Professional Engineer Certification

PROJECT DEVELOPMENT AND CORRIDOR STUDY REPORT

Project: Lena Road PD&C Study
Limits: From south of 44th Avenue East to north of Landfill Road
CIP #: 6107560

This report contains preliminary information that fulfills the purpose and need for the Lena Road Project Development and Corridor Study from south of 44th Avenue East to north of Landfill Road in Manatee County, Florida. I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of transportation engineering as applied through professional judgement and experience.

I hereby certify that I am a registered professional engineer in the State of Florida practicing with HDR Engineering, Inc. and that I have prepared or approved the evaluation findings, opinions, conclusions, or technical advice for this project.

Jason L Starr
2021.12.14 18:45:11 -05'00'

This item has been digitally signed and sealed by Jason L. Starr, P.E. on the date adjacent to the seal.
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CONTENTS

Professional Engineer Certification ................................................................................................................. 2

Executive Summary ......................................................................................................................................... 8

1.0 Project Summary ...................................................................................................................................... 9

1.1 Project Description .................................................................................................................................. 9

1.2 Purpose and Need ..................................................................................................................................... 9

1.3 Consistency with Other Plans ................................................................................................................ 11

1.3.1 44th Avenue East ................................................................................................................................. 11

1.3.2 Central County Complex ................................................................................................................... 11

2.0 Existing Roadway Conditions .................................................................................................................. 13

2.1 Typical Section ....................................................................................................................................... 13

2.2 Right of Way .......................................................................................................................................... 14

2.3 Adjacent Land Use ................................................................................................................................... 14

2.4 Posted Speed Limit .................................................................................................................................. 14

2.5 Horizontal and Vertical Alignment ......................................................................................................... 15

2.6 Multimodal Facilities ............................................................................................................................... 15

2.7 Intersections ........................................................................................................................................... 15

2.7.1 SR 70 .................................................................................................................................................... 15

2.7.2 54th Drive East .................................................................................................................................... 15

2.7.3 41st Avenue East .................................................................................................................................. 16

2.7.4 34th Avenue East .................................................................................................................................. 16

2.7.5 Landfill Road / 81st Court East ........................................................................................................ 16

2.7.6 Gillis Drive .......................................................................................................................................... 16

2.7.7 Brower Drive ........................................................................................................................................ 16

2.7.8 SR 64 / Heritage Green Way ............................................................................................................ 16

2.8 Traffic Data ............................................................................................................................................. 17

2.9 Crash Data ............................................................................................................................................... 17

2.10 Drainage .................................................................................................................................................. 18

2.11 Floodplain .............................................................................................................................................. 18

2.12 Soils and Geotechnical Data ................................................................................................................ 18

2.13 Lighting .................................................................................................................................................. 20

2.14 Utilities ................................................................................................................................................... 20

2.14.1 Manatee County Potable Water Mains ............................................................................................. 20
5.1 Typical Section ...................................................................................................................... 44
5.2 Horizontal and Vertical Geometry ....................................................................................... 44
5.3 Project Traffic Volumes ........................................................................................................ 45
5.4 Intersection Concepts ........................................................................................................... 45
  5.4.1 44th Avenue East ................................................................................................................ 45
  5.4.2 41st Avenue East .................................................................................................................. 46
  5.4.3 34th Avenue East .................................................................................................................. 46
  5.4.4 Landfill Road ....................................................................................................................... 46
  5.4.5 Gillis Drive .......................................................................................................................... 47
  5.4.6 Brower Drive / Musgrave Ranch Road / SR 64 ................................................................. 47
5.5 Access Management Plan ...................................................................................................... 49
5.6 Bicycle and Pedestrian Accommodations .......................................................................... 49
5.7 Right of Way Requirements ................................................................................................ 49
5.8 Lighting .................................................................................................................................. 50
5.9 Utilities .................................................................................................................................. 50
  5.9.1 Manatee County Potable Water Mains ............................................................................. 50
  5.9.2 Manatee County Wastewater Mains ............................................................................... 50
  5.9.3 Manatee County Reclaim Mains ...................................................................................... 51
  5.9.4 Manatee County Information Technology ...................................................................... 51
  5.9.5 Manatee County ATMS .................................................................................................... 51
  5.9.6 Manatee County Utility CIP Projects ............................................................................. 51
  5.9.7 Private Utility Facilities .................................................................................................... 51
5.10 Preliminary Drainage Analysis ............................................................................................ 51
5.11 Floodplain Analysis .............................................................................................................. 52
5.12 Structures ............................................................................................................................... 52
5.13 Cost Estimate ........................................................................................................................ 52
  5.13.1 Construction Cost Estimate Assumptions ...................................................................... 52
  5.13.2 Construction Cost Estimate ............................................................................................. 53
  5.13.3 Right of Way Cost Estimate ........................................................................................... 53
6.0 Summary of Permits and Mitigation ..................................................................................... 54
6.1 Stormwater ............................................................................................................................. 54
6.2 Natural Resources .................................................................................................................. 54
  6.2.1 Anticipated Permits ........................................................................................................... 54
6.2.2 Wildlife ........................................................................................................................................................................... 55
6.2.3 Wetlands and Other Surface Waters .................................................................................................................................... 55
6.3 Cultural Resources................................................................................................................................................................. 56
6.4 Potential Contamination .......................................................................................................................................................... 56

FIGURES
Figure 1-1 | Project Location Map ................................................................................................................................................... 10
Figure 1-2 | Related Projects Location Map ..................................................................................................................................... 12
Figure 2-1 | Typical Section – Existing Lena Road north of SR 70 to cul-de-sac ........................................................................... 13
Figure 2-2 | Typical Section – Existing Lena Road from 41st Avenue East to SR 64 ......................................................................... 14
Figure 2-3 | Posted Speed Limit on Lena Road .................................................................................................................................. 14
Figure 2-4 | Lena Road at SR 64 Intersection ..................................................................................................................................... 17
Figure 2-5 | Soils Map ........................................................................................................................................................................ 19
Figure 2-6 | Utilities Map .................................................................................................................................................................. 23
Figure 2-7 | Lena Road Business Park Entrance ............................................................................................................................. 25
Figure 3-1 | Cultural Background Map ........................................................................................................................................... 31
Figure 3-2 | Contamination Location Map ....................................................................................................................................... 33
Figure 4-1 | Build Alternative Routes A and B .................................................................................................................................. 38
Figure 4-2 | Build Typical Section 1 ............................................................................................................................................... 39
Figure 4-3 | Build Typical Section 2 ............................................................................................................................................... 40
Figure 4-4 | Build Typical Section 3 ............................................................................................................................................... 40
Figure 5-1 | Lena Road and 44th Avenue East Roundabout ......................................................................................................... 46
Figure 5-2 | Lena Road Roundabout at Brower Drive / Musgrave Ranch Road ........................................................................... 48

TABLES
Table 2-1 | Lena Road Parallel Potable Water Mains ...................................................................................................................... 20
Table 2-2 | Lena Road Parallel Wastewater Mains .......................................................................................................................... 21
Table 2-3 | Lena Road Parallel Reclaim Mains .................................................................................................................................. 21
Table 2-4 | Lena Road Private Utility Facilities .................................................................................................................................. 24
Table 3-1 | Project Effect Determinations for Federal Listed and Protected Wildlife ........................................................................... 28
Table 3-2 | Project Effect Determinations for State Listed Wildlife ................................................................. 28
Table 3-3 | Project Effect Determinations for Federal and State Listed Plants .................................................... 29
Table 3-4 | Risk Ratings for Potential Contamination Sites ...................................................................................... 32
Table 4-1 | General Design Elements .......................................................................................................................... 34
Table 4-2 | Typical Section Design Elements ............................................................................................................. 35
Table 4-3 | Horizontal Alignment Design Elements ....................................................................................................... 35
Table 4-4 | Vertical Alignment Design Elements .......................................................................................................... 36
Table 4-5 | Design Year (2045) Build Design Traffic Volume Characteristics ................................................................. 37
Table 4-6 | Alternatives Evaluation ...................................................................................................................................... 41
Table 5-1 | Preliminary Horizontal Curve Data ............................................................................................................... 44
Table 5-2 | Design Year (2045) Design Traffic Volume Summary .................................................................................. 45
Table 5-3 | Recommended Median Openings ............................................................................................................... 49
Table 5-4 | Recommended Alternative Construction Cost Estimate ............................................................................... 53
Table 5-5 | Recommended Alternative Right of Way Cost Estimate ........................................................................ 53

APPENDICES

Appendix A – Concept Plans .......................................................................................................................... 57
Appendix B – Design Traffic Memo ........................................................................................................... 57
Appendix C – Natural Resources Assessment Memo .................................................................................... 57
Appendix D – Cultural Resources Memo ....................................................................................................... 57
Appendix E – Contamination Screening Memo .......................................................................................... 57
Appendix F – Pond Siting Memo .................................................................................................................. 57
Appendix G – Utilities Memo ......................................................................................................................... 57
Appendix H – Agency Coordination Minutes .............................................................................................. 57
Appendix I – Cost Estimate ........................................................................................................................... 57
Executive Summary

Manatee County conducted a Project Development and Corridor Study to evaluate a 2.1-mile segment of Lena Road from the Lena Road cul-de-sac, north of SR 70, to SR 64 in Manatee County, Florida. The purpose of this project is to enhance safety, improve traffic operations, provide multimodal access, and meet the future transportation demand. The Study evaluated options for widening the existing two-lane roadway to facilitate two typical sections, a divided two-lane roadway and a two-lane section with a continuous two-way left turn lane. Both sections will provide a 12-foot shared use path on the west side and a 5-foot sidewalk on the east side of the roadway. The Manatee County Comprehensive Plan shows Lena Road as a future two-lane roadway with 120 feet of right of way.

The existing typical section along Lena Road is a 2-lane roadway with 12-foot travel lanes and unpaved shoulders. The southern portion of Lena Road provides a 5-foot sidewalk on the east side of the roadway and a 10-foot sidewalk outside of the roadway right of way on the west side. The right of way varies throughout the Study limits with typical widths of 90-feet, 50-feet, and finally widening to 96-feet approaching SR 64, starting from the southern end.

Based on the engineering and environmental analysis documented in this report, the recommended alternative for Lena Road is Alternative 2, with 84 feet of right of way containing a two-lane roadway with 11-foot travel lanes, an 18-foot wide median or a 14-foot two-way left turn lane, a 12-foot shared use path on the west side of the road and a 5-foot sidewalk on the east side of the road. Alternative 2 best meets the project purpose with:

- Restricted raised median for access management
- Pedestrian accommodations
- Buffer space between the road and sidewalk for pedestrian safety and comfort
- Minimized right of way impacts

The Recommended Alternative requires right of way acquisition from 20 parcels with 1 relocation. Of the two recommended pond sites, one is a recommended partial acquisition and the other is a partial usage of a larger County-owned property. The project will require an Environmental Resource Permit (ERP) for stormwater treatment and wetland and surface water impacts, a Section 404 Permit, for wetland and surface water impacts. There are no properties listed on the National Register of Historic Places (NRHP) within the boundary of the study area. Approximately 0.79 mile of the length of the corridor study area has not been previously surveyed. An archaeological survey of the undisturbed portion of the study area is recommended. In addition, there are historic-age buildings (those constructed in 1976 or before) that have not been previously surveyed within the boundary of the study. Three medium risk potential contamination sites are adjacent to the project corridor and would require further action.

Public involvement was not conducted during this study due to an abbreviated schedule. A public meeting is recommended during the design phase. Cost estimations are based on the best available data at the time of this Study and will be refined during the design phase.
1.0 Project Summary

Manatee County conducted a Project Development and Corridor Study (Study) to develop alternatives along Lena Road for reducing congestion, improving safety and operational performance, and addressing future transportation needs. The project limits extend from the cul-de-sac at the north end of existing Lena Road to the intersection with State Road (SR) 64, providing a new north-south corridor between SR 70 and SR 64 in Bradenton, Manatee County, Florida, as shown in Figure 1-1. The Study also included the evaluations of impacts to natural resources and cultural resources within the study area, as well as the potential for impacts to the study area from contamination sites because of the proposed project.

1.1 Project Description

This study consisted of evaluating alternatives to meet the following objectives:

- Connect Lena Road from SR 70 to SR 64, including the proposed 44th Avenue East corridor,
- Accommodate two (2) vehicular travel lanes,
- Accommodate bicycle and pedestrian traffic,
- Identify stormwater management pond site alternatives,
- Identify project impacts,
- Identify right of way needs, and
- Recommend alternative for further development.

1.2 Purpose and Need

The primary purpose of the Lena Road improvements is to provide congestion relief by providing a collector roadway between SR 70 and SR 64. Located between Interstate 75 (I-75) and Lakewood Ranch Boulevard, the new extension of Lena Road to SR 64 will provide connectivity between two commercial/industrial areas currently accessed from SR 70 or SR 64 and provide an alternative local route between these two major east-west corridors. The extension would also connect to the future extension of 44th Avenue East, providing alternative east-west access across I-75.

The Manatee County Capital Improvement Plan (CIP) includes funding for design and construction of a two-lane urban roadway from south of 44th Avenue East to Landfill Road.

To encourage and promote the Complete Streets Concept throughout the County, the Manatee County Comprehensive Plan has identified Lena Road with a twenty-year functional classification as a Collector with a twenty-year Level of Service standard of D, a twenty-year travel lane need of two lanes, and a Right-of-Way needs width of 120 feet.
Figure 1-1 | Project Location Map
1.3 Consistency with Other Plans

Related projects with the Lena Road Study area include the 44th Avenue East extension from Creekwood Boulevard to Lakewood Ranch Boulevard (Project #6045662) and the Central County Complex (Project #6106560) as shown in Figure 1-2.

1.3.1 44th Avenue East

This capital improvement project will provide a four-lane divided roadway with sidewalks, bike lanes/multi-use path, street lighting, overpass over I-75 and a crossing over a reclaimed water storage lake. The roadway section will include four 11-foot travel lanes, a 22-foot median, curb and gutter, 6-foot bike lanes, a 5-foot sidewalk on the south side, and a 10-foot sidewalk on the north side. A roundabout is planned for the intersection of 44th Avenue East with Lena Road. The southern leg of the roundabout will extend to the north cul-de-sac on Lena Road providing connection to SR 70. Design is scheduled to be completed in 2022 with construction planned for 2023.

1.3.2 Central County Complex

This capital improvement project involves the acquisition of 160.99 acres located south of SR 64 along the east side of Lena Road. The land acquisition is a planned to accommodate three Departments serving Manatee County: the Sheriff’s Department, Public Works, and Utilities. The County is currently in design of the access road and public utilities on the property. This includes the 30% design status of the access road, known as Musgrave Ranch Road, on the northern side of the property, opposite of Brower Drive. The plans for Musgrave Ranch Road also include turn lane widening of Lena Road.
2.0 Existing Roadway Conditions
The roadway is classified as a collector roadway within Manatee County. Within the Study area, Lena Road exists as two separate roadway segments: north from SR 70 and south from SR 64. From SR 70 to the cul-de-sac north of the Lakewood Ranch Elks Lodge is the first roadway segment and is designated as “Lena Road”. The second segment is considered from a separate cul-de-sac at the southern end to SR 64. From the cul-de-sac west towards the I-75 Limited Access right of way, the roadway is designated as “41st Avenue East” where it curves to the north. From 41st Avenue East, the roadway heads north as “Lena Road” and curves to the east towards the County Landfill. A four-way intersection exists with the western leg and northern leg designated as “Lena Road”. Landfill Road is the eastern leg and 81st Court East is the southern leg. From this four-way intersection north to SR 64, the roadway is designated as “Lena Road”.

2.1 Typical Section
Lena Road from north of SR 70 to the cul-de-sac north of the Lakewood Ranch Elks Lodge is a two-lane curbed roadway within a minimum 90-foot right of way. The existing two 12-foot travel lanes are located along the eastern right of way line, along with a 5-foot concrete sidewalk. A 10-foot concrete path is located along the western right of way line, within easement. See Figure 2-1.

![Figure 2-1 | Typical Section – Existing Lena Road north of SR 70 to cul-de-sac](image-url)
Lena Road north of SR 70 to the cul-de-sac is located within a minimum 90-foot right of way. Lena Road from 41st Avenue East to Landfill Road has a minimum 50-foot right of way. The right of way varies moving northward towards SR 64 widening to approximately 96 feet.

### 2.3 Adjacent Land Use

Lena Road north of SR 70 to the cul-de-sac is commercially developed. Lena Road from 41st Avenue East to SR 64 is bound by commercial/industrial and suburban residential properties.

### 2.4 Posted Speed Limit

The existing posted speed limit on Lena Road north of SR 70 and south of SR 64 is 30 mph. The existing posted speed limit on Lena Road near Landfill Road is 25 mph.
2.5  **Horizontal and Vertical Alignment**

Lena Road is a predominantly north-south roadway. From north of SR 70 to the cul-de-sac the roadway consists of a series of reversing curves without tangency. This roadway segment terminates with a cul-de-sac south of County-owned property.

The northern segment of Lena Road begins at the intersection with 41st Avenue East, which is actually a sharp horizontal curve for the pavement area rather than a traditional intersection. Lena Road heads north from this location to another sharp horizontal curve and connects to an intersection with 81st Court East and Landfill Road. This Study considers the roadway alignment from the cul-de-sac on 41st Avenue East to the Landfill Road intersection as the existing condition for initial assessment due to the sharp horizontal curvature.

From Landfill Road to SR 64, Lena Road is a primarily linear roadway with two main horizontal curves. The first curve to the left is near the power substation and has an approximate radius of 650 feet and is approximately 150 feet long. The second curve to the right has an approximate radius of 800 feet and is approximately 220 feet long. The minimum curve length is 400 feet; therefore, these existing curves lengths are deficient.

The roadway is considered level terrain.

2.6  **Multimodal Facilities**

Lena Road north of SR 70 accommodates pedestrian and bicycle traffic via the 10-foot-wide path located outside of the west side of the roadway right of way. The 5-foot-wide sidewalk located along the east side is not continuous but is present at developed parcels. From Landfill Road to SR 64, there is no accommodation for pedestrian or bicycle traffic, with the exception of sidewalk on the RaceTrac property located in the southwest corner of Lena Road and SR 64.

There are no MCAT transit routes along Lena Road. There were no school bus routes identified along Lena Road.

2.7  **Intersections**

2.7.1  **SR 70**

SR 70 is a six-lane divided facility with a dedicated left and right turn lane at the Lena Road intersection. Lena Road is stop-controlled while SR 70 is uncontrolled. Access to Lena Road from SR 70 eastbound is provided by a directional opening. Lena Road provides access to SR 70 in the westbound direction only (right out). There is a northbound right turn lane on Lena Road for the adjacent 54th Drive East intersection to the north of SR 70. The SR 70 at Lena Road intersection is currently under construction through an FDOT project for SR 70 and I-75 (FPID 201032-2). The project completion is anticipated for December 2021.

Pedestrians are currently accommodated by a sidewalk crossing at the back of SR 70 right of way, crossing Lena Road north of the existing stop bar. The FDOT project will provide curb ramps and a designated crosswalk closer to SR 70. The 10-foot-wide path on the west side of the right of way connects to the SR 70 sidewalk, through a short run of 6-foot-wide sidewalk. The existing keyhole bicycle lane on SR 70 will remain with the FDOT project.

2.7.2  **54th Drive East**

54th Drive East is a two-lane roadway connecting Lena Road and 87th Street East. The intersection with Lena Road is stop-controlled for 54th Drive East. The western leg of the intersection is a business entrance drive. Lena Road provides a northbound right turn lane that originates at SR 70 to the south and a southbound left turn lane. 54th Drive East provides a westbound undesignated left turn and shared through-right turn lane. The business entrance drive provides a designated entry lane and exit lane.
Pedestrians are currently accommodated by crosswalks on the northern and eastern legs of the intersection. There is a sidewalk network on the east side of Lena Road at this location due to developments on the NE and SE quadrants. The existing 10-foot-wide path on the west side of the right of way is not connected to the crosswalks at the intersection.

2.7.3 41st Avenue East
41st Avenue East is the designated roadway at the southern end of the existing northern segment of the Study area. The intersection of Lena Road exists by designation only and is not a functional intersection. The roadway segments of designated Lena Road and 41st Avenue East are connected by a 105-foot radius curve that is approximately 127 feet long.

There are no pedestrian accommodations at this intersection. There are nine (9) properties with direct access to 41st Avenue East, including FPL access into a transmission corridor.

2.7.4 34th Avenue East
34th Avenue East is a two-lane roadway connecting Lena Road and 81st Court East that is approximately 480 feet long. The intersection of Lena Road is undesignated by pavement markings but is stop controlled for 34th Avenue East.

There is a 5-foot-wide sidewalk on the north side of 34th Avenue East that terminates at this intersection on the NE quadrant. There are two (2) properties with direct access to 34th Avenue East.

2.7.5 Landfill Road / 81st Court East
Landfill Road connects Lena Road to the Manatee County Landfill with a 620-foot-long two-lane roadway from this intersection to the east. 81st Court East is an approximate 1,900-foot-long two-lane roadway from this intersection to the south that terminates with a cul-de-sac. Lena Road is the designation on the western leg and northern leg of this intersection undesignated by pavement markings. The western leg of Lena Road and Landfill Road are stop controlled with the northern leg of Lena Road and 81st Court East being uncontrolled.

There is a 5-foot-wide sidewalk on the west side of 81st Court East that terminates at this intersection on the SW quadrant. There are sixteen (16) properties with direct access to 81st Court East. Landfill Road provides access to the Manatee County Landfill.

2.7.6 Gillis Drive
Gillis Drive is a dead end, unimproved residential access roadway on the west side of Lena Road. The intersection is stop controlled for Gillis Drive with no pedestrian accommodations. There are three (3) properties with direct access to Gillis Drive.

2.7.7 Brower Drive
Brower Drive is a dead end, undesignated two-lane residential access roadway on the west side of Lena Road. The intersection is stop controlled for Brower Drive with no pedestrian accommodations. There are eight (8) properties with direct access to Brower Drive.

2.7.8 SR 64 / Heritage Green Way
Lena Road terminates at SR 64 which is a six-lane divided facility with dedicated left turn lanes and right turn lanes at a signalized intersection. The northern leg of this intersection is essentially a two-lane divided facility designated as Heritage Green Way. The configuration of Heritage Green Way provides a southbound dedicated
left turn lane and a shared through-right turn lane that deflects across the intersection to Lena Road. Lena Road provides a 270-foot-long dedicated left turn lane onto SR 64.

Pedestrians are accommodated on both sides of SR 64 and Heritage Green Way. A 5-foot sidewalk is provided on the west side of Lena Road that connects to SR 64. Designated bicycle lanes are provided on SR 64 and Heritage Green Way. Crosswalks are provided on all four legs of this signalized intersection.

2.8 Traffic Data
The Lena Road corridor connection between the cul-de-sac north of SR 70 and Landfill Road does not currently exist. The 44th Avenue East extension project will complete the 44th Avenue East corridor across I-75 from Bradenton to Lakewood Ranch. With these two important missing links in the Study area there is limited existing traffic data for the Study. Count Station 08-51 is located on Lena Road just south of SR 64 and is within the Study area. The 2019 Average Annual Daily Traffic (AADT) from this County Station is 3,987 vehicles.

The historic traffic data for Count Station 08-51 was reviewed to assess the growth rate for the project. The five-year growth rate is 3.85% and the ten-year growth rate is 3.04%. Appendix B contains the Design Traffic Memo performed for the Study.

2.9 Crash Data
For the five-year crash period from 2016 to 2021, there were 25 crashes recorded for Lena Road, with a majority (88%) located near the intersection with SR 70 involving rear-end collisions. The remaining 3 crashes were noted to be in parking lots near Lena Road. As the Study focal point is on the segment that does not exist, a crash analysis was not performed.
2.10 Drainage
Lena Road spans three watersheds: Williams Creek (WBID 1901), Braden River Below Ward Lake (WBID 1876), and Cypress Strand (WBID 1875). Williams Creek is listed as impaired for nutrients on the FDEP comprehensive study list. Braden River Below Ward Lake and Cypress Strand are impaired for nutrients or dissolved oxygen.

Corridor runoff is divided between the three watersheds. Basin 1 is the existing area within the Study limits from the cul-de-sac north of SR 70 to south of 44th Avenue East and outfalls to Williams Creek which flows westward beneath I-75 into the Braden River. Corridor runoff for Basin 2 is from south of 44th Avenue East to 34th Avenue East and outfalls to a network of wetlands leading to a channel which flows west, beneath I-75 on the north side of 44th Avenue East. Basin 3 is located north of 34th Avenue East to the end of the Study limits at SR 64. Corridor runoff flows northeast to Cypress Strand, which flows north to the Manatee River.

South of the 81st Court East cul-de-sac, the corridor is primarily undeveloped and drains via a series of connected depressions and channels. Developed residential areas drain via shoulder swales. North of the cul-de-sac, the corridor follows 81st Court East and Lena Road which drain via shoulder swales.

2.11 Floodplain
Lena Road is within Manatee County Unincorporated Area shown on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) 12081C0329E and 12081C0327E, both with an effective date March 17, 2014. The study corridor traverses multiple floodplain areas associated with Cypress Strand. Floodplains from south of 44th Avenue East to Landfill Road are designated Zone A, meaning the areas are within the 1% annual chance flood but do not have established flood elevations north of Landfill Road, floodplains continue along the northbound Lena Road right of way. Then, beginning south of the Cypress Strand cross drain beneath Lena Road and continuing to SR 64, Lena Road right of way is included in the floodplain. Floodplains north of Landfill Road are designated Zone AE, meaning they are within 1% annual chance flood and have established flood elevations. Flood elevation drops from 30 feet at Landfill Road to 20 feet downstream of the Cypress Strand cross drain beneath Lena Road.

2.12 Soils and Geotechnical Data
Soils within the Study area are predominantly fine sands with hydrologic soil group A/D. A United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Custom Soil Resource Report can be found in the Pond Siting Memo in Appendix F. A soils map of the Study area appears in Figure 2-5.
2.13 Lighting
There is no street lighting provided along Lena Road within the Study area. SR 64 provides corridor median lighting on the approaches to the Lena Road intersection.

2.14 Utilities
An overview of the County owned utilities overlayed with the proposed 500-foot roadway buffer zone is presented below in Figure 2-6. Detailed maps based on County GIS information and UAO provided location and alignment information are provided in Appendix G.

### 2.14.1 Manatee County Potable Water Mains
Existing County potable water mains within the Study area include parallel mains and laterals. The parallel mains are summarized in Table 2-1 and shown in Figure 2-6. A full assessment of existing potable water mains including utility age and asset IDs appears in Appendix G.

**Table 2-1 | Lena Road Parallel Potable Water Mains**

<table>
<thead>
<tr>
<th>Description</th>
<th>Roadway</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>10&quot; PVC Water Main</td>
<td>Lena Road</td>
<td>Beginning of Study Area along the west side of Lena Road ending at the cul-de-sac north of SR 70</td>
</tr>
<tr>
<td>8&quot; PVC Water Main</td>
<td>41st Avenue East</td>
<td>Along the north side of 41st Avenue East including a crossing of I-75</td>
</tr>
<tr>
<td>8&quot; PVC Water Main</td>
<td>Lena Road</td>
<td>Along the east side and north side of Lena Road from 41st Avenue East to the intersection with Landfill Road / 81st Court East</td>
</tr>
<tr>
<td>8&quot; PVC Water Main</td>
<td>Lena Road</td>
<td>Along the west side of Lena Road from the intersection with Landfill Road / 81st Court East to south of the SR 64 intersection</td>
</tr>
<tr>
<td>10&quot; PVC Water Main</td>
<td>Lena Road</td>
<td>Along the west side of Lena Road from the 8&quot; potable water main south of the SR 64 intersection to the north side of SR 64 where it ties into the east-west 42&quot; potable water main</td>
</tr>
<tr>
<td>6&quot; Unknown Water Main</td>
<td>Landfill Road</td>
<td>Along the north side of Landfill Road from the intersection with Lena Road / 81st Court East to the Landfill</td>
</tr>
<tr>
<td>8&quot; PVC Water Main</td>
<td>81st Court East</td>
<td>Along the west side of 81st Court East from the cul-de-sac to the intersection with Lena Road / Landfill Road</td>
</tr>
<tr>
<td>42&quot; DIP Water Main</td>
<td>SR 64</td>
<td>Along the north side of SR 64 within the intersection with Lena Road</td>
</tr>
</tbody>
</table>

2.14.2 Manatee County Wastewater Mains
Existing County wastewater mains within the Study area include parallel mains and laterals. The parallel mains are summarized in Table 2-2 and shown in Figure 2-6. A full assessment of existing wastewater mains including utility age and asset IDs appears in Appendix G.
## Lena Road Parallel Wastewater Mains

<table>
<thead>
<tr>
<th>Description</th>
<th>Roadway</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8” PVC Gravity Main</td>
<td>Lena Road</td>
<td>Beginning of Study Area along the west side of Lena Road ending at the cul-de-sac north of SR 70</td>
</tr>
<tr>
<td>20” DIP Force Main</td>
<td>County-Owned Property</td>
<td>This north-south force main follows the FPL Transmission corridor from SR 70 to the 41st Avenue East and was built in 1988</td>
</tr>
<tr>
<td>20” PVC Force Main</td>
<td>County-Owned Property</td>
<td>This north-south force main follows the FPL Transmission corridor from SR 70 to the 41st Avenue East and was built in 2018</td>
</tr>
<tr>
<td>20” DIP Force Main</td>
<td>41st Avenue East</td>
<td>Along the south side of 41st Avenue East including a crossing of I-75</td>
</tr>
<tr>
<td>8” PVC Gravity Main</td>
<td>Lena Road</td>
<td>Along the west side of Lena Road approximately 600 LF to 34th Street East</td>
</tr>
<tr>
<td>16” PVC Force Main</td>
<td>81st Court East</td>
<td>Along the east side of 81st Court East from the cul-de-sac to Landfill Road</td>
</tr>
<tr>
<td>8” PVC Gravity Main</td>
<td>81st Court East</td>
<td>Along the west side of 81st Court East from the cul-de-sac to Landfill Road</td>
</tr>
<tr>
<td>4” PVC Force Main</td>
<td>81st Court East</td>
<td>Along the east side of 81st Court East from Lift Station 615 to Landfill Road</td>
</tr>
<tr>
<td>16” PVC Force Main</td>
<td>Landfill Road</td>
<td>Along the south side of Landfill Road from the 16” force main on Lena Road (1986) to the Landfill</td>
</tr>
<tr>
<td>16” PVC Force Main</td>
<td>Lena Road</td>
<td>Along the east side of Lena Road from Landfill Road to SR 64 and was built in 1986</td>
</tr>
<tr>
<td>16” PVC Force Main</td>
<td>Lena Road</td>
<td>Along the east side of Lena Road from Landfill Road to SR 64 and was built in 2006</td>
</tr>
<tr>
<td>16” PVC Force Main</td>
<td>Lena Road</td>
<td>Across the SR 64 intersection to Heritage Green Way</td>
</tr>
<tr>
<td>12” DIP Force Main</td>
<td>SR 64</td>
<td>Along SR 64, under the southbound right turn lane pavement; connects to the mains on the east side of Lena Road</td>
</tr>
<tr>
<td>16” PVC Force Main</td>
<td>SR 64</td>
<td>Along the south side of SR 64 behind the sidewalk; connects to the mains on the east side of Lena Road</td>
</tr>
</tbody>
</table>

### Manatee County Reclaim Mains

Existing County reclaim mains within the Study area include parallel mains and laterals. The parallel mains are summarized in Table 2-3 and shown in Figure 2-6. A full assessment of existing reclaim mains including utility age and asset IDs appears in Appendix G.

## Lena Road Parallel Reclaim Mains

<table>
<thead>
<tr>
<th>Description</th>
<th>Roadway</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>36” DIP Reclaim Main</td>
<td>Lena Road</td>
<td>Crossing I-75 near 41st Avenue East and along the west side of Lena Road to the Lena Business Park subdivision where it follows the southern property line</td>
</tr>
<tr>
<td>30” DIP Reclaim Main</td>
<td>81st Court East</td>
<td>Along the east side of 81st Court East from the cul-de-sac to Landfill Road</td>
</tr>
<tr>
<td>Pipe Diameter</td>
<td>Road/Location</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td>10&quot; PVC Reclaim Main</td>
<td>Landfill Road</td>
<td>Along the south side of Landfill Road from the intersection with Lena Road / 81st Court East to the Landfill</td>
</tr>
<tr>
<td>30&quot; DIP Reclaim Main</td>
<td>Lena Road</td>
<td>Along the east side of Lena Road from Landfill Road to SR 64</td>
</tr>
<tr>
<td>30&quot; DIP Reclaim Main</td>
<td>SR 64</td>
<td>Along the south side of SR 64 from Lena Road to the east; located between the sidewalk and roadway</td>
</tr>
<tr>
<td>16&quot; PVC Reclaim Main</td>
<td>Heritage Green Way</td>
<td>In the median of Heritage Green Way, connecting to the 30&quot; reclaim main on SR 64</td>
</tr>
</tbody>
</table>

### 2.14.4 Manatee County Information Technology

The County Information Technology fiber optic cable system connects to the Manatee County Landfill from Lena Road. The East County Fiber Ring is located on the south side of SR 64 with a splice vault on the SW quadrant of the intersection with Lena Road. This system heads south to a pull box located outside the limits of the RaceTrac gas station site before crossing over to the east side of Lena Road. South of the FPL substation, the system run splits into two conduit systems that head south to Landfill Road, one on each side of Lena Road. At the Landfill Road / 81st Court East intersection, the two conduit systems reconnect and head along the north side of Landfill Road east to the Landfill.

The County Information Technology system traditionally consists of a 7-way DuraLine FuturePath conduit with pull boxes approximately every 250 feet. The County Information Technology system is shown in Figure 2-6.

### 2.14.5 Manatee County ATMS

There are no County ATMS facilities on Lena Road within the Study area. A County-maintained ATMS line is located on the south side of SR 64, connecting to the signalized intersection with Lena Road / Heritage Green Way. The County-maintained ATMS line is shown in Figure 2-6.
Figure 2-6 | Utilities Map
2.14.6 Manatee County Utility CIP Projects
There are several CIP projects in the Study area due to the presence of the Southeast Water Reclamation Facility (SEWRF) and the proposed Central County Complex.

I-75 Parallel Force Main [CIP 6097980] (Wastewater)
This project includes installing approximately 670 LF of 20-inch diameter force main downstream of 428 Booster Station (RTU 666), under I-75 at 41st Avenue East, where a hydraulic bottleneck exists. The project intent is to correct existing capacity deficiency.

Southeast Water Reclamation Facility (SEWRF) [multiple CIPs] (Wastewater)
The SEWRF CIP projects are located within the boundaries of the treatment plant and include SCADA, electrical, clarifier, and other treatment plant improvements.

Central County Complex [CIPs 61066570 and 6106580] (Water and Wastewater)
The Central County Complex include access roadway design and tie-in to the mains on SR 64 and Landfill Road. Central County Complex utility CIP projects include design of the potable and wastewater mains within the property.

44th Avenue East [CIP 6045662] (Water, Wastewater, and Reclaimed Water)
The 44th Avenue East project includes utility relocation and adjustments for the new roadway corridor as it crosses the SEWRF property. The ability to connect mains north and south on Lena Road is being considered with the utility accommodations of this project.

2.14.7 Private Utility Facilities
Private utility agency owners (UAOs) with utilities located within the Study area were contacted for information on their facilities. Table 2-4 summarizes the information received for these private UAOs. Additional coordination will be required during the design phase of Lena Road.

Table 2-4 | Lena Road Private Utility Facilities

<table>
<thead>
<tr>
<th>Utility Agency Owner</th>
<th>Description of Facilities</th>
</tr>
</thead>
</table>
| Florida Power and Light (FPL) | • FPL maintains a Transmission corridor on the east side of the Lena Road corridor from SR 70 to SR 64 including a 330-ft-wide easement on the County-owned SEWRF property.  
• FPL maintains a Transmission corridor crossing I-75 north of the proposed 44th Avenue East corridor that connects to the north-south Transmission corridor.  
• An FPL substation exists on the east side of Lena Road, north of Landfill Road.  
• FPL maintains a Distribution corridor located on the south side of 41st Avenue East, the east side of Lena Road from 41st Avenue East, and the north side of Lena Road to the Landfill Road / 81st Court East intersection.  
• FPL maintains a Distribution corridor located on the west side of 81st Court East from the cul-de-sac to the Lena Road / 81st Court East intersection.  
• FPL maintains a Distribution corridor located on the west side of Lena Road from the Landfill Road / 81st Court East intersection to the substation property where it crosses to the east side of Lena Road heading north to Brower Drive where it crosses back to the west side of Lena Road. From there it connects to facilities on the south side of SR 64. |
### Spectrum (Charter) Communications
- Spectrum maintains aerial facilities along Lena Road from 41st Avenue East to Landfill Road, along 81st Court East from the cul-de-sac to the Lena Road / Landfill Road intersection, and along Lena Road from the 81st Court East / Landfill Road intersection to SR 64.
- Spectrum maintains underground facilities along 41st Avenue East.

### CrownCastle Fiber
- CrownCastle maintains aerial facilities that follow the FPL Distribution corridor
- CrownCastle maintains an underground crossing of SR 64

### Uniti Fiber
- Uniti Fiber connects the tower north of the FPL substation to SR 64 with a 2-inch 4-way conduit containing 144-ct fiber.
- Uniti Fiber maintains a fiber line on SR 64 heading east from the Lena Road intersection.

### Zayo
- Zayo maintains communication facilities on Lena Road at both ends of the Study area.

### Frontier Communications
- Frontier maintains a 1-4” PVC conduit with fiber and copper on the east side of Lena Road from SR 70 to the cul-de-sac, crossing over to service the Lakewood Ranch Elks Lodge.
- Frontier maintains a 1-1.25” polypipe with fiber along the south side of 41st Avenue East and the east side of Lena Road, with connections to 81st Court East along 34th Avenue East.
- Frontier maintains a 1-4” PVC conduit with fiber and copper on the west side of Lena Road from Landfill Road to the north, expanding to 3-4” south of SR 64.
- Frontier maintains a 1-4” PVC conduit with fiber and 2-1.25” polypipe with fiber and copper on the east side of Lena Road from Landfill Road to SR 64.

### Black and Veatch
- This UAO from the Sunshine One Call for the Study area has not responded

### Braden River Utilities
- This UAO from the Sunshine One Call for the Study area has not responded

### Florida Gas Transmission (FGT)
- This UAO from the Sunshine One Call for the Study area has not responded

### Peace River Electric Cooperative (PRECO)
- This UAO from the Sunshine One Call for the Study area has not responded

### TECO Peoples Gas
- This UAO from the Sunshine One Call for the Study area has not responded

### 2.15 Signs
There are no overhead sign structures along Lena Road. Standard ground mounted signs are provided for traffic control (speed limit, stop, etc). A multi-post sign is in the southeast corner of Lena Road and Landfill Road for the Manatee County Landfill. The Lena Business Park entrance signs (concrete structure) are located in the SW and SE quadrants of the Lena Road intersection with Landfill Road / 81st Court East.

![Figure 2-7 | Lena Road Business Park Entrance](image-url)
2.16 Structures
There are no bridge structures on Lena Road. There are two existing cross drains within the Study area. One is a 36" pipe on 81st Court East, north of 34th Avenue East, allowing the Cypress Strand Tributary to flow east. The other cross drain is an unknown size on Lena Road, closer to SR 64, and allows Cypress Strand to flow west.
3.0 Existing Environmental Conditions

An analysis of the natural, cultural, and contamination issues/resources was performed as part of the Study. The purpose of this analysis was to determine the existing conditions within the corridor study area and identify potential effects from the proposed modifications to Lena Road. The existing natural and cultural resources within the study area, as well as the potential for impacts to the study area from contamination sites are summarized below.

3.1 Natural Resources

A Natural Resources Assessment Memo (see Appendix C) was prepared to support the Study through the evaluation of Protected Species and Habitat, Wetlands and Other Surface Waters, and Essential Fish Habitat. The Technical Memorandum documents the results of the corridor assessment in order to support decisions associated with the proposed project as it relates to natural resources potentially present in the corridor study area.

The natural resources assessment was performed using as guidance Part 2, Chapter 16 Protected Species and Habitat and Chapter 9 Wetlands and Other Surface Waters of the Florida Department of Transportation (FDOT) PD&E Manual (July 1, 2020). However, this assessment is not considered a full Natural Resources Evaluation (NRE) as defined in the FDOT PD&E Manual. For this project, the study area includes a 500-foot buffer, east and west of the existing road centerline (i.e., project limits), totaling a 1,000-foot-wide study corridor. All natural resources discussed below fall within this study area. The natural resources assessment did not evaluate proposed stormwater management facilities outside of the corridor study area, such as potential pond locations, if any.

3.1.1 Protected Species and Habitat

The project was evaluated for potential impacts to federal and State of Florida (state) endangered or threatened species of fish, wildlife, and plants (listed species) and habitat of such species that has been designated as critical habitat under Section 7(a) of the Endangered Species Act (ESA) of 1973, as amended. Protected species were also reviewed for their potential to occur within the corridor study area.

