V}{H}(L/W\ Ratio)} + 2*0.5*H*Side Slope + 2*Berm Width$$

$$W_{Rect} = L*(L/W\ Ratio) + 2*0.5*H*Side\ Slope + 2*Berm Width$$

APPENDIX D – Pond Alternative Maps



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

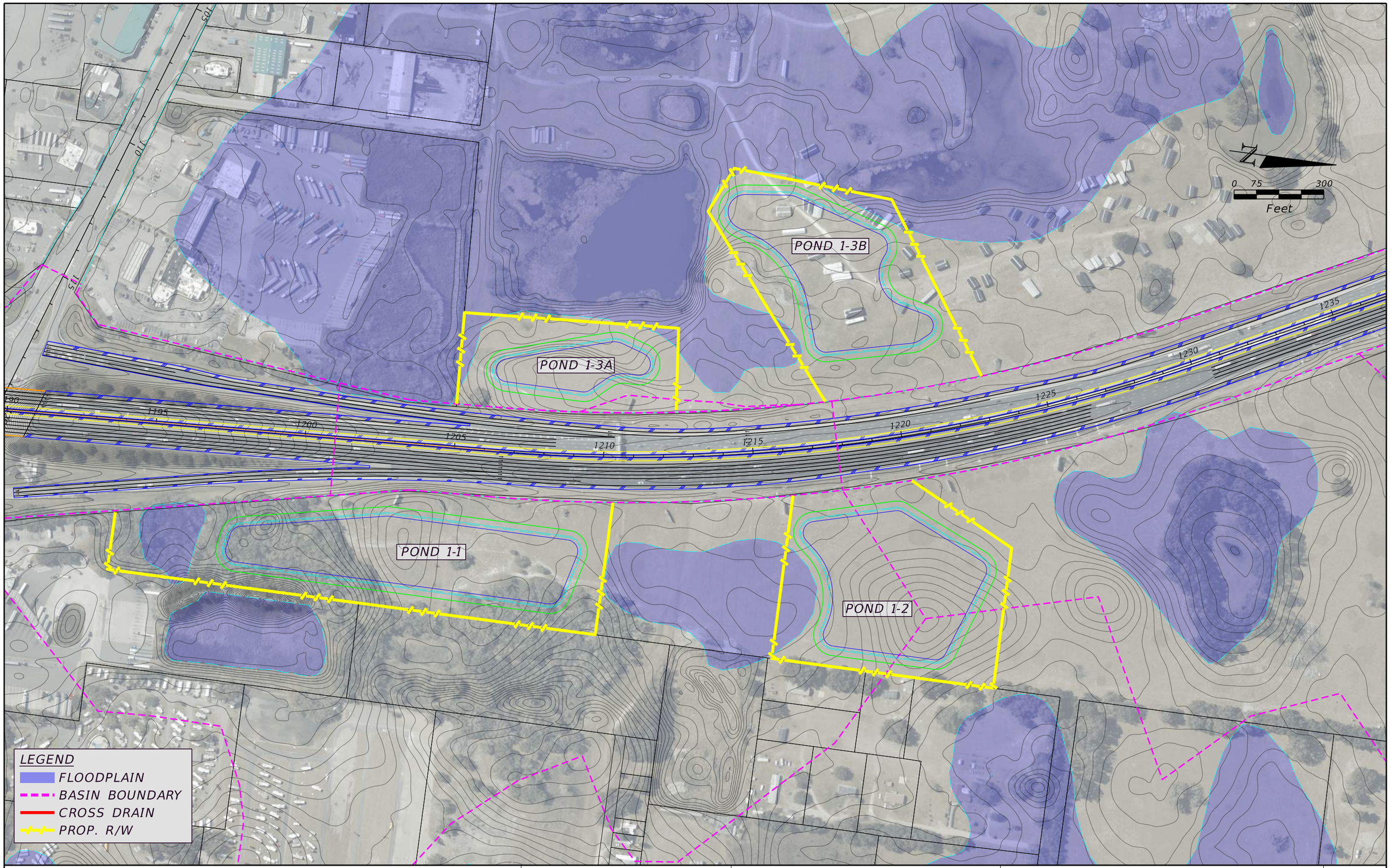
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	SUMTER	452074-2-22-01

BASIN 0
POND ALTERNATIVES

SHEET NO.