Federal Protected Wildlife and Critical Habitat

Three federal listed species protected by the U.S. Department of Interior Fish and Wildlife Service (USFWS) potentially occur within the corridor study area. The proposed project would be expected to result in the effect determinations provided in Table 3-1 for federal listed species. Migratory birds and their habitat, including the non-listed but federally protected bald eagle and osprey were also present in this region and included in Table 3-1. However, this list may need to be refined based on the project alternative selected to proceed. USFWS designated critical habitat, as defined by Congress 50 CFR §17.94, was not present within the corridor study area. Therefore, the proposed project would not result in the destruction or adverse modification of critical habitat.
Table 3-1 | Project Effect Determinations for Federal Listed and Protected Wildlife

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Project Effect Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Drymarchon corais couperi</em></td>
<td>Eastern indigo snake</td>
<td>Threatened</td>
<td><em>May affect, not likely to adversely affect</em></td>
</tr>
<tr>
<td><em>Mycteria americana</em></td>
<td>Wood stork</td>
<td>Threatened</td>
<td><em>May affect, not likely to adversely affect</em></td>
</tr>
<tr>
<td><em>Aphelocoma coerulescens</em></td>
<td>Florida scrub jay</td>
<td>Threatened</td>
<td><em>No affect anticipated</em></td>
</tr>
</tbody>
</table>

Federal Protected Wildlife

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Project Effect Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Haliaeetus leucocephalus</em></td>
<td>Bald eagle</td>
<td>BGEPA* MBTA**</td>
<td><em>Minimal or no impact expected</em></td>
</tr>
<tr>
<td><em>Pandion haliaetus</em></td>
<td>Osprey</td>
<td>MBTA**</td>
<td><em>Minimal or no impact expected</em></td>
</tr>
</tbody>
</table>

* Bald & Golden Eagle Protection Act and Migratory Bird Treaty Act. ** Migratory Bird Treaty Act

State Protected Wildlife

Eight state listed wildlife managed by the Florida Fish and Wildlife Conservation Commission (FWC) could potentially occur within the corridor study area. The proposed project would be expected to result in the effect determinations provided in Table 3-2 for state listed species. However, this list may need to be refined based on the project alternative selected to proceed.

Table 3-2 | Project Effect Determinations for State Listed Wildlife

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Project Effect Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Antigone canadensis pratensis</em></td>
<td>Florida sandhill crane</td>
<td>Threatened</td>
<td><em>No effect anticipated</em></td>
</tr>
<tr>
<td><em>Falco sparverius paulus</em></td>
<td>Southeastern American kestrel</td>
<td>Threatened</td>
<td><em>No effect anticipated</em></td>
</tr>
<tr>
<td><em>Gopherus polyphemus</em></td>
<td>Gopher tortoise</td>
<td>Threatened</td>
<td><em>No adverse effect anticipated</em></td>
</tr>
<tr>
<td><em>Pituophis melanoleucus mugitus</em></td>
<td>Florida pine snake</td>
<td>Threatened</td>
<td><em>No effect anticipated</em></td>
</tr>
</tbody>
</table>

Wading Birds

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Project Effect Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Egretta caerulea</em></td>
<td>Little blue heron</td>
<td>Threatened</td>
<td><em>No effect anticipated</em></td>
</tr>
<tr>
<td><em>Egretta tricolor</em></td>
<td>Tricolored heron</td>
<td>Threatened</td>
<td><em>No effect anticipated</em></td>
</tr>
<tr>
<td><em>Platalea ajaja</em></td>
<td>Rosette spoonbill</td>
<td>Threatened</td>
<td><em>No effect anticipated</em></td>
</tr>
</tbody>
</table>

Nesting Shorebirds

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Project Effect Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Sternula antillarum</em></td>
<td>Least Tern</td>
<td>Threatened</td>
<td><em>No effect anticipated</em></td>
</tr>
</tbody>
</table>
Federal and State Protected Plants

Eleven federal and state listed plants protected by the Florida Department of Agricultural and Consumer Services (FDACS) that have the potential to occur within the corridor study area, including six endangered and five threatened. These listed plant species are shown in Table 3-3. None were observed during preliminary field surveys. However, this list may need to be refined based on the project alternative selected to proceed. Due to their low likelihood of occurrence, there is no effect anticipated to these federal and state listed plant species.

Table 3-3 | Project Effect Determinations for Federal and State Listed Plants

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Project Effect Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calopogon multiflorus</td>
<td>Many-flowered Grass-pink</td>
<td>State Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Centrosema arenicola</td>
<td>Sand Butterfly Pea</td>
<td>State Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Chionanthus pygmaeus</td>
<td>Pygmy Fringe-tree</td>
<td>Federal Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Cladonia perforata</td>
<td>Florida Perforate Cladonia</td>
<td>Federal Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Lechea cernua</td>
<td>Nodding Pinweed</td>
<td>State Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Linum carteri var. smallii</td>
<td>Small's Flax</td>
<td>State Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Nemastylis floridana</td>
<td>Celestial Lily</td>
<td>State Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Nolina atopocarpa</td>
<td>Florida Beargrass</td>
<td>State Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Pteroglossaspis ecristata</td>
<td>Giant Orchid</td>
<td>State Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Rhynchospora megaplumosa</td>
<td>Large-plumed Beaksedge</td>
<td>State Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Zephyranthes simpsonii</td>
<td>Redmargin Zephyrlily</td>
<td>State Threatened</td>
<td>No effect anticipated</td>
</tr>
</tbody>
</table>

3.1.2 Wetlands and Other Surface Waters

Wetlands and other surface waters were identified within the corridor study area. The primary wetland types in the study area included: Stream and Lake Swamps, Mixed Wetland Hardwood, Exotic Wetland Hardwoods, Wetland Forested Mixed, Freshwater Marshes, and Wet Prairies. Generally, all wetland systems identified were in moderate to poor condition, having incurred drainage by ditching, watershed conversions to farmland, and/or nearby development. Vegetation communities within the wetlands have also been degraded by agricultural activities, tree harvesting, and nuisance and exotic species growth.

Surface waters were present mostly associated with roadside ditches on the northern half of the study area and some remnant field ditches, derived from agricultural land uses. There are two primary water channels associated with Lena Road. These drainages were historically natural and associated with wetlands.
A total of twenty-seven (27) wetlands were identified within the corridor study area. A total of eight (8) surface waters were identified within the corridor study area, all consisting of drainage ditches either running along the roadside or draining away from the roadway. During evaluation of the road alignment alternatives, potential impacts to wetlands and surface waters would be identified and quantified. Direct impacts would include permanent and temporary impacts and would be quantified and tabulated for the state and federal permit applications.

3.1.3 Essential Fish Habitat
Essential fish habitat does not occur within the corridor study area; therefore, an Essential Fish Habitat (EFH) Assessment was not required.

3.2 Cultural Resources
To support the Study, background research was conducted to identify known cultural resources within the corridor study area that have the potential to be impacted by the proposed project improvements. The background research informed recommendations for future cultural resources surveys (archaeological and architectural) in the corridor study area. For the cultural resources assessment, the corridor study area comprises a 500-foot buffer on either side of the existing Lena Road centerline.

A desktop review was completed to identify known cultural resources within the corridor study area, and within 1 mile of the corridor study area boundaries. The results of the desktop review are shown in Figure 3-1. The desktop review consisted of a search of Florida Master Site File (FMSF) records to identify previous cultural resources surveys conducted in the corridor study area and vicinity, and previously recorded archaeological sites and architectural resources (buildings and structures) in those areas. Manatee County Appraisal District data, and historic aerials and United States Geological Survey (USGS) maps available online, were used to identify historic-age buildings in the corridor study area.

The desktop review revealed that previous archaeological surveys have been performed within much of the corridor study area over the past 20 years, and that no archaeological sites have been previously recorded in the Area. Approximately 0.79 mile of the length of the corridor study area has not been previously surveyed, and an approximately 0.50-mile segment of that total is undisturbed. Undisturbed areas have a higher probability of containing intact buried cultural resources. Therefore, an archaeological survey for the portions of the corridor study area that are undisturbed is recommended. For the remainder of the corridor study area, it is advised that should any archaeological materials be identified during construction, all construction should cease, and the Florida Division of Historic Resources should be notified.

No historic-age architectural resources have been previously recorded in the corridor study area. A review of Manatee County Appraisal District data online showed 13 historic-age buildings (those constructed in 1976 or before) in the corridor study area that have not been previously surveyed. Given the presence of previously unrecorded historic-age architectural resources in the corridor study area, an architectural resources survey may be necessary to survey those resources and evaluate their eligibility for listing in the National Register of Historic Places (NRHP), depending on the final project design and potential impacts to historic-age architectural resources.
Figure 3-1 | Cultural Background Map
3.3 Contamination

A preliminary contamination screening was conducted for the project corridor to support the Study by identifying properties or facilities that have potential contamination that may affect the Lena Road corridor. The preliminary contamination screening was performed and documented using the Florida Department of Transportation (FDOT) Project Development and Environment (PD&E) Manual, Chapter 20 as a guide. However, it is not considered a full Contamination Screening Evaluation Report as defined in the FDOT PD&E Manual. The Contamination Screening Memo is provided in Appendix E.

A hazardous materials rating system that expresses the degree of concern for potential contamination problems was used to rank the identified sites. The ratings are No, Low, Medium, and High. Nine (9) sites were identified within the contamination screening buffer distances. These sites were investigated for current or past operations that may present the potential for finding contamination concerns and therefore may impact proposed improvements for the study area. The applied risk ratings are provided in Table 3-4.

Table 3-4 | Risk Ratings for Potential Contamination Sites

<table>
<thead>
<tr>
<th>Risk Rating</th>
<th>No. of Sites in Study Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>0</td>
</tr>
<tr>
<td>Medium</td>
<td>3</td>
</tr>
<tr>
<td>Low</td>
<td>3</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
</tr>
</tbody>
</table>

No High-risk sites were identified. The location of the three Medium-risk sites are shown in Figure 3-2.

For sites ranked No and Low for potential contamination, no further action is required at this time. These sites/facilities have the potential to impact the study area but based on select variables have been determined to have low risk to the project at this time. Variables that may change the risk rating include a facility’s non-compliance to environmental regulations, new discharges to the soil or groundwater, and modifications to current permits. Should any of these variables change additional assessment of the facilities would be conducted.

For those locations with a risk rating of “Medium”, field screening or a soil management plan may be needed depending on the locations of construction and intrusive activities proposed for the study area. These sites have been determined to have potential contaminants, which may impact the proposed construction. A soil and groundwater sampling plan may be needed for each site. The sampling plan should provide sufficient detail as to the number of soil and groundwater samples to be obtained and the specific analytical tests to be performed. A site location sketch for each facility showing all proposed boring locations and groundwater monitoring wells should also be included in the sampling plan.
Figure 3-2 | Contamination Location Map
4.0 Alternatives Analysis

4.1 Design Criteria

4.1.1 Reference Manuals

2. Manatee County Comprehensive Plan, Element 5 – Transportation, Table 5-1 (PA-17-02)
4. FDOT Design Manual (FDM), 2021

4.1.2 Design Elements

<table>
<thead>
<tr>
<th>Design Element</th>
<th>Criteria</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Period</td>
<td>20 years</td>
<td>Manatee County</td>
</tr>
<tr>
<td>Context</td>
<td>Industrial/Suburban Neighborhoods</td>
<td>PWS Figure T-15</td>
</tr>
<tr>
<td>Functional Classification</td>
<td>Collector</td>
<td>PA-17-02 Table 5-1</td>
</tr>
<tr>
<td>Design Speed</td>
<td>35 mph</td>
<td>FDM Table 201.5.1 C3 Suburban Minimum</td>
</tr>
<tr>
<td>Posted Speed</td>
<td>30 mph</td>
<td></td>
</tr>
<tr>
<td>Design Vehicle</td>
<td>WB-62 FL</td>
<td>FDM 201.6.1</td>
</tr>
<tr>
<td>Roundabout Control Vehicle</td>
<td>WB-62 FL</td>
<td>FDM 201.6.1, FDM 213.7</td>
</tr>
</tbody>
</table>
### Table 4-2 | Typical Section Design Elements

<table>
<thead>
<tr>
<th>Design Element</th>
<th>Criteria</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Lanes</td>
<td>2</td>
<td>PA-17-02 Map 5-D</td>
</tr>
<tr>
<td>Lane Width</td>
<td>12 ft</td>
<td>FGB Table 3-20 (Footnote 2, Industrial)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FGB Table 3-20 (Footnote 2, R/W constrained)</td>
</tr>
<tr>
<td>Median Width</td>
<td>22 ft</td>
<td>PWS 401.2, FGB Table 3-23</td>
</tr>
<tr>
<td></td>
<td>15.5 ft</td>
<td>FGB Table 3-23</td>
</tr>
<tr>
<td>Right of Way Width</td>
<td>84 ft</td>
<td>PWS 401.3</td>
</tr>
<tr>
<td>Bicycle Lane Width</td>
<td>4 ft</td>
<td>PWS 401.3, FGB Figure 9-1 (Footnote 2, Industrial)</td>
</tr>
<tr>
<td></td>
<td>4’ min. 7’ buffered preferred</td>
<td>FDM 223.2.1.1</td>
</tr>
<tr>
<td>Sidewalk Width</td>
<td>5’ (4’ from back of curb)</td>
<td>PWS 401.3, FGB Ch. 8, B.1</td>
</tr>
<tr>
<td></td>
<td>5’ (2’ from back of curb)</td>
<td>FGB Ch. 8, B.1</td>
</tr>
<tr>
<td></td>
<td>6’ (adjacent to curb)</td>
<td>FGB Ch. 8, B.1</td>
</tr>
<tr>
<td>Shared Use Path Width</td>
<td>10’ minimum</td>
<td>FGB Ch. 9, C.1</td>
</tr>
<tr>
<td></td>
<td>5’ (minimum distance from face of curb)</td>
<td>FGB Ch. 9, C.1</td>
</tr>
<tr>
<td>Lateral Offset</td>
<td>1.5 ft</td>
<td>FDM Table 215.2.2 (Curbed)</td>
</tr>
</tbody>
</table>

### Table 4-3 | Horizontal Alignment Design Elements

<table>
<thead>
<tr>
<th>Design Element</th>
<th>Criteria</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. Stopping Sight Distance</td>
<td>250 ft</td>
<td>FGB Table 3-4</td>
</tr>
<tr>
<td>Max. Deflection without curve</td>
<td>2°</td>
<td>FGB Ch. 3, C.4.b</td>
</tr>
<tr>
<td>Length of Curve</td>
<td>525 ft (15V)</td>
<td>FGB Table 3-8</td>
</tr>
<tr>
<td></td>
<td>400 ft (min.)</td>
<td></td>
</tr>
<tr>
<td>Max. Curvature (Min. Radius)</td>
<td>14° 15’ (402 ft)</td>
<td>FGB Table 3-11</td>
</tr>
<tr>
<td>Max. Superelevation</td>
<td>0.05</td>
<td>FGB Ch. 3, C.4.c.2</td>
</tr>
</tbody>
</table>
### Table 4-4 | Vertical Alignment Design Elements

<table>
<thead>
<tr>
<th>Design Element</th>
<th>Criteria</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Grade</td>
<td>9 %</td>
<td>FGB Table 3-16 (Level, Urban)</td>
</tr>
<tr>
<td>Min. Longitudinal Gutter Grade</td>
<td>0.3%</td>
<td>FGB Ch. 20, D.6.b</td>
</tr>
<tr>
<td>Max. Change in Grade without Vertical Curve</td>
<td>0.9</td>
<td>FGB Table 3-17</td>
</tr>
<tr>
<td>Min. Crest Curve K</td>
<td>29</td>
<td>FGB Table 3-18</td>
</tr>
<tr>
<td>Min. Sag Curve K</td>
<td>49</td>
<td>FGB Table 3-18</td>
</tr>
<tr>
<td>Min. Curve Length</td>
<td>105 ft (3V)</td>
<td>FGB Table 3-18</td>
</tr>
<tr>
<td>Vertical Clearance</td>
<td>16 ft</td>
<td>FGB Ch. 3, C.7.j.4(b)</td>
</tr>
<tr>
<td>Base Clearance above BCWE</td>
<td>3 ft</td>
<td>FDM 210.10.3 (2)</td>
</tr>
</tbody>
</table>

#### 4.2 No-Build Alternative

The No-Build Alternative considers the future conditions if the proposed project is not built. It includes the routine maintenance improvements to the existing roadway and project corridor but does not meet the project needs.

The 44th Avenue East extension project will be constructing a roundabout at the Lena Road intersection and may make the southern connection to the cul-de-sac north of SR 70. The No-Build Alternative for Lena Road within the Study area would still realize some improvements and connectivity to the County roadway network through the improvements to 44th Avenue East.

The Central County Complex Project will potentially increase traffic on SR 64 and Lakewood Ranch Boulevard in the No-Build Alternative for Lena Road. This is primarily based on the accessibility of the potential Sheriff’s Department, County Public Works, and County Utilities facilities intended for the site.

#### 4.3 Initial Alternatives

The process to narrow the Study evaluation to two viable alternatives required initial assessment of the project limits to meet County needs and objectives. While the County CIP intends on construction of a 2-lane segment to complete Lena Road from SR 70 to SR 64, the typical sections and alternatives developed for this Study assume that the existing 2-lane roadway north of SR 70 will remain untouched aside from the removal of the cul-de-sac to make the roadway connection.

The growth rate proposed to forecast the Design Year (2045) traffic volumes reviewed the historic five-year and ten-year growth rates as well as the University of Florida Bureau of Economic and Business Research (BEBR) population data. Appendix B contains the Traffic Analysis Memo performed for the Study. The proposed growth rate for the Study is 3.04%.
Table 4-5 | Design Year (2045) Build Design Traffic Volume Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021 AADT</td>
<td>-</td>
</tr>
<tr>
<td>2045 AADT</td>
<td>7,100 vehicles</td>
</tr>
<tr>
<td>Peak-to-Daily Ratio</td>
<td>9.00%</td>
</tr>
<tr>
<td>DHV</td>
<td>639 vehicles</td>
</tr>
<tr>
<td>Directional Distribution</td>
<td>56.30 %</td>
</tr>
<tr>
<td>Peak Directional Volume</td>
<td>360 vehicles</td>
</tr>
<tr>
<td>Off-Peak Directional Volume</td>
<td>279 vehicles</td>
</tr>
</tbody>
</table>

Under the Build Alternative, the Lena Road corridor is expected to operate at 45\% of the peak hour directional LOS D maximum service volume. The peak directional volume is 360 vehicles in the design year (2045) compared to a LOS D maximum service volume of 792 vehicles for the facility.

4.3.1 Corridor Analysis

Two routes were considered for connecting Lena Road from the cul-de-sac north of SR 70 to Landfill Road.

Route A starts at the cul-de-sac north of SR 70 and runs north, west of the FPL easement, and intersects with the future extension of 44th Avenue East at the roundabout. The route then curves left and follows 41st Avenue East and curves right to follow Lena Road. The route would continue north through a series of curves connecting to Lena Road north of Landfill Road. The existing segment of Lena Road that connects to Landfill Road would be maintained through a new intersection with the new Route A alignment of Lena Road. See Figure 4-1.

Route B starts at the cul-de-sac north of SR 70 and runs north, west of the FPL easement, and intersects with the future extension of 44th Avenue East at the roundabout. The route then curves left north of 41st Avenue East and curves right to connect to 81st Court East, crossing a conservation area. From the intersection of 81st Court East and Landfill Road, Route B continues along existing Lena Road. See Figure 4-1.

While both routes meet the intent of the project to provide connectivity between SR 70 and SR 64, Route A was less desirable for several reasons. The existing Lena Road corridor has existing right of way widths between 50-63 feet and Route A would impact parcels on one or both sides of the corridor to achieve the desired 84-foot right of way. Route B follows 81st Court East, which already maintains an 84-foot right of way corridor. Lena Road has sharp changes in direction at the connection with 41st Avenue East and where it turns east towards the Landfill Road intersection. Additional right of way impacts to the parcels on the inside of these curves would be realized when creating curvature that meets the 35-mph design speed. Additionally, the connection back to existing Lena Road, north of Landfill Road, would require additional parcel impacts to tie into the existing corridor while accommodating 35-mph design speed reverse curvature.

Route A was eliminated from consideration and Route B was selected for the typical section analysis.
Figure 4-1 | Build Alternative Routes A and B
4.3.2 Typical Section Analysis

Study objectives for the typical section analysis included two-lane accommodation for capacity, restricted median access control for safety, and bicycle and pedestrian accommodations. Three typical sections were reviewed below for the project limits, all utilizing the desired 84-foot right of way.

Build Typical Section 1

Build Typical Section 1 is a two-lane curbed roadway, following the Manatee County Public Works Manual Detail 401.3. This typical section accommodates vehicular traffic with two 12-foot travel lanes, one lane in each direction, separated by a 22-foot raised median. Bicycle traffic is accommodated by a 4-foot bike lane adjacent to the vehicular travel lanes. Pedestrian traffic is accommodated by 5-foot sidewalks located within the border of the roadway, offset 4 feet from the back of curb. Outside of the 84-foot right of way, temporary construction easements are anticipated for driveway connections and harmonization with adjacent property as required.

Figure 4-2 | Build Typical Section 1

Build Typical Section 2

Build Typical Section 2 is a two-lane divided curbed roadway with a reduced median and a shared use path. This typical section accommodates vehicular traffic with two 11-foot travel lanes, one lane in each direction, separated by an 18-foot raised median. Bicycle traffic is accommodated by a 12-foot shared use path located within the border of the west side of the roadway, offset 5 feet from the face of curb. Pedestrian traffic is accommodated by the 12-foot shared use path on the west side of the roadway and by a 5-foot sidewalk on the east side of the roadway. The 5-foot sidewalk is located within the border of the roadway, offset 2 feet from the proposed right of way line to allow for offsite drainage accommodations. Outside of the 84-foot right of way, temporary construction easements are anticipated for driveway connections and harmonization with adjacent property as required.
Build Typical Section 3

Build Typical Section 3 is only considered for the segment of 81st Court East with existing development on both sides of the roadway. Build Typical Section 3 is a two-lane undivided curbed roadway with a two-way left turn lane in the reduced median area to allow access in this constrained segment. This typical section accommodates vehicular traffic with two 11-foot travel lanes, one lane in each direction separated by a 14-foot two-way left turn lane. Bicycle traffic is accommodated by a 12-foot shared use path located within the border of the west side of the roadway, offset 7 feet from the face of curb. Pedestrian traffic is accommodated by the 12-foot shared use path on the west side of the roadway and by a 5-foot sidewalk on the east side of the roadway. The 5-foot sidewalk is located within the border of the roadway, offset 2 feet from the proposed right of way line. Outside of the 84-foot right of way, temporary construction easements are anticipated for driveway connections and harmonization with adjacent property as required.
4.4 Viable Alternatives

Both viable alternatives would consider a connection from the cul-de-sac north of SR 70 to SR 64 along Corridor Alternative Route B. The two-lane undivided roadway at the cul-de-sac would transition to the proposed two-lane divided roadway typical section and connect to the proposed roundabout associated with the 44th Avenue East extension project. Build Typical Section 3 would be considered for 81st Court East with transitions on either side to the divided roadway typical section.

4.4.1 Alternative 1

Alternative 1 considers Build Typical Section 1.

4.4.2 Alternative 2

Alternative 2 considers Build Typical Section 2.

4.5 Pond Siting

Preliminary pond sizing calculations are based on SWFWMD water quality and water requirements, and Manatee County stormwater design requirements. The study corridor is divided into three stormwater basins. Basin 1 includes 44th Avenue East and the adjacent portions of Lena Road and is treated with the 44th Avenue East project. The remaining two basins are considered as part of this Study as they are located north of 41st Avenue East. Two alternative pond sites are evaluated for Basin 2, which require right of way acquisition for a pond. Only one pond site is evaluated for Basin 3 with an assumed location on the Central County Complex property. All ponds are assumed to be wet detention based on evident high groundwater. The full pond siting memo is provided in Appendix F.

4.6 Alternatives Evaluation

As both viable alternatives follow the same route, evaluation criteria were selected that would assist in the selection of a Recommended Alternative. The No-Build option was also advanced to this evaluation matrix shown in Table 4-6. Quantitative assessments were compared as applicable. Natural, Environmental and Utility impacts are listed as qualitative assessments comparing Build Alternative 1 and 2 (Higher, Lower, Neutral) relative to each other.

Table 4-6 | Alternatives Evaluation

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>No-Build</th>
<th>Alternative 1 (Build Typical Section 1)</th>
<th>Alternative 2 (Build Typical Section 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meets Purpose and Need</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Number of Travel Lanes</td>
<td>0-2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Travel Lane Width (feet)</td>
<td>12</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Multi-Modal Accommodation</td>
<td>Partial</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Sidewalk Width (Left/Right) (feet)</td>
<td>10* / 5*</td>
<td>5 / 5</td>
<td>12** / 5</td>
</tr>
<tr>
<td>Bicycle Lane Width (Left/Right) (feet)</td>
<td>0 / 0</td>
<td>4 / 4</td>
<td>12** / 0</td>
</tr>
<tr>
<td>Buffered Bicycle Lane</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
### Engineering Considerations

The primary difference between Build Alternative 1 and Build Alternative 2 is the method in which bicyclists are accommodated. Due to increased awareness of bicycle level of comfort (BLOC), the County is moving away from on-street bicycle lanes that are only 4-feet wide. The maximum BLOC ratings are achieved with separate facilities for bicyclists. Build Alternative 1 maintains the 4-foot on-street bicycle lanes adjacent to 12-foot-wide travel lanes. Build Alternative 2 does not propose on-street bicycle lanes, instead providing a 12-foot-wide shared use path along the corridor and 11-foot-wide travel lanes. This reduction in pavement area will also help to slow speeds down on this primarily linear corridor.

Harmonizing the offsite conditions will be more flexible with Build Alternative 2 due to the narrower median and flexibility of the east side border area. The 5-foot-wide sidewalk on the east side of the corridor can meander as needed to address offsite drainage patterns and driveway connections. This flexibility will also result in reduced floodplain impacts along the corridor with an increased ability to meet natural ground conditions within the 84-foot-wide right of way.

Regarding the alignment of Corridor Alternative Route B, the existing horizontal curves on 81st Court East are substandard for curve length and are proposed to meet a minimum horizontal curve length of 400 feet. This will require small clips of additional right of way within these two curves.

### Environmental Considerations

With both alternatives utilizing Corridor Alternative B, the environmental considerations are primarily neutral. However, the wider pavement area and typical section width with the proposed right of way will result in slightly more impacts with Build Alternative 1. This would be anticipated as wetland impacts rather than any contamination or cultural resource impacts.

### Utility Considerations

Lena Road widening and drainage improvements will impact both County-owned and private UAOs along the proposed corridor. Build Alternative 2 may have increased flexibility due to the 12-foot-wide shared use path on the west side and the ability to meander the 5-foot-wide sidewalk on the east side of the corridor around above ground utilities.

If existing utilities are permitted to remain under pavement, this would alleviate conflicts with large diameter utilities. The project cost would be further lessened with either Build Alternative.

---

<table>
<thead>
<tr>
<th>Proposed Right of Way Width (feet)</th>
<th>Build Alternative 1</th>
<th>Build Alternative 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utility Impacts</td>
<td>Neutral</td>
<td>Neutral</td>
</tr>
<tr>
<td>Natural Resource Impacts</td>
<td>Higher</td>
<td>Lower</td>
</tr>
<tr>
<td>Cultural Resource Impacts</td>
<td>Neutral</td>
<td>Neutral</td>
</tr>
<tr>
<td>Potential Contamination</td>
<td>Neutral</td>
<td>Neutral</td>
</tr>
<tr>
<td>Construction Cost</td>
<td>Higher</td>
<td>Lower</td>
</tr>
<tr>
<td>Right of Way Cost</td>
<td>Neutral</td>
<td>Neutral</td>
</tr>
</tbody>
</table>

* Partial sidewalk accommodations on Lena Road at beginning of Study area

** Shared Use Path
4.7 Recommended Alternative

The Recommended Alternative is Build Alternative 2 (Corridor Alternative Route B with Build Typical Section 2 and Build Typical Section 3 for 81st Court East). The selection was based on the improved accommodation of bicycles and pedestrians on Lena Road with a smaller functional pavement footprint compared to Build Alternative 1. With the heavier industrial and commercial use of the corridor, the 12-foot-wide shared use path without on-street bicycle lanes is a safety benefit for multimodal users of this corridor. The benefits related to the 5-foot-wide sidewalk on the east side of the corridor are more flexible with Build Alternative 2 as well.
5.0 Details of the Recommended Alternative

5.1 Typical Section
Build Typical Section 2 is a two-lane divided curbed roadway with a reduced median and a shared use path. This typical section accommodates vehicular traffic with two 11-foot travel lanes, one lane in each direction, separated by an 18-foot raised median. Bicycle traffic is accommodated by a 12-foot shared use path located within the border of the west side of the roadway, offset 5 feet from the face of curb. Pedestrian traffic is accommodated by the 12-foot shared use path on the west side of the roadway and by a 5-foot sidewalk on the east side of the roadway. The 5-foot sidewalk is located within the border of the roadway, offset 2 feet from the proposed right of way line to allow for offsite drainage accommodations. Outside of the 84-foot right of way, temporary construction easements are anticipated for driveway connections and harmonization with adjacent property as required.

Build Typical Section 3 is only considered for the segment of 81st Court East with existing development on both sides of the roadway. Build Typical Section 3 is a two-lane undivided curbed roadway with a two-way left turn lane in the reduced median area to allow access in this constrained segment. This typical section accommodates vehicular traffic with two 11-foot travel lanes, one lane in each direction separated by a 14-foot two-way left turn lane. Bicycle and pedestrian accommodations are consistent with Build Typical Section 2.

Build Typical Section 2 is proposed from the cul-de-sac north of the SR 70 to 81st Court East and from the Landfill Road intersection to SR 64. Build Typical Section 3 is proposed from the south end of Lena Business Park (current 81st Court East) to the Landfill Road intersection. See Figure 4-3, Figure 4-4, and Appendix A for details.

5.2 Horizontal and Vertical Geometry
Lena Road exists within the Study area from SR 70 to the cul-de-sac at the northern end of this segment. The Recommended Alternative analyzes Lena Road north of this cul-de-sac, but the alignment was reviewed for this tie in location. There is a series of reverse curves identified as Lena_REV1, Lena_REV2, and LenaREV3. The Recommended Alternative begins with Lena_REV4 and Lena_REV5 connecting to this series of existing curves. From there the alignment connects to the 44th Avenue East roundabout and heads north to 41st Avenue East. Horizontal curves take the Recommended Alternative north to align with 81st Court East and follow the existing roadway. The existing Lena Road corridor is followed as the alignment heads north and a maximum deflection without curvature of 2 degrees was used at the northern end approaching SR 64. Preliminary horizontal curve data is shown in Table 5-1. Superelevation rates are based on 35 mph design speed with 5% maximum superelevation.

<table>
<thead>
<tr>
<th>Curve Name</th>
<th>Radius</th>
<th>Deflection Direction</th>
<th>Curve Length</th>
<th>Superelevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lena_REV1*</td>
<td>1,402 ft</td>
<td>LT</td>
<td>433 ft</td>
<td>NC</td>
</tr>
<tr>
<td>Lena_REV2*</td>
<td>720 ft</td>
<td>RT</td>
<td>655 ft</td>
<td>NC</td>
</tr>
<tr>
<td>Lena_REV3*</td>
<td>450 ft</td>
<td>LT</td>
<td>186 ft</td>
<td>NC</td>
</tr>
<tr>
<td>Lena_REV4</td>
<td>1,000 ft</td>
<td>RT</td>
<td>450 ft</td>
<td>RC</td>
</tr>
<tr>
<td>Lena_REV5</td>
<td>819 ft</td>
<td>LT</td>
<td>521 ft</td>
<td>RC</td>
</tr>
<tr>
<td>Lena_REV6</td>
<td>603 ft</td>
<td>LT</td>
<td>407 ft</td>
<td>RC</td>
</tr>
</tbody>
</table>
The vertical geometry will be evaluated during final design when survey is secured. Design parameters should be attainable without significant impact to adjacent property.

### 5.3 Project Traffic Volumes

Appendix B contains the Design Traffic Memo performed for the Study. The proposed traffic volumes are summarized in Table 5-2.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2045 AADT</td>
<td>7,100 vehicles</td>
</tr>
<tr>
<td>Peak-to-Daily Ratio</td>
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</tr>
<tr>
<td>DHV</td>
<td>639 vehicles</td>
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<td>Directional Distribution</td>
<td>56.30 %</td>
</tr>
<tr>
<td>Peak Directional Volume</td>
<td>360 vehicles</td>
</tr>
<tr>
<td>Off-Peak Directional Volume</td>
<td>279 vehicles</td>
</tr>
<tr>
<td>LOS D Maximum Service Volume</td>
<td>792 vehicles</td>
</tr>
<tr>
<td>Peak Directional Volume % of LOS D Maximum Service Volume</td>
<td>45%</td>
</tr>
</tbody>
</table>

### 5.4 Intersection Concepts

The Recommended Alternative will revise intersection access for Lena Road as described below. In addition to these intersection concepts, the design phase will also analyze the need for u-turn accommodations along the corridor.

#### 5.4.1 44th Avenue East

The 44th Avenue East extension project will construct a roundabout at the planned intersection with Lena Road. The County anticipates building out the intersection with a possible connection to the cul-de-sac north of SR 70 and an undetermined footprint on the north leg. The two-lane roundabout is sized for four-lane facilities on 44th Avenue East and Lena Road. Lena Road will expand on the approaches to the roundabout allowing more capacity through the intersection. The proposed Lena Road project would connect into both ends of this roundabout.

Pedestrian accommodations will be provided on all four legs of this roundabout with splitter islands providing pedestrian refuge. A minimum 10-foot-wide sidewalk will be provided on all four legs per standard roundabout.
design. Bicycle lanes on 44th Avenue East will be directed from the travel lanes within the roundabout per standard striping techniques.

![Figure 5-1 | Lena Road and 44th Avenue East Roundabout](image)

**5.4.2 41st Avenue East**

41st Avenue East will connect to Lena Road at the location of the existing cul-de-sac. Access to the FPL Easement will complete a fourth leg at this intersection. Both 41st Avenue East and the FPL Easement driveway will be stop-controlled in the proposed condition. Pedestrian and bicycle accommodations will be provided parallel to Lena Road on both sides of the corridor by the 12-foot-wide shared use path and 5-foot-wide sidewalk. There will be no designated crosswalks for Lena Road.

**5.4.3 34th Avenue East**

34th Avenue East will remain a stop-controlled intersection with the new alignment. The two-way left turn lane in this section of Lena Road can provide northbound access onto 34th Avenue East. Pedestrian and bicycle accommodations will be provided parallel to Lena Road on both sides of the corridor by the 12-foot-wide shared use path and 5-foot-wide sidewalk. The shared use path will connect to the sidewalk on the north side of 34th Avenue East. There will be no designated crosswalks for Lena Road.

**5.4.4 Landfill Road**

The intersection with Landfill Road will remain a two-way stop-controlled intersection where Lena Road / 81st Court East has the right of way. Left turn lanes will be provided on Lena Road to provide access onto Landfill Road and Old Lena Road. A northbound right turn lane will be provided on Lena Road for access onto Landfill Road. Pedestrian and bicycle accommodations will be provided parallel to Lena Road on both sides of the corridor by the 12-foot-wide shared use path and 5-foot-wide sidewalk. There will be no designated crosswalks for Lena Road.
This intersection has the potential for a future traffic signal based on a warrant analysis.

5.4.5 Gillis Drive
Gillis Drive will receive a new paved apron with 35-foot radii connecting to Lena Road. The divided roadway will prevent northbound access for Gillis Drive. Pedestrian and bicycle accommodations will be provided parallel to Lena Road on both sides of the corridor by the 12-foot-wide shared use path and 5-foot-wide sidewalk. There will be no designated crosswalks for Lena Road.

5.4.6 Brower Drive / Musgrave Ranch Road / SR 64
Brower Drive is located opposite of the future Musgrave Ranch Road on the Central County Complex parcel. This intersection is located approximately 800 feet south of the SR 64 intersection. This intersection also marks the end of the two-lane Lena Road section and the beginning of a four-lane Lena Road section that ties to SR 64.

Musgrave Ranch Road is currently at a 30% design phase for a two-lane roadway providing future access to the Central County Complex. With the increased future traffic expectations and the relatively short distance between major intersections, a solution that improves accessibility was evaluated. The result is a roundabout at Brower Drive / Musgrave Ranch Road that will facilitate the traffic flow through this section of Lena Road.

The alignment of Lena Road was shifted to the east to utilize the Central County Complex for the widening of Lena Road. The approach to SR 64 was set to line up the travel lanes of Lena Road with the travel lanes of Heritage Green Way, which intersects SR 64 from the north. The proposed roundabout will allow for transition to the four-lane Lena Road section.

The proposed roundabout has an inscribed circle diameter of 165 feet and carries two 15-foot-wide lanes north and south for Lena Road. In the northbound direction, these lanes open to allow a shared through / left turn lane and a shared through / right turn lane. Similarly, for the southbound direction, Lena Road will have a shared through / left turn lane and a shared through / right turn lane. South of the roundabout these lanes will merge to the single southbound 11-foot-wide travel lane. For Musgrave Ranch Road and Brower Drive, one 15-foot-wide lane east and west will circulate in the roundabout. This circulating lane will facilitate the left turns from Lena Road and the roundabout will have a 2x1 configuration.

The raised median on Lena Road will control access on the approaches. On the south side of the proposed roundabout, this means Gillis Drive will only be able to access southbound Lena Road. On the north side of the proposed roundabout, the Racetrac gas station driveways and a proposed medical office complex will have access to southbound Lena Road. The proposed roundabout will allow circulation for a u-turn maneuver that provides access to the SR 64 signal.

Pedestrian and bicycle accommodations will be provided with a minimum 10-foot-wide sidewalk circulating the proposed roundabout. On the west side of Lena Road, the 12-foot-wide shared use path will connect to the existing sidewalk on SR 64. On the east side of Lena Road, the 10-foot-wide sidewalk will circulate around Musgrave Ranch Road and terminate on the northeast quadrant. Crosswalks will be provided on all legs and median refuge will be located in the raised medians or splitter islands.

There are two properties on the west side that currently access Lena Road. Reconfiguration of their driveways will need to be addressed during the design phase, but an option is shown with this concept. See Figure 5-2 for the layout of this proposed roundabout and connection to SR 64.
Figure 5-2 | Lena Road Roundabout at Brower Drive / Musgrave Ranch Road
5.5 Access Management Plan

Median openings are recommended in addition to the full median openings noted above for the intersecting roadway. Table 5-3 lists the approximate location, spacing, and type (full/directional) of the proposed median openings. Access management would be unrestricted for the limits of Build Typical Section 3 which uses a two-way left turn lane in the center of the roadway to provide access to Lena Road. The design phase will also analyze the need for u-turn accommodations along the corridor.

Table 5-3 | Recommended Median Openings

<table>
<thead>
<tr>
<th>Location</th>
<th>Type</th>
<th>Control</th>
<th>Spacing</th>
<th>Intersection / Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>216+50</td>
<td>Full</td>
<td>Roundabout</td>
<td>-</td>
<td>44&lt;sup&gt;th&lt;/sup&gt; Avenue East</td>
</tr>
<tr>
<td>225+85</td>
<td>Full</td>
<td>Unsignalized</td>
<td>935 ft</td>
<td>41&lt;sup&gt;st&lt;/sup&gt; Avenue East</td>
</tr>
<tr>
<td>241+10</td>
<td>Full</td>
<td>Unsignalized</td>
<td>1,525 ft</td>
<td>Two-Way Left Turn Lane</td>
</tr>
<tr>
<td>260+80</td>
<td>Full</td>
<td>Unsignalized</td>
<td>1,970 ft</td>
<td>Landfill Road</td>
</tr>
<tr>
<td>274+30</td>
<td>Full</td>
<td>Unsignalized</td>
<td>1,350 ft</td>
<td>FPL Substation</td>
</tr>
<tr>
<td>288+00</td>
<td>Full</td>
<td>Unsignalized</td>
<td>1,370 ft</td>
<td>Hyatt Survey Services</td>
</tr>
<tr>
<td>302+40</td>
<td>Full</td>
<td>Roundabout</td>
<td>1,440 ft</td>
<td>Brower Drive / Musgrave Ranch Road</td>
</tr>
<tr>
<td>310+50</td>
<td>Full</td>
<td>Signalized</td>
<td>810 ft</td>
<td>SR 64</td>
</tr>
</tbody>
</table>

5.6 Bicycle and Pedestrian Accommodations

Bicycle and pedestrians will be accommodated by a 12-foot-wide shared use path along the west side of Lena Road. This path will connect to the 10-foot concrete sidewalk along the west side of Lena Road from SR 70 to the cul-de-sac and to the roundabout accommodations at 44<sup>th</sup> Avenue East, including the 10-foot concrete sidewalk along the north side of that alignment. The 12-foot-wide path will connect to the bicycle lanes and sidewalks along SR 64 via curb ramps at the intersection. The path will be set at least five feet from the face of curb.

Pedestrians will also be accommodated by a 5-foot-wide sidewalk along the east side of Lena Road. This sidewalk will connect to the 5-foot concrete sidewalk along the east side of Lena Road from SR 70 to the cul-de-sac. At the roundabouts at 44<sup>th</sup> Avenue East and Brower Drive / Musgrave Ranch Road, the 5-foot-wide sidewalk will expand to the 10-foot-wide accommodations. The east side sidewalk terminates on the northeast quadrant of Lena Road and Brower Drive / Musgrave Ranch Road. The sidewalk will primarily be located two feet from the right of way.

The design phase shall also consider supplemental green pavement markings for the shared use path crosswalks along the corridor.

5.7 Right of Way Requirements

The existing right of way will require widening and new right of way acquired for the proposed roadway alignment and stormwater management facilities. The two recommended pond sites are located on parcels...
already impacted by the roadway footprint. Pond 2A is a partial acquisition and Pond 3 is located on the Central County Complex parcel.

Outside of the encumbrances from the 44th Avenue East extension project, the Recommended Alternative for Lena Road is an 84-foot-wide right of way corridor with corner clips at Landfill Road and the proposed roundabout at Brower Drive / Musgrave Ranch Road. There are twenty (20) parcels anticipated to be impacted, requiring 5.5 acres of property. The pond sites account for another 3.2 acres of property. There is one total take due to the property impacts where the additional land can be utilized for floodplain mitigation. That parcel is 5.2 acres alone. The total amount property impacts for the Recommended Alternative is 13.9 acres. Temporary construction easements are anticipated for driveway connections and harmonization as required beyond the proposed right of way.

### 5.8 Lighting
If corridor lighting is warranted for Lena Road, it can be accommodated on either side of the roadway corridor, barring FPL impacts and OSHA offsets. In locations where the divided median is being provided, there is a potential for median lighting. The proposed medians are 15.3 feet between vertical face of curbs and Manatee County has previously permitted the use of median lighting with similar maintained widths.

The 44th Avenue East extension project will provide corridor lighting on the outside of the four-lane typical section and will illuminate the roundabout using standard techniques. Similar lighting should be utilized at the proposed Brower Drive / Musgrave Ranch Road roundabout.

The County does not currently have formalized standard lighting. Recent construction projects have tried to set a standard that includes GE Evolve LED fixtures, 40-foot-tall mounting heights, and arm lengths that vary between 8-feet, 12-feet, and 15-feet depending on their usage and location. Intersection lighting standards shall follow the latest FDM guidance at the time of design.

### 5.9 Utilities
The Lena Road Recommended Alternative is anticipated to have impacts to County-owned and private utilities. Full impacts will be determined during the design phase based on survey and final roadway and drainage design.

#### 5.9.1 Manatee County Potable Water Mains
The Lena Road Recommended Alternative may impact existing County mains currently along the west side of 81st Court East and along the west side of Lena Road from Landfill Road to SR 64. The 8-inch PVC water mains are potentially located under the proposed 12-foot-wide shared use path but are also located in proposed pavement widening areas. The Recommended Alternative does not impact the 10-inch PVC water main located at the beginning of the Study area at the cul-de-sac north of SR 70.

#### 5.9.2 Manatee County Wastewater Mains
The Lena Road Recommended Alternative may impact existing County mains currently along both sides of 81st Court East and along the east side of Lena Road from Landfill Road to SR 64. The wastewater mains are in proposed pavement widening areas for the Recommended Alternative. The Recommended Alternative does not impact Lift Station 615 or the 8-inch PVC gravity main located at the beginning of the Study area at the cul-de-sac north of SR 70.
5.9.3 Manatee County Reclaim Mains
There are sections of the existing 30-inch ductile iron reclaim main that are located under the proposed curb line of the Lena Road Recommended Alternative. Other sections are primarily located under proposed pavement widening areas for the Recommended Alternative. Due to the use of ductile iron for this reclaim main, the design phase should investigate the opportunity to preserve the mains in the proposed travel way.

5.9.4 Manatee County Information Technology
The Lena Road Recommended Alternative will impact the existing County Information Technology fiber optic system that connects to the Manatee County Landfill. There is an opportunity to consolidate conduit runs on the Lena Road corridor with the proposed improvements.

5.9.5 Manatee County ATMS
The Lena Road Recommended Alternative will impact the existing ATMS facilities along SR 64. The extents of these impacts are directly related to signalization improvements required for the SR 64 / Lena Road / Heritage Green Way intersection.

5.9.6 Manatee County Utility CIP Projects
The Lena Road Recommended Alternative is not anticipated to impact the CIP projects identified in Section 2.14.6. Design coordination will be required between the CIP projects and the Lena Road project.

5.9.7 Private Utility Facilities
Coordination with the private UAOs will be required during the design phase of Lena Road. There are above ground impacts to the FPL Distribution poles in along the Lena Road Recommended Alternative. These pole impacts will also affect aerial and underground communication lines.

5.10 Preliminary Drainage Analysis
Three wet detention ponds are recommended, one of which is already proposed in the 44th Avenue East extension project. Recommended pond sites include a total of 3.2-acres of right of way acquisition. Based on preliminary review all recommended alternatives have a low risk to wetlands, contamination, utilities, wildlife, and cultural resources.

Basin 1 runoff flows to Pond 1, a stormwater management facility associated with the 44th Avenue East extension project (SMF 12) which outfalls into the Braden River Below Ward Lake watershed. Basin 2 includes wetlands, open land, and 81st Court East – within Lena Road Business Park (ERP 3143.004). Existing basin runoff outfalls to five existing wet detention ponds. Basin 2 analysis determines the pond size and location required to supplement the capacity in the existing ponds. Alternative Pond 2A is a 1.87-acre partial acquisition of Parcel 1468121259 and outfalls east into Cypress Strand and wetland impacts are not anticipated. There are 0.92 acres of floodplain impacts for Alternative Pond 2A. It is centrally located within Basin 2 and is adjacent to the outfall ditch leading to Cypress Strand. Pond 3 is located on the Central County Complex property in Basin 3. The location is to be determined with the future development of the Central County Complex but requires 1.06 acres.

Existing Lena Road from SR 70 to the existing cul-de-sac is south of Basin 1 limits and outside of the Recommended Alternative. Pond siting analysis was not performed for this segment of Lena Road, but it traverses Creekwood East Corporate Park (ERP 5641.021) and drains to Williams Creek.

The full pond siting memo is provided in Appendix F.
5.11 Floodplain Analysis
Floodplain impacts are anticipated to Zones A and AE associated with Cypress Strand. No-rise certification will be required for impacts to the FEMA floodplain. Floodplain impacts and compensation within Basin 1 south of 41st Avenue East are documented in the 44th Avenue East extension project design and are not included in this Study. The existing Lena Road Business Park includes floodplain compensation (ERP 3143.004) and it is assumed that redeveloping areas in the floodplain will not result in additional floodplain impacts. Floodplain impacts in the Braden River Below Ward Lake watershed are estimated at 2.72-acres. Floodplain impacts in the Cypress Strand watershed are estimated at 6.08 acres.

Floodplain compensation benefits from 1.14-acres of surplus floodplain compensation with the 44th Avenue East extension project. The 44th Avenue East extension project surplus and Floodplain Compensation Area 1 provide 2.75-acres of compensation in the Braden River Below Ward Lake watershed. Floodplain Compensation Area 2 provides 6.22 acres of compensation in the Cypress Strand watershed. The final location of Floodplain Compensation Area 2 within the Central County Complex property will be determined with the final design.

5.12 Structures
There are no proposed bridge structures within the Study area. The existing 36” cross drain and unknown size Cypress Strand cross drain are extended in the proposed design. Two additional cross drains are required. One is a 6-foot by 6-foot box culvert proposed to convey Williams Branch beneath Lena Road. A 42” cross drain is proposed to convey a wetland channel flowing west to the Braden River.

5.13 Cost Estimate
5.13.1 Construction Cost Estimate Assumptions
The construction cost estimate for the Recommended Alternative is based on the following assumptions:

- Clearing and Grubbing based on full width of right of way and cost includes removal of concrete on the corridor and clearing floodplain compensation areas.
- Earthwork estimated based a depth of ten feet over the cleared area from the beginning of the Recommended Alternative to 81st Court East, a depth of two feet over 81st Court East, a depth of five feet north of Landfill Road, and includes excavation and embankment. Pond earthwork is included in the earthwork estimate.
- Aside from 25 feet of milling and resurfacing where proposed construction ties to existing and the 44th Avenue East roundabout area, the pavement design was assumed to be comprised of 12-inch Type B Stabilization, Optional Base Group 9 (10 inches), 3-inch Superpave Asphalt Concrete, Traffic C, PG 76-22 with 1.5-inch Asphalt Concrete Friction Course, Traffic C, PG 76-22. Milling assumed at 1.5-inch with replacement of friction course.
- 1,000 feet of gravity wall (5-feet tall) with aluminum pipe guiderail assumed for unknown conditions which may require its use, due to right of way constraints.
- Curb inlet spacing assumed at 300 feet, excluding 44th Avenue East roundabout area.
- Back of sidewalk inlets assumed every 600 feet to address offsite drainage, excluding 44th Avenue East roundabout area.
- Storm drain main trunk line estimated at 36-inch diameter for length of project.
- Storm drain lateral pipes estimated at 18-inch diameter based on 300 feet spacing.
- Traffic Signal removal and reconstruction based on a lump sum price of $500,000 per intersection.
• Light poles estimated based on 200 feet spacing, staggered on the left and right sides of the roadway.
• Mobilization estimated based on 10% of project subtotal.
• Maintenance of Traffic estimated based on 15% of project subtotal.
• To account for items not estimated and other project unknowns, a contingency of 25% was applied to the sum of the project subtotal plus mobilization and maintenance of traffic.
• Utility relocation construction costs are not included.
• Wetland mitigation costs are not included.

5.13.2 Construction Cost Estimate
The Recommended Alternative construction cost estimate is $17,840,000. The estimate is summarized in Table 5-4. Detailed information is provided in Appendix I.

Table 5-4 | Recommended Alternative Construction Cost Estimate

<table>
<thead>
<tr>
<th>Component</th>
<th>Cost Estimate</th>
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<tr>
<td>Roadway and Drainage</td>
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<tr>
<td>Signing and Pavement Marking</td>
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<tr>
<td>Signalization</td>
<td>$ 500,000</td>
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<td>Lighting</td>
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<tr>
<td>Mobilization</td>
<td>$ 1,142,000</td>
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<tr>
<td>Maintenance of Traffic</td>
<td>$ 1,713,000</td>
</tr>
<tr>
<td>Project Unknowns</td>
<td>$ 3,568,000</td>
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<tr>
<td><strong>CONSTRUCTION COST TOTAL</strong></td>
<td><strong>$ 17,840,000</strong></td>
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</table>

5.13.3 Right of Way Cost Estimate
There are twenty (20) parcels impacted by the Recommended Alternative and preliminary cost estimation was determined at a cursory level for the Study. The Recommended Alternative right of way cost estimate is $1,700,000. The estimate is summarized in Table 5-5. Detailed parcel identification is provided in Appendix I.

Table 5-5 | Recommended Alternative Right of Way Cost Estimate

<table>
<thead>
<tr>
<th>Component</th>
<th>Cost Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway Partial Takes</td>
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<tr>
<td>Pond Partial Takes</td>
<td>$ 700,000</td>
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<tr>
<td>Roadway and Pond Full Takes</td>
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</tr>
<tr>
<td><strong>RIGHT OF WAY COST TOTAL</strong></td>
<td><strong>$ 1,700,000</strong></td>
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</table>
6.0 Summary of Permits and Mitigation

6.1 Stormwater
A pre-application meeting was completed with Southwest Florida Water Management District (SWFWMD) on October 7, 2021 (see Appendix H). Prior on-site / off-site permit activity within the Study area includes:

- Environmental Resource Permit (ERP) 5641.020 (Creekwood East Corporate Park)
- ERP 3413.004 (Lena Road Business Park)
- ERP 24001.000 (Manatee County Reclaimed Water Main N-SE)

Anticipated permit requirements include the following:

- An ERP from SWFWMD per Florida Administrative Code (FAC) 62-330
- Florida Department of Environmental Protection (FDEP) State 404 Program per FAC 62-331
- A National Pollutant Discharge Elimination System (NPDES) permit from the Environmental Protection Agency (EPA) per the Clean Water Act.

6.2 Natural Resources

6.2.1 Anticipated Permits
The Lena Road project would require permitting with two state of Florida agencies, including SWFWMD and the FDEP Southwest District.

A pre-application meeting was completed with SWFWMD on October 7, 2021, including an Environmental Discussion. See Pre-Application Meeting Notes in Appendix H. SWFWMD required that the limits of jurisdictional wetlands and surface waters be provided and that appropriate mitigation for impacts be provided using the Uniform Mitigation Assessment Method (UMAM), including the use of available mitigation banks within the Manatee River Environmental Resource Permit (ERP) Basin. The Applicant must demonstrate elimination and reduction of wetland impacts and use appropriate wetland setbacks. Hydroperiods in wetlands must be maintained and seasonal highwater levels determined at pond locations. A title determination is required from FDEP to confirm if state-owned sovereign submerged lands are present, often associated with named waterways and waterbodies. Bald eagle nest MN032 is in proximity (~250 feet) to the project and coordination with USFWS will be required. (A second nest, MN036, is located near SR 70 about 400 feet from the project and would also require coordination with USFWS). Conservation area(s) crossed by the project are likely wetland mitigation sites. Impact assessments will be based on permitted success criteria, not on existing conditions, per SWFWMD requirements.

In January 2021, the state of Florida assumed the federal Clean Water Act Section 404 Permit program for non-tidally influenced wetlands and waters. The Lena Road project would require a Section 404 permit from FDEP. A pre-application meeting was not held with FDEP. In addition, due to impacts to wetlands and other surface waters, the project will require a new Individual Statewide Environmental Resource Permit (ERP) pursuant to 62-330 F.A.C. The following agency permitting actions are anticipated:

- FDEP Section 404 Permit – Individual Permit or General Permit, depending on the extent of wetland and water impacts, 0.5 acres of impact being the threshold.
- FDEP National Pollutant Discharge Elimination System, Stormwater Discharge from Large and Small Construction Activities (62-621.300 F.A.C.). This permit is to be obtained by the contractor.
A second tier of agency involvement includes FWC and USFWS as commenting agencies on the respective permit applications for listed and protected species. Coordination and possible consultation with these agencies would be required to construct the Lena Road project.

6.2.2 Wildlife
To protect listed wildlife, wildlife habitat, and plants, Manatee County will conduct wildlife surveys of the road corridor and pond sites during permitting and then prior to construction for the presence of protected wildlife species including plants. Manatee County will abide by standard resource protection measures in addition to the following specific commitments:

- The County will adhere to the most current version of USFWS *Standard Protection Measures for the Eastern Indigo Snake* (2013) during construction.
- The County will survey for bald eagle nests during permitting and design. If a bald eagle nest is identified within 660 feet of the project prior to or during construction, the County will coordinate with the USFWS and the FWC in accordance with the BGEPA and MBTA and will adhere to the USFWS Bald Eagle Management Guidelines.
- The County will conduct osprey nest surveys during the permitting phase of the proposed project. If an osprey nest is identified, the County will coordinate with the USFWS and/or the FWC, depending on the activity status of the nest.
- The County will perform pre-construction surveys for nesting Florida sandhill cranes per the FWC species guidelines (2016) to ensure active nests and flightless young are protected.
- If required, the County will perform southeastern American kestrel surveys for breeding and active nest cavities during permitting and pre-construction.
- The County will perform preliminary gopher tortoise surveys during permitting and formal gopher tortoise surveys during pre-construction in areas deemed suitable habitat in accordance with the FWC Gopher Tortoise Permitting Guidelines, and will secure an FWC *Gopher Tortoise Relocation Permit* if gopher tortoise burrows are found.
- The County will survey wading bird nesting habitat within 330 feet of the project area during permitting. If a wading bird nest is detected, additional surveys may be recommended to determine if an active breeding site is present.
- The County will perform pre-construction surveys for least tern nests and young and for multi-year construction projects. Surveys can be conducted prior to land clearing and earthmoving to ensure nesting birds are not present.
- If protected plants are discovered during pre-construction surveys, the County will initiate coordination with the FDACS.

6.2.3 Wetlands and Other Surface Waters
To protect wetland and water resources before, during, and after construction, Manatee County will abide by state and federal permit requirements and water quality protection measures particularly including the following commitments:

- The County will implement provisions to avoid and minimize wetland impacts during design, permitting, and construction.
- The County will use the UMAM to evaluate each wetland impact area to quantify the functional loss based on location and landscape, water environment, and vegetation conditions.
• The County will mitigate for wetland impacts pursuant to Section 373.4137, F.S., to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 33 U.S.C. §1344.
• The County will use erosion control measures and Best Management Practices during construction to avoid and minimize direct, indirect, and temporary impacts to habitat and water quality.

6.3 Cultural Resources
Approximately 0.79 mile of the length of the corridor study area has not been previously surveyed, and an approximately 0.50-mile segment of that total is undisturbed. Undisturbed areas have a higher probability of containing intact buried cultural resources. Therefore, an archaeological survey for the portions of the corridor study area that are undisturbed is recommended. Given the presence of previously unrecorded historic-age architectural resources in the corridor study area, an architectural resources survey may also be necessary to survey those resources and evaluate their eligibility for listing in the NRHP, depending on the final project design and potential impacts to historic-age architectural resources.

If prehistoric or historic artifacts, are encountered at any time within the project area, construction activities involving subsurface disturbance in the vicinity of the discovery will cease. The Florida Department of State, Division of Historical Resources, Compliance Review Section will be contacted. The subsurface construction activities will not resume without verbal and/or written authorization. In the event that unmarked human remains are encountered during construction activities, all work will stop immediately, and the proper authorities notified in accordance with Section 872.05, Florida Statutes.

6.4 Potential Contamination
For those locations with a risk rating of “Medium”, field screening or a soil management plan may be needed depending on the locations of construction and intrusive activities proposed for the study area. These sites have been determined to have potential contaminants, which may impact the proposed construction. A soil and groundwater sampling plan may be needed for each site. The sampling plan should provide sufficient detail as to the number of soil and groundwater samples to be obtained and the specific analytical tests to be performed. A site location sketch for each facility showing all proposed boring locations and groundwater monitoring wells should also be included in the sampling plan.
Appendices
Appendix A – Concept Plans
LEGEND

- PROPOSED ASPHALT (REDESIGN)
- PROPOSED GRASS
- PROPOSED CONCRETE (SIDEWALK, CURB AND GUTTER)
- PROPOSED POND SITE
- PROPOSED FLOODPLAIN COMPENSATION AREA
- EXISTING PARCEL LINES
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- PROPOSED POND TO BE CONSTRUCTED AS PART OF CIP PROJECT - 44TH AVENUE E

RECOMMENDED ALTERNATIVE
LEGEND

- PROPOSED ASPHALT (Paved)
- PROPOSED GRAVEL
- PROPOSED GrASS
- PROPOSED CONCRETE (ROADWAY)
- PROPOSED ASPHALT (ROADWAY)
- EXISTING PARCEL LINES
- PROPOSED POND SITE
- PROPOSED COMPENSATION AREA
- PROPOSED FLOODPLAIN
- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPOSED GRASS (SIDWALK, CURB AND GUTTER)
- PROPOSED RIGHT-OF-WAY

PARCEL ID 1463210151
PARCEL ID 1463210060
PARCEL ID 1463200103
PARCEL ID 1463700209
PARCEL ID 1462800309
PARCEL ID 1462800359
PARCEL ID 1463200103
1.0 Introduction/Purpose of Memorandum

The purpose of this memorandum is to document the corridor analysis results for the Lena Road corridor in Manatee County. Existing year (2021) traffic volumes were not developed for the Lena Road segment between south of 44th Avenue East to north of Landfill Road as the majority of this segment doesn’t currently exist. Volume characteristics were developed using the Florida Department of Transportation (FDOT) Florida Traffic Online (FTO) traffic counts data, shown in Appendix A. Future volumes were projected using a 3.04% growth rate, based on the 10-year historic growth rates. The Build concept (2-Lane Roadway) was analyzed for capacity using the 2020 FDOT Quality/Level of Service (QLOS) Handbook.

2.0 Existing Conditions

The Lena Road corridor connection between south of 44th Avenue East and north of Landfill Road does not currently exist. The project is located in Manatee County, Florida, as illustrated in Figure 1.
2.1 Roadway Characteristics
The Lena Road corridor connection between south of 44th Avenue East and north of Landfill Road doesn’t currently exist. However, the existing segments of Lena Road corridor are local roadways with a posted speed of 30 miles per hour (mph) north of SR 70 and south of SR 64 beyond the project limits. The existing segments of Lena Road are 2-way undivided roadways between SR 70 and south of 44th Avenue East and between SR 64 and north of Landfill Road. There are no dedicated bike lanes along the northbound or southbound approaches of the existing corridor segments.

2.2 Crash Analysis
A crash analysis was not performed for this segment of Lena Road between south of 44th Avenue East and north of Landfill Road as the segment doesn’t currently exist.

2.3 Traffic Data Collection
Turning movement counts were not collected for the intersections along the corridor for this study. Historical traffic data obtained from the FDOT 2020 FTO database and historical traffic data provided by Manatee County were used as the basis for the capacity analysis. Historical AADT data from the year 2020 was not used due to COVID-19 causing abnormal traffic patterns.

2.4 Traffic Parameters
Traffic parameters, including the design-hour factor (K), design-hour directional distribution factor (D), and design-hour truck percentage (DHT), were determined based on the 2019 historical traffic data obtained from the FDOT 2020 FTO database. FDOT FTO Count stations were not available along the existing segments of the Lena Road corridor. Station #130072 along SR 64 east of Lena Road was the closest station to the study limits and was used for the traffic parameters determination. Historical traffic data can be found in Appendix A.

The design hour traffic factors utilized for the study area are as follows:

K – Factor = 9.00%
D – Factor = 56.30%
T – Factor = 4.90%

3.0 Growth Rate
The growth rate was determined by comparing the Manatee County population projections, the historic traffic trends, the travel demand from the District 1 Regional Planning Model (D1RPM), and the socioeconomic (SE) data from the D1RPM.
3.1 BEBR Growth Trends

Historical population data obtained from the University of Florida Bureau of Economic and Business Research (BEBR) was used to analyze growth rates that may be applicable in developing future traffic projections. As shown in Table 1, Manatee County had a population of about 398,500 in 2020. Table 1 shows the low, medium, and high population estimates for 2025, 2035, and 2045, along with the corresponding growth rates from 2020 to each future year. The low, medium, and high population growth rates for 2045 range from 0.51% to 2.56%.

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<td></td>
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3.2 Historic Count Trends

A historical count trends analysis was performed using count data provided by Manatee County. Historical AADT volumes were input into the FDOT Trend worksheet to calculate trend growth rates through the Design Year (2045).

Historical AADT data from the year 2020 was not used due to COVID-19 causing abnormal traffic patterns. The trends analysis method relies on historical traffic counts and does not consider future traffic pattern changes due to new traffic generators or network improvements. Manatee County historical counts and trend worksheets can be found in Appendix A.

3.3 D1RPMv2.0

The D1RPMv2.0 was utilized to review the anticipated future roadway network and planned developments through Design Year (2045). Socioeconomic (SE) data provided by Manatee County was used to update the future year (2045) ZDATA to reflect planned development within the county, and both No Build and Build scenarios were modeled for the study corridor.

The D1RPMv2.0 SE data was reviewed for both the model's validated base year (2015) and the future year (2045) to assess socioeconomic growth in the project area. D1RPMv2.0 plots and growth rate calculations can be found in Appendix B.
3.4 Determined Growth Rates

The Lena Road corridor connection between south of 44th Avenue East to north of Landfill Road does not currently exist. The historical traffic growth rates were based on Station 08-51 along Lena Road, north of the project limits.

Growth rates for existing and no build scenarios were not applicable as the segment doesn’t currently exist.

A Build growth rate of 3.04% was used to forecast the Design Year (2045) traffic volumes for the Build 2-lane roadway connection scenario, based on the 10-year historical traffic trend growth rate from station 08-51.

Table 2 shows the growth rate comparison and the proposed growth rates for the Lena Road corridor.

<table>
<thead>
<tr>
<th>Source</th>
<th>Calculated Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical Traffic (5 Years) - Manatee County Station 08-51</td>
<td>3.85%</td>
</tr>
<tr>
<td>Historical Traffic (10 Years) - Manatee County Station 08-51</td>
<td>3.04%</td>
</tr>
<tr>
<td>BEBR - Low</td>
<td>0.51%</td>
</tr>
<tr>
<td>BEBR - Medium</td>
<td>1.46%</td>
</tr>
<tr>
<td>BEBR - High</td>
<td>2.56%</td>
</tr>
<tr>
<td>D1RPMv2.0 - No Build</td>
<td>N/A</td>
</tr>
<tr>
<td>D1RPMv2.0 - Build</td>
<td>N/A</td>
</tr>
<tr>
<td>D1RPMv2.0 - Project Area SE Data</td>
<td>3.10%</td>
</tr>
<tr>
<td>Proposed Growth Rate</td>
<td>Existing N/A</td>
</tr>
<tr>
<td></td>
<td>No Build N/A</td>
</tr>
<tr>
<td></td>
<td>Build 3.04%</td>
</tr>
</tbody>
</table>

4.0 Existing Year (2021) Volume Development

Existing year (2021) AADT volumes were not developed for this segment of Lena Road as the segment doesn’t currently exist.

5.0 Existing Year (2021) Level of Service Analysis

A capacity analysis for the existing year (2021) was not performed for this segment of Lena Road as the segment doesn’t currently exist.
6.0 Design Alternatives and Assumptions

One design alternative was assessed for the Design Year (2045). The alternative is a Build alternative which assumes that the existing segments of Lena Road are connected between south of 44th Avenue East and north of Landfill Road with a 2-lane roadway. The Build alternative is anticipated to connect SR 64 and SR 70 which is expected to support traffic within the project area.

7.0 Design Year (2045) Volume Development

The Manatee County 2019 historical AADT was used to forecast the Design Year (2045) AADT volumes for the Build alternative using a 3.04% growth rate. The Build alternative Design Year (2045) roadway AADT volumes and design hour directional volumes are shown in Figure 2. Table 3 shows the Design Year (2045) design traffic volume characteristics along the Lena Road corridor between south of 44th Avenue East and north of Landfill Road for the Build alternative. The K-Factor (Peak-To-Daily Ratio) was used to calculate the Design-Hour Volume (DHV) and the D-factor (Directional Distribution) was used to calculate the directional volumes.

Table 3 | Design Year (2045) Build Design Traffic Volume Characteristics

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Lena Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limits</td>
<td>From south of 44th Avenue East to north of Landfill Road</td>
</tr>
<tr>
<td>2021 AADT</td>
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<tr>
<td>2045 AADT</td>
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<tr>
<td>Peak-To-Daily Ratio</td>
<td>9.00%</td>
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<tr>
<td>DHV</td>
<td>639</td>
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<tr>
<td>Directional Distribution</td>
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<td>Peak Directional Volume</td>
<td>360</td>
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<tr>
<td>Off Peak Directional Volume</td>
<td>279</td>
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</table>
Figure 2 | Build Design AADT and Design Hour Directional Volumes

Legend:
XXXX AADT
(XXXX) Directional Volume
8.0 Design Year (2045) Level of Service Analysis

Generalized Service Volume Tables (GSVT), found in the FDOT Quality/LOS Handbook 2020, were used to perform a corridor capacity analysis. The developed Design year (2045) traffic volumes were compared to the LOS D maximum service volumes found in the GSVTs to determine the volume/LOS D maximum service volume percentage. GSVT Table 7 was used to compare the peak hour directional volumes to the LOS D maximum peak hour directional volumes. Table 4 provides the capacity analysis for the Design Year (2045) peak hour directional volumes along the Lena Road corridor for the Build alternative. For Design Year (2045) under the Build alternative the corridor is expected to operate under the peak hour directional LOS D maximum service volume.

Under the Build alternative, the corridor is expected to operate at 45% of the peak hour directional LOS D maximum service volume.

Table 4 | Design Year (2045) No Build LOS D Capacity Analysis

<table>
<thead>
<tr>
<th>Lena Road</th>
<th>From south of 44th Avenue East to north of Landfill Road</th>
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<tbody>
<tr>
<td>Attribute</td>
<td>Volume</td>
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<tr>
<td>2 Lane</td>
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<tr>
<td>Peak Directional Volume</td>
<td>360</td>
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</table>

*Adjusted for non-state roads, reduced by 10%

9.0 Summary and Conclusion

The results of the capacity analysis show that for the design year (2045) under the Build alternative the Lena Road corridor operates under the peak hour directional LOS D maximum service volume. The corridor is expected to operate at 45% of the peak hour directional LOS D maximum service volume.
Appendix A
Historical Data and Trends Analysis
Count Stations

OBJECTID 6949
SHAPE Point
STATION_ID 08-51
ROUTE_NAME Lena Rd.
DIR S
DIST 200
CROSS_ROUTE_NAME SR 64& Manatee Ave.

C86 No Data
C87 No Data
C88 No Data
C89 No Data
C90 No Data
C91 No Data
C92 No Data
C93 No Data
C94 No Data
C95 No Data
C96 No Data
C97 No Data
C98 No Data
C99 No Data
C2000 No Data
C2001 No Data
C2002 No Data
C2003 No Data
C2004 No Data
C2005 No Data
C2006 4171
C2007 3270
C2008 3210
C2009 2616
C2010 3100
C2011 2750
C2012 3207
C2013 2567
C2014 3218
C2015 3237
C2016 3734
C2017 3578
C2018 3601
C2019 3987
C2020 3480
C2021 Null
C2022 Null
C2023 Null
C2024 Null
C2025 Null
EDITORNAME MOLMSTEAD
LASTUPDATE 3/31/2021 8:05:00 AM
CREATOR Null
CREATION_DATE Null
## Traffic Trends - V03.a

**Lena Road --**

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<thead>
<tr>
<th>Year</th>
<th>Observations</th>
<th>Fitted Curve</th>
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<tr>
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**Traffic (ADT/AADT)**

<table>
<thead>
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<tr>
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<td>3800</td>
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<tr>
<td>2019</td>
<td>4000</td>
<td>3900</td>
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</table>

**2025 Opening Year Trend**
- Year: 2025
- Traffic: N/A, 4800

**2035 Mid-Year Trend**
- Year: 2035
- Traffic: N/A, 6300

**2045 Design Year Trend**
- Year: 2045
- Traffic: N/A, 7800

**TRANPLAN Forecasts/Trends**

- *Axle-Adjusted**

---

**Straight Line Growth Option**

**Annual Trend Increase:** 150

**Trend R-squared:** 68.60%

**Trend Annual Historic Growth Rate:** 4.55%

**Trend Growth Rate (2019 to Design Year):** 3.85%

**Printed:** 8-Sep-21
<table>
<thead>
<tr>
<th>YEAR</th>
<th>AADT</th>
<th>DIRECTION 1</th>
<th>DIRECTION 2</th>
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AADT FLAGS:  
C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE  
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE  
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN  

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARD K, PRIOR YEARS ARE K30 VALUES
### Lena Road Immediate Project Area

**Diprmv2.0 2015 Base Model**

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**Diprmv2.0 2045 Cost Feasible Model**

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**Diprmv2.0 2015 Base Model to 2045 Cost Feasible Model Linear Growth**

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</table>

Total Type Growth: 5.52% 92.22% 8.73% 9.05% 1.10% 3.88% 1.76% 1.86% 6.07% 0.00% 0.00%

Overall Area Growth: 3.10%

### Lena Road Expanded Project Area

**Diprmv2.0 2015 Base Model**

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**Diprmv2.0 2045 Cost Feasible Model**

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**Diprmv2.0 2015 Base Model to 2045 Cost Feasible Model Linear Growth**

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<td>6179</td>
<td>0.24%</td>
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<td>0.67%</td>
<td>0.68%</td>
<td>5.05%</td>
<td>0.24%</td>
<td>0.24%</td>
<td>0.57%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>6191</td>
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<td>0.24%</td>
<td>2.24%</td>
<td>0.24%</td>
<td>4.7%</td>
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<td>0.36%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
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</tbody>
</table>

Total Type Growth: 0.34% 2.30% 0.59% 0.60% 2.28% 0.53% 0.51% 0.74% 8.40% 0.00% 0.00%

Overall Area Growth: 1.36%
Appendix C – Natural Resources Assessment Memo
Natural Resources Assessment
Technical Memorandum

Lena Road
Project Development and Corridor Study Report

October 2021
## CONTENTS

Executive Summary .......................................................................................................................................................... 5

1.0 Introduction ......................................................................................................................................................... 9
  1.1 Project Description ........................................................................................................................................ 9
  1.2 Purpose and Need ....................................................................................................................................... 9

2.0 Existing Conditions ......................................................................................................................................... 12
  2.1 Land Use .................................................................................................................................................. 12
  2.2 Soils ....................................................................................................................................................... 15

3.0 Protected Species and Habitat ..................................................................................................................... 17
  3.1 Methodology ........................................................................................................................................ 17
  3.2 Federal Protected Wildlife and Critical Habitat ....................................................................................... 18
    3.2.1 Eastern Indigo Snake (*Drymarchon corais couperi*) ................................................................. 20
    3.2.2 Wood Stork (*Mycteria americana*) ........................................................................................... 21
    3.2.3 Florida Scrub Jay (*Aphelocoma coerulescens*) ................................................................. 22
    3.2.4 Bald Eagle (*Haliaeetus leucocephalus*) ............................................................................... 22
    3.2.5 Osprey (*Pandion haliaetus*) ................................................................................................. 23
  3.3 State Protected Wildlife ............................................................................................................................ 23
    3.3.1 Florida Sandhill Crane (*Antigone canadensis pratensis*) ..................................................... 24
    3.3.2 Southeastern American Kestrel (*Falco sparverius Paulus*) .............................................. 24
    3.3.3 Gopher Tortoise (*Gopherus polyphemus*) ........................................................................ 25
    3.3.4 Florida Pine Snake (*Pituophis melanoleucus mugitus*) ................................................ 25
    3.3.5 Wading Birds ......................................................................................................................... 25
    3.3.6 Nesting Shorebirds ................................................................................................................ 26
  3.4 Federal and State Protected Plants ........................................................................................................... 27

4.0 Wetlands and Other Surface Waters ........................................................................................................ 27
  4.1 Methodology ........................................................................................................................................ 27
  4.2 Study Area Wetland and Other Surface Water Features ..................................................................... 28
  4.3 Outstanding Florida Waters .................................................................................................................. 34
  4.4 Sovereign Submerged Lands ................................................................................................................ 34
  4.5 Wetland and Other Surface Waters .................................................................................................... 34
    4.5.1 Direct Wetland and Other Surface Water Impacts ............................................................. 34
    4.5.2 Avoidance and Minimization ............................................................................................... 34
    4.5.3 Indirect and Cumulative Impacts ....................................................................................... 35
4.5.4 Mitigation .............................................................................................................................................................................35

5.0 Essential Fish Habitat.............................................................................................................................................................................36

6.0 Anticipated Permits .............................................................................................................................................................................36

7.0 Conclusions............................................................................................................................................................................................................37

7.1 Protected Species and Habitat ............................................................................................................................................................37

7.1.1 Federal Protected Wildlife and Critical Habitat ....................................................................................................................37

7.1.2 State Protected Wildlife ..............................................................................................................................................................37

7.1.3 Federal and State Protected Plants ................................................................................................................................................38

7.2 Wetlands and Other Surface Waters ........................................................................................................................................38

7.3 Essential Fish Habitat ...................................................................................................................................................................39

7.4 Anticipated Permits .......................................................................................................................................................................39

8.0 Commitments ......................................................................................................................................................................................................39

8.1 Wildlife ................................................................................................................................................................................................……...39

8.2 Wetlands and Other Surface Waters ........................................................................................................................................40

9.0 References......................................................................................................................................................................................................41

FIGURES

Figure 1-1: Project Location ..................................................................................................................................................................10

Figure 1-2: Study Area .......................................................................................................................................................................11

Figure 2-1: Land Use and Land Cover for the Lena Road Study Area ........................................................................................14

Figure 2-2: NRCS Soils Map for the Lena Road Study Area ........................................................................................................16

Figure 3-1: Wildlife Occurrence Map for the Lena Road Study Area ........................................................................................19

Figure 4-1: Wetlands and Surface Water Map – South ....................................................................................................................31

Figure 4-2: Wetlands and Surface Water Map – Middle ...................................................................................................................32

Figure 4-3: Wetlands and Surface Water Map – North .....................................................................................................................33
TABLES

Table E-1: Project Effect Determinations for Federal Listed and Protected Wildlife ............................................................. 6
Table E-2: Project Effect Determinations for State Listed Wildlife .......................................................................................... 6
Table E-3: Project Effect Determinations for Federal and State Listed Plants ......................................................................... 7
Table 2-1: SWFWMD Land Use Land Cover Summary for the Study Area ..................................................................................... 13
Table 2-2: NRCS Soil Survey of Manatee County, Florida Summary for the Study Area ........................................................... 15
Table 3-1: Federally Protected Wildlife Potentially Occurring within the Study Area ................................................................. 20
Table 3-2: State Listed Species Potentially Occurring within the Study Area .............................................................................. 23
Table 3-3: Federal and State Listed Plants Potentially Occurring within the Study Area ............................................................. 27
Table 4-1: Wetland and Other Surface Waters, Classification, and Acres in the Study Area .......................................................... 29
Table 7-1: Project Effect Determinations for Federal Listed and Protected Wildlife ................................................................. 37
Table 7-2: Project Effect Determinations for State Listed Wildlife ................................................................................................. 37
Table 7-3: Project Effect Determinations for Federal and State Listed Plants .............................................................................. 38

APPENDICES

Appendix A – Soil Data Report
Appendix B – IPaC Resource List
Appendix C – Affects Determination Keys
Appendix D – Special Protection Measures
Executive Summary
Manatee County conducted a Project Development and Corridor Study (Study) to develop alternatives along Lena Road for reducing congestion, improving safety and operational performance, and addressing future transportation needs. The project limits extend from the cul-de-sac at the north end of existing Lena Road to the intersection with State Road (SR) 64, providing a new north-south corridor between SR 70 and SR 64 in Bradenton, Manatee County, Florida. This Natural Resources Assessment Technical Memorandum was prepared to support the Study through the evaluation of Protected Species and Habitat, Wetlands and Other Surface Waters, and Essential Fish Habitat. This Technical Memorandum documents the results of the corridor assessment in order to support decisions associated with the proposed project as it relates to natural resources potentially present in the corridor study area.

Manatee County will use the results of the Study to evaluate alternatives to avoid or minimize impacts to environmental sensitive areas, including wetlands, critical wildlife habitats, and listed species.

The natural resources assessment was performed using as guidance Part 2, Chapter 16 Protected Species and Habitat and Chapter 9 Wetlands and Other Surface Waters of the Florida Department of Transportation (FDOT) PD&E Manual (July 1, 2020). However, this assessment is not considered a full Natural Resources Evaluation (NRE) as defined in the FDOT PD&E Manual. In addition, the natural resources assessment did not evaluate proposed stormwater management facilities outside of the corridor study area, such as potential pond locations, if any.

Protected Species and Habitat
The project was evaluated for potential impacts to federal and State of Florida (state) endangered or threatened species of fish, wildlife, and plants (listed species) and habitat of such species that has been designated as critical habitat under Section 7(a) of the Endangered Species Act (ESA) of 1973, as amended. Protected species were also reviewed for their potential to occur within the corridor study area.

Federal Protected Wildlife and Critical Habitat
Three federal listed species protected by the U.S. Department of Interior Fish and Wildlife Service (USFWS) potentially occur within the corridor study area. The proposed project would be expected to result in the effect determinations provided in Table E-1 for federal listed species. Migratory birds and their habitat, including the non-listed but federally protected bald eagle and osprey were also present in this region and included in Table E-1. However, this list may need to be refined based on the project alternative selected to proceed. USFWS designated critical habitat, as defined by Congress 50 CFR §17.94, was not present within the corridor study area. Therefore, the proposed project would not result in the destruction or adverse modification of critical habitat.
Table E-1: Project Effect Determinations for Federal Listed and Protected Wildlife

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Project Effect Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Federal Listed Wildlife</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Drymarchon corais couperi</em></td>
<td>Eastern indigo snake</td>
<td>Threatened</td>
<td>May affect, not likely to adversely affect</td>
</tr>
<tr>
<td><em>Mycteria americana</em></td>
<td>Wood stork</td>
<td>Threatened</td>
<td>May affect, not likely to adversely affect</td>
</tr>
<tr>
<td><em>Aphelocoma coerulescens</em></td>
<td>Florida scrub jay</td>
<td>Threatened</td>
<td>No affect anticipated</td>
</tr>
<tr>
<td><strong>Federal Protected Wildlife</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Haliaeetus leucocephalus</em></td>
<td>Bald eagle</td>
<td>BGEPA* MBTA**</td>
<td>Minimal or no impact expected</td>
</tr>
<tr>
<td><em>Pandion haliaetus</em></td>
<td>Osprey</td>
<td>MBTA**</td>
<td>Minimal or no impact expected</td>
</tr>
</tbody>
</table>

* Bald & Golden Eagle Protection Act and Migratory Bird Treaty Act. ** Migratory Bird Treaty Act

State Protected Wildlife

Eight state listed wildlife managed by the Florida Fish and Wildlife Conservation Commission (FWC) could potentially occur within the corridor study area. The proposed project would be expected to result in the effect determinations provided in Table E-2 for state listed species. However, this list may need to be refined based on the project alternative selected to proceed.