$USER$ $DATE$ $TIME$ $MODELNAME$ $FILE$



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

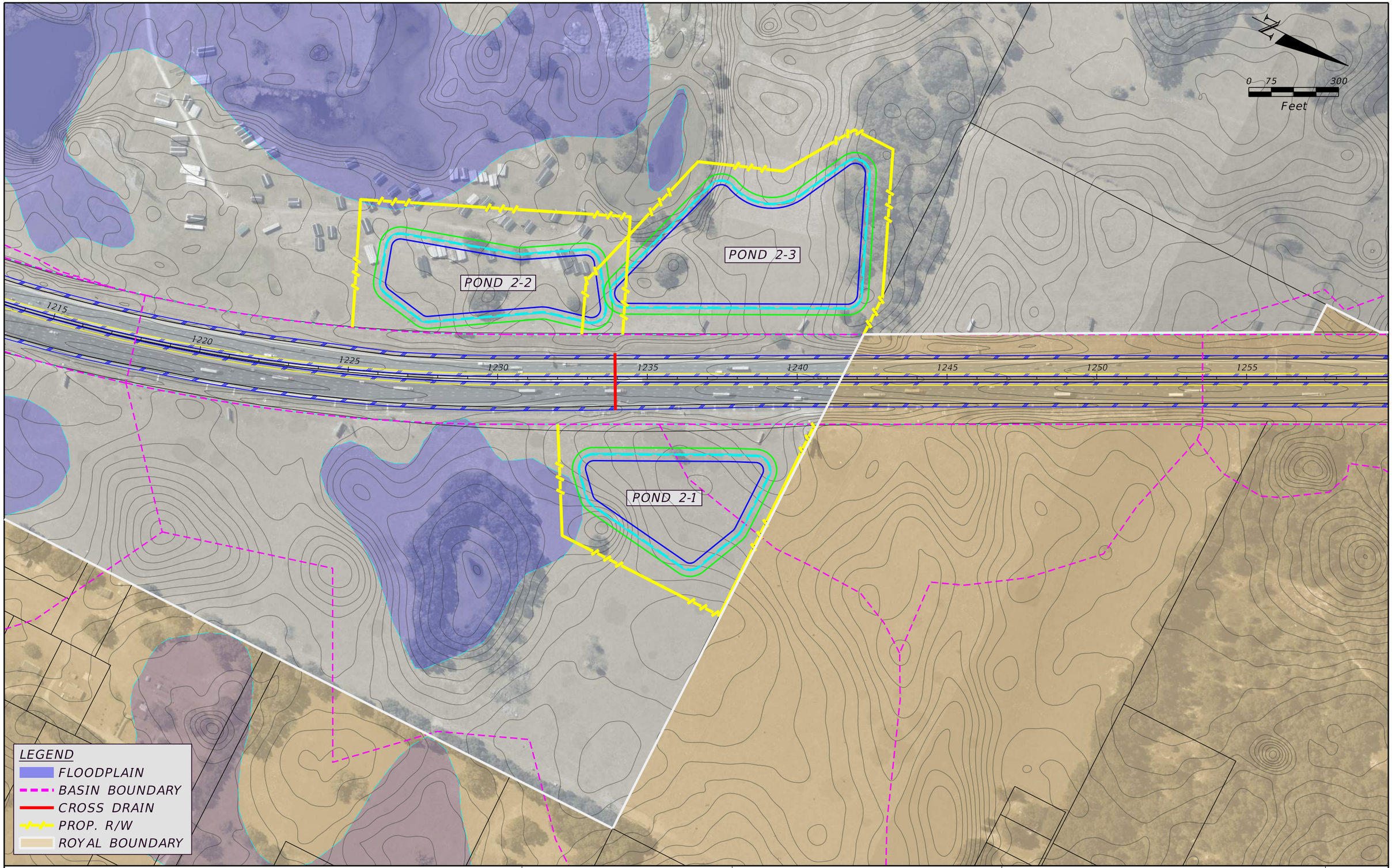
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	SUMTER	452074-2-22-01

BASIN 1
POND ALTERNATIVES

SHEET NO.

$USER$ $DATE$ $TIME$ $MODELNAME$ $FILE$



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	SUMTER	452074-2-22-01

BASIN 2
POND ALTERNATIVES

SHEET NO.