Table E-2: Project Effect Determinations for State Listed Wildlife

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Project Effect Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Antigone canadensis pratensis</em></td>
<td>Florida sandhill crane</td>
<td>Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td><em>Falco sparverius paulus</em></td>
<td>Southeastern American kestrel</td>
<td>Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td><em>Gopherus polyphemus</em></td>
<td>Gopher tortoise</td>
<td>Threatened</td>
<td>No adverse effect anticipated</td>
</tr>
<tr>
<td><em>Pituophis melanoleucus mugitus</em></td>
<td>Florida pine snake</td>
<td>Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td><strong>Wading Birds</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Egretta caerulea</em></td>
<td>Little blue heron</td>
<td>Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td><em>Egretta tricolor</em></td>
<td>Tricolored heron</td>
<td>Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td><em>Platalea ajaja</em></td>
<td>Rosette spoonbill</td>
<td>Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td><strong>Nesting Shorebirds</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Sternula antillarum</em></td>
<td>Least Tern</td>
<td>Threatened</td>
<td>No effect anticipated</td>
</tr>
</tbody>
</table>
Federal and State Protected Plants

Eleven federal and state listed plants protected by the Florida Department of Agricultural and Consumer Services (FDACS) that have the potential to occur within the corridor study area, including six endangered and five threatened. These listed plant species are shown in Table E-3. None were observed during preliminary field surveys. However, this list may need to be refined based on the project alternative selected to proceed. Due to their low likelihood of occurrence, there is no effect anticipated to these federal and state listed plant species.

Table E-3: Project Effect Determinations for Federal and State Listed Plants

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Project Effect Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calopogon multiflorus</td>
<td>Many-flowered Grass-pink</td>
<td>State Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Centrosema arenicola</td>
<td>Sand Butterfly Pea</td>
<td>State Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Chionanthus pygmaeus</td>
<td>Pygmy Fringe-tree</td>
<td>Federal Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Cladonia perforata</td>
<td>Florida Perforate Cladonia</td>
<td>Federal Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Lechea cernua</td>
<td>Nodding Pinweed</td>
<td>State Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Linum carteri var. smallii</td>
<td>Small’s Flax</td>
<td>State Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Nemastylis floridana</td>
<td>Celestial Lily</td>
<td>State Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Nolina atopocarpa</td>
<td>Florida Beargrass</td>
<td>State Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Pteroglossaspis ecristata</td>
<td>Giant Orchid</td>
<td>State Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Rhynchospora megaplumosa</td>
<td>Large-plumed Beaksedge</td>
<td>State Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Zephyranthes simpsonii</td>
<td>Redmargin Zephyrlily</td>
<td>State Threatened</td>
<td>No effect anticipated</td>
</tr>
</tbody>
</table>

Wetlands and Other Surface Waters

Wetlands and other surface waters were identified within the corridor study area. The primary wetland types in the study area included: Stream and Lake Swamps, Mixed Wetland Hardwood, Exotic Wetland Hardwoods, Wetland Forested Mixed, Freshwater Marshes, and Wet Prairies. Generally, all wetland systems identified were in moderate to poor condition, having incurred drainage by ditching, watershed conversions to farmland, and/or nearby development. Vegetation communities within the wetlands have also been degraded by agricultural activities, tree harvesting, and nuisance and exotic species growth.

Surface waters were present mostly associated with roadside ditches on the northern half of the study area and some remnant field ditches, derived from agricultural land uses. There are two primary water channels associated with Lena Road. These drainages were historically natural and associated with wetlands.

A total of 16 wetlands were identified within the corridor study area. A total of five surface waters were identified within the corridor study area, all consisting of drainage ditches either running along the roadside or draining...
away from the roadway. During evaluation of the road alignment alternatives, potential impacts to wetlands and surface waters would be identified and quantified. Direct impacts would include permanent and temporary impacts and would be quantified and tabulated for the state and federal permit applications.

**Essential Fish Habitat**

Essential fish habitat does not occur within the corridor study area; therefore, an Essential Fish Habitat (EFH) Assessment was not required.
1.0 Introduction

Manatee County conducted a Project Development and Corridor Study (Study) to develop alternatives along Lena Road for reducing congestion, improving safety and operational performance, and addressing future transportation needs. This Natural Resources Assessment Technical Memorandum was prepared to support the Study through the evaluation of Protected Species and Habitat, Wetlands and Other Surface Waters, and Essential Fish Habitat. This Technical Memorandum documents the results of the corridor assessment to support decisions associated with the proposed modifications to Lena Road as it relates to natural resources potentially present in the corridor study area.

Manatee County will use the results of the Study to evaluate alternatives to avoid or minimize impacts to environmental sensitive areas, including wetlands, critical wildlife habitats, and listed species.

The purpose of this natural resources assessment is to demonstrate due diligence in accordance with federal and state regulations and to begin conformance with the requirements of Title 23 of the Code of Federal Regulations (CFR) Part 771 and applicable federal and state laws, including the National Environmental Policy Act (NEPA). The natural resources assessment was performed using as guidance Part 2, Chapter 16 Protected Species and Habitat and Chapter 9 Wetlands and Other Surface Waters of the Florida Department of Transportation (FDOT) PD&E Manual (July 1, 2020). However, this assessment is not considered a full Natural Resources Evaluation (NRE) as defined in the FDOT PD&E Manual. In addition, the natural resources assessment did not evaluate proposed stormwater management facilities outside of the corridor study area, such as potential pond locations, if any.

1.1 Project Description

Manatee County proposes the extension of Lena Road to State Road (SR) 64. The project limits extend from the cul-de-sac at the north end of existing Lena Road to the intersection with SR 64, providing a new north-south corridor between SR 70 and SR 64 in Bradenton, Manatee County, Florida, as shown in Figure 1-1. The County is performing a full range of engineering and environmental studies within the study corridor to support the evaluation of project alternatives and develop a preliminary design.

The project is located in southwestern Manatee County within the Williams Creek watershed and the Cypress Strand watershed. Williams Creek is a tributary to the Braden River. Cypress Creek is a tributary to the Manatee River (Below Dam) watershed. Figure 1-2 shows the study area on the United States Geologic Survey (USGS), 7.5 Minute “Lorraine, Florida” (2021) Quadrangle topographic maps with an aerial photograph base. For this project, the study area includes a 500-foot buffer, east and west of the existing road centerline (i.e., project limits), totaling a 1,000-foot-wide study corridor. All resources discussed herein fall within this study area.

1.2 Purpose and Need

The primary purpose of the Lena Road improvements is to provide congestion relief by providing a collector roadway between SR 70 and SR 64. Located between Interstate 75 (I-75) and Lakewood Ranch Boulevard, the new extension of Lena Road to SR 64 would provide connectivity between two commercial/industrial areas currently accessed from SR 70 or SR 64 and provide an alternative local route between these two major east-west corridors. The extension would also connect to the future extension of 44th Avenue East, providing alternative east-west access across I-75.
Figure 1-1: Project Location
Figure 1-2: Study Area
2.0 Existing Conditions

2.1 Land Use

The land use in this part of Manatee County has been characterized by agriculture for decades, including vegetable farms, citrus groves, and cattle pastures. The 1954 U.S. Census of Agriculture reported the aggregated land in farms as 309,000 acres, or 69 percent of all county land (USDA 1958). This area of Manatee County is coastal lowlands, comprised mostly of nearly level plains that have undergone little or no dissection since successive sea level withdrawals in the Pleistocene epoch (Ice Age) (USDA 1983). Aerial imagery from the University of Florida Digital Library Collection was reviewed, including photography from 1940, 1957, and 1970, for recent land use conditions and environmental features. The historic aerial photography confirmed that current-day Lena Road was present in 1957 only as a 4,800 feet road south from SR 64, to current-day Landfill Road. At that time, it was sole access to a farm that was present in 1940, including citrus groves and agricultural fields. Except for this segment, no other portion of the current Lena Road alignment south to SR 70 was present in 1970 although a smaller footprint of the county landfill appears to be under construction.

The Southwest Florida Water Management District (SWFWMD) Land Use Land Cover data (2017) and 2020 aerial imagery were reviewed for existing land uses within the study area. Land use was categorized using the FDOT Florida Land Use, Cover and Forms Classification System (FLUCFCS) (1999). Site reviews were performed to confirm current conditions and recent changes in land use and land cover types, particularly for this rapidly changing corridor. Natural areas were evaluated for habitat type, quality, and any degradations evident. The dominant existing land uses within the Lena Road study area consist of Commercial and Services (FLUCFCS 140), covering 19.7 percent, and Industrial (FLUCFCS 150) at 11.7 percent, each associated with the Lena Business Park. These areas are on the southern portion of the project and in the middle near Landfill Road. Agricultural (FLUCFCS 210 and 250) is 5.6 percent of the project area, primarily at the northern project area. Low-Density Residential (FLUCFCS 110) is 6.3 percent of land area, primarily at the central and northern project areas and Open Lands (FLUCFCS 190) are 7.8 percent of the study area at the northern extent of the project. Table 2-1 summarizes the land use within the study area, and Figure 2-1 is a map of the land use within the study area.
Table 2-1: SWFWMD Land Use Land Cover Summary for the Study Area

<table>
<thead>
<tr>
<th>FLUCFCS Code</th>
<th>FLUCFCS Description</th>
<th>Acres within Study Area</th>
<th>Percent within Study Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Land Uses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>110 110</td>
<td>Low Density, &lt;2 dwelling units/acre</td>
<td>29.2</td>
<td>6.3%</td>
</tr>
<tr>
<td>130 130</td>
<td>130: High Density, 6 or more dwelling units/acre</td>
<td>4.6</td>
<td>1.1%</td>
</tr>
<tr>
<td>140 140</td>
<td>Commercial and Services</td>
<td>91.2</td>
<td>19.7%</td>
</tr>
<tr>
<td>1423 1423</td>
<td>Junk Yard</td>
<td>16.5</td>
<td>3.6%</td>
</tr>
<tr>
<td>150 150</td>
<td>Industrial</td>
<td>54.4</td>
<td>11.7%</td>
</tr>
<tr>
<td>190 190</td>
<td>Open Land (Urban)</td>
<td>36.1</td>
<td>7.8%</td>
</tr>
<tr>
<td>810 810</td>
<td>Transportation</td>
<td>31.8</td>
<td>6.9%</td>
</tr>
<tr>
<td>Agriculture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>210 210</td>
<td>Cropland and Pastureland</td>
<td>14.7</td>
<td>3.2%</td>
</tr>
<tr>
<td>250 250</td>
<td>Specialty Farms</td>
<td>11.1</td>
<td>2.4%</td>
</tr>
<tr>
<td>Surface Waters and Natural Habitats</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>510 510</td>
<td>Streams and Waterways</td>
<td>4.0</td>
<td>0.9%</td>
</tr>
<tr>
<td>530 530</td>
<td>Reservoirs</td>
<td>20.3</td>
<td>4.4%</td>
</tr>
<tr>
<td>615 615</td>
<td>Stream and Lake Swamps (bottomland)</td>
<td>9.0</td>
<td>1.9%</td>
</tr>
<tr>
<td>617 617</td>
<td>Mixed Wetland Hardwood</td>
<td>39.8</td>
<td>8.5%</td>
</tr>
<tr>
<td>641 641</td>
<td>Freshwater Marshes</td>
<td>29.9</td>
<td>6.5%</td>
</tr>
<tr>
<td>643 643</td>
<td>Wet Prairies</td>
<td>3.0</td>
<td>0.6%</td>
</tr>
<tr>
<td>644 644</td>
<td>Emergent Aquatic Vegetation</td>
<td>0.4</td>
<td>0.1%</td>
</tr>
<tr>
<td>Total Area of Interest</td>
<td></td>
<td>463.0</td>
<td>100%</td>
</tr>
</tbody>
</table>
Figure 2-1: Land Use and Land Cover for the Lena Road Study Area
### 2.2 Soils

The United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Soil Survey of Manatee County, Florida dated May 1983 and the Web Soil Survey (2021) ([Appendix A](#)) were reviewed for near surface soil data. Based on the NRCS soil geodatabase, the study area includes nine soil mapping units. The general soil types are listed in Table 2-2 with their corresponding NRCS map unit number, hydric classification, drainage class, and their coverage in acres and percent cover within the study area. Figure 2-2 shows soil types within the study area on an aerial image, including their hydric or non-hydric status.

Soils were predominantly non-hydric, including EauGallie-EauGallie Wet, Fine Sand, 0 to 2 Percent Slopes with a depth to water table of about 6 inches to 18 inches, which covers 70 percent of the study area. There were three hydric soils, including the Floridana-Immokalee-Okeelanta Association with a depth to water table of 0 inches, which covers 14 percent of the study area; Canova, Anclote, and Okeelanta soils with a depth to water table of 0 inches, which covers 5 percent of the study area; and Delray Complex with a depth to water table of 0 inches to 6 inches, which covers less than 1 percent of the study area. Table 2-2 lists the soil types, drainage classes, and percent area mapped within the study area.

<table>
<thead>
<tr>
<th>Map Unit</th>
<th>NRCS Map Unit Name</th>
<th>Hydric</th>
<th>Drainage Class</th>
<th>Acres Within Study Area</th>
<th>Percent of Study Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Canova, Anclote, and Okeelanta Soils</td>
<td>Yes</td>
<td>Very Poorly Drained</td>
<td>23.2</td>
<td>5%</td>
</tr>
<tr>
<td>11</td>
<td>Cassia Fine Sand, 0 to 2 Percent Slopes</td>
<td>No</td>
<td>Somewhat Poorly Drained</td>
<td>11.8</td>
<td>2.5%</td>
</tr>
<tr>
<td>12</td>
<td>Cassia Fine Sand, Moderately Well Drained</td>
<td>No</td>
<td>Moderately Well Drained</td>
<td>9.1</td>
<td>2%</td>
</tr>
<tr>
<td>16</td>
<td>Delray Complex</td>
<td>Yes</td>
<td>Very Poorly Drained</td>
<td>2.0</td>
<td>0.4%</td>
</tr>
<tr>
<td>20</td>
<td>EauGallie-EauGallie Wet, Fine Sand, 0 to 2 Percent Slopes</td>
<td>No</td>
<td>Poorly Drained</td>
<td>323.6</td>
<td>70%</td>
</tr>
<tr>
<td>26</td>
<td>Floridana-Immokalee-Okeelanta Association</td>
<td>Yes</td>
<td>Very Poorly Drained</td>
<td>64.0</td>
<td>13.8%</td>
</tr>
<tr>
<td>35</td>
<td>Ona Fine sand, Orstein Substratum</td>
<td>No</td>
<td>Poorly Drained</td>
<td>6.6</td>
<td>1.4%</td>
</tr>
<tr>
<td>45</td>
<td>Tavares Fine Sand, 0 to 5 Percent Slopes</td>
<td>No</td>
<td>Moderately Well Drained</td>
<td>18.2</td>
<td>3.9%</td>
</tr>
<tr>
<td>48</td>
<td>Wabasso-Wabasso, Wet, Fine Sand, 0 to 2 Percent Slopes</td>
<td>No</td>
<td>Poorly Drained</td>
<td>4.4</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total Study Area</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>463.0</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

*Table 2-2: NRCS Soil Survey of Manatee County, Florida Summary for the Study Area*
Figure 2-2: NRCS Soils Map for the Lena Road Study Area
3.0 Protected Species and Habitat

This Technical Memorandum complies with Section 7(a) of the Endangered Species Act (ESA) of 1973, as amended. Section 7(a) (2) of the ESA requires every federal agency, in consultation with and with the assistance of the Secretary, to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. Section 7(a) (3) of the ESA authorizes a prospective permit or license applicant to request the issuing federal agency to enter into early consultation with the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) to determine whether the proposed action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.

In accordance with 16 United States Code (U.S.C.) 1536(a)-(d) of the ESA, as amended, federal agencies impose specific requirements regarding endangered or threatened species of fish, wildlife, or plants (listed species) and habitat of such species that has been designated as critical habitat under Section 7(a) of the ESA. These requirements include the protection of all federal listed species (and their habitats).

The state affords protections to listed animals through the Florida Fish and Wildlife Conservation Commission (FWC) pursuant to Chapter 68A-27, Florida Administrative Code (F.A.C.). The state affords protections to listed plants through the Florida Department of Agriculture and Consumer Services (FDACS) Division of Plant Industry pursuant to Chapter 5B-40, F.A.C.

3.1 Methodology

The project was evaluated for potential impacts to federal and state, threatened or endangered species (listed species) and federal protected species. Federally listed species are protected under the ESA. Other species, such as the bald eagle, are not listed but are afforded protection under the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668d) or Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-711). State listed species are protected under Chapter 379, Florida Statutes and Chapters 68A-27 and 5B-40 F.A.C. The purpose of this assessment was to evaluate if listed or protected species would likely utilize the study area and to determine if protected species, or their habitat, could be adversely impacted by the project.

The Florida Natural Areas Inventory (FNAI) Biodiversity Matrix (Unofficial) was queried and a USFWS IPaC Official Species List was generated for the study area listing protected species that have the potential to occur within the study area. The IPaC Official Species List is included in Appendix B.

The methodology to identify state or federal listed species potentially occurring within the study area also included review of federal and state agency databases and USFWS Consultation Areas. A GIS desktop analysis was performed referencing this information prior to conducting field surveys to establish baseline information and guide onsite evaluations. Figure 3-1 is a map of wildlife records showing the results of the GIS desktop analysis. Preliminary wildlife surveys were conducted within the project right-of-way in July and August 2021.

Information sources and databases utilized for the wildlife analysis included the following:

- ESRI ArcGIS World Image Service (2020)
- The Cornell Lab of Ornithology - e-Bird database (2019-2021)
- FNAI Biodiversity Matrix (Unofficial) (August 2021)
- Audubon Center for Birds of Prey Bald Eagle Nest database (2021)
- USDA NRCS, Soils of Manatee County, Florida (1983)
- USFWS Wood Stork Nesting Colonies / Core Foraging Areas (2021)
- USFWS Critical Habitat (2021)
Protected species that were identified as having the potential to occur within the study area are discussed in the following sections. The study area was assessed for their habitat requirements and each species was assigned an effect determination. In addition, each potential species was designated as having a no, low, moderate, or high likelihood of occurrence based on range, habitat type, location, patch size, and connectivity, as defined below.

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No</strong></td>
<td>Suitable habitat is not believed to be present within the study area.</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>Species documented within Manatee County, but with a low likelihood to occur within the study area due to the limited presence of suitable habitat.</td>
</tr>
<tr>
<td><strong>Moderate</strong></td>
<td>Species documented within Manatee County and for which suitable habitat was present within the study area; however, no documented occurrences exist.</td>
</tr>
<tr>
<td><strong>High</strong></td>
<td>Species highly likely to occur within the study area based on known habitat ranges and existence of suitable habitat. Species known to occur within or adjacent to the study area or have been documented within the vicinity.</td>
</tr>
</tbody>
</table>

### 3.2 Federal Protected Wildlife and Critical Habitat

Based on the combined results of the desktop analysis and preliminary field surveys, federal listed and protected species potentially occurring within the corridor study area are provided in Table 3-1 along with their likelihood of occurrence. Their likelihood of occurrence was based on the above-mentioned data sources and methodology. Three listed federal species have the potential to occur within the study area and are discussed in detail following Table 3-1.

Migratory birds and their habitat, including the non-listed but federally protected bald eagle and osprey, and the state listed least tern, were also present in this region and included in Table 3-1. Migratory birds are afforded protection under the MBTA (16 U.S.C. 703-711). The least tern is discussed under the state listed wildlife section. The bald eagle is additionally protected under the BGEPA (16 U.S.C. 668-668d), as amended. The bald eagle and osprey are discussed under the federal protected wildlife section. In addition to federal listed endangered and threatened species, the gopher tortoise has been recognized as a candidate species for federal listing. This state threatened reptile is discussed in Section 3.3.

The study area was evaluated for Critical Habitat for federal listed species as defined by Congress 50 CFR § 17.94. Review of available information determined that USFWS-designated critical habitat was not present.
Figure 3-1: Wildlife Occurrence Map for the Lena Road Study Area
### Table 3-1: Federally Protected Wildlife Potentially Occurring within the Study Area

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Likelihood of Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Federal Listed Wildlife</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Drymarchon corais couperi</em></td>
<td>Eastern indigo snake</td>
<td>Threatened</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Mycteria americana</em></td>
<td>Wood stork</td>
<td>Threatened</td>
<td>High</td>
</tr>
<tr>
<td><em>Aphelocoma coerulescens</em></td>
<td>Florida scrub jay</td>
<td>Threatened</td>
<td>Low</td>
</tr>
<tr>
<td><strong>Federal Protected Wildlife</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Haliaeetus leucocephalus</em></td>
<td>Bald eagle</td>
<td>BGEPA* MBTA**</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Pandion haliaetus</em></td>
<td>Osprey</td>
<td>MBTA**</td>
<td>Low</td>
</tr>
</tbody>
</table>

* Bald & Golden Eagle Protection Act and Migratory Bird Treaty Act. ** Migratory Bird Treaty Act

#### 3.2.1 Eastern Indigo Snake (*Drymarchon corais couperi*)

The federal status for the eastern indigo snake is threatened. The eastern indigo snake is a shiny black snake, which can reach lengths up to eight feet. The indigo snake will use a range of habitats from disturbed open land, pasture, scrub, sandhills, and flatwoods to wet prairies and mangrove swamps. Indigo snakes are known to lay eggs in uplands with a preference for gopher tortoise burrows. These snakes are also known to utilize gopher tortoise burrows for thermal refuge.

The eastern indigo snake is distributed across Florida although no critical habitat has been designated in the study area. Neither gopher tortoise burrows nor eastern indigo snakes were observed during preliminary field surveys. However, the indigo snake has been documented within Manatee County and potential indigo snake habitat was present within and outside the corridor study area. Therefore, the *Eastern Indigo Snake Programmatic Effect Determination Key* approved for the North Florida Ecological Services Field Offices (USFWS 2013) was reviewed for consistency ([Appendix C](#)), as keyed out below:

- **A** Project is not located in open water or salt marsh... [go to B.](#)
- **B** Permit will be conditioned for use of the Service’s *Standard Protection Measures for the Eastern Indigo Snake* during site preparation and project construction... [go to C.](#)
- **C** There are gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities... [go to D.](#)
- **D** The project will impact less than 25 acres of xeric habitat (scrub, sandhill, or scrubby flatwoods) or less than 25 active and inactive gopher tortoise burrows... [go to E.](#)

In line with the consultation key, if found, gopher tortoise burrows, active or inactive, would be excavated prior to site manipulation. If an eastern indigo snake was encountered, the snake would be allowed to vacate the area. Notably, gopher tortoise burrows were not be observed during preliminary surveys, but they could be present within the study area.

- **E** Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows be inspected each morning before site manipulation in a particular area, and if
occupied by an eastern indigo snake, no work will commence until the snake has vacated the vicinity of proposed work …NLAA.

Projects containing habitat with the potential to support the indigo snake are required to follow the USFWS Standard Protection Measures for the Eastern Indigo Snake (2013) (Appendix D) during construction, which dictates that contractors be made aware the species could be present and that land clearing and using heavy equipment be conducted with avoidance and protection of this species in mind. These protection measures will be required for this project during clearing and grubbing and during construction within the project limits, including within pond sites. Due to these commitments and per the Eastern Indigo Snake Programmatic Effect Determination Key, it is anticipated that the project may affect, but is not likely to adversely affect the eastern indigo snake.

3.2.2 Wood Stork (*Mycteria americana*)
The federal status for the wood stork is threatened. The wood stork is a large wading bird with black edged wings and a short black tail. This often-transient wading bird forages in shallow water containing high prey densities and it utilizes freshwater and estuarine habitats for nesting, foraging, and roosting. Wood storks typically nest in rookeries and construct nests in forested wetlands, including hardwood hammocks, cypress swamps, and forested sloughs.

The study area falls within the jurisdiction of the USFWS North Florida Ecological Services Office, which recognizes a 15-mile Core Foraging Area (CFA) radius around wood stork rookeries for central Florida. The CFA is the maximum distance storks typically fly from the colony to capture prey for their young. The USFWS guidelines state that impacts to appropriate wetland systems within the CFA of an active colony may directly affect colony productivity.

Based on USFWS data (2017), the study area falls within the CFA of one wood stork colony at the time of this Technical Memorandum. This nesting colony was approximately 4.3 miles west-northwest of the study area. While nesting colonies were not documented within the study area, riverine and forested wetlands, marshes, and roadside ditches were present where intermittent foraging or loafing could occur. The USFWS recognizes the need to protect wood stork suitable foraging habitat (SFH) within a CFA. SFH is defined as calm, relatively open waters, uncluttered by dense vegetation with water levels between 2 to 15 inches (USFWS 2012). Wood storks were not observed during preliminary field surveys; however, potential impacts to SFH could occur due to direct impacts from the future road widening and pond sites. The Wood Stork Effect Determination Key (Appendix C) for the North Florida Ecological Services Field Offices (2008) was reviewed for consistency, as keyed out below:

| A | Project more than 2,500 feet from a colony site…**go to B.** |
| B | Project impacts SFH²…**go to C.** |
| C | Project impacts to SFH are less than or equal to 0.5-acre³…**NLAA.** |
| D | Project impacts to SFH are within the Core Foraging Area of a colony site, or wood storks have been documented foraging on site …**go to E.** |
| E | Project provides SFH compensation within the Service Area of a Service-approved wetland mitigation bank or wood stork conservation bank preferably within the CFA or consists of SFH compensation within the CFA consisting of enhancement, restoration or creation in a project phased approach that provides an amount of habitat and foraging function equivalent to that of impacted SFH…**NLAA.** |
Construction from the widening of Lena Road could impact riverine and forested wetlands, marshes, and some roadside ditches with SFH; therefore, provisions to reduce or minimize impacts would be implemented. These measures would include wetland mitigation pursuant to Section 373.4137, F.S., to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 33 U.S.C. §1344. Due to these assurances and per the Wood Stork Effect Determination Key (USFWS 2008), it is anticipated that the project may affect, but is not likely to adversely affect the wood stork.

3.2.3 Florida Scrub Jay (*Aphelocoma coerulescens*)
The federal status for the Florida scrub-jay is threatened. The Florida scrub-jay is blue- and gray-colored and about the size of a blue jay. They have blue wings, head, and tail, gray back and underparts, and a whitish forehead and neck. The Florida scrub jay does not have black markings or a crest as other jays do. Florida scrub-jays live in family groups, consisting of a breeding pair with young helpers that are usually the offspring of the pair.

The study area is within the USFWS Florida Scrub-jay Consultation Area. Florida scrub-jays are habitat-specific and utilize sand pine and oak scrub, as well as scrubby flatwoods. Scrubby flatwoods have an open canopy of widely spaced pine trees and a low, shrubby understory dominated by scrub oak and saw palmetto, often interspersed with patches of barren white sand. These habitat types were not present within the study area and there are no recent records of scrub-jays occurring in the area. For this reason, it is expected that the project would have no effect on the Florida scrub-jay.

3.2.4 Bald Eagle (*Haliaeetus leucocephalus*)
The bald eagle was delisted from the USFWS List of Endangered and Threatened Wildlife effective August 8, 2007. The bald eagle continues to receive protections through the BGEPA and the MBTA. To minimize disturbance to nesting eagles, construction activities are restricted within 330 feet of an active nest tree. The USFWS Eagle Management Guidelines (USFWS 2007) are used as guidance if construction is to occur within 660 feet of an active eagle nest during the nesting season (October 1 - May 15).

As shown in **Figure 3-1**, two bald eagle nests were within the Lena Road corridor study area, including MN036a (active 2016) at the south end of the project near SR 70, and MN032 (active 2011) at the north extent of the project adjacent to an FPL substation northwest of the county landfill (Audubon, 2021).

- MN036a was mapped about 420 feet southwest of Lena Road but the nest was not observed during field reviews.
- MN032 was mapped about 250 feet east of the Lena Road, possibly associated with a telecommunications tower, but the nest was not observed during field reviews.

USFWS protection zones on both nests overlay existing Lena Road and will require coordination with the USFWS to develop construction management guidelines for nest MN036, and to possibly obtain an Eagle Take Permit for nest MN032 if impacts to this nest cannot be avoided.

A third bald eagle nest (MN051) lies 2,500 feet (about 0.5 miles) east of Lena Road near the middle of the project corridor. The nest is located on the east side of the 85-acre Manatee County Reclaimed Southeast Water Reclamation Facility (SEWRF) Lake. This nest is active, most recently fledging young in 2021. USFWS coordination regarding MN051 has been ongoing since January 2016 and an Incidental Take Permit #MB33468C-0 was obtained by Manatee County. The County purchased land adjacent to Duette Preserve to satisfy the eagle mitigation required by the permit. MN051 lies beyond the 660 feet buffer zone from Lena Road.

There are numerous other known nests in Manatee County west along I-75 and the Braden River, south in Sarasota County, and north along the Manatee River, but all other nest locations are one mile or greater outside the corridor study area. Resurvey of the corridor would occur during permitting and design. If the two closest
bald eagle nests can be confirmed within 660 feet of the project, the County would coordinate with the USFWS in accordance with the BGEPA and MBTA. Because this project would be consistent with the BGEPA and MBTA, long-term impacts to the bald eagle would not be expected.

3.2.5 **Osprey (Pandion haliaetus)**

Ospreys are afforded protection under the MBTA and are state protected by Chapter 68A of the F.A.C. Ospreys require nest sites in open surroundings for easy approach that are safe from ground predators, such as raccoons. They readily build nests on manmade structures, such as telephone poles and nest platforms designed especially for these birds. Nesting season typically occurs between December and February.

Although both active and inactive osprey nests are federally protected, only active nests require federal permits for taking. Under state rules, only inactive osprey nests may be taken, as determined by the absence of eggs or flightless young at the nest. Typically, a replacement nesting structure located in the immediate vicinity is required to be erected.

Ospreys and their nests were not observed during preliminary field surveys for the study area. Surveys to identify active osprey nests will be conducted during the design and permitting phase of the project, and permits will be acquired if impacts during construction are unavoidable. Nest avoidance will be prioritized, and nest structure replacement will occur if removal is required. Because the project would be consistent with federal and state requirements, it is anticipated that the project would not impact the osprey.

3.3 **State Protected Wildlife**

Based on desktop analysis and preliminary field surveys, state listed wildlife managed by the FWC and potentially occurring within the corridor study area are provided in Table 3-2 along with their protection status and likelihood of occurrence. Likelihood of occurrence was based on the above-mentioned data sources and methodologies, and on the presence of suitable habitat as defined in Florida’s Imperiled Species Management Plan, as amended (2018). Listing status was in accordance with Florida’s Official Endangered and Threatened Species List (June 2021).

State protected wildlife known to occur or have the potential to use habitat within the study area include eight species. None of the state listed species were observed during preliminary field surveys; however, potential habitat was present for some species.

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

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Likelihood of Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Antigone canadensis pratensis</em></td>
<td>Florida sandhill crane</td>
<td>Threatened</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Falco sparverius paulus</em></td>
<td>Southeastern American kestrel</td>
<td>Threatened</td>
<td>Low</td>
</tr>
<tr>
<td><em>Gopherus polyphemus</em></td>
<td>Gopher tortoise</td>
<td>Threatened</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Pituophis melanoleucus mugitus</em></td>
<td>Florida pine snake</td>
<td>Threatened</td>
<td>Low</td>
</tr>
</tbody>
</table>

**Wading Birds**

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Likelihood of Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Egretta caerulea</em></td>
<td>Little blue heron</td>
<td>Threatened</td>
<td>High</td>
</tr>
<tr>
<td><em>Egretta tricolor</em></td>
<td>Tricolored heron</td>
<td>Threatened</td>
<td>High</td>
</tr>
</tbody>
</table>
### Nesting Shorebirds

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Likelihood of Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Platalea ajaja</em></td>
<td>Rosette spoonbill</td>
<td>Threatened</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

**3.3.1 Florida Sandhill Crane** (*Antigone canadensis pratensis*)

The state protection status of the Florida sandhill crane is threatened. Sandhill cranes are tall gray birds with a patch of red on their head. Sandhill cranes use a variety of habitats, preferring wet prairies, marshy lake margins, wet pastures, and marshes. Sandhill cranes nest in shallow freshwater ponds and marshes. Sandhill cranes sometimes forage along roadsides and often in pastures.

No sandhill cranes were observed during surveys of the study area although some larger pasture areas to the north could be used by cranes for foraging. There were also large marshes within the business park to the south and marsh-like littoral zones on several small ponds that could provide nesting habitat.

Per the FWC species guidelines (2016), pre-planning and pre-construction surveys are recommended in areas with potential to support nesting sandhill cranes to ensure active nests and flightless young are protected. Sandhill cranes breed from December through August and nest between February and April. For pre-planning surveys, FWC recommends three survey events during the permitting process to facilitate avoidance, minimization, and mitigation measures. The ideal time for these surveys is in March, early April, and early May. For pre-construction surveys, surveys should occur prior to site clearing. Also, Florida sandhill cranes do not nest in the same location every year, so because construction occurs over several years it would be necessary to reconfirm nesting (or the absence thereof) each year.

Given that the County would be committed to avoiding nesting sandhill cranes during construction if present, and because freshwater marsh systems would be maintained, there is **no effect anticipated** to the Florida sandhill crane.

**3.3.2 Southeastern American Kestrel** (*Falco sparverius Paulus*)

The state status of the southeastern American kestrel is threatened. Females have brown wings while males have bluish-gray wings, however both have white bellies and black markings around their eyes. There are two kestrel subspecies in Florida. The American kestrel is migratory; the Southeastern American kestrel is not. Identification of southeastern American kestrels can only be confirmed in the field when the migrant is not in Florida (approximately April through August). Kestrels utilize open grassland, pasture, and agricultural land, as well as ephemeral wetlands. They prefer habitats with perches, a diverse prey population, and tree snags with cavities for nesting. The FWC distribution map shows the kestrel as a potential species within this region but not in Manatee County. The FNAI distribution map and Biodiversity Matrix (Unofficial) list the kestrel as a potential species within this region.

The kestrel was not observed during preliminary field surveys although open pasture and fields were present, and snags were available. Within the study area, some land management activities have created disturbed clearings with low-growing vegetation, which could provide substrate for kestrels. The proposed road widening could overlay adjacent cleared areas and habitats.

FWC formal surveys for the southeastern American kestrel are conducted from April through August and are valid until March 1 of the following breeding season. FWC recommends three survey events. Surveys are
conducted along transects to document the presence of kestrels (perching or foraging), suitable cavities, and/or active nest cavities. Verification of suitable nest cavities is conducted between March 1 and July 31.

The FWC may recommend kestrel surveys during permitting. If kestrel breeding and/or nesting is confirmed, the FWC will recommended avoidance measures to eliminate a take by maintaining a 490-foot buffer around active nest cavities during the breeding season, retaining cavities in natural structures, and maintaining at least 124 acres of SFH within a 0.31-mile radius of occupied habitat. Given the habitat conditions within portions of the study area, the southeastern American kestrel may use the project area but is not expected. Therefore, there is no effect anticipated to the southeastern American kestrel.

### 3.3.3 Gopher Tortoise (*Gopherus polyphemus*)

The state protection status for the gopher tortoise is threatened. The tortoise is a candidate for federal listing in its eastern range, which includes Florida, Georgia, and parts of Alabama and South Carolina. A final decision on whether to expand the listed range of this species or remove the species from the ESA candidate listing is expected in 2022 or 2023. The gopher tortoise has a brownish-gray, rounded carapace, and the plastron is beige without a hinge. The gopher tortoise has claws adapted for digging deep burrows. Tortoises occupy upland habitats, preferring those with well-drained sandy soils, a seasonal high groundwater table below 18 inches, and open areas with abundant forage. Habitats supportive of healthy gopher tortoise populations include, but are not limited to, dry pastures and fields, flatwoods, sandhills, scrub, xeric oak hammocks, dry prairies, and disturbed open lands such as transportation and utility rights-of-way. Tortoise burrows are used by many commensals such as the eastern indigo snake and the Florida pine snake.

Potential gopher tortoise habitat was present in the corridor study area; however, no gopher tortoises or potentially occupied tortoise burrows were observed during preliminary surveys. Formal tortoise surveys were not performed during the field survey.

Preliminary gopher tortoise surveys would be recommended within the project area during permitting. These surveys typically cover approximately 15 percent of potential gopher tortoise habitat. Prior to construction, formal gopher tortoise surveys will be required in areas deemed suitable for the gopher tortoise in accordance with the FWC *Gopher Tortoise Permitting Guidelines*. If potentially occupied tortoise burrows are found within the project area, a gopher tortoise capture, relocation, and release permit will be acquired from the FWC in accordance with F.A.C. 68A-27.007 and 68A-27.003.

Because gopher tortoise habitat would be surveyed, potentially occupied gopher tortoise burrows verified, and any gopher tortoise relocated, there is no adverse effect anticipated on the species.

### 3.3.4 Florida Pine Snake (*Pituophis melanoleucus mugitus*)

The state protection status for the Florida pine snake is threatened. The Florida pine snake can reach a length of up to 84 inches. It has a brown back with dark blotches, white belly, ridged scales, small head, and pointed snout. This snake utilizes dry, sandy open areas and has been found using gopher tortoise burrows. The FNAI Biodiversity Matrix (Unofficial) documents potential pine snake habitat and lists sightings of the pine snake in this region. Neither the pine snake nor gopher tortoise burrows were observed during preliminary field surveys within the study area. Due to the disturbed project area lacking suitable habitat and the requirement to excavate all potentially occupied gopher tortoise burrows, which would include a requirement to protect commensal species, there is no effect anticipated to the Florida pine snake.

### 3.3.5 Wading Birds

Wading birds, including the little blue heron, roseate spoonbill, and tricolored heron would be expected to utilize the study area, and in particular, the wetlands found within the study area. The state protection status of all three wading birds is threatened.
• Little blue herons have a grayish blue body. Their head is dark maroon during breeding season and purplish during non-breeding season.
• The roseate spoonbill has pink and red wings with a white neck and back and reddish legs and feet.
• The tricolored heron has a dark blue colored head and upper body, a purple chest, and a white belly.

The breeding season varies somewhat for each species and by location. All three birds are year-round residents in Florida, but none were observed in the study area. These wading birds could use the study area for foraging and loafing particularly the larger creek systems, extensive marshes at the south portion of Lena Road, and some of the adjacent smaller surface waters and roadside ditches.

Wading birds rely on wetlands for breeding, foraging, and sheltering and will build nests of sticks, twigs, and fibers in trees or shrubs on hummocks or in branches overhanging water. Wading birds typically nest in multi-species colonies, although tricolored herons also will nest in single-species groups or build solitary nests. These three wading birds are known to forage in shallow herbaceous and forested wetlands, as well as along the edges of riverine habitat.

The FWC recommends surveys to determine if wading bird nesting habitat is present within 330 feet of a project area. These surveys are usually conducted during the permitting process and generally focus on identifying nesting habitat rather than foraging habitat. If a wading bird nest is detected, additional surveys are recommended to determine if an active breeding site is present. Conducting surveys during the dates specified as follows is recommended:

<table>
<thead>
<tr>
<th>Wading Bird</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Little Blue Heron</td>
<td>April 15 – June 30</td>
</tr>
<tr>
<td>Rosette Spoonbill</td>
<td>February 15 – April 30</td>
</tr>
<tr>
<td>Tricolored Heron</td>
<td>April 15 – June 30</td>
</tr>
</tbody>
</table>

Impacts to wading bird foraging habitat is addressed through wetland mitigation that meets the requirements of Rule 68A-27.007, F.A.C. However, if nesting is detected, additional measures are necessary to develop appropriate avoidance, minimization, and mitigation measures. FWC will also recommended pre-construction surveys prior to site clearing or excavation to ensure active nests or flightless young are not present. With adherence to the FWC guidelines and wetland impacts minimized and mitigated, there is no effect anticipated to these species.

3.3.6 Nesting Shorebirds

**Least Tern**

The state protection status for the least tern is threatened. The least tern is a small shorebird approximately eight to nine inches in length, with a forked tail and long pointed wings. Least terns are gray backed with a white belly, yellow beak, and a black cap. Terns typically nest on beaches with coarse sand and shell but have been reported to use interior shoreline habitats for nesting, including substrates such as dredged spoil and manmade structures. The least tern breeding season is April 1 through September 30. Least tern protection measures should focus on construction management techniques that avoid taking shorebird nests and young.

The least tern has not been documented in the study area and they were not observed during field surveys. They could opportunistically utilize the project area during construction if bare ground is exposed. However, protection of potential least tern nests and young can be ensured through construction planning and management. For multi-year construction projects, where construction activities cannot be avoided during least tern nesting season, pre-construction surveys can be conducted prior to land clearing and earthmoving to ensure nesting birds are not present. If nesting or flightless young are encountered, construction should be
3.4 Federal and State Protected Plants

The FNAI Biodiversity Matrix (Unofficial) identified 11 federal and state listed plants protected by the FDACS that have the potential to occur within the corridor study area. These listed plant species are shown in Table 3-3. None of these species were observed within the study area during preliminary field surveys. Due to their low likelihood of occurrence, there is no effect anticipated to these federal and state listed plant species. If protected plants are discovered during field surveys for permitting or at the time of construction, coordination with the FDACS will be initiated.

Table 3-3: Federal and State Listed Plants Potentially Occurring within the Study Area

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Likelihood of Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calopogon multiflorus</td>
<td>Many-flowered Grass-pink</td>
<td>State Threatened</td>
<td>Low</td>
</tr>
<tr>
<td>Centrosema arenicola</td>
<td>Sand Butterfly Pea</td>
<td>State Endangered</td>
<td>None</td>
</tr>
<tr>
<td>Chionanthus pygmaeus</td>
<td>Pygmy Fringe-tree</td>
<td>Federal Endangered</td>
<td>Low</td>
</tr>
<tr>
<td>Cladonia perforata</td>
<td>Florida Perforate Cladonia</td>
<td>Federal Endangered</td>
<td>None</td>
</tr>
<tr>
<td>Lechea cernua</td>
<td>Nodding Pinweed</td>
<td>State Threatened</td>
<td>None</td>
</tr>
<tr>
<td>Linum carteri var. smallii</td>
<td>Small’s Flax</td>
<td>State Endangered</td>
<td>None</td>
</tr>
<tr>
<td>Nemastylis floridana</td>
<td>Celestial Lily</td>
<td>State Endangered</td>
<td>Low</td>
</tr>
<tr>
<td>Nolina atopocarpa</td>
<td>Florida Beargrass</td>
<td>State Threatened</td>
<td>None</td>
</tr>
<tr>
<td>Pteroglossaspis ecristata</td>
<td>Giant Orchid</td>
<td>State Threatened</td>
<td>Low</td>
</tr>
<tr>
<td>Rhynchospora megaplumosa</td>
<td>Large-plumed Beaksedge</td>
<td>State Endangered</td>
<td>Low</td>
</tr>
<tr>
<td>Zephyranthes simpsonii</td>
<td>Redmargin Zephyrlily</td>
<td>State Threatened</td>
<td>Low</td>
</tr>
</tbody>
</table>

4.0 Wetlands and Other Surface Waters

4.1 Methodology

A GIS desktop analysis was performed prior to the field survey to establish baseline information and guide the onsite evaluations for conducting wetland, riverine, and other surface water delineation estimates. Data sources utilized for this analysis included the following:

- SWFWMD Land Use Land Cover (2018)
- USDA NRCS, Soils of Manatee County, Florida (1983)
- USFWS National Wetland Inventory (NWI)
- USGS Topographic Maps
- Florida Department of Environmental Protection (FDEP) Outstanding Florida Water (2019)
Estimated delineations of wetlands and other surface waters were performed within the study area in July and August 2021. Features outside the existing right-of-way were estimated based on ground-truthing aerial photography to the extent possible considering private property and access limitations. Delineations were completed in accordance with the U.S. Army Corps of Engineers *Wetland Delineation Manual* (1987); *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region* (2010); Rule 62-340, F.A.C., *Delineation of the Landward Extent of Wetlands and Surface Waters*, and the *Florida Wetlands Delineation Manual* (1995).

### 4.2 Study Area Wetland and Other Surface Water Features

Wetlands are present within the corridor study area and were mapped and classified according to FLUCFCS and the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). Table 4-1 lists the wetland, surface water, and other surface water features within the study area along with their estimated acreages and FLUCFCS and USFWS classifications. Figures 4-1, 4-2, and 4-3 show the south, middle, and north areas of the study area with all wetlands and other surface waters observed within the 500-foot buffer limits. The primary wetland types in the study area included:

- Stream and Lake Swamps (FLUCFCS 615),
- Mixed Wetland Hardwood (FLUCFCS 617),
- Freshwater Marshes (FLUCFCS 641),
- and smaller areas of Wet Prairies (FLUCFCS 643).

The natural forested systems were typically larger areas in the southern and central portions of the study area intermixed with the Commercial and Services and Industrial land uses. Wetlands near the County’s water reclamation facility were also larger forested systems. There were few or no forested wetland systems associated with the two named waterways, Williams Creek (OSW-2) and Cypress Strand (OSW-6), that flow through the study area.

Existing conditions within the Lena Road study area included evidence of elevated water levels in wetlands, adjoining uplands, and stormwater management facilities across the southern and middle project sections associated with southern Lena Road and the Lena Business Park at Landfill Road. Field reviews indicated elevated water levels by as much 0.5 feet and perhaps 1.0 feet above normal wet season. This may be an indication of blocked pipes or restricted flow ways on significant portions of the study area. Several large facilities, including Lena Road, I-75, the Florida Power and Light Company (FPL) electrical transmission line, and the County water treatment facility may also have affected surface water flows and levels, and/or local groundwater elevations. These observations may merit further engineering investigations, including ultimately a determination of base clearance elevation for the proposed road widening.

Historic aerial photography shows a trend toward land clearing, ditching, and agricultural uses, beginning in 1940, which was much more prevalent by 1957. Nearly all marshes are drained by ditches (Streams and Waterways, FLUCFCS 510), which have had reduced water levels and hydroperiods for decades. By 1970, agricultural land uses are far more extensive and low-density residential areas are more common.

To the north of Landfill Road, there are fewer and smaller forested and herbaceous wetlands within the study area.

Generally, all wetland systems are in moderate to poor condition, having incurred drainage by ditching, and watershed conversions to commercial development and farmland. Vegetation communities within the wetlands have also been degraded by past agricultural activities, tree harvesting, nuisance and exotic species growth, and in places, above normal water levels.
Surface waters were mostly associated with the two primary water channels crossing Lena Road. These drainages were historically natural and associated with limited wetlands in the study area, including:

- **Williams Creek** drains the southern portion of the study area and flows west to the Braden River as a Stream Swamp through residential areas. The southern third of the road project lies within the Williams Creek watershed.
- **Cypress Strand** includes a creek channel flowing north through the northern portion of the project. There is very little forested wetland associated with the creek, instead bounded by a strand of live oaks with variable canopy.

There are Wetland Conservation areas marked within the central area of the Lena Road study area. These areas are either wetland mitigation sites and/or conservation areas with upland buffers surrounding them. Permit conditions and protective easements will require review to anticipate impact avoidance and minimization needs and potential mitigation needs.

**Table 4-1: Wetland and Other Surface Waters, Classification, and Acres in the Study Area**

<table>
<thead>
<tr>
<th>Wetland and OSW</th>
<th>FLUCFCS Description</th>
<th>USFWS Classification</th>
<th>Area within Study Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>WL-1</td>
<td>615- Stream and Lake Swamps</td>
<td>PFO3 – Palustrine Forested Broad-leaved Evergreen</td>
<td>3.24</td>
</tr>
<tr>
<td>WL-2</td>
<td>641- Freshwater Marsh</td>
<td>PEM1 – Palustrine, Emergent, Persistent</td>
<td>2.27</td>
</tr>
<tr>
<td>WL-3</td>
<td>641- Freshwater Marsh</td>
<td>PEM1 – Palustrine, Emergent, Persistent</td>
<td>2.21</td>
</tr>
<tr>
<td>WL-4</td>
<td>617- Mixed Wetland Hardwoods</td>
<td>PFO3 – Palustrine Forested Broad-leaved Evergreen</td>
<td>1.27</td>
</tr>
<tr>
<td>WL-5</td>
<td>641- Freshwater Marsh</td>
<td>PEM1 – Palustrine, Emergent, Persistent</td>
<td>2.0</td>
</tr>
<tr>
<td>WL-6</td>
<td>617- Mixed Wetland Hardwoods</td>
<td>PFO3 – Palustrine Forested Broad-leaved Evergreen</td>
<td>2.01</td>
</tr>
<tr>
<td>WL-7</td>
<td>617- Mixed Wetland Hardwoods</td>
<td>PFO3 – Palustrine Forested Broad-leaved Evergreen</td>
<td>1.55</td>
</tr>
<tr>
<td>WL-8</td>
<td>641- Freshwater Marsh</td>
<td>PEM1 – Palustrine, Emergent, Persistent</td>
<td>4.11</td>
</tr>
<tr>
<td>WL-9</td>
<td>617- Mixed Wetland Hardwoods</td>
<td>PFO3 - Palustrine, Forested, Broad-leaved, Evergreen</td>
<td>3.32</td>
</tr>
<tr>
<td>WL-10</td>
<td>641- Freshwater Marsh</td>
<td>PEM1 – Palustrine, Emergent, Persistent</td>
<td>2.13</td>
</tr>
<tr>
<td>WL-11</td>
<td>641 – Freshwater Marsh</td>
<td>PEM1 – Palustrine, Emergent, Persistent</td>
<td>1.59</td>
</tr>
<tr>
<td>WL-12</td>
<td>617- Mixed Wetland Hardwoods</td>
<td>PFO3 - Palustrine, Forested, Broad-leaved, Evergreen</td>
<td>0.70</td>
</tr>
<tr>
<td>WL-13</td>
<td>615- Stream and Lake Swamps</td>
<td>PFO3 – Palustrine Forested Broad-leaved Evergreen</td>
<td>0.42</td>
</tr>
<tr>
<td>WL-14</td>
<td>641- Freshwater Marsh</td>
<td>PEM1 – Palustrine, Emergent, Persistent</td>
<td>3.06</td>
</tr>
<tr>
<td>WL-15</td>
<td>641 - Freshwater Marsh</td>
<td>PEM1 – Palustrine, Emergent, Persistent</td>
<td>3.58</td>
</tr>
<tr>
<td>WL-16</td>
<td>617- Mixed Wetland Hardwoods</td>
<td>PFO3 – Palustrine Forested Broad-leaved Evergreen</td>
<td>4.37</td>
</tr>
<tr>
<td>Wetland and OSW</td>
<td>FLUCFCS Description</td>
<td>USFWS Classification</td>
<td>Area within Study Area</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>WL-17</td>
<td>617- Mixed Wetland Hardwoods</td>
<td>PFO3 – Palustrine Forested Broad-leaved Evergreen</td>
<td>5.76</td>
</tr>
<tr>
<td></td>
<td>641- Freshwater Marsh</td>
<td>PEM1 – Palustrine, Emergent, Persistent</td>
<td>5.03</td>
</tr>
<tr>
<td>WL-18</td>
<td>617- Mixed Wetland Hardwoods</td>
<td>PFO3 – Palustrine Forested Broad-leaved Evergreen</td>
<td>13.42</td>
</tr>
<tr>
<td>WL-19</td>
<td>617- Mixed Wetland Hardwoods</td>
<td>PFO3 – Palustrine Forested Broad-leaved Evergreen</td>
<td>0.46</td>
</tr>
<tr>
<td>WL-20</td>
<td>617- Mixed Wetland Hardwoods</td>
<td>PFO3 – Palustrine Forested Broad-leaved Evergreen</td>
<td>1.21</td>
</tr>
<tr>
<td>WL-21</td>
<td>617- Mixed Wetland Hardwoods</td>
<td>PFO3 – Palustrine Forested Broad-leaved Evergreen</td>
<td>1.27</td>
</tr>
<tr>
<td>WL-22</td>
<td>617- Mixed Wetland Hardwoods</td>
<td>PFO3 – Palustrine Forested Broad-leaved Evergreen</td>
<td>0.16</td>
</tr>
<tr>
<td>WL-23</td>
<td>617- Mixed Wetland Hardwoods</td>
<td>PFO3 – Palustrine Forested Broad-leaved Evergreen</td>
<td>3.56</td>
</tr>
<tr>
<td>WL-24</td>
<td>644- Emergent Aquatic Vegetation</td>
<td>PEM1 – Palustrine, Emergent, Persistent</td>
<td>0.45</td>
</tr>
<tr>
<td>WL-25</td>
<td>643 - Wet Prairies</td>
<td>PEM1 – Palustrine, Emergent, Persistent</td>
<td>0.65</td>
</tr>
<tr>
<td>WL-26</td>
<td>617- Mixed Wetland Hardwoods</td>
<td>PFO3 – Palustrine Forested Broad-leaved Evergreen</td>
<td>0.31</td>
</tr>
<tr>
<td>WL-27</td>
<td>643 - Wet Prairies</td>
<td>PEM1 – Palustrine, Emergent, Persistent</td>
<td>2.39</td>
</tr>
<tr>
<td>OSW-1</td>
<td>510 – Streams and Waterways</td>
<td>R_{1,UB_2} – Riverine, Lower Perennial, Unconsolidated Bottom, Sand</td>
<td>0.19</td>
</tr>
<tr>
<td>OSW-2</td>
<td>510 – Streams and Waterways</td>
<td>R_{1,UB_2} – Riverine, Lower Perennial, Unconsolidated Bottom, Sand</td>
<td>0.66</td>
</tr>
<tr>
<td>OSW-3</td>
<td>510 – Streams and Waterways</td>
<td>R_{1,UB_2} – Riverine, Lower Perennial, Unconsolidated Bottom, Sand</td>
<td>0.14</td>
</tr>
<tr>
<td>OSW-4</td>
<td>510 – Streams and Waterways</td>
<td>R_{1,UB_2} – Riverine, Lower Perennial, Unconsolidated Bottom, Sand</td>
<td>0.62</td>
</tr>
<tr>
<td>OSW-5</td>
<td>510 – Streams and Waterways</td>
<td>R_{1,UB_2} – Riverine, Lower Perennial, Unconsolidated Bottom, Sand</td>
<td>0.3</td>
</tr>
<tr>
<td>OSW-6</td>
<td>510 – Streams and Waterways</td>
<td>R_{1,UB_2} – Riverine, Lower Perennial, Unconsolidated Bottom, Sand</td>
<td>1.4</td>
</tr>
<tr>
<td>OSW-7</td>
<td>510 – Streams and Waterways</td>
<td>R_{1,UB_2} – Riverine, Lower Perennial, Unconsolidated Bottom, Sand</td>
<td>0.5</td>
</tr>
<tr>
<td>OSW-8</td>
<td>510 – Streams and Waterways</td>
<td>R_{1,UB_2} – Riverine, Lower Perennial, Unconsolidated Bottom, Sand</td>
<td>0.21</td>
</tr>
</tbody>
</table>
Figure 4-1: Wetlands and Surface Water Map – South
Figure 4-2: Wetlands and Surface Water Map – Middle
Figure 4-3: Wetlands and Surface Water Map – North
4.3 Outstanding Florida Waters

FDEP-designated Outstanding Florida Waters (OFW) receive special protection to maintain ambient water quality in accordance with Chapter 62-302.700 F.A.C. and under the authority granted by Section 403.061(27) F.S. (FDEP, 2021). These waters are provided the highest level of water quality protection in the state of Florida, including requirements for additional water quality treatment above and beyond usual standards.

The corridor study area does not cross any OFWs so these criteria do not apply to this project.

4.4 Sovereign Submerged Lands

Sovereign Submerged Lands (SSL) are lands, including but not limited to, tidal lands, islands, sand bars, shallow banks, and lands waterward of the ordinary or mean high water line, beneath navigable fresh water, or beneath tidally influenced waters, which the State of Florida acquired title to on March 3, 1845, by virtue of statehood, and which have not been heretofore conveyed or alienated per Chapter 18-21.003, F.A.C. The corridor study area does not contain SSL listed, per Title XVIII Public Lands and Property Chapter 253 F.S. or per the Florida TIITF Land Records Spatial Index of the FDEP. Special SSL provisions and proprietary easements are not required for the widening of Lena Road.

4.5 Wetland and Other Surface Waters

4.5.1 Direct Wetland and Other Surface Water Impacts

Direct impacts to wetlands and other surface waters must be quantified and assessed for the proposed Lena Road project alignment and footprint. During evaluation of the road alignment alternatives, potential impacts to wetlands and other surface waters would be identified and quantified. Direct impacts would include permanent and temporary impacts and would be quantified and tabulated for the state and federal permit applications.

The Uniform Mitigation Assessment Method (UMAM) will be utilized to evaluate each wetland impact area to quantify the anticipated functional loss for each area based on location and landscape, water environment, and vegetation conditions. UMAM assessment forms would be prepared at a later design stage to document existing conditions of the wetlands to determine the functional loss for each impact.

4.5.2 Avoidance and Minimization

The proposed widening of Lena Road would use the existing disturbed and cleared right-of-way for the road and other project improvements as much as possible. Every effort would be made to avoid and minimize wetland impacts for the road widening. Additional impacts outside the existing right-of-way could result in impacts to wetland and other surface water habitats of better quality further from the disturbed right-of-way limits. Unavoidable direct wetland impacts would be expected within the existing right-of-way. Other impacts would be expected outside the existing right-of-way for the additional widening required, causing further disturbance to wetland and wildlife habitats.

Degradation of water quality, resulting from construction or excess stormwater runoff from the project, has the potential to adversely impact flowing waters and associated habitats. Best Management Practices (BMPs) would be implemented during construction to protect water quality. Direct, indirect, and temporary impacts to habitat and water quality would be avoided and then minimized using erosion control measures and BMPs during construction. Measures to minimize project impacts could include construction phasing, sediment barriers, floating turbidity barriers, and other construction techniques identified during design and permitting in cooperation with the regulatory agencies.
In addition, maintenance of an Erosion Control Plan that addresses protecting wetland areas and implements FDOT design standards, including those measures designed to protect aquatic environments, would be used as outlined in the following manuals:

- Standard Specifications for Road and Bridge Construction (Section 7, 104, and 110) (July 2020),
- State of Florida Erosion and Sediment Control Manual (E&SC Manual) (July 2013), and

Based on the avoidance and minimization measures discussed above and in accordance with Section 404 of the Clean Water Act, the proposed project alternatives within the corridor study area would represent the most practicable alignment for the Lena Road widening. Given that the project involves improvements to an existing roadway, opportunities to completely avoid wetland impacts would not be available. Although unavoidable impacts to wetlands and other surface waters would occur within the existing and proposed right-of-way, these would be the least impactful as compared to an alternate new roadway alignment outside of the existing right-of-way.

This evaluation would consider all practicable measures to avoid and minimize impact and impairment to wetlands and other surface water habitats, resulting from the proposed road widening. Mitigation of direct and indirect wetland and riverine surface water impacts would be provided to reduce the short-term and long-term adverse impacts to wetland resources in this region of Manatee County. Habitat quality, water quality and quantity, and hydroperiods would be protected and maintained in all wetlands and riverine surface waters that remain undisturbed.

4.5.3 Indirect and Cumulative Impacts

Short-term and long-term impacts to water quality and the resultant effects on wetland resources caused by construction, maintenance, and operation of the widened Lena Road would be managed using erosion control measures and BMPs during construction and use of stormwater management protocols. Measures to protect water quality within the waterways and wetlands will be required to meet state water quality standards.

Indirect wetland impacts are to habitat functions of wetlands associated with adjacent upland activities. The offset buffer of the indirect impact varies by agency. During the permitting process, indirect impacts would be evaluated at each wetland impact. For the state regulatory agencies, per the Environmental Resource Permit (ERP) Applicant’s Handbook Volume I, Part III, Section 10.2.7, an average 25-foot buffer is the guidance used to estimate secondary impacts to the habitat functions of wetlands associated with adjacent upland activities. The exact buffer width would be site-specific and would be finalized during design and permitting.

The guidance for establishing the secondary impact buffer distance would be specific to landscape conditions (e.g., natural versus urban setting), wetland type (e.g., forested versus herbaceous) and wetland quality (e.g., low, medium, or high). The actual buffer distances for each wetland would be finalized in cooperation with the agencies, following formal wetland delineations and wetland quality characterizations at the time of permitting.

Cumulative effects of potential future projects on the natural resources adjacent to the widened road would be considered. Wetlands are present however these systems are limited in area, protected by federal and state regulations, and would not be expected to be impacted by future development. While development would be expected near these wetland areas, wetland buffers required by regulations would provide adequate protection. Therefore, cumulative impacts from the proposed project would be expected to be insignificant.

4.5.4 Mitigation

Wetland and riverine surface water impacts, resulting from the widening of Lena road would be mitigated pursuant to Part IV of Chapter 373, F.S., and 33 U.S.C. §1344. Final mitigation requirements would be determined
during permitting based on the project design, extent and type of impacts, and use of the UMAM habitat scoring.

Some wetland impacts are expected to be unavoidable for the Lena Road widening and would occur within the Williams Creek and Cypress Strand Watersheds. To compensate these impacts, Manatee County would be first directed to use available mitigation banks with service areas that cover the project limits. Braden River Mitigation Bank and the Manatee Mitigation Bank would be two candidates for these requirements. These banks have available state credits however, federal credits are limited but could be available soon.

- **Braden River Mitigation Bank** - The service area for this mitigation bank includes the project area; however, it does not offer federal mitigation credits. In only offers state approved, freshwater herbaceous and forested wetland mitigation credits.

- **Manatee Mitigation Bank** - The service area for this mitigation bank includes the project area; however, the federal permit remains pending. Issuance is expected in October 2021.

If adequate mitigation bank credits are not available, permittee-responsible, onsite or offsite wetland mitigation could be proposed within the project watershed limits, potentially on Manatee County-owned land. A project-specific wetland mitigation plan has not been developed. A feasibility study and review of potential sites would be required to determine selection of a viable and suitable site for mitigation.

### 5.0 Essential Fish Habitat

Essential Fish Habitat (EFH) Assessments are conducted in accordance with the requirements of the Magnuson-Stevens Fishery Conservation and Management Act of 1996. However, essential fish habitat does not occur within the corridor study area. Therefore, an EFH Assessment is not required.

### 6.0 Anticipated Permits

Coordination with regulatory agencies is recommended for the Lena Road widening project primarily involving two state of Florida agencies, including SWFWMD and the FDEP Southwest District. In January 2021, the state of Florida assumed the federal Clean Water Act Section 404 permit program for non-tidally influenced wetlands and waters. The Lena Road widening project would require a Section 404 permit from FDEP. In addition, due to impacts to wetlands and other surface waters, the project will require a Statewide ERP pursuant to 62-330 F.A.C. The following agency permitting actions are anticipated:

- **FDEP Section 404 Permit** – Individual Permit or General Permit, depending on the extent of wetland and surface water impacts, 0.5 acres of impact being the threshold.
- **FDEP National Pollutant Discharge Elimination System, Stormwater Discharge from Large and Small Construction Activities** (62-621.300 F.A.C.). This permit is to be obtained by the contractor.
- **SWFWMD Statewide ERP** – Individual ERP with the application review fee determined by project work area and extent of wetland impacts.

A second tier of agency involvement includes FWC and USFWS as commenting agencies on the respective permit applications for listed and protected species. Coordination and possible consultation with these agencies would be required to construct the Lena Road widening project.
7.0 Conclusions

7.1 Protected Species and Habitat

7.1.1 Federal Protected Wildlife and Critical Habitat
The federal listed and protected wildlife species provided in Table 7-1 were determined to have the potential to occur within the corridor study area. Each species is listed with its federal status and the project effect determination based on the study results. The study area is not located within designated Critical Habitat for any federal protected species. Therefore, the proposed project would not result in the destruction or adverse modification of critical habitat.

Table 7-1: Project Effect Determinations for Federal Listed and Protected Wildlife

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Project Effect Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drymarchon corais couperi</td>
<td>Eastern indigo snake</td>
<td>Threatened</td>
<td>May affect, not likely to adversely affect</td>
</tr>
<tr>
<td>Mycteria americana</td>
<td>Wood stork</td>
<td>Threatened</td>
<td>May affect, not likely to adversely affect</td>
</tr>
<tr>
<td>Aphelocoma coerulescens</td>
<td>Florida scrub jay</td>
<td>Threatened</td>
<td>No affect anticipated</td>
</tr>
</tbody>
</table>

Federal Protected Wildlife

Haliaeetus leucocephalus Bald eagle | BGEPA* MBTA** | Minimal or no impact expected |

Pandion haliaetus Osprey | MBTA** | Minimal or no impact expected |

* Bald & Golden Eagle Protection Act and Migratory Bird Treaty Act. ** Migratory Bird Treaty Act

7.1.2 State Protected Wildlife
The state listed wildlife species provided in Table 7-2 were determined to have the potential to occur within the corridor study area. Each species is listed with its state status and the project effect determination based on the study results.

Table 7-2: Project Effect Determinations for State Listed Wildlife

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Project Effect Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antigone canadensis pratensis</td>
<td>Florida sandhill crane</td>
<td>Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Falco sparverius paulus</td>
<td>Southeastern American kestrel</td>
<td>Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Gopherus polyphemus</td>
<td>Gopher tortoise</td>
<td>Threatened</td>
<td>No adverse effect anticipated</td>
</tr>
<tr>
<td>Pituophis melanoleucus mugitus</td>
<td>Florida pine snake</td>
<td>Threatened</td>
<td>No effect anticipated</td>
</tr>
</tbody>
</table>

Wading Birds

Egretta caerulea Little blue heron | Threatened | No effect anticipated |
Table 7-3: Project Effect Determinations for Federal and State Listed Plants

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Project Effect Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calopogon multiflorus</td>
<td>Many-flowered Grass-pink</td>
<td>State Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Centrosema arenicola</td>
<td>Sand Butterfly Pea</td>
<td>State Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Chionanthus pygmaeus</td>
<td>Pygmy Fringe-tree</td>
<td>Federal Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Cladonia perforata</td>
<td>Florida Perforate Cladonia</td>
<td>Federal Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Lechea cernua</td>
<td>Nodding Pinweed</td>
<td>State Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Linum carteri var. smallii</td>
<td>Small's Flax</td>
<td>State Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Nemastylis floridana</td>
<td>Celestial Lily</td>
<td>State Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Nolina atopocarpa</td>
<td>Florida Beargrass</td>
<td>State Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Pteroglossaspis ecristata</td>
<td>Giant Orchid</td>
<td>State Threatened</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Rhynchospora megaplumosa</td>
<td>Large-plumed Beaksedge</td>
<td>State Endangered</td>
<td>No effect anticipated</td>
</tr>
<tr>
<td>Zephyranthes simpsonii</td>
<td>Redmargin Zephyrlily</td>
<td>State Threatened</td>
<td>No effect anticipated</td>
</tr>
</tbody>
</table>

7.2 Wetlands and Other Surface Waters

Wetlands were present in the corridor study area and were mapped and classified according to FLUCFCS and the USFWS Classification of Wetlands and Deepwater Habitats of the United States.

A total of 27 wetland systems were identified within the corridor study area. These wetland systems consist of 14 herbaceous wetland areas totaling approximately 33 acres and 17 forested wetland areas totaling approximately 55 acres.
A total of eight surface waters were identified within the corridor study area consisting of Williams Creek, Cypress Stand, and drainage ditches.

Potential impacts to wetlands and other surface waters would be estimated and assessed during an alternative’s analysis. Each alternative would have a unique total UMAM functional loss on which to determine the eventual mitigation cost for each alternative. Additional wetland functional losses associated with the preferred pond site impacts would also be evaluated and compared. Mitigation will be required for all project impacts.

Final mitigation requirements would be determined during permitting based on the project design and using the UMAM scoring of impact areas at that time of review with the environmental agencies. Impacts to wetlands that result from the project would be mitigated pursuant to Section 373.4137, F.S., to satisfy all requirements of Part IV of Chapter 373, F.S., and 33 U.S.C. §1344.

There are no FDEP-designated OFWs within the corridor study area protected in accordance with 62-302.700 F.A.C. and under the authority granted by Section 403.061(27) F.S.

There are no sovereign submerged lands designated with the corridor study area per Title XVIII Public Lands and Property Chapter 253 F.S.

7.3 Essential Fish Habitat
There is no essential fish habitat present within the corridor study area.

7.4 Anticipated Permits
The Lena Road project would require permitting with two state of Florida agencies, including SWFWMD and the FDEP Southwest District.

- FDEP Section 404 Permit – Individual Permit or General Permit, depending on the extent of wetland and water impacts, 0.5 acres of impact being the threshold.
- FDEP National Pollutant Discharge Elimination System, Stormwater Discharge from Large and Small Construction Activities (62-621.300 F.A.C.) – To be obtained by the contractor.
- SWFWMD Statewide ERP – Individual ERP with the application review fee determined by project work area and extent of wetland impacts.

8.0 Commitments

8.1 Wildlife
To protect listed wildlife, wildlife habitat, and plants, Manatee County will conduct wildlife surveys of the road corridor and pond sites during permitting and then prior to construction for the presence of protected wildlife species including plants. Manatee County will abide by standard resource protection measures in addition to the following specific commitments:

1. The County will adhere to the most current version of USFWS Standard Protection Measures for the *Eastern Indigo Snake* (2013) during construction.
2. The County will survey for bald eagle nests during permitting and design. If a bald eagle nest is identified within 660 feet of the project prior to or during construction, the County will coordinate with the USFWS and the FWC in accordance with the BGEPA and MBTA and will adhere to the USFWS Bald Eagle Management Guidelines.
3. The County will conduct osprey nest surveys during the permitting phase of the proposed project. If an osprey nest is identified, the County will coordinate with the USFWS and/or the FWC, depending on the activity status of the nest.

4. The County will perform pre-construction surveys for nesting *Florida sandhill cranes* per the FWC species guidelines (2016) to ensure active nests and flightless young are protected.

5. If required, the County will perform *southeastern American kestrel* surveys for breeding and active nest cavities during permitting and preconstruction.

6. The County will perform preliminary *gopher tortoise* surveys during permitting and formal gopher tortoise surveys during pre-construction in areas deemed suitable habitat in accordance with the FWC Gopher Tortoise Permitting Guidelines, and will secure an FWC Gopher Tortoise Relocation Permit, if gopher tortoise burrows are found.

7. The County will survey *wading bird* nesting habitat within 330 feet of the project area during permitting. If a wading bird nest is detected, additional surveys may be recommended to determine if an active breeding site is present.

8. The County will perform pre-construction surveys for *least tern* nests and young and for multi-year construction projects. Surveys can be conducted prior to land clearing and earthmoving to ensure nesting birds are not present.

9. If *protected plants* are discovered during pre-construction surveys, the County will initiate coordination with the FDACS.

### 8.2 Wetlands and Other Surface Waters

To protect wetland and water resources before, during, and after construction, Manatee County will abide by state and federal permit requirements and water quality protection measures particularly including the following commitments:

1. The County will implement provisions to avoid and minimize wetland impacts during design, permitting, and construction.

2. The County will use UMAM to evaluate each wetland impact area to quantify the functional loss based on location and landscape, water environment, and vegetation conditions.

3. The County will mitigate for wetland impacts pursuant to Section 373.4137, F.S., to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 33 U.S.C. §1344.

4. The County will use erosion control measures and Best Management Practices during construction to avoid and minimize direct, indirect, and temporary impacts to habitat and water quality.
9.0 References


Florida Department of Environmental Protection. Chapter 62-340 F.A.C., Delineation of the Landward Extent of Wetland and Surface Waters.


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

Preface .......................................................................................................................... 2
How Soil Surveys Are Made .......................................................................................... 5
Soil Map ......................................................................................................................... 8
Soil Map ......................................................................................................................... 9
Legend ............................................................................................................................ 10
Map Unit Legend ............................................................................................................ 11
Map Unit Descriptions .................................................................................................. 11
Manatee County, Florida ............................................................................................... 13
  7—Canova, Anclote, and Okeelanta soils................................................................. 13
  11—Cassia fine sand, 0 to 2 percent slopes......................................................... 16
  12—Cassia fine sand, moderately well drained.................................................... 18
  16—Delray complex ............................................................................................... 19
  20—EauGallie-EauGallie wet, fine sand, 0 to 2 percent slopes......................... 21
  26—Floridana-Immokalee-Okeelanta association .............................................. 24
  35—Ona fine sand, orstein substratum ................................................................. 27
  45—Tavares fine sand, 0 to 5 percent slopes ....................................................... 30
  48—Wabasso-Wabasso, wet, fine sand, 0 to 2 percent slopes............................. 32
Soil Information for All Uses ......................................................................................... 36
  Suitabilities and Limitations for Use ..................................................................... 36
  Wildlife Management ............................................................................................... 36
  WLF - Gopher Tortoise Burrowing Suitability ..................................................... 36
References ..................................................................................................................... 45
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

MAP LEGEND

Area of Interest (AOI)

Soils
- Area of Interest (AOI)
- 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
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: Manatee County, Florida
Survey Area Data: Version 17, Jun 8, 2020

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

Date(s) aerial images were photographed: Feb 5, 2020—Mar 10, 2020

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

<table>
<thead>
<tr>
<th>Map Unit Symbol</th>
<th>Map Unit Name</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Canova, Anclote, and Okeelanta soils</td>
<td>23.2</td>
<td>5.0%</td>
</tr>
<tr>
<td>11</td>
<td>Cassia fine sand, 0 to 2 percent slopes</td>
<td>11.8</td>
<td>2.5%</td>
</tr>
<tr>
<td>12</td>
<td>Cassia fine sand, moderately well drained</td>
<td>9.1</td>
<td>2.0%</td>
</tr>
<tr>
<td>16</td>
<td>Delray complex</td>
<td>2.0</td>
<td>0.4%</td>
</tr>
<tr>
<td>20</td>
<td>EauGallie-EauGallie wet, fine sand, 0 to 2 percent slopes</td>
<td>323.7</td>
<td>69.9%</td>
</tr>
<tr>
<td>26</td>
<td>Floridana-Immokalee-Okeelanta association</td>
<td>64.0</td>
<td>13.8%</td>
</tr>
<tr>
<td>35</td>
<td>Ona fine sand, orstein substratum</td>
<td>6.6</td>
<td>1.4%</td>
</tr>
<tr>
<td>45</td>
<td>Tavares fine sand, 0 to 5 percent slopes</td>
<td>18.2</td>
<td>3.9%</td>
</tr>
<tr>
<td>48</td>
<td>Wabasso-Wabasso, wet, fine sand, 0 to 2 percent slopes</td>
<td>4.4</td>
<td>1.0%</td>
</tr>
<tr>
<td><strong>Totals for Area of Interest</strong></td>
<td></td>
<td><strong>463.0</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

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.
**Manatee County, Florida**

7—Canova, Anclote, and Okeelanta soils

**Map Unit Setting**

- *National map unit symbol:* 1hg9b
- *Elevation:* 0 to 130 feet
- *Mean annual precipitation:* 48 to 56 inches
- *Mean annual air temperature:* 68 to 75 degrees F
- *Frost-free period:* 350 to 365 days
- *Farmland classification:* Not prime farmland

**Map Unit Composition**

- *Canova and similar soils:* 40 percent
- *Anclote and similar soils:* 25 percent
- *Okeelanta and similar soils:* 20 percent
- *Minor components:* 15 percent

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

**Description of Canova**

**Setting**

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

**Typical profile**

- *Oa - 0 to 8 inches:* muck
- *A - 8 to 24 inches:* fine sand
- *B/C - 24 to 68 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 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* Frequent
- *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:* Moderate (about 6.5 inches)

**Interpretive groups**

- *Land capability classification (irrigated):* None specified
- *Land capability classification (nonirrigated):* 7w
- *Hydrologic Soil Group:* A/D
- *Forage suitability group:* Organic soils in depressions and on flood plains (G155XB645FL)
**Other vegetative classification:** Organic soils in depressions and on flood plains (G155XB645FL)

**Hydric soil rating:** Yes

### Description of Anclote

**Setting**

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

**Typical profile**

- *A - 0 to 16 inches:* fine sand
- *Cg2 - 16 to 80 inches:* fine sand

**Properties and qualities**

- *Slope:* 0 to 2 percent
- *Depth to restrictive feature:* More than 80 inches
- *Runoff class:* Negligible
- *Drainage class:* Very poorly drained
- *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 6 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):* 3w
- *Hydrologic Soil Group:* A/D
- *Forage suitability group:* Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
- *Other vegetative classification:* Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
- *Hydric soil rating:* Yes

### 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 20 inches:* muck
- *C - 20 to 54 inches:* sand

**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): 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
Calcium carbonate, maximum content: 5 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): 7w
Hydrologic Soil Group: A/D
Forage suitability group: Organic soils in depressions and on flood plains
   (G155XB645FL)
Other vegetative classification: Organic soils in depressions and on flood plains
   (G155XB645FL)
Hydric soil rating: Yes

Minor Components

Manatee
Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G155XB345FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Chobee
Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G155XB345FL)
Hydric soil rating: Yes

Floridana
Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes
11—Cassia fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2tzx6
Elevation: 0 to 110 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: Farmland of unique importance

Map Unit Composition

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

Description of Cassia

Setting

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

Typical profile

A - 0 to 5 inches: fine sand
E - 5 to 26 inches: fine sand
Bh - 26 to 42 inches: fine sand
C - 42 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ks): Moderately high to high (0.57 to 5.95 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 5.8 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
   (G155XB131FL)
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands
   (G155XB131FL), Sand Pine Scrub (R155XY001FL)
Hydric soil rating: No

Minor Components

Myakka
   Percent of map unit: 7 percent
   Landform: Drainageways on flatwoods on marine terraces
   Landform position (three-dimensional): Tread, dip, talf
   Down-slope shape: Linear
   Across-slope shape: Linear, concave
   Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands
      (G155XB141FL), South Florida Flatwoods (R155XY003FL)
   Hydric soil rating: No

Pomello
   Percent of map unit: 6 percent
   Landform: Ridges on marine terraces, knolls on marine terraces
   Landform position (two-dimensional): Backslope, summit
   Landform position (three-dimensional): Side slope, interfluve, riser
   Down-slope shape: Linear, convex
   Across-slope shape: Linear
   Ecological site: R155XY001FL - Sand Pine Scrub
   Other vegetative classification: Sandy soils on rises and knolls of mesic uplands
      (G155XB131FL), Sand Pine Scrub (R155XY001FL)
   Hydric soil rating: No

Satellite
   Percent of map unit: 4 percent
   Landform: Flatwoods on marine terraces, rises on marine terraces
   Landform position (three-dimensional): Tread, talf, rise
   Down-slope shape: Linear, convex
   Across-slope shape: Linear
   Other vegetative classification: Sandy soils on rises and knolls of mesic uplands
      (G155XB131FL), Sand Pine Scrub (R155XY001FL)
   Hydric soil rating: No

Jonathan
   Percent of map unit: 3 percent
   Landform: Knolls on marine terraces, ridges on marine terraces
   Landform position (two-dimensional): Summit
   Landform position (three-dimensional): Interfluve, tread, rise
   Down-slope shape: Convex
   Across-slope shape: Linear
   Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL)
   Hydric soil rating: No
12—Cassia fine sand, moderately well drained

Map Unit Setting

National map unit symbol: 1hg7q
Elevation: 0 to 130 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Cassia, Moderately Well Drained

Setting

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

Typical profile

A - 0 to 5 inches: fine sand
E - 5 to 29 inches: fine sand
Bh - 29 to 41 inches: fine sand
C - 41 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 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: Low (about 3.5 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, knolls, and ridges of mesic uplands (G155XB121FL)
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL), Sand Pine Scrub (R155XY001FL)

Hydric soil rating: No

Minor Components

Pomello

Percent of map unit: 10 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: Sandy soils on rises and knolls of mesic uplands (G155XB131FL), Sand Pine Scrub (R155XY001FL)

Hydric soil rating: No

16—Delray complex

Map Unit Setting

National map unit symbol: 1hg7v
Elevation: 10 to 60 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Delray and similar soils: 75 percent
Minor components: 25 percent

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

Description of Delray

Setting

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

Typical profile

A - 0 to 15 inches: fine sand
E - 15 to 55 inches: fine sand
Btg - 55 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 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 5.4 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 (G155XB141FL)
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), Slough (R155XY011FL)
Hydric soil rating: Yes

Minor Components
Floridana, depressional
Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Gator
Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Organic soils in depressions and on flood plains (G155XB645FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Felda, hydric
Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL), Slough (R155XY011FL)
Hydric soil rating: Yes

Anclote
Percent of map unit: 5 percent
Landform: Drainageways on marine terraces, depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Ona, 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: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

20—EauGallie-EauGallie wet, fine sand, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: 2y9gx
Elevation: 10 to 150 feet
Mean annual precipitation: 45 to 61 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 335 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition
Eaugallie and similar soils: 70 percent
Eaugallie, wet, and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eaugallie
Setting
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, 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 23 inches: fine sand
Bh - 23 to 47 inches: fine sand
Bw - 47 to 55 inches: fine sand
Btg - 55 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: Moderate (about 6.7 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: R155XY003FL - South Florida Flatwoods
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), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Description of Eaugallie, Wet

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

Typical profile
A - 0 to 5 inches: fine sand
E - 5 to 17 inches: fine sand
Bh - 17 to 26 inches: fine sand
Bw - 26 to 48 inches: fine sand
E'g - 48 to 72 inches: fine sand
Btg - 72 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 high to high (0.60 to 2.00 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Ecological site: R155XY003FL - South Florida Flatwoods
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), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: Yes

Minor Components

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

Delray
Percent of map unit: 3 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, convex, linear
Across-slope shape: Concave, linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Pinellas
Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL), Cabbage Palm Flatwoods (R155XY005FL)
Hydric soil rating: No

Myakka
Percent of map unit: 2 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Riviera
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: Linear, concave
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL), Slough (R155XY011FL)
Hydric soil rating: Yes
26—Floridana-Immokalee-Okeelanta association

Map Unit Setting

National map unit symbol: 1hg86
Elevation: 0 to 150 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Floridana, depressional, and similar soils: 35 percent
Immokalee and similar soils: 30 percent
Okeelanta and similar soils: 20 percent
Minor components: 15 percent

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

Description of Floridana, Depressional

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 19 inches: fine sand
E - 19 to 36 inches: fine sand
Btg - 36 to 63 inches: sandy clay loam
Cg - 63 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: 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: Moderate (about 7.8 inches)

Interpretive groups

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

Description of Immokalee

Setting
Landform: Depressions on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Sandy marine deposits

Typical profile
A - 0 to 10 inches: fine sand
E - 10 to 34 inches: fine sand
Bh - 34 to 43 inches: fine sand
C - 43 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 low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 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 3.5 inches)

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

Description of Okeelanta

Setting
Landform: Depressions on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Herbaceous organic material over sandy marine deposits
Typical profile

Oa - 0 to 20 inches: muck
C - 20 to 54 inches: sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ks): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.7 inches)

Interpretive groups

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

Minor Components

Delray

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Anclote

Percent of map unit: 3 percent
Landform: Drainageways on marine terraces, depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Chobee

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G155XB345FL)
Hydric soil rating: Yes

Pomona, non-hydric
Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Manatee
Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G155XB345FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Myakka, non-hydric
Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

35—Ona fine sand, orstein substratum

Map Unit Setting
National map unit symbol: 1hg8j
Elevation: 20 to 150 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

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

Description of Ona, 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: fine sand
- Bh - 5 to 16 inches: fine sand
- E - 16 to 52 inches: fine sand
- B’h1 - 52 to 68 inches: fine sand
- B’h2 - 68 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: 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 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 6.0 inches)

Interpretive groups
- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 3w
- Hydrologic Soil Group: B/D
- 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), South Florida Flatwoods (R155XY003FL)
- Hydric soil rating: No

Description of Ona, Hydric

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

Typical profile
- A - 0 to 5 inches: fine sand
- Bh - 5 to 16 inches: fine sand
- E - 16 to 52 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: 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 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 6.0 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
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), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: Yes

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 (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

St. johns, non-hydric
Percent of map unit: 4 percent
Landform: Seeps on marine terraces
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Wauchula, 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 over loamy soils on flats of hydric or mesic lowlands (G155XB241FL), South Florida Flatwoods (R155XY003FL)
**Hydric soil rating:** No

**Waveland, 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
- **Other vegetative classification:** Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
- **Hydric soil rating:** No

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**45—Tavares fine sand, 0 to 5 percent slopes**

**Map Unit Setting**
- **National map unit symbol:** 2sw00
- **Elevation:** 0 to 130 feet
- **Mean annual precipitation:** 42 to 63 inches
- **Mean annual air temperature:** 66 to 77 degrees F
- **Frost-free period:** 340 to 365 days
- **Farmland classification:** Not prime farmland

**Map Unit Composition**
- **Tavares and similar soils:** 83 percent
- **Minor components:** 17 percent
- **Estimates are based on observations, descriptions, and transects of the mapunit.**

**Description of Tavares**

**Setting**
- **Landform:** Flats on marine terraces, hills on marine terraces, ridges on marine terraces, knolls on marine terraces
- **Landform position (two-dimensional):** Summit
- **Landform position (three-dimensional):** Interfluve, side slope, tread, rise
- **Down-slope shape:** Convex, linear
- **Across-slope shape:** Linear, convex
- **Parent material:** Eolian or sandy marine deposits

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

**Properties and qualities**
- **Slope:** 0 to 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):** High to very high (6.00 to 20.00 in/hr)
- **Depth to water table:** About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL)
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL), Longleaf Pine-Turkey Oak Hills (R155XY002FL), Sand Pine Scrub (R155XY001FL)
Hydric soil rating: No

Minor Components

Cassia
Percent of map unit: 5 percent
Landform: Rises on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G155XB131FL), Sand Pine Scrub (R155XY001FL)
Hydric soil rating: No

Pomello
Percent of map unit: 4 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Side slope, interfluve, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: R155XY001FL - Sand Pine Scrub
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G155XB131FL), Sand Pine Scrub (R155XY001FL)
Hydric soil rating: No

Apopka
Percent of map unit: 3 percent
Landform: Hills 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
Across-slope shape: Linear
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G155XB111FL), Longleaf Pine-Turkey Oak Hills (R155XY002FL)
Hydric soil rating: No

Astatula
Percent of map unit: 3 percent
Landform: Hills on marine terraces, ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope, riser, rise
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands
(G155XB111FL)
Hydric soil rating: No

Adamsville
Percent of map unit: 2 percent
Landform: Rises on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Tread, rise
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands
(G155XB131FL), Upland Hardwood Hammock (R155XY008FL)
Hydric soil rating: No

48—Wabasso-Wabasso, wet, fine sand, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: 2y9dx
Elevation: 0 to 150 feet
Mean annual precipitation: 43 to 60 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 335 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition
Wabasso and similar soils: 70 percent
Wabasso, wet, and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wabasso

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

Typical profile
A - 0 to 7 inches: fine sand
E - 7 to 24 inches: fine sand
Bh - 24 to 35 inches: fine sand
Bw - 35 to 39 inches: fine sand
Btg - 39 to 80 inches: sandy clay loam

Properties and qualities
Slope: 0 to 2 percent
Custom Soil Resource Report

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
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Non saline 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 7.5 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
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), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Description of Wabasso, Wet

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

Typical profile
A - 0 to 7 inches: fine sand
E - 7 to 24 inches: fine sand
Bh - 24 to 35 inches: fine sand
Bw - 35 to 39 inches: fine sand
Btg - 39 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 (0.57 to 1.98 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Non saline 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 7.5 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
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), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: Yes

Minor Components

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

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

Riviera
Percent of map unit: 3 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
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL), Slough (R155XY011FL)
Hydric soil rating: Yes

Aripeka
Percent of map unit: 2 percent
Landform: Rises on karstic marine terraces
Landform position (three-dimensional): Tread, rise
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 (G155XB521FL), Wetland Hardwood Hammock (R155XY012FL)
Hydric soil rating: No

Basinger
Percent of map unit: 1 percent
Landform: Depressions on flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), Freshwater Marshes and Ponds (R155XY010FL)

Hydric soil rating: Yes

Paisley

Percent of map unit: 1 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear

Other vegetative classification: Wetland Hardwood Hammock (R155XY012FL), Loamy and clayey soils on flats of hydric or mesic lowlands (G155XB341FL)

Hydric soil rating: Yes
Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations 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 interpretation.