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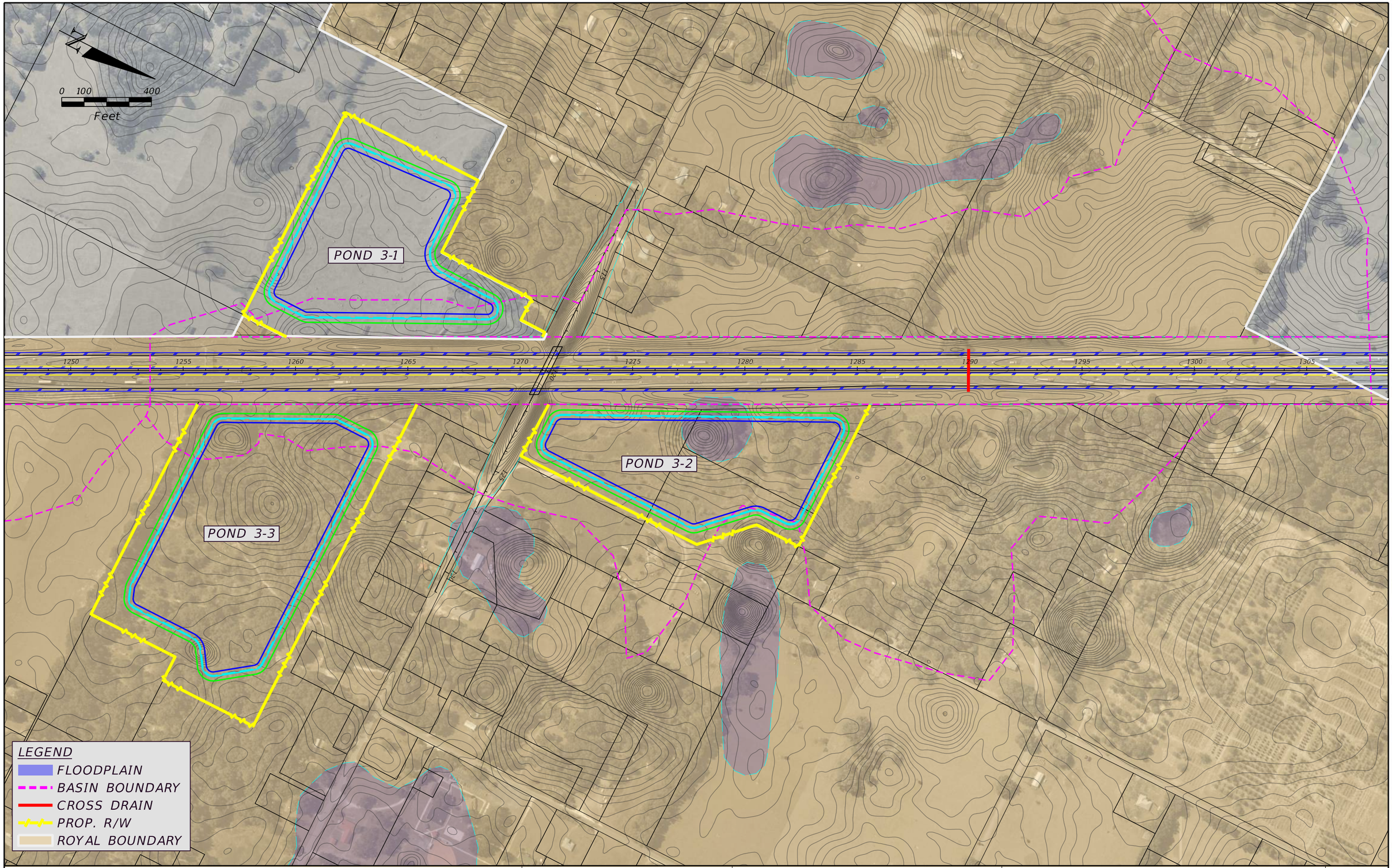

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	SUMTER	452074-2-22-01

BASIN 3
POND ALTERNATIVES

SHEET NO.