Wildlife Management

Wildlife Management interpretations are tools for evaluating the suitability of the soil for various components of wildlife habitat, and as habitat of different types or species of wildlife. Example interpretations include crawfish aquaculture, burrowing animals and reptiles, grasses and legumes for food and cover, and freshwater wetland plants.

WLF - Gopher Tortoise Burrowing Suitability

This soil interpretation is intended to provide ratings based on the dominant soil characteristics that influence the suitability of the soil for excavation, maintenance, and preservation of burrows by gopher tortoises (Gopherus polyphemus). The information allows the user to identify areas of potentially suitable habitat area prior to the application of conservation practices. The ratings are for the soils in their natural condition and do not consider present land use, existing vegetation, water sources, and the presence or absence of wildlife in the area. The presence or absence of a species is determined at the local level and by many factors including soil characteristics.

The gopher tortoise (Gopherus polyphemus) is a burrowing reptile that inhabits open pine forests throughout the southeastern United States. Historically, typical gopher tortoise habitat consisted of open, frequently burned longleaf pine or longleaf pine/scrub oak uplands and flatwoods on moderately well drained to xeric soils. The burrows of a gopher tortoise are the habitat and center of normal feeding, breeding, and sheltering activity. Gopher tortoises excavate and use more than one burrow for shelter beneath the ground surface. Burrows, which may extend for more than 30 feet, provide shelter from canid predators, winter cold and summer heat.
The soil criteria that are taken into account in this soil interpretation are those that have been determined to have the most effect on burrow excavation, maintenance, and preservation. These include the soil texture, percent coarse fragments, depth to a restrictive layer or layer with greater than or equal to 35% clay, ponding or flooding frequency, slope, and depth to seasonal high water table.

Each soil criteria is assigned a numerical rating between 0 and 1. In this rating, 1 represents more suitable soil characteristics, and 0 represents less suitable soil characteristics. Each criterion is calculated separately and the lowest rating is reported as the overall soil suitability rating, representing the most limiting factor in the soil's suitability for gopher tortoise burrows.

Rating classes have been defined as follows:

Highly suited (numerical rating 0.95-1): These soils have no restrictions for use and are favorable for burrowing by gopher tortoise. Colonization and population densities may be above average if other habitat factors are not limiting.

Moderately suited (numerical rating 0.5-0.95): These soils are suitable and somewhat favorable for burrowing by gopher tortoise. Some restrictive features may limit the use of the site to a minor extent. Colonization and population densities may be average to above for the area if the other habitat requirements are met.

Less suited (numerical rating 0.05-0.5): These soils have characteristics that may limit establishment, maintenance, or use of the site by gopher tortoise. Colonization and population densities may be below average or restricted in the area due to the limiting factors even though all of the other species habitat requirements are met.

Unsuitable (numerical rating 0-0.05): These soils have characteristics that may limit establishment, maintenance, or use of the site by gopher tortoise. Areas of included soils with better drainage may provide suitable soil properties in some locations.

Not Rated: Miscellaneous areas are given a not rated status.

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen, which is displayed on the report. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the Selected Soil Interpretations report with this interpretation included from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Citations:
### MAP LEGEND

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<th>Area of Interest (AOI)</th>
<th>US Routes</th>
<th>Major Roads</th>
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### 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: Manatee County, Florida
Survey Area Data: Version 17, Jun 8, 2020

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

Date(s) aerial images were photographed: Feb 5, 2020—Mar 10, 2020

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.
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<th>Map unit name</th>
<th>Rating</th>
<th>Component name (percent)</th>
<th>Rating reasons (numeric values)</th>
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<td>Delray (3%)</td>
<td>Ponding (0.00)</td>
<td></td>
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<td></td>
<td></td>
<td>Water table (0.00)</td>
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<td></td>
<td>Anclote (3%)</td>
<td>Ponding (0.00)</td>
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<td>Water table (0.00)</td>
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<td></td>
<td></td>
<td></td>
<td>Chobee (3%)</td>
<td>Ponding (0.00)</td>
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<td>Water table (0.00)</td>
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<td></td>
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<td></td>
<td></td>
<td>Texture (0.59)</td>
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<td></td>
<td></td>
<td></td>
<td>Manatee (2%)</td>
<td>Ponding (0.00)</td>
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<td></td>
<td></td>
<td>Water table (0.00)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Ona fine sand, orstein substratum</td>
<td>Less suited</td>
<td>Ona, non-hydric (70%)</td>
<td>Water table (0.22)</td>
<td>6.6</td>
<td>1.4%</td>
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<td></td>
<td></td>
<td></td>
<td>Myakka, non-hydric (4%)</td>
<td>Water table (0.22)</td>
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<td></td>
<td></td>
<td></td>
<td>St. Johns, non-hydric (4%)</td>
<td>Water table (0.22)</td>
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<td></td>
<td></td>
<td>Waveland, non-hydric (3%)</td>
<td>Soil depth (0.09)</td>
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Custom Soil Resource Report
<table>
<thead>
<tr>
<th>Map unit symbol</th>
<th>Map unit name</th>
<th>Rating</th>
<th>Component name (percent)</th>
<th>Rating reasons (numeric values)</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
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</thead>
<tbody>
<tr>
<td>45</td>
<td>Tavares fine sand, 0 to 5 percent slopes</td>
<td>Highly suited</td>
<td>Tavares (83%)</td>
<td></td>
<td>18.2</td>
<td>3.9%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cassia (5%)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Pomello (4%)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Astatula (3%)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Apopka (3%)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Adamsville (2%)</td>
<td></td>
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</tr>
<tr>
<td>48</td>
<td>Wabasso-Wabasso, wet, fine sand, 0 to 2 percent slopes</td>
<td>Unsuitable</td>
<td>Wabasso (70%)</td>
<td>Water table (0.00)</td>
<td>4.4</td>
<td>1.0%</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Wabasso, wet (15%)</td>
<td>Water table (0.00)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Malabar (3%)</td>
<td>Water table (0.00)</td>
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<td></td>
<td></td>
<td></td>
<td>Riviera (3%)</td>
<td>Water table (0.00)</td>
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<td></td>
<td></td>
<td></td>
<td>Aripeka (2%)</td>
<td>Soil depth (0.00)</td>
<td></td>
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<td></td>
<td></td>
<td>Content of rock fragments (0.50)</td>
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<td></td>
<td></td>
<td>Texture (0.65)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Water table (0.92)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Paisley (1%)</td>
<td>Soil depth (0.00)</td>
<td></td>
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<td></td>
<td></td>
<td>Water table (0.00)</td>
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<td></td>
<td></td>
<td>Texture (0.56)</td>
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<td></td>
<td></td>
<td></td>
<td>Basinger (1%)</td>
<td>Ponding (0.00)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Water table (0.00)</td>
<td></td>
<td></td>
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</tbody>
</table>

Totals for Area of Interest

<table>
<thead>
<tr>
<th>Rating Options—WLF - Gopher Tortoise Burrowing Suitability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregation Method: Dominant Condition</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rating</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less suited</td>
<td>330.3</td>
<td>71.3%</td>
</tr>
<tr>
<td>Unsuitable</td>
<td>93.6</td>
<td>20.2%</td>
</tr>
<tr>
<td>Highly suited</td>
<td>39.1</td>
<td>8.4%</td>
</tr>
<tr>
<td>Totals for Area of Interest</td>
<td>463.0</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Component Percent Cutoff: None Specified

Tie-break Rule: Higher
References


Appendix B – IPaC Resource List
In Reply Refer To:  
Consultation Code: 04EF1000-2021-SLI-1390  
Event Code: 04EF1000-2021-E-02160  
Project Name: Lena Road

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

To Whom It May Concern:

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

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

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

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

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

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

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

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

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

Attachment(s):

- Official Species List
- Migratory Birds
Official Species List

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

This species list is provided by:

North Florida Ecological Services Field Office
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517
(904) 731-3336
Project Summary
Consultation Code: 04EF1000-2021-SLI-1390
Event Code: 04EF1000-2021-E-02160
Project Name: Lena Road
Project Type: TRANSPORTATION
Project Description: Connecting Lena road to 64 and 70
Project Location:
Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@27.4627625,-82.4565495173091,14z

Counties: Manatee County, Florida
**Endangered Species Act Species**

There is a total of 9 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries\(^1\), as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

---

1. **NOAA Fisheries**, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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### Birds

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
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</thead>
<tbody>
<tr>
<td>Audubon's Crested Caracara <em>Polyborus plancus audubonii</em></td>
<td>Threatened</td>
</tr>
<tr>
<td>Population: FL pop.</td>
<td></td>
</tr>
<tr>
<td>No critical habitat has been designated for this species.</td>
<td></td>
</tr>
<tr>
<td>Species profile: <a href="https://ecos.fws.gov/ecp/species/8250">https://ecos.fws.gov/ecp/species/8250</a></td>
<td></td>
</tr>
</tbody>
</table>

| Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis* | Threatened   |
| No critical habitat has been designated for this species.    |              |
| Species profile: [https://ecos.fws.gov/ecp/species/10477](https://ecos.fws.gov/ecp/species/10477) |              |

| Wood Stork *Mycteria americana* | Threatened   |
| Population: AL, FL, GA, MS, NC, SC |              |
| No critical habitat has been designated for this species. |              |
| Species profile: [https://ecos.fws.gov/ecp/species/8477](https://ecos.fws.gov/ecp/species/8477) |              |

---
### Reptiles

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Indigo Snake <em>Drymarchon corais couperi</em></td>
<td>Threatened</td>
</tr>
<tr>
<td>Gopher Tortoise <em>Gopherus polyphemus</em></td>
<td>Candidate</td>
</tr>
<tr>
<td>Green Sea Turtle <em>Chelonia mydas</em></td>
<td>Threatened</td>
</tr>
<tr>
<td>Loggerhead Sea Turtle <em>Caretta caretta</em></td>
<td>Threatened</td>
</tr>
</tbody>
</table>

#### Species Profile:
- [https://ecos.fws.gov/ecp/species/646](https://ecos.fws.gov/ecp/species/646)
- [https://ecos.fws.gov/ecp/species/6994](https://ecos.fws.gov/ecp/species/6994)
- [https://ecos.fws.gov/ecp/species/6199](https://ecos.fws.gov/ecp/species/6199)
- [https://ecos.fws.gov/ecp/species/1110](https://ecos.fws.gov/ecp/species/1110)

### Flowering Plants

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pygmy Fringe-tree <em>Chionanthus pygmaeus</em></td>
<td>Endangered</td>
</tr>
</tbody>
</table>

#### Species Profile:
- [https://ecos.fws.gov/ecp/species/1084](https://ecos.fws.gov/ecp/species/1084)

### Lichens

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida Perforate Cladonia <em>Cladonia perforata</em></td>
<td>Endangered</td>
</tr>
</tbody>
</table>

#### Species Profile:
- [https://ecos.fws.gov/ecp/species/7516](https://ecos.fws.gov/ecp/species/7516)

### Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE’S JURISDICTION.
Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act\(^1\) and the Bald and Golden Eagle Protection Act\(^2\).

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

2. The [Bald and Golden Eagle Protection Act](https://www.fws.gov/ eagles/) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](https://ecos.fws.gov/ecp/species) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](https://ebird.org) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

<table>
<thead>
<tr>
<th>NAME</th>
<th>BREEDING SEASON</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Kestrel <em>Falco sparverius paulus</em></td>
<td>Breeds Apr 1 to Aug 31</td>
</tr>
<tr>
<td>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9587">https://ecos.fws.gov/ecp/species/9587</a></td>
<td></td>
</tr>
<tr>
<td>Bald Eagle <em>Haliaeetus leucocephalus</em></td>
<td>Breeds Sep 1 to Jul 31</td>
</tr>
<tr>
<td>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a></td>
<td></td>
</tr>
<tr>
<td>NAME</td>
<td>BREEDING SEASON</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>Black Skimmer <em>Rynchops niger</em></td>
<td>Breeds May 20 to Sep 15</td>
</tr>
<tr>
<td>Clapper Rail <em>Rallus crepitans</em></td>
<td>Breeds Apr 10 to Oct 31</td>
</tr>
<tr>
<td>Common Ground-dove <em>Columbina passerina exigua</em></td>
<td>Breeds Feb 1 to Dec 31</td>
</tr>
<tr>
<td>Least Tern <em>Sterna antillarum</em></td>
<td>Breeds Apr 20 to Sep 10</td>
</tr>
<tr>
<td>Lesser Yellowlegs <em>Tringa flavipes</em></td>
<td>Breeds elsewhere</td>
</tr>
<tr>
<td>Limpkin <em>Aramus guarauna</em></td>
<td>Breeds Jan 15 to Aug 31</td>
</tr>
<tr>
<td>Prairie Warbler <em>Dendroica discolor</em></td>
<td>Breeds May 1 to Jul 31</td>
</tr>
<tr>
<td>Prothonotary Warbler <em>Protonotaria citrea</em></td>
<td>Breeds Apr 1 to Jul 31</td>
</tr>
<tr>
<td>Red-headed Woodpecker <em>Melanerpes erythrocephalus</em></td>
<td>Breeds May 10 to Sep 10</td>
</tr>
<tr>
<td>Reddish Egret <em>Egretta rufescens</em></td>
<td>Breeds Mar 1 to Sep 15</td>
</tr>
<tr>
<td>Swallow-tailed Kite <em>Elanoides forficatus</em></td>
<td>Breeds Mar 10 to Jun 30</td>
</tr>
<tr>
<td>Yellow Warbler <em>Dendroica petechia gundlachi</em></td>
<td>Breeds May 20 to Aug 10</td>
</tr>
</tbody>
</table>
Probability Of Presence Summary
The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.
Additional information can be found using the following links:


**Migratory Birds FAQ**

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

*Nationwide Conservation Measures* describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS *Birds of Conservation Concern (BCC)* and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the *Avian Knowledge Network (AKN)*. The AKN data is based on a growing collection of *survey, banding, and citizen science datasets* and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (*Eagle Act* requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf).
What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the **Avian Knowledge Network (AKN)**. This data is derived from a growing collection of **survey, banding, and citizen science datasets**.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are **Birds of Conservation Concern** (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical...
Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.
January 25, 2010

Dear Mr. Hobbie:

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

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

Wood stork

Habitat

The wood stork is primarily associated with freshwater and estuarine habitats that are used for nesting, roosting, and foraging. Wood storks typically construct their nests in medium to tall trees that occur in stands located either in swamps or on islands surrounded by relatively broad expanses of open water (Ogden 1991, 1996; Rodgers et al. 1996). Successful colonies are those
that have limited human disturbance and low exposure to land-based predators. Nesting colonies protected from land-based predators are characterized as those surrounded by large expanses of open water or where the nest trees are inundated at the onset of nesting and remain inundated throughout most of the breeding cycle. These colonies have water depths between 0.9 and 1.5 meters (3 and 5 feet) during the breeding season.

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

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

Conservation Measures

The Service routinely concurs with the Corps’ “may affect, not likely to adversely affect” determination for individual project effects to the wood stork when project effects are insignificant due to scope or location, or if assurances are given that wetland impacts have been avoided, minimized, and adequately compensated such that there is no net loss in foraging potential. We utilize our Habitat Management Guidelines for the Wood Stork in the Southeast Region (Service 1990) (Appendix 1) (HMG) in project evaluation. The HMG is currently under review and once final will replace the enclosed HGM. There is no designated critical habitat for the wood stork.
The SFESO recognizes a 29.9 kilometer [km] (18.6-mile) core foraging area (CFA) around all known wood stork colonies in south Florida. Appendix 2 (to be updated as necessary) provides locations of colonies and their CFAs in south Florida that have been documented as active within the last 10 years. The Service believes loss of suitable wetlands within these CFAs may reduce foraging opportunities for the wood stork. To minimize adverse effects to the wood stork, we recommend compensation be provided for impacts to foraging habitat. The compensation should consider wetland type, location, function, and value (hydrology, vegetation, prey utilization) to ensure that wetland functions lost due to the project are adequately offset. Wetlands offered as compensation should be of the same hydroperiod and located within the CFAs of the affected wood stork colonies. The Service may accept, under special circumstances, wetland compensation located outside the CFAs of the affected wood stork nesting colonies. On occasion, wetland credits purchased from a “Service Approved” mitigation bank located outside the CFAs could be acceptable to the Service, depending on location of impacted wetlands relative to the permitted service area of the bank, and whether or not the bank has wetlands having the same hydroperiod as the impacted wetland.

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

The Key is as follows:

A. Project within 0.76 km (0.47 mile)\(^2\) of an active colony site\(^3\) .................... “may affect”

Project impacts Suitable Foraging Habitat (SFH) at a location greater than 0.76 km (0.47 mile) from a colony site ................................................................. “go to B”

Project does not affect SFH\(^5\) ................................................................. “no effect”.

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

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

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

\(^4\) Consultation may be concluded informally or formally depending on project impacts.

\(^5\) Suitable foraging habitat (SFH) are wetlands that typically have shallow-open water areas that are relatively calm and having a permanent or seasonal water depth between 5 to 38 cm (2 to 15 inches) deep. Other shallow non-wetland water bodies are also SFH. SFH supports and concentrates, or is capable of supporting and concentrating small fish, frogs, and other aquatic prey. Examples of SFH include, but are not limited to freshwater marshes, small
B. Project impact to SFH is less than 0.20 hectare (one-half acre)\textsuperscript{6} .................. NLA\textsuperscript{4}.

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

C. Project impacts to SFH not within the CFA (29.9 km, 18.6 miles) of a colony site ................................................................. go to D

Project impacts to SFH within the CFA of a colony site ................................ go to E

D. Project impacts to SFH have been avoided and minimized to the extent practicable, and compensation (Service approved mitigation bank or as provided in accordance with Mitigation Rule 33 CFR Part 332) for unavoidable impacts is proposed in accordance with the CWA section 404(b)(1) guidelines and habitat compensation replaces the foraging value matching the hydroperiod\textsuperscript{7} of the wetlands affected and provides foraging value similar to, or higher than, that of impacted wetlands. See Appendix 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance\textsuperscript{8} .......................................................... NLA\textsuperscript{4}.

Project not as above................................................................. “may affect”

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

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

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

\textsuperscript{8} For this Key, the Service requires an analysis of foraging prey base losses and enhancements from the proposed action as shown in the examples in Appendix 3 for projects with greater than 2.02 hectares (5 acres) of wetland impacts. For projects with less than 2.02 hectares (5 acres) of wetland impacts, an individual foraging prey base analysis is not necessary although type for type wetland compensation is still a requirement of the Key.
matching the hydroperiod\(^6\) of the wetlands affected, and provides foraging value similar to, or higher than, that of impacted wetlands. See Appendix 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance\(^8\)……..“NLAA\(^{14}\)”

Project does not satisfy these elements ………………………………………..“may affect”

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

Monitoring and Reporting Effects

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

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

Sincerely yours,

Paul Souza
Field Supervisor
South Florida Ecological Services Office

Appendices

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


Colonel Alan M. Dodd, District Engineer  
Department of the Army  
Jacksonville District Corps of Engineers  
P.O Box 4970  
Jacksonville, Florida 32232-0019  
(Attn: Mr. David S. Hobbie)

RE: Update Addendum to USFWS Concurrence Letter to U.S. Army Corps of Engineers  
Regarding Use of the Attached Eastern Indigo Snake Programmatic Effect Determination Key

Dear Colonel Dodd:

This letter is to amend the January 25, 2010, letter to the U.S. Army Corps of Engineers regarding the use of the attached eastern indigo snake programmatic effect determination key (key). It supersedes the update addendum issued January 5, 2012.

We have evaluated the original programmatic concurrence and find it suitable and appropriate to extend its use to the remainder of Florida covered by the Panama City Ecological Services Office.

On Page 2

The following replaces the last paragraph above the signatures:

"Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. Any questions or comments should be directed to Annie Dziergowski (North Florida ESO) at 904-731-3089, Harold Mitchell (Panama City ESO) at 850-769-0552, or Victoria Foster (South Florida ESO) at 772-469-4269."

On Page 3

The following replaces both paragraphs under "Scope of the key":

"This key should be used only in the review of permit applications for effects determinations for the eastern indigo snake within the State of Florida, and not for other listed species or for aquatic resources such as Essential Fish Habitat (EFH)."

On Page 4

The following replaces the first paragraph under Conservation Measures:

"The Service routinely concurs with the Corps’ “not likely to adversely affect” (NLAA) determination for individual project effects to the eastern indigo snake when assurances are given that
our *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013) located at: 
http://www.fws.gov/northflorida/IndigoSnakes/indigo-snakes.htm will be used during project site 
preparation and project construction. There is no designated critical habitat for the eastern indigo 
snake."

**On Page 4 and Page 5 (Couplet D)**

The following replaces D. under Conservation Measures:

D. The project will impact less than 25 acres of xeric habitat (scrub, sandhill, or scrubby 
flatwoods) or less than 25 active and inactive gopher tortoise burrows.................*.go to E*

The project will impact more than 25 acres of xeric habitat (scrub, sandhill, or scrubby flatwoods) 
or more than 25 active and inactive gopher tortoise burrows and consultation with the Service is 
requested✓..........................................................”*may affect”*

**On Page 5**

The following replaces footnote #3:

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

Thank you for making these amendments concerning the Eastern Indigo Snake Key. If you have any 
questions, please contact Jodie Smithem of my staff at the address on the letterhead, by email at 
jodie_smithem@fws.gov, or by calling (904)731-3134.

Sincerely,

Dawn Jennings
Acting Field Supervisor

cc: 
Panama City Ecological Services Field Office, Panama City, FL 
South Florida Ecological Services Field Office, Vero Beach, FL
January 25, 2010

David S. Hobbie
Chief, Regulatory Division
U.S. Army Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32232-0019

Subject: North and South Florida Ecological Services Field Offices Programmatic Concurrence for Use of Original Eastern Indigo Snake Key(s) Until Further Notice

Dear Mr. Hobbie:

The U.S. Fish and Wildlife Service’s (Service) South and North Florida Ecological Services Field Offices (FO), through consultation with the U.S. Army Corps of Engineers Jacksonville District (Corps), propose revision to both Programmatic concurrence letters/keys for the federally threatened Eastern Indigo Snake (Drymarchon corais couperi), (indigo snake), and now provide one key for both FO’s. The original programmatic key was issued by the South Florida FO on November 9, 2007. The North Florida FO issued a revised version of the original key on September 18, 2008. Both keys were similar in content, but reflected differences in geographic work areas between the two Field Offices. The enclosed key satisfies each office’s responsibilities under the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C.1531 et seq.).

Footnote number 3 in the original keys indicated “A member of the excavation team should be authorized for Incidental Take during excavation through either a section 10(a)(1)(A) permit issued by the Service or an incidental take permit issued by the Florida Fish and Wildlife Conservation Commission (FWC).” We have removed this reference to a Service issued Section 10(a)(1)(A) permit, as one is not necessary for this activity. We also referenced the FWC’s revised April 2009 Gopher Tortoise Permitting Guidelines with a link to their website for updated excavation guidance, and have provided a website link to our Standard Protection Measures. All other conditions and criteria apply.

We believe the implementation of the attached key achieves our mutual goal for all users to make consistent effect determinations regarding this species. The use of this key for review of projects...
located in all referenced counties in our respective geographic work areas leads the Service to concur with the Corps’ determination of “may affect, not likely to adversely affect” (MANLAA) for the Eastern indigo snake. The biological rationale for the determinations is contained within the referenced documents and is submitted in accordance with section 7 of the Act.

Should circumstances change or new information become available regarding the eastern indigo snake or implementation of the key, the determinations may be reconsidered as deemed necessary.

Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. Any questions or comments should be directed to either Allen Webb (Vero Beach) at 772-562-3909, extension 246, or Jay Herrington (Jacksonville) at 904-731-3326.

Sincerely,

Paul Souza
Field Supervisor
South Florida Ecological Services Office

David L. Hankla
Field Supervisor
North Florida Ecological Services Office

Enclosure

cc: electronic only
FWC, Tallahassee, Florida (Dr. Elsa Haubold)
Service, Jacksonville, Florida (Jay Herrington)
Service, Vero Beach, Florida (Sandra Sneckenberger)
Eastern Indigo Snake Programmatic Effect Determination Key

Scope of the key

This key should be used only in the review of permit applications for effects determinations within the North and South Florida Ecological Services Field Offices Geographic Areas of Responsibility (GAR), and not for other listed species or for aquatic resources such as Essential Fish Habitat (EFH). Counties within the North Florida GAR include Alachua, Baker, Bradford, Brevard, Citrus, Clay, Columbia, Dixie, Duval, Flagler, Gilchrist, Hamilton, Hernando, Hillsborough, Lafayette, Lake, Levy, Madison, Manatee, Marion, Nassau, Orange, Pasco, Pinellas, Putnam, St. Johns, Seminole, Sumter, Suwannee, Taylor, Union, and Volusia.

Counties in the South Florida GAR include Broward, Charlotte, Collier, De Soto, Glades, Hardee, Hendry, Highlands, Lee, Indian River, Martin, Miami-Dade, Monroe, Okeechobee, Osceola, Palm Beach, Polk, Sarasota, St. Lucie.

Habitat

Over most of its range, the eastern indigo snake frequents several habitat types, including pine flatwoods, scrubby flatwoods, high pine, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, and human-altered habitats (Service 1999). Eastern indigo snakes appear to need a mosaic of habitats to complete their life cycle. Wherever the eastern indigo snake occurs in xeric habitats, it is closely associated with the gopher tortoise (Gopherus polyphemus), the burrows of which provide shelter from winter cold and summer desiccation (Speake et al. 1978; Layne and Steiner 1996). Interspersion of tortoise-inhabited uplands and wetlands improves habitat quality for this species (Landers and Speake 1980; Auffenberg and Franz 1982).

In south Florida, agricultural sites, such as sugar cane fields, created in former wetland areas are occupied by eastern indigo snakes (Enge pers. comm. 2007). Formerly, indigo snakes would have only occupied higher elevation sites within the wetlands. The introduction of agriculture and its associated canal systems has resulted in an increase in rodents and other species of snakes that are prey for eastern indigo snakes. The result is that indigos occur at higher densities in these areas than they did historically.

Even though thermal stress may not be a limiting factor throughout the year in south Florida, indigo snakes still seek and use underground refugia. On the sandy central ridge of central Florida, eastern indigos use gopher tortoise burrows more (62 percent) than other underground refugia (Layne and Steiner 1996). Other underground refugia used include armadillo (Dasypus novemcinctus) burrows near citrus groves, cotton rat (Sigmodon hispidus) burrows, and land crab (Cardisoma guanhumi) burrows in coastal areas (Service 2006). Natural ground holes, hollows at the base of trees or shrubs, ground litter, trash piles, and crevices of rock-lined ditch walls are also used (Layne and Steiner 1996). These refugia are used most frequently where tortoise burrows are not available, principally in low-lying areas off the central and coastal ridges. In extreme south Florida (the Everglades and Florida Keys), indigo snakes are found in tropical...
hardwood hammocks, pine rocklands, freshwater marshes, abandoned agricultural land, coastal prairie, mangrove swamps, and human-altered habitats (Steiner et al. 1983). It is suspected that they prefer hammocks and pine forests, because most observations occur in these habitats disproportionately to their presence in the landscape (Steiner et al. 1983). Hammocks may be important breeding areas as juveniles are typically found there. The eastern indigo snake is a snake-eater so the presence of other snake species may be a good indicator of habitat quality.

**Conservation Measures**

The Service routinely concurs with the Corps’ “not likely to adversely affect” (NLAA) determination for individual project effects to the eastern indigo snake when assurances are given that our *Standard Protection Measures for the Eastern Indigo Snake* (Service 2004) located at: [http://www.fws.gov/northflorida/IndigoSnakes/indigo-snakes](http://www.fws.gov/northflorida/IndigoSnakes/indigo-snakes) will be used during project site preparation and project construction. There is no designated critical habitat for the eastern indigo snake.

In an effort to reduce correspondence in effect determinations and responses, the Service is providing an Eastern Indigo Snake Effect Determination Key, similar in utility to the West Indian Manatee Effect Determination Key and the Wood Stork Effect Determination Keys presently being utilized by the Corps. If the use of this key results in a Corps’ determination of “no effect” for a particular project, the Service supports this determination. If the use of this Key results in a determination of NLAA, the Service concurs with this determination and no additional correspondence will be necessary. This key is subject to revisitation as the Corps and Service deem necessary.

A. Project is not located in open water or salt marsh.

   go to B

   Project is located solely in open water or salt marsh.

   “no effect”

B. Permit will be conditioned for use of the Service’s *Standard Protection Measures For The Eastern Indigo Snake* during site preparation and project construction.

   go to C

   Permission will not be conditioned as above for the eastern indigo snake, or it is not known whether an applicant intends to use these measures and consultation with the Service is requested.

   “may affect”

C. There are gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities.

   go to D

   There are no gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities.

   “NLAA”

D. The project will impact less than 25 acres of xeric habitat supporting less than 25 active and inactive gopher tortoise burrows.

   go to E
The project will impact more than 25 acres of xeric habitat or more than 25 active and inactive gopher tortoise burrows and consultation with the Service is requested\(^2\) \(\ldots\) "may affect"

E. Any permit will be conditioned such that all gopher tortoise burrows, active or inactive, will be evacuated prior to site manipulation in the vicinity of the burrow\(^3\). If an indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of a particular area, and, if occupied by an indigo snake, no work will commence until the snake has vacated the vicinity of proposed work\(\ldots\) "NLAA"

Permit will not be conditioned as outlined above and consultation with the Service is requested\(^2\) \(\ldots\) "may affect"

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\(^1\) With an outcome of "no effect" or "NLAA" as outlined in this key, the requirements of section 7 of the Act are fulfilled for the eastern indigo snake and no further action is required.

\(^2\) Consultation may be concluded informally or formally depending on project impacts.

\(^3\) If burrow excavation is utilized, it should be performed by experienced personnel. The method used should minimize the potential for injury of an indigo snake. Applicants should follow the excavation guidance provided within the Florida Fish and Wildlife Conservation Commission’s revised April 2009 Gopher Tortoise Permitting Guidelines located at [http://myfwc.com/License/Permits_ProtectedWildlife.htm#gophertortoise](http://myfwc.com/License/Permits_ProtectedWildlife.htm#gophertortoise). A member of the excavation team should be authorized for Incidental Take during excavation through an incidental take permit issued by the Florida Fish and Wildlife Conservation Commission.
Appendix D – Special Protection Measures
The eastern indigo snake protection/education plan (Plan) below has been developed by the U.S. Fish and Wildlife Service (USFWS) in Florida for use by applicants and their construction personnel. At least 30 days prior to any clearing/land alteration activities, the applicant shall notify the appropriate USFWS Field Office via e-mail that the Plan will be implemented as described below (North Florida Field Office: jaxregs@fws.gov; South Florida Field Office: verobeach@fws.gov; Panama City Field Office: panamacity@fws.gov). As long as the signatory of the e-mail certifies compliance with the below Plan (including use of the attached poster and brochure), no further written confirmation or “approval” from the USFWS is needed and the applicant may move forward with the project.

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

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

POSTER INFORMATION

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

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

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

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

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

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

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

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

**IF YOU SEE A DEAD EASTERN INDIGO SNAKE ON THE SITE:**

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

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

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

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

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

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

**DURING CONSTRUCTION ACTIVITIES**

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

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

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

**POST CONSTRUCTION ACTIVITIES**

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

Lena Road
Project Development and Corridor Study Report

October 2021
CONTENTS

Executive Summary .................................................................................................................................................. 3

1.0 Introduction ....................................................................................................................................................... 4

1.1 Purpose ............................................................................................................................................................... 4

2.0 Environmental Setting ..................................................................................................................................... 4

3.0 Methodology ..................................................................................................................................................... 6

4.0 Findings .......................................................................................................................................................... 6

4.1 Cultural Resource Surveys ............................................................................................................................... 6

4.2 Archaeological Sites ........................................................................................................................................ 6

4.3 Historic-age Architectural Resources .............................................................................................................. 6

4.3.1 Previously Recorded Historic-age Architectural Resources ........................................................................... 6

4.3.2 Unrecorded Historic-age Architectural Resources .......................................................................................... 6

5.0 Summary and Recommendations ................................................................................................................... 12

6.0 References ....................................................................................................................................................... 12

FIGURES

Figure 1 | Project Location ....................................................................................................................................... 5

Figure 2 | Cultural Resources and Previous Surveys within 1 Mile of the Study Area .................................................. 7

TABLES

Table 1 | Mapped Soil Units in the Study Area ............................................................................................................ 4

Table 2 | Previous Cultural Resources Surveys Conducted within 1 Mile of the Study Area ........................................ 8

Table 3 | Previously Recorded Historic-Age Structures Located within 1 Mile of the Study Area ............................... 11

Table 4 | Previously Unrecorded Historic-Age Architectural Resources Located within Study Area .......................... 11
Executive Summary

Manatee County conducted a Project Development and Corridor Study (Study) to develop alternatives along Lena Road for reducing congestion, improving safety and operational performance, and addressing future transportation needs. The project limits extend from the cul-de-sac at the north end of existing Lena Road to the intersection with State Road (SR) 64, providing a new north-south corridor between SR 70 and SR 64 in Bradenton, Manatee County, Florida. Manatee County will use the results of the Study to evaluate alternatives to avoid or minimize impacts to environmental sensitive areas.

To support the Study, background research was conducted to identify known cultural resources within the corridor study area (Study Area) that have the potential to be impacted by the proposed project improvements. The background research informed recommendations for future cultural resources surveys (archaeological and architectural) in the Study Area. For this project, the Study Area comprises a 500-foot buffer on either side of the existing Lena Road centerline.

The desktop review revealed that previous archaeological surveys have been performed within much of the Study Area over the past 20 years, and that no archaeological sites have been previously recorded in the Study Area. Approximately 0.79 mile of the length of the Study Area has not been previously surveyed, and an approximately 0.50-mile segment of that total is undisturbed. Undisturbed areas have a higher probability of containing intact buried cultural resources. Therefore, an archaeological survey for the portions of the Study Area that are undisturbed is recommended. For the remainder of the Study Area, it is advised that should any archaeological materials be identified during construction, all construction should cease, and the Florida Division of Historic Resources should be notified.

No historic-age architectural resources have been previously recorded in the Study Area. A review of Manatee County Appraisal District data online showed 13 historic-age buildings (those constructed in 1976 or before) in the Study Area that have not been previously surveyed. Given the presence of previously unrecorded historic-age architectural resources in the study area, an architectural resources survey may be necessary to survey those resources and evaluate their eligibility for listing in the NRHP, depending on the final project design and potential impacts to historic-age architectural resources.
1.0 Introduction

Manatee County conducted a Project Development and Corridor Study (Study) to develop alternatives along Lena Road for reducing congestion, improving safety and operational performance, and addressing future transportation needs. Manatee County proposes the extension of Lena Road to State Road (SR) 64. The project limits extend from the cul-de-sac at the north end of existing Lena Road to the intersection with SR 64, providing a new north-south corridor between SR 70 and SR 64 in Bradenton, Manatee County, Florida, as shown in Figure 1. Manatee County will use the results of the Study to evaluate alternatives to avoid or minimize impacts to environmental sensitive areas.

To support the Study, background research was conducted to identify known cultural resources within the corridor study area (Study Area) that have the potential to be impacted by the proposed project improvements. The background research informed recommendations for future cultural resources surveys (archaeological and architectural) in the Study Area. For this project, the Study Area comprises a 500-foot buffer on either side of the existing Lena Road centerline.

1.1 Purpose

The primary purpose of the Lena Road improvements is to provide congestion relief by providing a collector roadway between SR 70 and SR 64. Located between Interchange 75 (I-75) and Lakewood Ranch Boulevard, the new extension of Lena Road to SR 64 would provide connectivity between two commercial/industrial areas currently accessed from SR 70 or SR 64 and provide an alternative local route between these two major east-west corridors. The extension would also connect to the future extension of SR 44 Avenue East, providing alternative east-west access across I-75.

2.0 Environmental Setting

The Study Area is underlain by the Hawthorn Group of the Peace River Formation of Miocene and Pliocene age (USGS 2021). According to the University of California and U.S. Department of Agriculture Natural Resources Conservation Service Soil Web (2019), eight mapped soil units occur within the Study Area, as listed in Table 1.

Table 1 | Mapped Soil Units in the Study Area.

<table>
<thead>
<tr>
<th>Map Symbol</th>
<th>Soil Unit</th>
<th>Landform</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>Tavares fine sand, 0 to 5 percent slopes</td>
<td>Marine terraces</td>
</tr>
<tr>
<td>11</td>
<td>Cassia fine sand, 0 to 2 percent slopes</td>
<td>Marine terraces</td>
</tr>
<tr>
<td>35</td>
<td>Ona fine sand, orstein substratum</td>
<td>Flatwoods</td>
</tr>
<tr>
<td>20</td>
<td>EauGallie-EauGallie wet, fine sand, 0 to 2 percent slopes</td>
<td>Flatwoods</td>
</tr>
<tr>
<td>16</td>
<td>Delray complex</td>
<td>Flats</td>
</tr>
<tr>
<td>12</td>
<td>Cassia fine sand, moderately well drained</td>
<td>Rises</td>
</tr>
<tr>
<td>26</td>
<td>Floridana-Immokalee-Okeelanta association</td>
<td>Depressions/Marine Terraces</td>
</tr>
<tr>
<td>7</td>
<td>Canova, Anclote, and Okeelanta soils</td>
<td>Depressions</td>
</tr>
</tbody>
</table>
Technical Memorandum
Lena Road Project Development and Corridor Study: Cultural Resources

Figure 1 | Project Location
3.0 Methodology
A desktop review was completed to identify known cultural resources within the Lena Road Study Area, and within 1 mile of the Study Area boundaries. The desktop review consisted of a search of Florida Master Site File (FMSF) records to identify previous cultural resources surveys conducted in the Study Area and vicinity, and previously recorded archaeological sites and architectural resources (buildings and structures) in those areas. Manatee County Appraisal District data, and historic aerials and United States Geological Survey (USGS) maps available online, were used to identify historic-age buildings in the Study Area.

4.0 Findings

4.1 Cultural Resource Surveys
At the time of the desktop review, FMSF data revealed the boundaries of 23 previous cultural resources surveys overlap the 1-mile search area. Survey areas of 10 of the 22 previous surveys partially overlap the Study Area. Previous surveys overlap 2.75 miles of the 3.47-mile long current Lena Road alignment. The locations of these 10 previous surveys are shown in Figure 2. Details for all previous cultural resources within 1 mile of the Study Area are listed in Table 2.

4.2 Archaeological Sites
FMSF data shows one archaeological site located within 1 mile of the Study Area. Site 8MA01497 (Lena 1) is a prehistoric site located approximately 0.16 mile east of the Study Area. Artifacts discovered at the site include pottery, and the site was recommended not eligible for inclusion in the NRHP. Due to its distance from the corridor, Site 8MA01497 is unlikely to be impacted by the proposed project.

4.3 Historic-age Architectural Resources

4.3.1 Previously Recorded Historic-age Architectural Resources
FMSF data shows five historic-age architectural resources located within 1 mile of the Study Area. The closest, MA01038, is located approximately 0.20 mile east of the Study Area, and it has been evaluated as ineligible for inclusion in the NRHP. Due to their distance from the Study Area, both previously recorded structures are unlikely to be impacted by the proposed project. Details for all previously recorded historic-age structures are listed in Table 3.

4.3.2 Unrecorded Historic-age Architectural Resources
For projects requiring compliance with Section 106 of the National Historic Preservation Act (NHPA), an Area of Potential Effects (APE) is defined to assess potential effects of the project on historic properties. An APE is defined as the geographic area or areas within which a project may directly or indirectly cause alterations in the character or use of historic properties, including changes to historic setting via visual impacts. All buildings and structures (including bridges) 50 years of age or older in the APE must be identified, surveyed, and evaluated for potential eligibility for listing in the NRHP. For most projects, a five-year buffer is applied to allow for project completion, meaning all resources 45 years of age or older (built in 1976 or earlier) in the APE should be recorded and evaluated as part of a cultural resources survey.
Figure 2 | Cultural Resources and Previous Surveys within 1 Mile of the Study Area
### Table 2 | Previous Cultural Resources Surveys Conducted within 1 Mile of the Study Area

<table>
<thead>
<tr>
<th>ID</th>
<th>Agency</th>
<th>Report Title</th>
<th>Contractor</th>
<th>Year</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>22585</td>
<td>-</td>
<td>Cultural Resource Assessment Survey, Technical Memorandum, I-75 (SR 93) at SR 64 Interchange, Manatee County, Florida; FPID No. 201032-6-32-1</td>
<td>Archeological Consultants Inc.</td>
<td>2015</td>
<td>-</td>
</tr>
<tr>
<td>24011</td>
<td>FCC</td>
<td>FCC – Form 621, Panamerican Consultants, Inc. An Archaeological and Historical Survey of the Jiggs landing FA10151958 Collection of Antennas on Existing Stealth Flagpole Tower, 4916 Lena Road, Brandelton, Manatee County, Florida</td>
<td>Panamerican Consultants, Inc.</td>
<td>2012</td>
<td>-</td>
</tr>
<tr>
<td>15979</td>
<td>-</td>
<td>I-75 Manatee County PD&amp;E Study from North of University Parkway to North of Moccasin Wallow Road</td>
<td>Janus Research, Inc.</td>
<td>2008</td>
<td>Overlaps approx.. 1.14 mi (1.8 km) of the Study Area</td>
</tr>
<tr>
<td>15282</td>
<td>FCC</td>
<td>An Archaeological and Historical Survey of the SR 70 &amp; I-75 Tower in Manatee County, Florida FCC Form 620</td>
<td>Panamerican Consultants, Inc.</td>
<td>2007</td>
<td>Overlaps approx. 88 ft (27 m) of the Study Area</td>
</tr>
<tr>
<td>11422</td>
<td>-</td>
<td>Creekwood Parcels A, B, C and D, Technical Memorandum, Cultural Resource Assessment Survey, Manatee County, Florida</td>
<td>Archaeological Consultants, Inc.</td>
<td>2005</td>
<td>-</td>
</tr>
<tr>
<td>12142</td>
<td>-</td>
<td>Cultural Resource Assessment Survey for the Lakewood Ranch Business Park, Manatee County, Florida</td>
<td>Janus Research, Inc.</td>
<td>2005</td>
<td>-</td>
</tr>
<tr>
<td>10443</td>
<td>-</td>
<td>Cultural Resources Assessment Survey, Crossing Creek Village, Phase I, Sarasota County Florida</td>
<td>Archaeological Consultants, Inc.</td>
<td>2004</td>
<td>-</td>
</tr>
<tr>
<td>9144</td>
<td>-</td>
<td>Cultural Resource Reconnaissance Survey/Section 106 Review Proposed Lena Road Communication Tower Site 3331 Lena Road,</td>
<td>Archaeological Consultants, Inc.</td>
<td>2003</td>
<td>Overlaps approx 1.71 mi (2.75 km) of the Study Area</td>
</tr>
<tr>
<td>Project Code</td>
<td>Project Title</td>
<td>Consultant(s)</td>
<td>Year</td>
<td>Study Area Details</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-----------------------------------</td>
<td>------</td>
<td>----------------------------------</td>
<td></td>
</tr>
<tr>
<td>7628</td>
<td>An Archaeological and Historical Survey of the Proposed Williams Creek Tower Location in Manatee County, Florida</td>
<td>Panamerican Consultants, Inc.</td>
<td>2001</td>
<td>Overlaps approx. 0.99 mi (1.6 km) of the Study Area</td>
<td></td>
</tr>
<tr>
<td>7917</td>
<td>Historic Properties Survey and Assessment Within the One Mile Area of Potential Effects of the Proposed Schroeder Ranch #1 Telecommunications Tower, Manatee County, Florida</td>
<td>Florida Archaeological Consulting, Inc.</td>
<td>2001</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>6743</td>
<td>A Cultural Resource Assessment Survey Upper Manatee River Road from SR 64 to US 301 Manatee County, Florida</td>
<td>Archeological Consultants, Inc.</td>
<td>2001</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>6066</td>
<td>Cultural Resource Assessment Survey for the State Road (SR) 70 PD&amp;E Study from West of Interstate 75 to Lorraine Road in Manatee County, Florida</td>
<td>Janus Research, Inc</td>
<td>2000</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>6079</td>
<td>A Cultural Resource Assessment Survey S.R. 64 from East of I-75 to Lorraine Road, Manatee County, Florida</td>
<td>Archaeological Consulting, Inc.</td>
<td>2000</td>
<td>Overlaps approx. 200 ft (61 m) of the Study Area</td>
<td></td>
</tr>
<tr>
<td>6330</td>
<td>A Cultural Resource Assessment Survey of Two Potential Sarasota Lateral Contractor Yards, Florida Gas Transmission Company, Manatee County, Phase IV Expansion, Florida</td>
<td>Southeastern Archaeological Research</td>
<td>2000</td>
<td>Overlaps approx. 540 ft (165 m) of the Study Area</td>
<td></td>
</tr>
<tr>
<td>5710</td>
<td>Cultural Resource Assessment Survey for the State Road (SR) 64 Improvements S.E.I.R. from Interstate 75 to East of the Haile Middle School Entrance in Manatee County, Florida</td>
<td>Janus Research</td>
<td>1999</td>
<td>Overlaps approx. 0.91 mi (1.5 km) of the Study Area</td>
<td></td>
</tr>
<tr>
<td>5540</td>
<td>Cultural Resources Assessment for the Heritage Sound DRI/ADA Project Site, Manatee County, Florida</td>
<td>Janus Research</td>
<td>1998</td>
<td>Overlaps approx. 360 ft (110 m) of the Study Area</td>
<td></td>
</tr>
<tr>
<td>Project Number</td>
<td>Phase</td>
<td>Description</td>
<td>Consultant</td>
<td>Year</td>
<td>Overlaps Approx.</td>
</tr>
<tr>
<td>----------------</td>
<td>-------</td>
<td>------------------------------------------------------------------------------</td>
<td>-----------------------------------</td>
<td>------</td>
<td>------------------</td>
</tr>
<tr>
<td>2069</td>
<td>-</td>
<td>Cultural Resource Assessment Survey of the Creekwood Development, Manatee County, Florida</td>
<td>Piper Archaeological Research, Inc.</td>
<td>1988</td>
<td>0.13 mi (0.21 km) of the Study Area</td>
</tr>
<tr>
<td>4399</td>
<td>-</td>
<td>Cultural Resource Assessment Survey: Environmental Clearance for Stormwater Ponds and Mitigation Area for SR 70 from US 301 to Interstate 75 in Manatee County, Florida</td>
<td>Archeological Consultants, Inc.</td>
<td>1995</td>
<td>-</td>
</tr>
<tr>
<td>2214</td>
<td>FDoT</td>
<td>The proposed multilaning of SR70 (Onepo Road), from SR683 (US301) to Lorraine Road, in Manatee County, Florida</td>
<td>-</td>
<td>1986</td>
<td>105 ft (32 m) of the Study Area</td>
</tr>
<tr>
<td>1613</td>
<td>-</td>
<td>An archaeological and historical survey of the River Club property, Manatee County, Florida</td>
<td>-</td>
<td>1988</td>
<td>-</td>
</tr>
<tr>
<td>1293</td>
<td>-</td>
<td>Phase I cultural resources assessment survey of Manatee County Southeast Wastewater Treatment Plant effluent pipeline corridor, Manatee County, Florida</td>
<td>-</td>
<td>1986</td>
<td>-</td>
</tr>
<tr>
<td>133</td>
<td>-</td>
<td>An Archaeological and Historical Survey of the Proposed Tara Development Property in Manatee County, Florida</td>
<td>Piper Archaeological Research, Inc.</td>
<td>1979</td>
<td>-</td>
</tr>
<tr>
<td>8890</td>
<td>FDoT</td>
<td>Pond Siting Cultural Resource Assessment Survey SR 70 West of Interstate 75 to Lakewood Ranch Boulevard, Manatee County, Florida</td>
<td>-</td>
<td>2002</td>
<td>-</td>
</tr>
</tbody>
</table>
Table 3 | Previously Recorded Historic-Age Structures Located within 1 Mile of the Study Area

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Name</th>
<th>Address</th>
<th>NRHP Eligibility</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA01038</td>
<td>8500-8507 SR 64</td>
<td>8500-8507 SR 64, Parrish</td>
<td>Ineligible</td>
<td>Approx. 0.20 mi (0.32 km) from the Study Area</td>
</tr>
<tr>
<td>MA01039</td>
<td>9408 SR 64</td>
<td>9408 SR 64, Parrish</td>
<td>Ineligible</td>
<td>Approx. 0.43 mi (0.69 km) from the Study Area</td>
</tr>
<tr>
<td>MA01026</td>
<td>Harlee Farms Building #1</td>
<td>-</td>
<td>Ineligible</td>
<td>Approx. 0.55 mi (0.89 km) from the Study Area</td>
</tr>
<tr>
<td>MA01027</td>
<td>Harlee Farms Building #2</td>
<td>-</td>
<td>Ineligible</td>
<td>Approx. 0.55 mi (0.89 km) from the Study Area</td>
</tr>
<tr>
<td>MA01028</td>
<td>Harlee Farms Building #3</td>
<td>-</td>
<td>Ineligible</td>
<td>Approx. 0.56 mi (0.90 km) from the Study Area</td>
</tr>
</tbody>
</table>

A review of Manatee County Appraisal District data online showed 13 buildings constructed in 1976 or before located within the Study Area (Table 4). All are residential in use. The oldest of the buildings was built in 1893, and the most recently constructed was built in 1976. The final project design, including potential right-of-way (ROW) acquisitions and introductions of new vertical elements, would determine which, if any, of these buildings would be included in the APE for a historic-age resources architectural survey, in accordance with Section 106.

Table 4 | Previously Unrecorded Historic-Age Architectural Resources Located within Study Area.

<table>
<thead>
<tr>
<th>Address</th>
<th>Year Built</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1507 Lena Rd., Bradenton</td>
<td>1958</td>
<td>Residential</td>
</tr>
<tr>
<td>8304 Bower Dr., Bradenton</td>
<td>1968</td>
<td>Residential</td>
</tr>
<tr>
<td>8104 Bower Dr., Bradenton</td>
<td>1976</td>
<td>Residential</td>
</tr>
<tr>
<td>1712 Lena Rd., Bradenton</td>
<td>1972</td>
<td>Residential</td>
</tr>
<tr>
<td>1707 Lena Rd., Bradenton</td>
<td>1957</td>
<td>Residential</td>
</tr>
<tr>
<td>2008 Lena Rd., Bradenton</td>
<td>1964</td>
<td>Residential</td>
</tr>
<tr>
<td>2950 Lena Rd., Bradenton</td>
<td>1893</td>
<td>Residential</td>
</tr>
<tr>
<td>3204 Lena Rd., Bradenton</td>
<td>1960</td>
<td>Residential</td>
</tr>
<tr>
<td>7909 41st Ave. E, Bradenton</td>
<td>1974</td>
<td>Residential</td>
</tr>
<tr>
<td>7905 41st Ave. E, Bradenton</td>
<td>1974</td>
<td>Residential</td>
</tr>
<tr>
<td>7903 41st Ave. E, Bradenton</td>
<td>1969</td>
<td>Residential</td>
</tr>
<tr>
<td>8010 41st Ave. E, Bradenton</td>
<td>1975</td>
<td>Residential</td>
</tr>
<tr>
<td>8040 41st Ave. E, Bradenton</td>
<td>1975</td>
<td>Residential</td>
</tr>
</tbody>
</table>
5.0 Summary and Recommendations

The desktop review revealed that previous archaeological surveys have been performed for the majority of the Study Area within the past 20 years, but no archaeological sites have been previously recorded in the Study Area. Approximately 0.79 mile of the length of the Study Area has not been previously surveyed, and an approximately 0.50-mile segment of that total is undisturbed. Undisturbed areas have a higher probability of containing intact buried cultural resources. Therefore, an archaeological survey for the portions of the Survey Area that are undisturbed is recommended. For the remainder of the Study Area, it is advised that should any archaeological materials be identified during construction, all construction should cease, and the Florida Division of Historic Resources should be notified.

No historic-age architectural resources have been previously recorded in the Study Area. A review of Manatee County Appraisal District data online showed 13 historic-age buildings in the Study Area that have not been previously surveyed. Given the presence of previously unrecorded historic-age architectural resources in the Study Area, an architectural resources survey may also be necessary to survey those resources and evaluate their eligibility for listing in the National Register of Historic Places, depending on the final project design and potential impacts to historic-age architectural resources.

6.0 References

United States Geological Survey (USGS).


University of California and U.S. Department of Agriculture Natural Resources Conservation Service (University of California, Davis, California Soil Resource Lab; University of California, Division of Agriculture and Natural Resources;)

Appendix E – Contamination Screening Memo
Contamination Screening
Technical Memorandum

Lena Road
Project Development and Corridor Study Report

September 2021
CONTENTS
Executive Summary ................................................................................................................................................. 3
1.0 Introduction .................................................................................................................................................. 4
  1.1 Purpose ...................................................................................................................................................... 4
2.0 Methodology .................................................................................................................................................. 4
3.0 Risk Ratings .................................................................................................................................................. 8
4.0 Findings ...................................................................................................................................................... 9
5.0 Recommendations ..................................................................................................................................... 17

FIGURES
Figure 1 | Project Location ................................................................................................................................. 5
Figure 2 | Potential Contamination Site Locations ............................................................................................. 11
Figure 3 | Southern Gunite (2021 HDR Site Reconnaissance, FDEP Records 2014 Inspection) ......................... 12
Figure 4 | American Golf Services (2021 HDR Site Reconnaissance) ................................................................. 13
Figure 5 | Southeast Regional Wastewater Treatment Plant (FDEP Records 2015 Inspection) ....................... 14
Figure 6 | Lena Road Landfill Biosolids Facility and Entrance (FDEP Records 2019 Inspection) ................... 15
Figure 7 | Landfill Gas to Energy Plant (FDEP Records 2019 Inspection) ......................................................... 15
Figure 8 | Davis Concrete AST (FDEP Records 2019 Inspection) ..................................................................... 16
Figure 9 | Freedom Recycling Vacant Land (2021 HDR Site Reconnaissance) .................................................. 17

TABLES
Table 1 | Federal Databases ............................................................................................................................... 6
Table 2 | State Databases .................................................................................................................................... 7
Table 3 | Summary of Potential Contamination Sites ........................................................................................ 9

APPENDICES
Appendix A – EDR ............................................................................................................................................. 18
Executive Summary

Manatee County conducted a Project Development and Corridor Study (Study) to develop alternatives along Lena Road for reducing congestion, improving safety and operational performance, and addressing future transportation needs. The project limits extend from the cul-de-sac at the north end of existing Lena Road to the intersection with State Road (SR) 64, providing a new north-south corridor between SR 70 and SR 64 in Bradenton, Manatee County, Florida.

A preliminary contamination screening was conducted for the project corridor to support the Study by identifying properties or facilities that have potential contamination that may affect the Lena Road corridor. The preliminary contamination screening was performed using the Florida Department of Transportation (FDOT) Project Development and Environment (PD&E) Manual, Chapter 20 as a guide. This preliminary screening uses the reporting format and standard environmental assessment practices of reviewing records of regulatory agencies, site reconnaissance, literature review and when necessary, personal interviews of individuals and business owners within the limits of the study area, outlined in the FDOT PD&E Manual, Chapter 20. However, this preliminary contamination screening is not considered a full Contamination Screening Evaluation Report as defined in the FDOT PD&E Manual.

Manatee County will use the results of the Study to evaluate alternatives to avoid or minimize impacts to environmental sensitive areas, including potential contamination concerns.

Nine (9) sites were investigated along the project corridor for current or past operations that may present the potential for finding contamination concerns and therefore may impact proposed improvements for the study area. The following risk ratings have been applied:

<table>
<thead>
<tr>
<th>Risk Rating</th>
<th>No. of Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>0</td>
</tr>
<tr>
<td>Medium</td>
<td>3</td>
</tr>
<tr>
<td>Low</td>
<td>3</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
</tr>
</tbody>
</table>

However, this list may need to be refined based on the project alternative selected to proceed.

For sites ranked No and Low for potential contamination, no further action is required at this time. These sites/facilities have the potential to impact the study area, but based on select variables have been determined to have low risk to the project at this time. Variables that may change the risk rating include a facility's non-compliance to environmental regulations, new discharges to the soil or groundwater, and modifications to current permits. Should any of these variables change, additional assessment of the facilities would be conducted.

For those locations with a risk rating of “Medium”, field screening or a soil management plan may be needed depending on the locations of construction and intrusive activities proposed for the study area. These sites have been determined to have potential contaminants, which may impact the proposed construction. A soil and groundwater sampling plan may be needed for each site. The sampling plan should provide sufficient detail as to the number of soil and groundwater samples to be obtained and the specific analytical tests to be performed. A site location sketch for each facility showing all proposed boring locations and groundwater monitoring wells should also be included in the sampling plan.

Additional information may become available or site-specific conditions may change from the time this memorandum was prepared and should be considered prior to proceeding with roadway construction.
1.0 Introduction
Manatee County conducted a Project Development and Corridor Study (Study) to develop alternatives along Lena Road for reducing congestion, improving safety and operational performance, and addressing future transportation needs. Manatee County proposes the extension of Lena Road to State Road (SR) 64. The project limits extend from the cul-de-sac at the north end of existing Lena Road to the intersection with SR 64, providing a new north-south corridor between SR 70 and SR 64 in Bradenton, Manatee County, Florida, as shown in Figure 1.

This Contamination Technical Memorandum has been prepared to support the Study by identifying properties or facilities that have potential contamination/hazardous materials that may affect the corridor study area. Manatee County will use the results of the Study to evaluate alternatives to avoid or minimize impacts to environmental sensitive areas, including potential contamination concerns.

1.1 Purpose
The primary purpose of the Lena Road improvements is to provide congestion relief by providing a collector roadway between SR 70 and SR 64. Located between Interstate 75 (I-75) and Lakewood Ranch Boulevard, the new extension of Lena Road to SR 64 would provide connectivity between two commercial/industrial areas currently accessed from SR 70 or SR 64 and provide an alternative local route between these two major east-west corridors. The extension would also connect to the future extension of 44th Avenue East, providing alternative east-west access across I-75.

2.0 Methodology
A preliminary contamination screening of the corridor study area was conducted to determine the potential for contamination within the corridor right-of-way. A desktop review was performed of electronically available information on the Florida Department of Environmental Protection (FDEP) Oculus website. This review identified locations including but not limited to underground storage tanks (USTs), petroleum discharges, registered drycleaners, superfund sites, solid waste sites, and brownfield sites. The Florida Department of Transportation (FDOT) Project Development and Environment (PD&E) Manual Part 2 Chapter 20, Contamination provides a standard contamination screening buffer, an area within and adjacent to the project that should be evaluated for possible additional contamination assessment. The following buffer distances are recommended by FDOT and were used for the desktop review:

- 500 feet from the right-of-way line for petroleum, drycleaners, and non-petroleum sites. Corridor projects in heavily industrialized or urbanized areas with dewatering planned near the contaminated sites need to be addressed with FDEP, Water Management District, or the local delegated program lead.
- 1,000 feet from the right-of-way line for non-landfill solid waste sites (such as recycling facilities, transfer stations, and debris placement areas).
- 1/2 -mile (2,640 feet) from the right-of-way line for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) registered sites, National Priorities List (NPL) Superfund sites, or Landfill sites.

Additionally, an environmental database search was performed by Environmental Data Resources, Inc. The resulting Environmental Data Report (EDR), dated July 1, 2021 (provided in Appendix A), includes potential hazardous material and petroleum contamination sites that were listed in the United States Environmental Protection Agency (USEPA) and the FDEP databases. The databases listed in Table 1 and Table 2 were reviewed with the Oculus or EDR databases.
Figure 1 | Project Location
<table>
<thead>
<tr>
<th>Database Name</th>
<th>Database Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Priorities List (NPL)</td>
<td>This list contains facilities and/or locations where environmental contamination has been confirmed and prioritized for cleanup activities.</td>
</tr>
<tr>
<td>Comprehensive Environmental Response, Compensation and Liability Information System List (CERCLIS)</td>
<td>This Superfund database tracks facilities and/or locations that the USEPA is investigating to determine if an existing or threatened release of hazardous substances is present.</td>
</tr>
<tr>
<td>Records of Decisions (ROD) System</td>
<td>This system documents information relative to site history, community participation, enforcement activities, site characteristics, scope and role of response action, and remedies applied to Superfund sites.</td>
</tr>
<tr>
<td>Archived CERCLIS Sites (No Further Remedial Action Planned List (NFRAP))</td>
<td>This list contains archived data on CERCLIS sites where the USEPA has completed assessment activities and determined no further steps to list the site on the NPL will be taken.</td>
</tr>
<tr>
<td>Emergency Response Notification System (ERNS) List</td>
<td>This database stores information on the notification of oil discharges and hazardous substance releases. It is a cooperative data sharing effort among the USEPA, US Department of Transportation, and the National Response Center.</td>
</tr>
<tr>
<td>Resource Conservation and Recovery Information System (RCRIS) Handlers with Corrective Action Activity (CORRACTS)</td>
<td>This database lists hazardous waste handlers that have undergone Resource Conservation and Recovery Act (RCRA) corrective action activity.</td>
</tr>
<tr>
<td>Hazardous Waste Data Management System (HWDMS)</td>
<td>This historical database was replaced by the USEPA RCRA Information System (RCRIS). The HWDMS list formerly tracked sites involved in the generation, transportation, treatment, storage, and/or disposal of hazardous waste.</td>
</tr>
<tr>
<td>RCRA-Large Quantity Generator (LQG), Small Quantity Generator (SQG), Conditionally Exempt SQG and Transporters (NONTSD)</td>
<td>This list is a subset of the USEPA RCRIS list and identifies facilities that generate and transport hazardous wastes.</td>
</tr>
<tr>
<td>RCRA Treatment, Storage and/or Disposal Sites (TSD)</td>
<td>This list is a subset of the RCRIS and identifies facilities that treat, store, and/or dispose of hazardous waste.</td>
</tr>
<tr>
<td>RCRA Administrative Action Tracking System (RAATS)</td>
<td>This list is a historical RCRA enforcement database that tracked facilities found to be major violators under RCRA. Data entry in this database discontinued in 1995.</td>
</tr>
<tr>
<td>Tribal Lust List (TRIBLLUST)</td>
<td>This database lists active and closed storage tank facilities on Native American lands. The database is created by extracting records from the storage tank databases that have indicated current or past releases.</td>
</tr>
<tr>
<td>Tribal Tanks List (TRIBLTANKS)</td>
<td>This database lists active and closed storage tanks on Native American lands.</td>
</tr>
</tbody>
</table>
### Facility Registry System (FRS)
The FRS is a centrally-managed database of sites regulated by Program Offices of the USEPA, such as air, water, and waste. The FRS has replaced the Facility Index System List (FINDS).

### Toxic Release Inventory System (TRIS) List
This list identifies facilities that are required to submit annual reports relative to the estimated routine and accidental release of toxic chemicals to the environment, as stipulated under current federal laws.

### Biennial Reporting System
This system collects data on the generation and management of hazardous waste from large quantity generators and treatment, storage, and disposal facilities. The data are reported on even years by the facilities to state environmental agencies that provide the information to regional and national USEPA offices.

### PCB Activity Data System (PADS)
This list contains sites that have notified the USEPA of their activities relative to the generation, transportation, permitted storage, and permitted disposal of polychlorinated biphenyls (PCBs) under the Toxic Substances Control Act.

### Permit Compliance System (PCS)
This is a data system for the National Pollutant Discharge Elimination System (NPDES) permit holding facilities.

### Brownfields Management System (USBWNFLDS)
This database stores information reported by USEPA brownfields grant recipients on brownfields properties assessed or cleanup up with grant funding.

<table>
<thead>
<tr>
<th>Database Name</th>
<th>Database Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underground/Aboveground Storage Tanks (TANKS)</td>
<td>This database contains sites with registered aboveground (AST) or underground storage tanks (UST) containing regulated petroleum products.</td>
</tr>
<tr>
<td>Leaking Underground Storage Tanks List (LUST)</td>
<td>This list identifies facilities and/or locations that have notified the FDEP of a possible release of contaminants from petroleum storage systems.</td>
</tr>
<tr>
<td>Solid Waste Facilities List (SLDWST)</td>
<td>This list identifies locations that have been permitted to conduct solid waste handling activities. Activities may include landfills, transfer stations, and sites handling bio-hazardous wastes.</td>
</tr>
<tr>
<td>State Sites List (STCERC)</td>
<td>This historical list contains sites that the Florida Department of Environmental Regulation (now FDEP) compiled to track suspect contamination sites. The FDER updated this list, previously known as the Florida SITES list, in 1989.</td>
</tr>
<tr>
<td>State Funded Action Sites (STNPL)</td>
<td>This list contains facilities and/or locations that have been identified by the FDEP as having known environmental contamination and are currently being addressed through state funded cleanup action.</td>
</tr>
<tr>
<td>State Hazardous Waste Notifiers (STRCRA)</td>
<td>This list identifies facilities that generate, transport, treat, store, and dispose of hazardous waste.</td>
</tr>
<tr>
<td>State Institutional and/or Engineering Controls (INSTENG)</td>
<td>This list contains sites that have had institutional and/or engineering controls implemented to regulate exposure to environmental hazards.</td>
</tr>
</tbody>
</table>
In addition to the database search of potential contamination sites, field reviews were conducted on August 6, 2021 to verify the locations of the sites included in the EDR and identified through the FDEP Oculus search. Site reconnaissance was completed from the public areas for each facility having the potential for contamination involvement of the corridor. The sites were evaluated for possible contamination risks to the project right-of-way and construction activities.

3.0 Risk Ratings

A hazardous materials rating system that expresses the degree of concern for potential contamination problems was used to rank the identified sites. The ratings are No, Low, Medium, and High and are generally explained as follows:

- **No** – A review of available information on the property and a review of the conceptual or design plans indicates there is minimal potential contamination impact to the project. It is possible that contaminants have been handled on the property. However, findings from this preliminary contamination screening indicate that contamination impacts are not expected.

- **Low** – A review of available information indicates that past or current activities on the property have an ongoing compliance or regulatory issue, the site has a hazardous waste generator identification (ID) number, or the site stores, handles, or manufacturers hazardous materials. However, based on the review of conceptual or design plans and/or findings from this preliminary contamination screening, it is not likely that there would be any contamination impacts to the project.

- **Medium** – After a review of conceptual or design plans and findings from a preliminary contamination screening, a potential contamination impact to the project has been identified. If there was insufficient information (such as regulatory records or site historical documents) to make a determination as to the potential for contamination impact, and there was reasonable suspicion that contamination may exist that would impact the proposed design and construction, the property was rated at least as a “Medium.” Properties used historically as gasoline stations and which have not been evaluated or assessed by regulatory agencies, sites with abandoned in place underground petroleum storage tanks or currently operating gasoline stations received this rating.
High – After a review of all available information and conceptual or design plans, there is appropriate analytical data or regulatory information that shows contamination would impact construction activities, have implications to right-of-way acquisition or have other potential transfer of contamination related liability to the FDOT.

4.0 Findings
Following the desktop review, nine (9) sites were identified within the contamination screening buffer distances. Of the nine (9) sites, six (6) were identified as having the potential for contamination concern to the corridor study area. Of the six (6) sites investigated, the following risk ratings have been applied:
- Medium Risk Sites: Three (3) sites were identified as having a Medium risk to the project corridor.
- Low Risk Sites: Three (3) sites were identified as having a Low risk to the project corridor.

Table 3 lists the potential contamination sites along the project corridor. Individual site descriptions follow Table 3. No High-risk sites were identified. The location of these three Medium risk sites are shown in Figure 2. The remaining three sites would have No impact to the project corridor.

Table 3 | Summary of Potential Contamination Sites

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Site Name</th>
<th>Address</th>
<th>Oculus or EDR Database¹</th>
<th>Distance from ROW</th>
<th>Details</th>
<th>Risk Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rios Drycleaning</td>
<td>3101 81st Court East, Bradenton, FL 34211</td>
<td>Hist Cleaner</td>
<td>120 feet</td>
<td>Historic Drycleaners</td>
<td>Medium</td>
</tr>
<tr>
<td>2</td>
<td>Southern Gunite, Inc./Prestige Gunite of Bradenton Inc.</td>
<td>3302 81st Court East, Bradenton, FL 34211</td>
<td>SWF, AST, FINDS, ECHO, AIRS</td>
<td>115 feet</td>
<td>AST Concern</td>
<td>Medium</td>
</tr>
<tr>
<td>3</td>
<td>American Pride Golf Cart Services</td>
<td>3208 81st Court East, Bradenton, FL 34211</td>
<td>SWF</td>
<td>125 feet</td>
<td>Waste Tire Collector</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>Southeast Regional Wastewater Treatment Facility</td>
<td>3331 Lena Road, Bradenton, FL 34211 / 3335 Lena Road, Bradenton, FL 34211</td>
<td>SWF, Spills, NPDES, Tier 2, AST, UST</td>
<td>0.3 mile (1,584 feet)</td>
<td>Chemicals, Biosolids</td>
<td>Low</td>
</tr>
<tr>
<td>5</td>
<td>Lena Road Class 1 Landfill, Fleet Service, Utility Operations Dept.</td>
<td>3333 Lena Road, Bradenton, FL 34211</td>
<td>SWF, RCRA-SQG, RCRA-VSQG, UST, AST, HW Gen., NPDES, AIRS</td>
<td>0.3 mile (1,584 feet)</td>
<td>Landfill, Leachate, Household Hazardous Waste</td>
<td>Medium</td>
</tr>
<tr>
<td>6</td>
<td>Landfill Gas to Energy Plant</td>
<td>3415 Lena Road, Bradenton, FL 34211</td>
<td>FINDS</td>
<td>0.3 mile (1,584 feet)</td>
<td>Generators</td>
<td>Low</td>
</tr>
<tr>
<td>Site No.</td>
<td>Site Name</td>
<td>Address</td>
<td>Oculus or EDR Database(^1)</td>
<td>Distance from ROW</td>
<td>Details</td>
<td>Risk Rating</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------</td>
<td>----------------------------------</td>
<td>-------------------------------</td>
<td>------------------</td>
<td>--------------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>7</td>
<td>Davis Concrete</td>
<td>3331 81st Court East, Bradenton, FL 34211</td>
<td>AST</td>
<td>420 feet</td>
<td>AST</td>
<td>Low</td>
</tr>
<tr>
<td>8</td>
<td>Freedom Recycling C&amp;D Debris Waste Processing Facility</td>
<td>3407 81st Court East, Bradenton, FL 34211</td>
<td>SWF</td>
<td>N/A</td>
<td>Facility Never Constructed/Undeveloped Land</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>Lena Towers Business Park</td>
<td>3730 Lena Road, Bradenton, FL 34211</td>
<td>ECHO</td>
<td>100 feet</td>
<td>Industrial Businesses/Construction Permit</td>
<td>No</td>
</tr>
</tbody>
</table>

Sources: Environmental Data Resources, Inc. Environmental Data Report (EDR), dated July 1, 2021, FDEP Map Direct

Notes:
- ROW: right-of-way.
- \(^1\) Tables 1 and 2 list the Oculus or EDR databases reviewed and the description for each.
Figure 2 | Potential Contamination Site Locations
Site No. 1 – Rios Drycleaning
3101 81st Court East, Bradenton, FL 34211

- Concern: Historic Drycleaner
- Risk Rating: Medium

During site reconnaissance, the site consisted of a strip of businesses including ShutterShop, Titan Pool and Spa, and Smiley Pool Services. The building is located 120 feet from the existing right-of-way. According to the EDR, this site was a drycleaning facility in 2007 and 2008. According to the historical aerial photographs, the parcel was undeveloped land in 2005, with the building shown in 2006. The site was not found to be registered in the FDEP Drycleaning Solvent Program Cleanup Sites. More investigation is needed to know if the current businesses store Chlorine or other water treatment chemicals on the property. Based on the site visit and regulatory review, the site is given a risk rating of “Medium” for potential contamination to impact the corridor.

Site No. 2 – Southern Gunite, Inc./Prestige Gunite of Bradenton Inc.
3302 81st Court East, Bradenton, FL 34211

- Concern: Solid Waste Facility, Diesel Aboveground Storage Tank, Compliance Inspection Notification
- Risk Rating: Medium

Photos of the facility are provided in Figure 3. The site is located 115 feet from the existing right-of-way. According to the historic aerial photographs, the facility was built in the early 2000s. According to the EDR, Prestige Gunite of Bradenton Inc. had a Minor Air Permit that was created in 2009 and considered permanently closed in 2012. The site has a 1,000-gallon AST containing vehicular diesel since 2006. According to the public records online, Southern Gunite, Inc. was founded at the facility in 2014. During site reconnaissance, the site was Southern Gunite, Inc. Southern Gunite, Inc. is a general contractor specializing in construction services. An annual inspection conducted in March 2019 indicated the facility was operating in compliance, however the inspection stated a note of concern: “shop fabricated storage tank system has a not repaired component which has or could cause a release or discharge”. A corrective action was given by the inspector to immediately replace the missing interstitial gauge glass. No follow-up records are provided on the EDR and FDEP records. Based on the site visit and regulatory review, the site is given a risk rating of “Medium” for potential contamination to impact the corridor.
Site No. 3 – American Pride Golf Cart Services
3208 81st Court East, Bradenton, FL 34211

- Concern: Waste Tire Collector and Generator
- Risk Rating: No

Photos of the facility are provided in Figure 4. During site reconnaissance, this site was American Pride Golf Cart Services. This facility is an authorized EZ-GO dealer carrying new, re-manufactured and used custom gas and electric golf carts. The site is located 125 feet from the existing right-of-way. According to the EDR, American Pride Golf Cart Services is registered on the site as a waste tire collector since 2017. The facility reported 3 tons of used tires were collected and disposed of at the Lena Road County Landfill. The facility renewed registration in 2019. Based on the site visit and regulatory review, the site is given a risk rating of “No” for potential contamination to impact the corridor.

Figure 4 | American Golf Services (2021 HDR Site Reconnaissance)

Site No. 4 – Southeast Regional Wastewater Treatment Facility
3331 Lena Road, Bradenton, FL 34211 / 3335 Lena Road, Bradenton, FL 34211

- Concern: Historic Spill, Solid Waste Facility, Used Oil Aboveground Storage Tank, Hazardous Substance
- Risk Rating: Low

Photos of the facility are provided in Figure 5. During site reconnaissance, this site was located on the Manatee County Sanitary Landfill property. The site is located 0.3 miles from the existing right-of-way. The Wastewater Treatment Facility is located in the southwest corner of the landfill property. According to the EDR, the site is registered as a solid waste facility and is registered under the hazardous waste program, handling hazardous substances, chemicals and biosolids. The site had a 1,000-gallon AST containing used oil that was installed in 1998 and removed in 2000. The site reported a spill in 2000. The site had a 3,000-gallon AST containing an unidentified hazardous substance that was installed in 1996 and removed in 2001. The site also had a 6,510-gallon AST containing an unidentified hazardous substance that was installed in 2008 and removed in 2012. The site had a Stormwater No Exposure Certificate issued November 2015 and expired November 2020. The site has a construction generic dewatering permit issued October 2020 and set to expire October 2025. An annual inspection conducted April 2021 noted the facility operating in compliance. Based on the site visit and regulatory review, the site is given a risk rating of “Low” for potential contamination to impact the corridor.
Site No. 5 – Lena Road Class 1 Landfill, Fleet Service, Utility Operations Dept.
3333 Lena Road, Bradenton, FL 34211

- Concern: Solid Waste Facility, Hazardous Waste Generator
- Risk Rating: Medium

Photos of the facility are provided in Figure 6. During site reconnaissance, this site was the Manatee County Sanitary Landfill property. The site is located 0.3 miles from the existing right-of-way. The site began collecting waste in the 1970s. The landfill is permitted by FDOT as a Class 1 Landfill facility that includes a clay slurry wall leachate containment and collection system, and landfill gas collection and conveyance system, transmission pipes, a blower, and a flare station. The facility has an active waste tire processing facility, an inactive, pre-authorized disaster debris management site, and drop off areas for white goods, batteries, and scrap metals. The landfill had a 1,000-gallon UST for construction purposes containing unleaded gas that was installed in 1989 and removed in 1999. The landfill had a 1,000-gallon AST containing unleaded gas that was installed in 1984 and removed in 1989. The landfill had a 10,000-gallon AST containing vehicular diesel that was installed in 1979 and removed in 1989. The landfill has a 20,000-gallon AST containing vehicular diesel on site that was installed in 1999. According to the EDR, this site was a conditionally exempt small quantity generator of ignitable, corrosive, and reactive hazardous waste since 1995. According to the EDR, in 2007 the landfill was not considered a generator of hazardous waste. The facility conducts monthly monitoring of water balance, groundwater gradient, rainfall, leachate meter readings, and leachate tracking summaries, and conducts quarterly waste tire processing reports. An annual inspection was conducted in May 2020 that indicated the facility operating in compliance. Based on the site visit and regulatory review, the site is given a risk rating of “Medium” for potential contamination to impact the corridor.
Photos of the facility are provided in Figure 7. During site reconnaissance, this site was located on the Manatee County Sanitary Landfill property. The site is located 0.3 miles from the existing right-of-way. According to the EDR, this site is a landfill gas to energy plant for the Lena Road/Manatee County Landfill. Onsite generators are operated by Florida Power and Light Company. Based on the site visit and regulatory review, the site is given a risk rating of “Low” for potential contamination to impact the corridor.
Site No. 7 – Davis Concrete  
3331 81st Court East, Bradenton, FL 34211

- Concern: Aboveground Storage Tank  
- Risk Rating: Low

Photos of the facility are provided in **Figure 8**. During site reconnaissance, this site was Davis Concrete. Davis Concrete is a concrete contractor and supplier. The site is located 420 feet from the existing right-of-way. According to the EDR, this site is an in-service fuel user/non-retail. One AST is located in the northeast corner of the property. FDEP’s annual inspections at the site determine the facility is in compliance. No violations were found. Based on the site visit and regulatory review, the site is given a risk rating of “Low” for potential contamination to impact the corridor.