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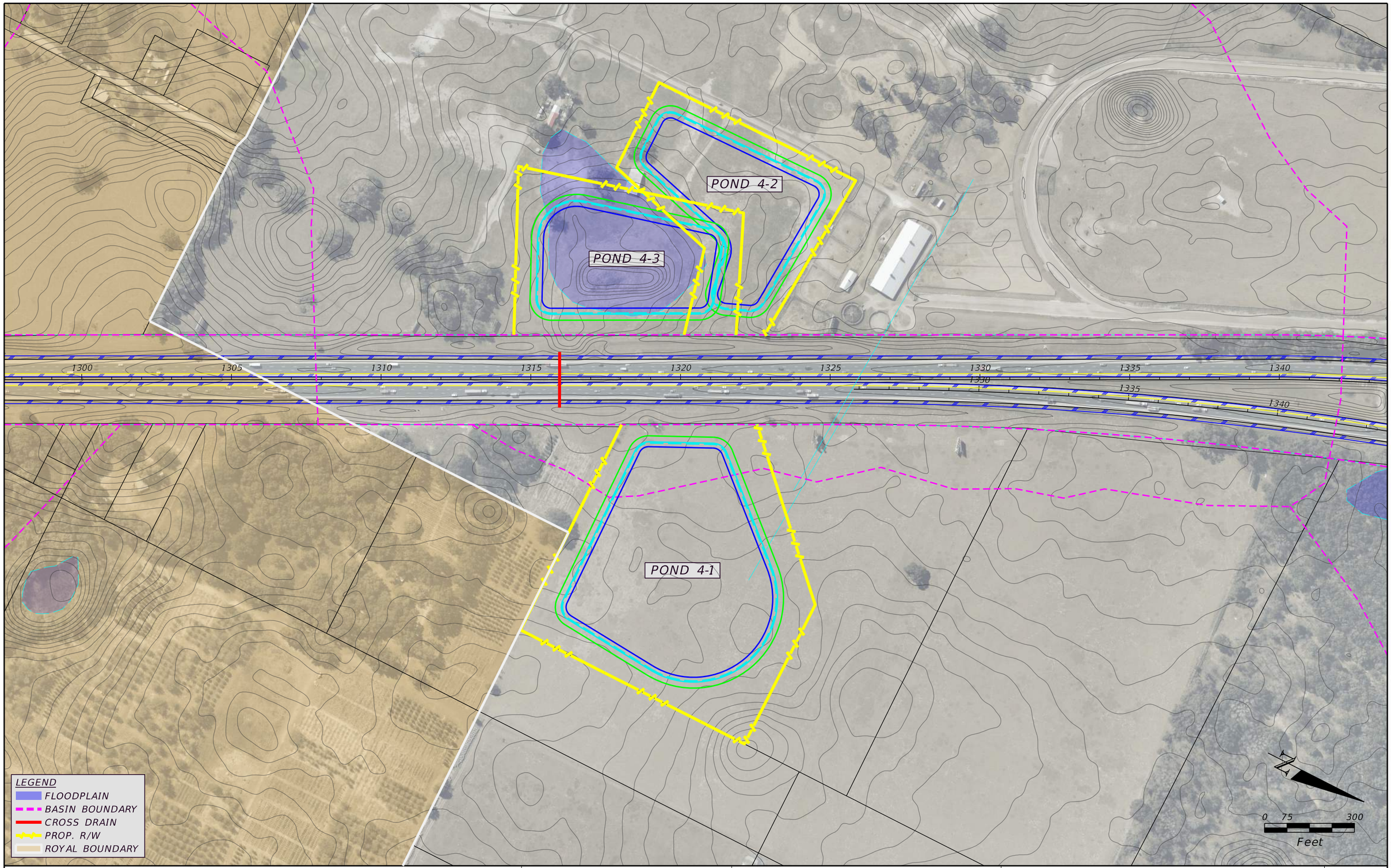


REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

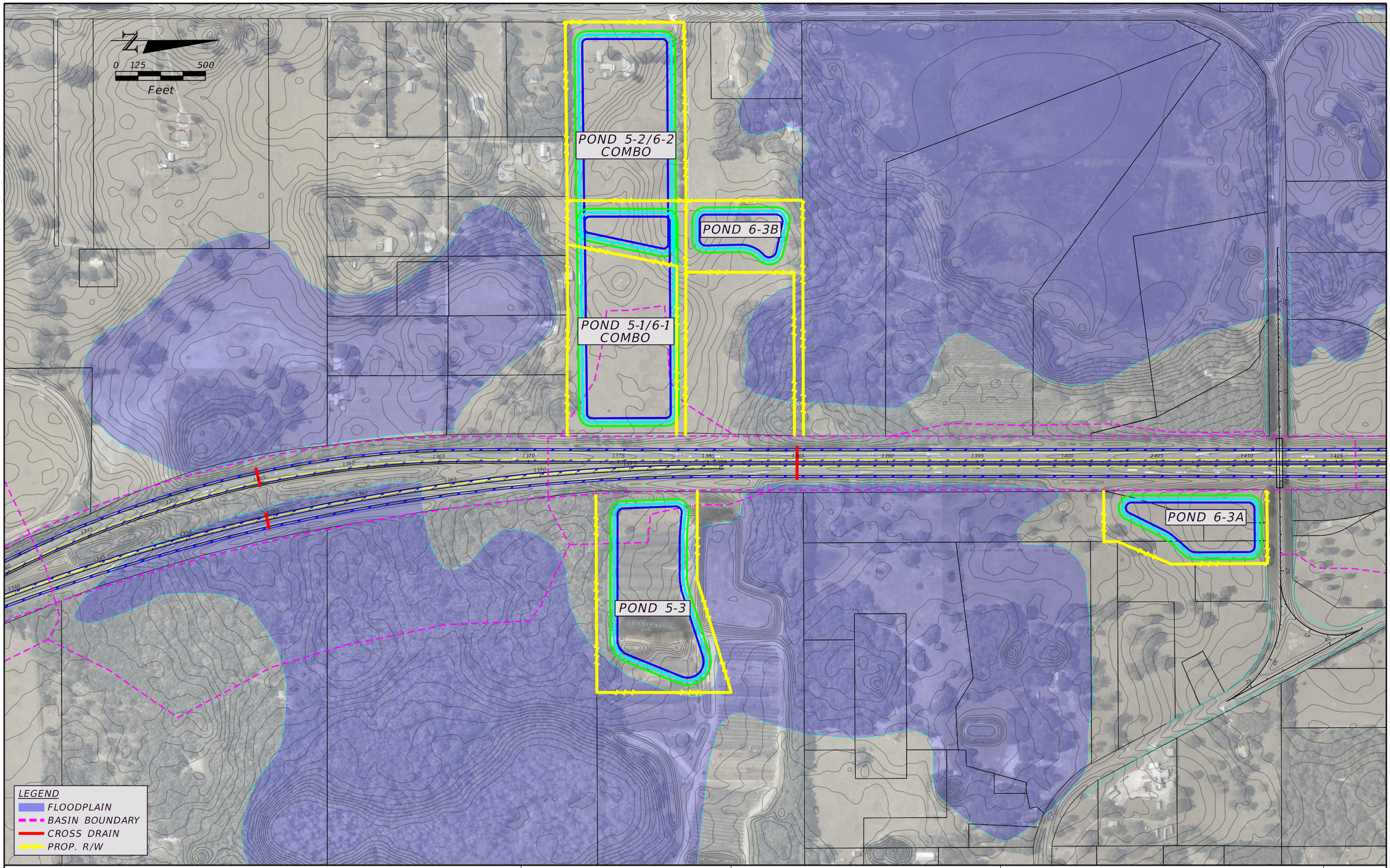
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	SUMTER	452074-2-22-01

BASIN 4
POND ALTERNATIVES

SHEET NO.

$USER$ $DATE$ $TIME$ $MODELNAME$ $FILE$



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	SUMTER	452074-2-22-01

BASINS 5 & 6 POND ALTERNATIVES

SHEET NO.

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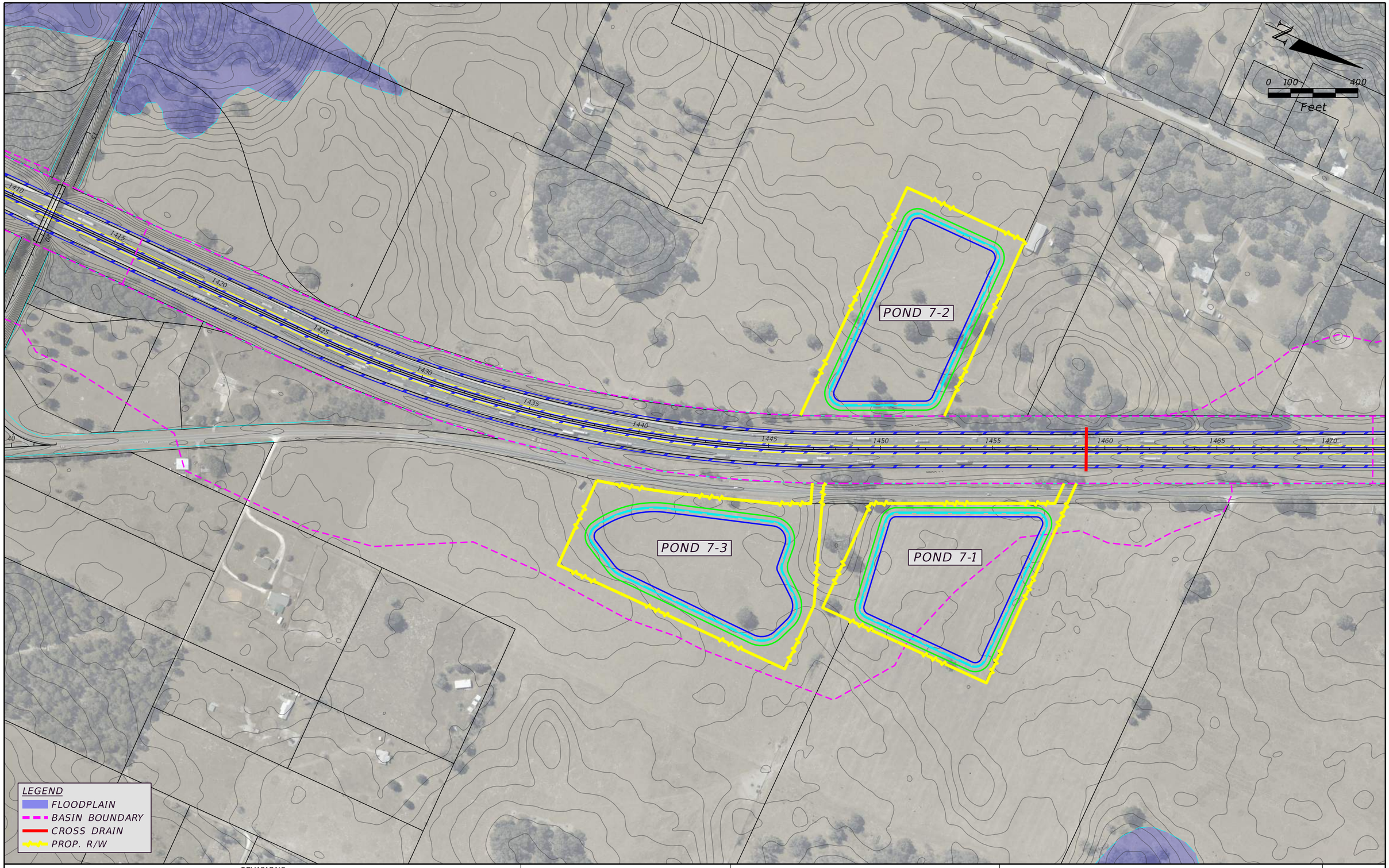

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	SUMTER	452074-2-22-01

BASIN 7
POND ALTERNATIVES

SHEET NO.

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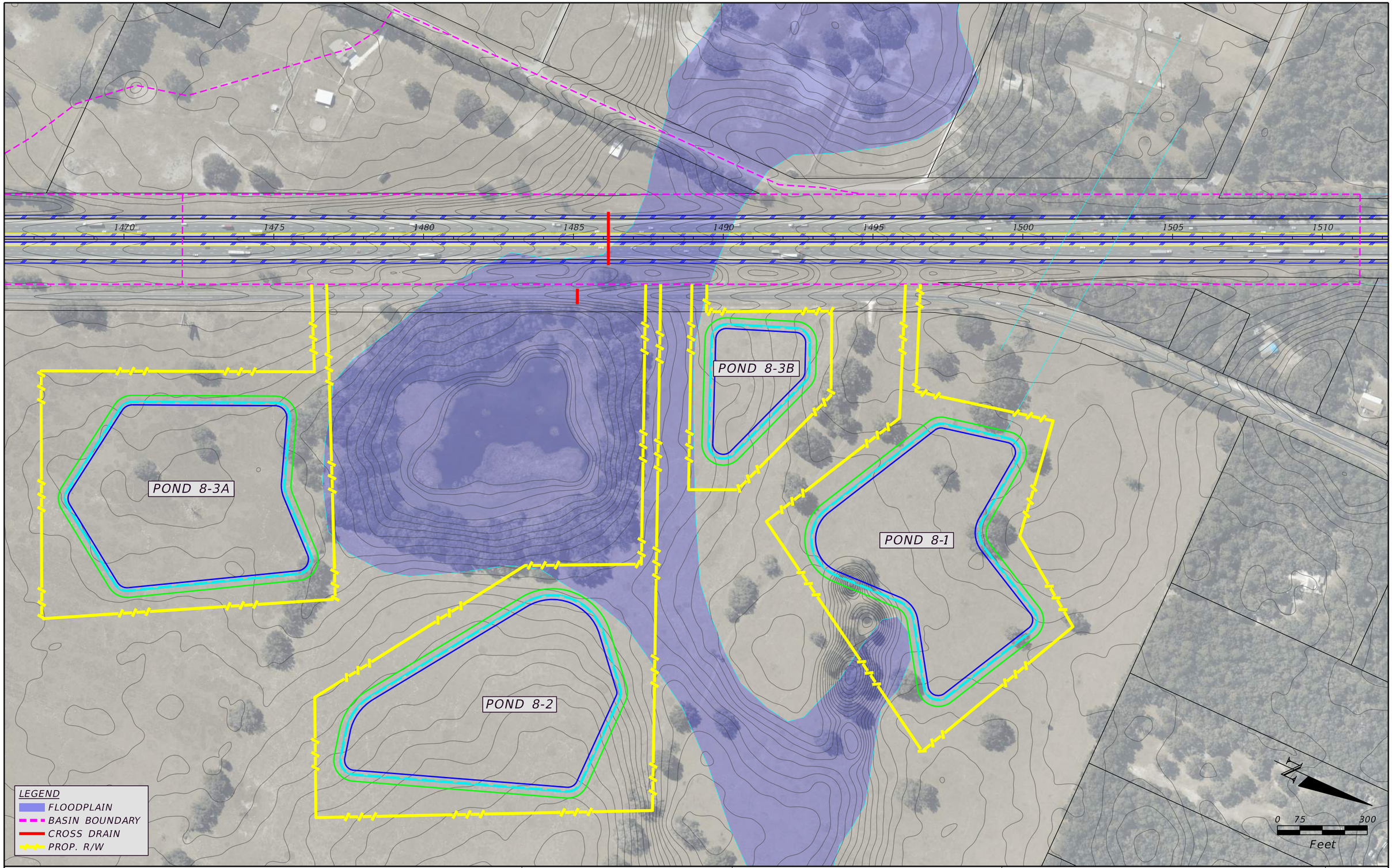

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	SUMTER	452074-2-22-01

BASIN 8
POND ALTERNATIVES

SHEET NO.

$USER$ $DATE$ $TIME$ $MODELNAME$ $FILE$

Appendix E – Hydraulic Gradient Calculations

Hydraulic Gradient Calculations

Pond	Approx. Edge of Pavement of Basin 0 (ft)	Treatment / Attenuation Depth (ft)	Estimated Distance from Basin Low Point (ft)	Estimated HGL Loss (Assume 0.05%) (ft)	Preferred HGL Clearance (ft)	Calculated Max. Pond Bottom (ft)	Estimated Pond Bottom (ft)	Difference (ft)	
0-1	52.1	3	50	0.03	1	48.08	48.00	**0.08**	Approx. EOP within SW Ramp near infield Pond
0-2	53.0	1.5	1100	0.55	1	49.95	49.90	**0.05**	Approx. EOP within NE Ramp that would be routed to Pond 0-2
0-3	54.0	2	3400	1.70	1	49.30	49.00	**0.30**	Approx. EOP within NW Ramp that would be routed to Pond 0-3

Pond	Approx. Edge of Pavement of Basin 1 (ft)	Treatment / Attenuation Depth (ft)	Estimated Distance from Basin Low Point (ft)	Estimated HGL Loss (Assume 0.05%) (ft)	Preferred HGL Clearance (ft)	Calculated Max. Pond Bottom (ft)	Estimated Pond Bottom (ft)	Difference (ft)	
1-1	57.0	2	50	0.03	1	53.98	53.00	**0.98**	
1-2	57.0	2	1450	0.73	1	53.28	53.00	**0.27**	
1-3A	57.0	2	100	0.05	1	53.95	53.00	**0.95**	
1-3B	58.0	2	1000	0.50	1	54.50	53.00	**1.50**	Approx. EOP within northern half of Basin 2 as Pond 1-3A would accept southern half

Pond	Approx. Edge of Pavement of Basin 2 (ft)	Treatment / Attenuation Depth (ft)	Estimated Distance from Basin Low Point (ft)	Estimated HGL Loss (Assume 0.05%) (ft)	Preferred HGL Clearance (ft)	Calculated Max. Pond Bottom (ft)	Estimated Pond Bottom (ft)	Difference (ft)
2-1	58.5	4	100	0.05	1	53.45	53.00	**0.45**
2-2	58.5	4	100	0.05	1	53.45	52.00	**1.45**
2-3	58.5	4	200	0.10	1	53.40	52.00	**1.40**

Pond	Approx. Edge of Pavement of Basin 3 (ft)	Treatment / Attenuation Depth (ft)	Estimated Distance from Basin Low Point (ft)	Estimated HGL Loss (Assume 0.05%) (ft)	Preferred HGL Clearance (ft)	Calculated Max. Pond Bottom (ft)	Estimated Pond Bottom (ft)	Difference (ft)
3-1	58.5	4	1950	0.98	1	52.53	52.00	**0.52**
3-2	58.5	4	125	0.06	1	53.44	52.00	**1.44**
3-3	58.5	4	2300	1.15	1	52.35	52.00	**0.35**

Pond	Approx. Edge of Pavement of Basin 4 (ft)	Treatment / Attenuation Depth (ft)	Estimated Distance from Basin Low Point (ft)	Estimated HGL Loss (Assume 0.05%) (ft)	Preferred HGL Clearance (ft)	Calculated Max. Pond Bottom (ft)	Estimated Pond Bottom (ft)	Difference (ft)
4-1	65.5	3	120	0.06	1	61.44	60.00	**1.44**
4-2	65.5	3	125	0.06	1	61.44	59.00	**2.44**
4-3	65.5	3	700	0.35	1	61.15	58.00	**3.15**

Pond	Approx. Edge of Pavement of Basin 5 (ft)	Treatment / Attenuation Depth (ft)	Estimated Distance from Basin Low Point (ft)	Estimated HGL Loss (Assume 0.05%) (ft)	Preferred HGL Clearance (ft)	Calculated Max. Pond Bottom (ft)	Estimated Pond Bottom (ft)	Difference (ft)
5-1	59.0	3.5	2100	1.05	1	53.45	53.00	**0.45**
5-2	59.0	3.5	3700	1.85	1	52.65	53.00	**-0.35**
5-3	59.0	3.5	2300	1.15	1	53.35	53.00	**0.35**

Pond	Approx. Edge of Pavement of Basin 6 (ft)	Treatment / Attenuation Depth (ft)	Estimated Distance from Basin Low Point (ft)	Estimated HGL Loss (Assume 0.05%) (ft)	Preferred HGL Clearance (ft)	Calculated Max. Pond Bottom (ft)	Estimated Pond Bottom (ft)	Difference (ft)
6-1	58.5	3.5	1900	0.95	1	53.05	53.00	**0.05**
6-2	58.5	3.5	3000	1.50	1	52.50	53.00	**-0.50**
6-3A	58.5	4	1050	0.53	1	52.98	53.00	**-0.02**
6-3B	58.5	4	2100	1.05	1	52.45	53.00	**-0.55**

Pond	Approx. Edge of Pavement of Basin 7 (ft)	Treatment / Attenuation Depth (ft)	Estimated Distance from Basin Low Point (ft)	Estimated HGL Loss (Assume 0.05%) (ft)	Preferred HGL Clearance (ft)	Calculated Max. Pond Bottom (ft)	Estimated Pond Bottom (ft)	Difference (ft)
7-1	61.0	3.5	375	0.19	1	56.31	56.00	**0.31**
7-2	61.0	3.5	750	0.38	1	56.13	56.00	**0.13**
7-3	61.0	3.5	1450	0.73	1	55.78	56.00	**-0.23**

Pond	Approx. Edge of Pavement of Basin 8 (ft)	Treatment / Attenuation Depth (ft)	Estimated Distance from Basin Low Point (ft)	Estimated HGL Loss (Assume 0.05%) (ft)	Preferred HGL Clearance (ft)	Calculated Max. Pond Bottom (ft)	Estimated Pond Bottom (ft)	Difference (ft)
8-1	58.5	3.5	1450	0.73	1	53.28	53.00	**0.27**
8-2	58.5	3.5	1500	0.75	1	53.25	53.00	**0.25**
8-3A	58.5	3.5	1500	0.75	1	53.25	53.00	**0.25**
8-3B	58.5	3.5	550	0.28	1	53.73	53.00	**0.73**