![Figure 8 | Davis Concrete AST (FDEP Records 2019 Inspection)](image)

Site No. 8 – Freedom Recycling C&D Debris Waste Processing Facility  
3407 81st Court East, Bradenton, FL 34211

- Concern: Registered Solid Waste Facility  
- Risk Rating: No

Photos of the facility are provided in **Figure 9**. During site reconnaissance, this site was undeveloped land. The parcel is located south of Davis Concrete. According to the EDR, this site is registered as a construction and demolition debris waste processing facility. However, the facility was never constructed. According to the Manatee County Property Appraiser, the parcel was purchased by Freedom Recycling in 2003, with design plans for the proposed waste processing facility dated as early as 2004. The site’s permit that was issued in 2011 was not renewed by Freedom Recycling and expired January 5, 2016. Based on the site visit and regulatory review, the site is given a risk rating of “No” for potential contamination to impact the corridor.
During site reconnaissance, this site was Lena Towers Business Park. The site is located 100 feet from the existing right-of-way. Multiple businesses are located within the business park along 34th Avenue. Businesses include Ballard Marine Construction, Curbco, and Spartan Custom Closets. According to the historic aerial photographs, the parcels north and south of 34th Avenue were being developed in 2003. According to the EDR, the site had a construction stormwater permit in 2010. Based on the site visit and regulatory review, the site is given a risk rating of “No” for potential contamination to impact the corridor.

### 5.0 Recommendations

For the sites ranked “No” for potential contamination, no further action is required. These sites have been evaluated and determined not to have any potential environmental risk to the study area at this time.

For sites ranked “Low” for potential contamination, no further action is required at this time. These sites/facilities have the potential to impact the study area but based on select variables have been determined to have low risk to the corridor at this time. Variables that may change the risk rating include a facility’s non-compliance to environmental regulations, new discharges to the soil or groundwater, and modifications to current permits. Should any of these variables change, additional assessment of the facilities would be conducted.

For those locations with a risk rating of “Medium”, field screening or a soil management plan may be needed depending on the locations of construction and intrusive activities proposed for the study area. These sites have been determined to have potential contaminants, which may impact the proposed construction. A soil and groundwater sampling plan may be needed for each site. The sampling plan should provide sufficient detail as to the number of soil and groundwater samples to be obtained and the specific analytical tests to be performed. A site location sketch for each facility showing all proposed boring locations and groundwater monitoring wells should also be included in the sampling plan.

Additional information may become available or site-specific conditions may change from the time this memorandum was prepared and should be considered prior to proceeding with any roadway construction.
Appendices
Appendix A – EDR
Thank you for your business.
Please contact EDR at 1-800-352-0050 with any questions or comments.

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A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA’s Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

**SUBJECT PROPERTY INFORMATION**

**ADDRESS**

LENA ROAD  
BRADENTON, FL 34211

**TARGET PROPERTY SEARCH RESULTS**

The Target Property was identified in the following databases.

Page Numbers and Map Identifications refer to the EDR Area/Corridor Report where detailed data on individual sites can be reviewed.

Sites listed in **bold italics** are in multiple databases.

**STANDARD ENVIRONMENTAL RECORDS**

*Federal RCRA generators list*

RCRA-SQG: RCRA - Small Quantity Generators

A review of the RCRA-SQG list, as provided by EDR, and dated 03/22/2021 has revealed that there are 2 RCRA-SQG sites within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANATEE COUNTY LENA</td>
<td>3333 LENA RD # B</td>
<td>B17 / 3</td>
<td>86</td>
</tr>
<tr>
<td>EPA ID:: FLD984244392</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>MANATEE COUNTY FLEET</td>
<td>3333 LENA RD</td>
<td>B18 / 3</td>
<td>90</td>
</tr>
<tr>
<td>EPA ID:: FLD982122004</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

A review of the RCRA-VSQG list, as provided by EDR, and dated 03/22/2021 has revealed that there is 1 RCRA-VSQG site within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANATEE COUNTY FLEET</td>
<td>3333 LENA RD</td>
<td>B13 / 3</td>
<td>51</td>
</tr>
<tr>
<td>EPA ID:: FLT970059135</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
State and tribal landfill and/or solid waste disposal site lists
SWF/LF: Solid Waste Facility Database

A review of the SWF/LF list, as provided by EDR, has revealed that there are 2 SWF/LF sites within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMERICAN PRIDE GOLF</td>
<td>3208 81ST CT E</td>
<td>3 / 3</td>
<td>20</td>
</tr>
<tr>
<td>Facility-Site Id: 105066</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class Status: INACTIVE (I)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| MANATEE CNTY-LANDFIL| 3333 LENA RD     | B20 / 3               | 95   |
| Facility-Site Id: 44795 |
| Class Status: ACTIVE (A) |
| Class Status: UNDER SOLID WASTE PERMIT (W) |
| Class Status: INACTIVE (I) |

State and tribal registered storage tank lists
UST: Storage Tank Facility Information

A review of the UST list, as provided by EDR, has revealed that there are 2 UST sites within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANATEE CNTY-LANDFIL</td>
<td>3333 LENA RD</td>
<td>B20 / 3</td>
<td>95</td>
</tr>
<tr>
<td>Database: UST, Date of Government Version: 01/26/2021</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tank Status: B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facility-Site Id: 8630173</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facility Status: OPEN</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| MANATEE CNTY-SE WWTP| 3335 LENA RD     | B21 / 3               | 191  |
| Database: UST, Date of Government Version: 01/26/2021 |
| Tank Status: B |
| Facility-Site Id: 8944388 |
| Facility Status: OPEN |

AST: Storage Tank Facility Information

A review of the AST list, as provided by EDR, has revealed that there are 5 AST sites within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANATEE CNTY EAST PL</td>
<td>3331 LENA RD</td>
<td>B9 / 3</td>
<td>42</td>
</tr>
<tr>
<td>Database: AST, Date of Government Version: 01/26/2021</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Facility-Site Id: 9800685</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facility Status: CLOSED</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| MANATEE COUNTY PUBLI| 3331 LENA ROAD   | B10 / 3               | 43   |
| Database: AST, Date of Government Version: 01/26/2021 |
EXECUTIVE SUMMARY

Facility-Site Id: 9800602
Facility Status: CLOSED
Facility Status: CLOSED

MANATEE CNTY-LANDFIL  3333 LENA RD  B20 / 3
Database: AST, Date of Government Version: 01/26/2021
Facility-Site Id: 8630173
Facility Status: OPEN
Facility Status: OPEN

MANATEE CNTY-SE WWTP  3335 LENA RD  B21 / 3
Database: AST, Date of Government Version: 01/26/2021
Facility-Site Id: 8944388
Facility Status: OPEN
Facility Status: OPEN

SOUTHERN GUNITE, INC  3302 81ST CT E  C23 / 3
Database: AST, Date of Government Version: 01/26/2021
Facility-Site Id: 9808317
Facility Status: OPEN
Facility Status: OPEN

ADDITIONAL ENVIRONMENTAL RECORDS

Records of Emergency Release Reports
SPILLS: Oil and Hazardous Materials Incidents

A review of the SPILLS list, as provided by EDR, and dated 04/05/2021 has revealed that there is 1 SPILLS site within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOUTHEAST WATER RECL</td>
<td>3331 LENA ROAD</td>
<td>B7 / 3</td>
<td>25</td>
</tr>
</tbody>
</table>

Other Ascertainable Records
RMP: Risk Management Plans

A review of the RMP list, as provided by EDR, and dated 01/22/2021 has revealed that there is 1 RMP site within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOUTHEAST REGIONAL W</td>
<td>3331 LENA ROAD</td>
<td>B6 / 3</td>
<td>22</td>
</tr>
</tbody>
</table>
ICIS: Integrated Compliance Information System

A review of the ICIS list, as provided by EDR, and dated 11/18/2016 has revealed that there is 1 ICIS site within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANATEE COUNTY UTILI</td>
<td>3333 LENA ROAD</td>
<td>B14 / 3</td>
<td>53</td>
</tr>
</tbody>
</table>

US AIRS: Aerometric Information Retrieval System Facility Subsystem

A review of the US AIRS list, as provided by EDR, has revealed that there is 1 US AIRS site within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANATEE COUNTY UTILI</td>
<td>3333 LENA ROAD</td>
<td>B14 / 3</td>
<td>53</td>
</tr>
</tbody>
</table>

Database: US AIRS (AFS), Date of Government Version: 10/12/2016
EPA plant ID:: 110012324047

FINDS: Facility Index System/Facility Registry System

A review of the FINDS list, as provided by EDR, and dated 02/03/2021 has revealed that there are 9 FINDS sites within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOUTHEAST REGIONAL W</td>
<td>3331 LENA ROAD</td>
<td>B5 / 3</td>
<td>21</td>
</tr>
<tr>
<td>MANATEE COUNTY SOUTH</td>
<td>3331 LENA RD</td>
<td>B11 / 3</td>
<td>49</td>
</tr>
<tr>
<td>MANATEE COUNTY FLEET</td>
<td>3333 LENA RD</td>
<td>B13 / 3</td>
<td>51</td>
</tr>
<tr>
<td>LENA ROAD CLASS I LA</td>
<td>3333 LENA ROAD</td>
<td>B15 / 3</td>
<td>84</td>
</tr>
<tr>
<td>LENA RD LANDFILL - P</td>
<td>3333 LENA ROAD</td>
<td>B16 / 3</td>
<td>85</td>
</tr>
<tr>
<td>PACIFIC TOMATO GROWE</td>
<td>3333 LENA RD</td>
<td>B19 / 3</td>
<td>95</td>
</tr>
<tr>
<td>MANATEE COUNTY LFGTE</td>
<td>3415 LENA RD</td>
<td>B22 / 3</td>
<td>198</td>
</tr>
<tr>
<td>PRESTIGE GUNITE OF B</td>
<td>3302 EAST 81ST COURT</td>
<td>C24 / 3</td>
<td>200</td>
</tr>
<tr>
<td>LENA TOWERS BUSINESS</td>
<td>3730 LENA RD</td>
<td>26 / 3</td>
<td>207</td>
</tr>
</tbody>
</table>
EXECUTIVE SUMMARY

ECHO: Enforcement & Compliance History Information

A review of the ECHO list, as provided by EDR, and dated 04/04/2021 has revealed that there are 9 ECHO sites within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
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</thead>
<tbody>
<tr>
<td>MANATEE COUNTY SOUTH</td>
<td>3331 LENA RD</td>
<td>B4 / 3</td>
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<tr>
<td>Registry ID: 110033633968</td>
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<td></td>
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</tr>
<tr>
<td>MANATEE COUNTY SOUTH</td>
<td>3331 LENA RD</td>
<td>B11 / 3</td>
<td>49</td>
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<tr>
<td>Registry ID: 110064416118</td>
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</tr>
<tr>
<td>Registry ID: 110027955988</td>
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</tr>
<tr>
<td>MANATEE COUNTY SOUTH</td>
<td>3331 LENA RD</td>
<td>B12 / 3</td>
<td>50</td>
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<tr>
<td>Registry ID: 110028292498</td>
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<td></td>
</tr>
<tr>
<td>MANATEE COUNTY FLEET</td>
<td>3333 LENA RD</td>
<td>B13 / 3</td>
<td>51</td>
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<tr>
<td>Registry ID: 110005584518</td>
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<td></td>
</tr>
<tr>
<td>LENA ROAD CLASS I LA</td>
<td>3333 LENA ROAD</td>
<td>B15 / 3</td>
<td>84</td>
</tr>
<tr>
<td>Registry ID: 110043790662</td>
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<td></td>
</tr>
<tr>
<td>LENA RD LANDFILL - P</td>
<td>3333 LENA ROAD</td>
<td>B16 / 3</td>
<td>85</td>
</tr>
<tr>
<td>Registry ID: 110012324047</td>
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</tr>
<tr>
<td>PACIFIC TOMATO GROWE</td>
<td>3333 LENA RD</td>
<td>B19 / 3</td>
<td>95</td>
</tr>
<tr>
<td>Registry ID: 110035700471</td>
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</tr>
<tr>
<td>PRESTIGE GUNITE OF B</td>
<td>3302 EAST 81ST COURT</td>
<td>C24 / 3</td>
<td>200</td>
</tr>
<tr>
<td>Registry ID: 110039607333</td>
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</tr>
<tr>
<td>LENA TOWERS BUSINESS</td>
<td>3730 LENA RD</td>
<td>26 / 3</td>
<td>207</td>
</tr>
<tr>
<td>Registry ID: 110024387215</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

AIRS: Permitted Facilities Listing

A review of the AIRS list, as provided by EDR, and dated 01/26/2021 has revealed that there are 2 AIRS sites within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANATEE CNTY-LANDFIL</td>
<td>3333 LENA RD</td>
<td>B20 / 3</td>
<td>95</td>
</tr>
<tr>
<td>Facility Status: A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facility Id: 810055</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOUTHERN GUNITE-BRAD</td>
<td>3302 81ST CT E</td>
<td>C25 / 3</td>
<td>200</td>
</tr>
<tr>
<td>Facility Status: A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facility Id: 810239</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Financial Assurance: Financial Assurance Information Listing

A review of the Financial Assurance list, as provided by EDR, has revealed that there are 3 Financial Assurance sites within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANATEE CNTY-LANDFIL</td>
<td>3333 LENA RD</td>
<td>B20 / 3</td>
<td>95</td>
</tr>
<tr>
<td>Database: Financial Assurance 1, Date of Government Version: 01/25/2021</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Database: Financial Assurance 3, Date of Government Version: 01/26/2021</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facility Id: 00044795</td>
<td></td>
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</tr>
</tbody>
</table>
HW GEN: Hazardous Waste Generators

A review of the HW GEN list, as provided by EDR, and dated 03/23/2021 has revealed that there is 1 HW GEN site within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANATEE CNTY-LANDFIL</td>
<td>3333 LENA RD</td>
<td>B20 / 3</td>
<td>95</td>
</tr>
</tbody>
</table>

TIER 2: Tier 2 Facility Listing

A review of the TIER 2 list, as provided by EDR, and dated 12/31/2019 has revealed that there are 5 TIER 2 sites within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRESTIGE GUNITE - BR</td>
<td>3132 EAST 81 COURT</td>
<td>A2 / 4</td>
<td>18</td>
</tr>
<tr>
<td>SOUTHEAST WATER RECL</td>
<td>3331 LENA ROAD</td>
<td>B7 / 3</td>
<td>25</td>
</tr>
<tr>
<td>BIOSOLIDS DRYER/SOUT</td>
<td>3331 LENA ROAD</td>
<td>B8 / 3</td>
<td>38</td>
</tr>
<tr>
<td>MANATEE COUNTY PUBLI</td>
<td>3331 LENA ROAD</td>
<td>B10 / 3</td>
<td>43</td>
</tr>
<tr>
<td>MANATEE CNTY-LANDFIL</td>
<td>3333 LENA RD</td>
<td>B20 / 3</td>
<td>95</td>
</tr>
</tbody>
</table>

*Additional key fields are available in the Map Findings section
NPDES: Wastewater Facility Regulation Database

A review of the NPDES list, as provided by EDR, and dated 01/29/2021 has revealed that there are 2 NPDES sites within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOUTHEAST WATER RECL</td>
<td>3331 LENA ROAD</td>
<td>B7 / 3</td>
<td>25</td>
</tr>
<tr>
<td>Status: A</td>
<td>Facility ID: FLR20DY53</td>
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<tr>
<td>Facility ID: FLRNEE423</td>
<td>Facility ID: FLA012618</td>
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<tr>
<td>Facility ID: FLG072647</td>
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<tr>
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<tr>
<td>Status: A</td>
<td>Facility ID: FLR05F797</td>
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</table>

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there is 1 EDR Hist Cleaner site within the requested target property.

<table>
<thead>
<tr>
<th>Site</th>
<th>Address</th>
<th>Map ID / Focus Map(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIOS DRYCLEANING TO</td>
<td>3101 81ST CT E</td>
<td>A1 / 4</td>
<td>18</td>
</tr>
</tbody>
</table>

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Page Numbers and Map Identifications refer to the EDR Area/Corridor Report where detailed data on individual sites can be reviewed.

Sites listed in **bold italics** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facility Database

A review of the SWF/LF list, as provided by EDR, has revealed that there are 2 SWF/LF sites within approximately 0.5 miles of the requested target property.
## EXECUTIVE SUMMARY

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### State and tribal registered storage tank lists

AST: Storage Tank Facility Information

A review of the AST list, as provided by EDR, has revealed that there is 1 AST site within approximately 0.25 miles of the requested target property.

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## MAPPED SITES SUMMARY

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**LENA ROAD**  
**BRADENTON, FL 34211**

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TC6558351.5s  Page 2
## MAP FINDINGS SUMMARY

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*State and tribal institutional control / engineering control registries*

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- INST CONTROL: 0.500 - 0 0 0 NR NR 0

*State and tribal voluntary cleanup sites*

- INDIAN VCP: 0.500 - 0 0 0 NR NR 0
- VCP: 0.500 - 0 0 0 NR NR 0

*State and tribal Brownfields sites*

- BROWNFIELDS: 0.500 - 0 0 0 NR NR 0

**ADDITIONAL ENVIRONMENTAL RECORDS**

*Local Brownfield lists*

- US BROWNFIELDS: 0.500 - 0 0 0 NR NR 0

*Local Lists of Landfill / Solid Waste Disposal Sites*

- SWRCY: 0.500 - 0 0 0 NR NR 0
- INDIAN ODI: 0.500 - 0 0 0 NR NR 0
- DEBRIS REGION 9: 0.500 - 0 0 0 NR NR 0
- ODI: 0.500 - 0 0 0 NR NR 0
- IHS OPEN DUMPS: 0.500 - 0 0 0 NR NR 0

*Local Lists of Hazardous waste / Contaminated Sites*

- US HIST CDL: TP - NR NR NR NR NR NR 0
- PRIORITYCLEANERS: 0.500 - 0 0 0 NR NR 0
- FI Sites: 1,000 - 0 0 0 0 NR 0
- US CDL: TP - NR NR NR NR NR 0
- PFAS: 0.500 - 0 0 0 NR NR 0

*Local Land Records*

- LIENS 2: TP - NR NR NR NR NR 0

**Records of Emergency Release Reports**

- HMIRS: TP - NR NR NR NR NR 0
- SPILLS: TP - 1 NR NR NR NR NR 1
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**Other Ascertainable Records**

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**NOTES:**
- TP = Target Property
- NR = Not Requested at this Search Distance
- Sites may be listed in more than one database
Target Property:
LENA ROAD
BRADENTON, FL  34211

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<th>DIST (ft. &amp; mi.)</th>
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NO MAPPED SITES FOUND
Target Property:
LENA ROAD
BRADENTON, FL 34211

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NO MAPPED SITES FOUND
MAP ID / FOCUS MAP | SITE NAME | ADDRESS | DATABASE ACRONYMS | DIST (ft. & mi.) | DIRECTION
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3 / 3 | AMERICAN PRIDE GOLF | 3208 81ST CT E | SWF/LF | TP | 
B4 / 3 | MANATEE COUNTY SOUTH | 3331 LENA RD | ECHO | TP | 
B5 / 3 | SOUTHEAST REGIONAL W | 3331 LENA ROAD | FINDS | TP | 
B6 / 3 | SOUTHEAST REGIONAL W | 3331 LENA ROAD | RMP | TP | 
B7 / 3 | SOUTHEAST WATER RECL | 3331 LENA ROAD | SPILLS, TIER 2, NPDES | TP | 
B8 / 3 | BIOSOLIDS DRYER/SOUT | 3331 LENA ROAD | TIER 2 | TP | 
B9 / 3 | MANATEE CNTY EAST PL | 3331 LENA RD | AST | TP | 
B10 / 3 | MANATEE COUNTY PUBLIC | 3331 LENA ROAD | AST, TIER 2 | TP | 
B11 / 3 | MANATEE COUNTY SOUTH | 3331 LENA RD | FINDS, ECHO | TP | 
B12 / 3 | MANATEE COUNTY SOUTH | 3331 LENA RD | ECHO | TP | 
B13 / 3 | MANATEE COUNTY FLEET | 3333 LENA RD | RCRA-VSQG, FINDS, ECHO | TP | 
B14 / 3 | MANATEE COUNTY UTILI | 3333 LENA ROAD | ICIS, US AIRS | TP | 
B15 / 3 | LENA ROAD CLASS I LA | 3333 LENA ROAD | FINDS, ECHO | TP | 
B16 / 3 | LENA RD LANDFILL - P | 3333 LENA ROAD | FINDS, ECHO | TP | 
B17 / 3 | MANATEE COUNTY LENA | 3333 LENA RD # B | RCRA-SQG | TP | 
B18 / 3 | MANATEE COUNTY FLEET | 3333 LENA RD | RCRA-SQG | TP | 
B19 / 3 | PACIFIC TOMATO GROWE | 3333 LENA RD | FINDS, ECHO | TP | 
B20 / 3 | MANATEE CNTY-LANDFIL | 3333 LENA RD | SWF/LF, UST, AST, AIRS, Financial Assurance | TP | 
B21 / 3 | MANATEE CNTY-SE WWTP | 3335 LENA RD | UST, AST, Financial Assurance | TP | 
B22 / 3 | MANATEE COUNTY LGTTE | 3415 LENA RD | FINDS | TP | 
C23 / 3 | SOUTHERN GUNITE, INC | 3302 81ST CT E | AST | TP | 
C24 / 3 | PRESTIGE GUNITE OF B | 3302 EAST 81ST COURT | FINDS, ECHO | TP | 
C25 / 3 | SOUTHERN GUNITE-BRAD | 3302 81ST CT E | AIRS, Financial Assurance | TP | 
26 / 3 | LENA TOWERS BUSINESS | 3730 LENA RD | FINDS, ECHO | TP | 
27 / 3 | DAVIS CONCRETE | 3331 81ST CT E | AST | 93 0.018 East | 
28 / 3 | FREEDOM RECYCLING C& | 3407 81ST COURT, EAS | SWF/LF | 93 0.018 East | 
29 / 3 | TIRE AND WHEEL OUTLE | 7218 36TH AVE E | SWF/LF | 2275 0.431 West |
Target Property:
LENA ROAD
BRADENTON, FL  34211

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Target Property:
LENA ROAD
BRADENTON, FL 34211

MAP ID / FOCUS MAP | SITE NAME | ADDRESS | DATABASE ACRONYMS | DIST (ft. & mi.) | DIRECTION
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Target Property:
LENA ROAD
BRADENTON, FL 34211

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NO MAPPED SITES FOUND
### A1 - RIOS DRYCLEANING TO GO

**Target**: 3101 81ST CT E  
**Property**: BRADENTON, FL  34211

**Site 1 of 2 in cluster A**

- **Actual**: 29 ft.
- **Focus Map**: 4
- **Year**: 2007  
  **Name**: RIOS DRYCLEANING TO GO  
  **Type**: Drycleaning Plants, Except Rugs, NEC
- **Year**: 2008  
  **Name**: RIOS DRYCLEANING TO GO  
  **Type**: Drycleaning Plants, Except Rugs, NEC

---

### A2 - PRESTIGE GUNITE - BRADENTON

**Target**: 3132 EAST 81 COURT  
**Property**: BRADENTON, FL  34211

**Site 2 of 2 in cluster A**

- **Actual**: 29 ft.
- **Focus Map**: 4
- **Name**: PRESTIGE GUNITE - BRADENTON
- **Address**: 3132 EAST 81 COURT  
  **City,State,Zip**: BRADENTON, FL 34211
- **Year**: Not reported
- **Facility Id**: Not reported
- **Active Date**: 01/01/2005
- **Inactive Date**: 12/31/2006
- **Sale Pending**: False
- **Original Date**: Not reported
- **PLOT Source**: Not reported
- **Latitude**: 27.469444  
  **Longitude**: -82.456944
- **LEPC District**: 8  
  **Counties**: Pinellas, Pasco, Manatee, Hillsborough,  
  **SPRC**: 33584
- **Program Level**: 0
- **PRIME**: 25895
- **SIC Code**: Not reported
- **NAICS Code**: 23571

**Other Chemical Data**:
- **Report Year**: 2006
- **Tier 2 Report ID**: 96362
- **Chemical ID**: 252563
- **CAS Number**: 65997151
- **Chemical Name**: PORTLAND CEMENT
- **Chemical Date**: 2/12/2007
- **Average Amount**: 4
- **Maximum Amount**: 125000
- **Location ID**: 432178
- **Chemical State**: Solid
- **Mixture**: True
- **Mixture Percent**: .00
- **Container**: H - SILO
- **Pressure**: 1 - AMBIENT PRESSURE  
  **Temperature**: 4 - AMBIENT TEMPERATURE
- **Average Amount**: 4
- **Maximum Amount**: 125000
- **Days on Site**: 365
- **Site Plan**: False
PRESTIGE GUNITE - BRADENTON  (Continued)

Site Plan Document: Not reported  
Private Location: False  
Location: CENTER OF PROPERTY

Report Year: 2006  
Tier 2 Report ID: 96362  
Chemical ID: 252562  
CAS Number: 68476346  
Chemical Name: DIESEL FUEL OIL (HIGH SULFUR)  
Chemical Date: 2/12/2007  
Average Amount: 4  
Maximum Amount: 74000  
Location ID: 432177  
Chemical State: LIQUID  
Mixture: True  
Mixture Percent: .00  
Container: A - ABOVE GROUND TANK  
Pressure: 1 - AMBIENT PRESSURE  
Temperature: 4 - AMBIENT TEMPERATURE  
Average Amount: 4  
Maximum Amount: 74000  
Days on Site: 365  
Site Plan: False  
Site Plan Document: Not reported  
Private Location: False  
Location: ADJACENT TO BLDG.

Report Year: 2005  
Tier 2 Report ID: 95013  
Chemical ID: 247030  
CAS Number: 65997151  
Chemical Name: PORTLAND CEMENT  
Chemical Date: 10/9/2006  
Average Amount: 4  
Maximum Amount: 125000  
Location ID: 425311  
Chemical State: Solid  
Mixture: True  
Mixture Percent: .00  
Container: H - SILO  
Pressure: 1 - AMBIENT PRESSURE  
Temperature: 4 - AMBIENT TEMPERATURE  
Average Amount: 4  
Maximum Amount: 125000  
Days on Site: 365  
Site Plan: False  
Site Plan Document: Not reported  
Private Location: False  
Location: CENTER OF PROPERTY NEXT TO BATCH PLANT

Report Year: 2005  
Tier 2 Report ID: 95013  
Chemical ID: 247029  
CAS Number: 68476346
PRESTIGE GUNITE - BRADENTON (Continued)

Chemical Name: DIESEL FUEL OIL (HIGH SULFUR)
Chemical Date: 10/9/2006
Average Amount: 4
Maximum Amount: 74000
Location ID: 425310
Chemical State: LIQUID
Mixture: True
Mixture Percent: .00
Container: B - BELOW GROUND TANK
Pressure: 1 - AMBIENT PRESSURE
Temperature: 4 - AMBIENT TEMPERATURE
Average Amount: 4
Maximum Amount: 74000
Days on Site: 365
Site Plan: False
Site Plan Document: Not reported
Private Location: False
Location: ADJACENT TO BUILDING

Company Info:
Company Name: PRESTIGE MANAGEMENT COMPANY, SOUTH
Company Address: 7228-C WESTPORT PLACE
Company City,St,Zip: WEST PALM BEACH, FL 33413
Company Phone: 561-478-9980
Company Fax: 561-478-2911
Company Email: mmahoney@prestige-gunite.com
FEI Number: 650252164
Company Contact Name: MIKE MAHONEY
Cmpny Contact Phone: 561-478-9980
Reduced Fees: True
Exempt Fees: False
Electronic Filing: False
Employee: 0
Comments: 10-3-06: PER DAVID HAGEN THE FEI#S ON THE TIER II S ARE NOT REGISTERED WITH THEM. ONLY THE #S ON THE ARF. RM

3 AMERICAN PRIDE GOLF CART SERVICES
Target 3208 81ST CT E
Property BRADENTON, FL 34211

SWF/LF:
Name: AMERICAN PRIDE GOLF CART SERVICES
Address: 3208 81ST CT E
City,State,Zip: BRADENTON, FL 34211
Facility ID: 105066
District: SWD
Lat/Long: :: / ::
Class Type: 754
Classification: WASTE TIRE COLLECTOR
Class Status: INACTIVE (I)
Section: Not reported
Township: Not reported
Range: Not reported
AMERICAN PRIDE GOLF CART SERVICES (Continued)

Responsible Authority Name: Not reported
Responsible Authority Address: Not reported
Responsible Authority City,St,Zip: Not reported
Responsible Authority Phone: Not reported
EMail Address1: Not reported
EMail Address2: Not reported
Site Supervisor Name: Not reported
Site Supervisor Addr: Not reported
Site Supervisor City/State/Zip: Not reported
Site Supervisor Telephone: Not reported
Land Owner Name: Not reported
Land Owner Address: Not reported
Land Owner City/State/Zip: Not reported
Land Owner Telephone: Not reported

Click here for Florida Oculus:

B4 MANATEE COUNTY SOUTHEAST REGIONAL WWTF
Target 3331 LENA RD
Property BRADENTON, FL 34211

Site 1 of 19 in cluster B
Actual: 30 ft.
Focus Map: 3

ECHO: 1010737975
Envid: 110033633968
Registry ID: http://echo.epa.gov/detailed-facility-report?fid=110033633968
Name: MANATEE COUNTY SOUTHEAST REGIONAL WWTF
Address: 3331 LENA RD
City,State,Zip: BRADENTON, FL 34211

B5 SOUTHEAST REGIONAL WASTEWATER TREATMENT FACILITY
Target 3331 LENA ROAD
Property BRADENTON, FL 34211

Site 2 of 19 in cluster B
Actual: 30 ft.
Focus Map: 3

FINDS: 1011262762
Registry ID: 110020728113

Environmental Interest/Information System:
US EPA Risk Management Plan (RMP) database stores the risk management plans reported by companies that handle, manufacture, use, or store certain flammable or toxic substances, as required under section 112(r) of the Clean Air Act (CAA).
Florida Environmental System Today Application (FIESTA) Data Maintenance (FDM) system maintains entity, environmental interest and affiliation data for the State of Florida.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.
B6 SOUTHEAST REGIONAL WASTEWATER TREATMENT FACILITY

Target 3331 LENA ROAD
Property BRADENTON, FL 34202

Site 3 of 19 in cluster B

Actual: 30 ft.

Focus Map: 3

RMP:

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<tr>
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<td>LEPC city:</td>
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<td>Facility decimal latitude:</td>
<td>27.46833</td>
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<tr>
<td>Facility decimal longitude:</td>
<td>-82.448889</td>
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<td>Is facility in county box:</td>
<td>T</td>
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<td>LatLong method:</td>
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<tr>
<td>Home page web address:</td>
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<td>Facility telephone:</td>
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<td>Facility email:</td>
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<td>Facility DUNS #:</td>
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<td>Manatee County Government</td>
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<tr>
<td>Operators address:</td>
<td>4410 66th Street West</td>
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<tr>
<td>Operators City,St,Zip:</td>
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<td>RMP implementation contact:</td>
<td>Lenox E. Bramble, P.E.</td>
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<td>Emergency contact:</td>
<td>Dalton Cook</td>
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<td>Chief Operator</td>
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<td>Is fac. covered by CAA Title V 112(2):</td>
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<td>Last safety insp. dat:</td>
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<td>Post, Buckley, Schuh &amp; Jernigan, Inc.</td>
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<td>Date RMP received:</td>
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<td>Does RMP contain graphics files:</td>
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SOUTHEAST REGIONAL WASTEWATER TREATMENT FACILITY (Continued) 1011837665

Does RMP contain attachments: False
Was certification letter received: True
RMP submission method: RMP*Submit
Does RMP contain CBI substantiation: False
Does RMP contain electronic waiver: False
Date RMP postmarked: 1999-06-21 00:00:00
Is RMP complete: True
Date of de-registration: 2002-03-20 00:00:00
Date de-registration is effective: 2000-09-15 00:00:00
Anniversary date: 2004-06-21 00:00:00
Does RMP contain CBI data: False
Does RMP contain unsanitized CBI version: False
RMP version #: 1.1.7
FRS latitude: 27.468330000000002
FRS longitude: -82.44890000000006
FRS Description: PROCESS UNIT
FRS Method: GPS CARRIER PHASE STATIC RELATIVE POSITION

Emergency Responses:
ER plan most recent review date: 1997-09-15 00:00:00
ER plan most recent employee training date: 1998-05-31 00:00:00
Local agency coordinating ER plan: Braden River Fire Department
Telephone of the coordinating local agency: 9417515611
Federal regulation: True
OSHA 1910 120: False
SPCC: False
RCRA: False
OPA 90: False
EPCRA: False
Other Regulations: Not reported

Processes:
Process ID: 17650
Optional facility description: Chlorination
Program level: 3
Record contains CBI data: False

Process NAICS:
NAICS code description: Sewage Treatment Facilities

Prevention Program 3:
Safety review date: 1999-06-17 00:00:00
Most recent PHA date: 1999-04-29 00:00:00
Process Hazard Analysis: HAZOP
Expected PHA changes completion date: 1999-12-31 00:00:00
Major Hazard: Toxic Release, Fire, Explosion, Overpressurization, Corrosion, Contamination, Equipment failure, Cooling loss, Floods, Tornado, Hurricanes
Process Control:
Vents, Relief valves, Check valves, Manual shutoffs, Interlocks, Alarms, Emergency air supply, Emergency power, Grounding equipment
Mitigation Systems:
None
Monitoring/Detection:
Process area detector
Changes since the last process hazard analysis:
None
Most recent review of op. procedures:
1999-06-17 00:00:00
Most recent training progs review/update:
1999-06-17 00:00:00
Training: Classroom
Competency testing: Demonstration, Observation

TC6558351.5s Page 23
SOUTHEAST REGIONAL WASTEWATER TREATMENT FACILITY (Continued) 1011837665

Most recent maintenance review date: 1999-06-17 00:00:00
Most recent equipment inspection date: 1999-06-17 00:00:00
Equipment tested: all chlorine service equipment inspected daily
Most recent changes by mgmt: Not reported
Date of most recent review/upgrade: 1999-06-17 00:00:00
Date of pre-start review: 1999-06-17 00:00:00
Most recent compliance audit date: 1999-05-01 00:00:00
Expected date of audit completion: 1999-05-01 00:00:00
Most recent incident investigation: Not reported
Expected date of investigation changes: Not reported
Date of participation plan review: 1999-06-17 00:00:00
Date of hot work permit review: 1999-06-17 00:00:00
Date of contractor safety review: 1999-06-17 00:00:00
Date of contractor safety eval. review: Not reported
Record has CBI data: False

Process Chemicals:
Chemical name: Public OCA Chemical
Process chemical qty in 100s lbs: 0

Toxics Alt Releases:
Percent weight of chemical: 100
Physical state: a
Analytical basic: EPA’s RMP*Comp(TM)
Scenario: Not reported
Quantity released in pounds: Not reported
Release duration in minutes: Not reported
Release rate in pounds per second: Not reported
Wind speed in meters/second: 3
Stability class: D
Topography: a
Distance to endpoint in miles: Not reported
Residential population: Not reported
Public receptors: Not reported
Environmental receptors: Not reported
Passive mitigation: Not reported
Active mitigation: Chlorine gas leak detectors

Toxics Worst Case:
Percent weight of chemical: 100
Physical state: c
Analytical basic: EPA’s RMP*Comp(TM)
Scenario: Not reported
Quantity released in pounds: Not reported
Release duration in minutes: 10
Release rate in pounds per second: Not reported
Wind speed in meters/second: 1.5
Stability class: F
Topography: a
Distance to endpoint in miles: Not reported
Residential population: Not reported
Public receptors: Not reported
Environmental receptors: Not reported
Passive mitigation: Not reported

Chemical name: Chlorine
SOUTHEAST REGIONAL WASTEWATER TREATMENT FACILITY (Continued)

Process chemical qty in 100s lbs: 40000

B7 SOUTHEAST WATER RECLAMATION FACILITY
Target 3331 LENA ROAD
Property BRADENTON, FL 34202

Site 4 of 19 in cluster B

Actual:
30 ft.

Focus Map:
3

SPILLS:
Name: Not reported
Address: 3331 LENA ROAD
City,State,Zip: BRADENTON, FL
OHMIT Incident Number: 9820
Incident Legacy: 00-4I-0990Z
On-Scene Response: No
Criminal Indicator: No
Hurricane Indicator: No
Incident Date: 12/18/2000
Incident Status: Closed
Incident Report Date: Not reported

TIER 2:
Name: SOUTHEAST WATER RECLAMATION FACILITY
Address: 3331 LENA ROAD
City,State,Zip: BRADENTON, FL 34211

Year: 2019
Facility Id: 6633883
Active Date: Not reported
Inactive Date: Not reported
Sale Pending: Not reported
Original Date: Not reported
PLOT Source: Not reported
Latitude: Not reported
Longitude: Not reported
LEPC District: Not reported
Counties: Not reported
SERC: Not reported
Program Level: Not reported
PRIME: Not reported
SIC Code: Not reported
SIC Code 2: Not reported
NAICS Code: 221320
Last Modified Date: 02/20/2020
First Submit Date: 02/20/2020
Data Submitted By: Christian Collins
Company Name: Manatee County Utilities Department
Comments: Not reported

Contact:
Contact ID: Not reported
Year: 2019
Facility Id: 6633883
Contact Type: Owner / Operator
Contact Name: Manatee County Utilities Department
Contact Title: Not reported
SOUTHEAST WATER RECLAMATION FACILITY (Continued)  S109211083

Contact Phone: Not reported
Contact 24Hr Phone: Not reported
Contact Telephone 2: (941) 792-8811 ext 8025
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: Chris.Collins@mymanatee.org

Contact ID: Not reported
Year: 2019
Facility Id: 6633883
Contact Type: Owner / Operator
Contact Name: Manatee County Utilities Department
Contact Title: Not reported
Contact Phone: Not reported
Contact 24Hr Phone: Not reported
Contact Telephone 2: (941) 792-8811 ext 8025
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: Chris.Collins@mymanatee.org

Contact ID: Not reported
Year: 2019
Facility Id: 6633883
Contact Type: Owner / Operator
Contact Name: Manatee County Utilities Department
Contact Title: Not reported
Contact Phone: Not reported
Contact 24Hr Phone: Not reported
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Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: Chris.Collins@mymanatee.org

Contact ID: Not reported
Year: 2019
Facility Id: 6633883
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Contact Name: Manatee County Utilities Department
Contact Title: Not reported
Contact Phone: Not reported
Contact 24Hr Phone: Not reported
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Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: Chris.Collins@mymanatee.org

Contact ID: Not reported
Year: 2019
Facility Id: 6633883
### SOUTHEAST WATER RECLAMATION FACILITY (Continued)

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<td>Contact Email:</td>
<td><a href="mailto:Chris.Collins@mymanatee.org">Chris.Collins@mymanatee.org</a></td>
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<td>Charles Froman</td>
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| Facility Id: | 6365465 |
| Contact Type: | Owner / Operator |
| Contact Name: | Manatee County Utilities Department |
| Contact Title: | Not reported |
| Contact Phone: | Not reported |
| Contact 24Hr Phone: | Not reported |
| Contact Telephone 2: | (941) 792-8811 ext.5162 |
| Contact Telephone 3: | Not reported |
| Contact Telephone 4: | Not reported |
| Contact Telephone 5: | Not reported |
| Contact Telephone 6: | Not reported |
| Contact Email: | Chuck.Froman@mymanatee.org |
| Contact ID: | Not reported |
### SOUTHEAST WATER RECLAMATION FACILITY (Continued)

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Contact Name: Manatee County Utilities Department
Contact Title: Not reported
Contact Phone: Not reported
Contact 24Hr Phone: Not reported
Contact Telephone 2: (941) 792-8811 ext.5162
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: Chuck.Froman@mymanatee.org

Contact ID: Not reported
Year: 2018
Facility Id: 6365465
Contact Type: Owner / Operator
Contact Name: Manatee County Utilities Department
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Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: Chuck.Froman@mymanatee.org
SOUTHEAST WATER RECLAMATION FACILITY (Continued)

Contact Email: Chuck.Froman@mymanatee.org

Contact ID: Not reported
Year: 2018
Facility Id: 6365465
Contact Type: Owner / Operator
Contact Name: Manatee County Utilities Department
Contact Title: Not reported
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Contact 24Hr Phone: Not reported
Contact Telephone 2: (941) 792-8811 ext.5162
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: Chuck.Froman@mymanatee.org

Name: SOUTHEAST WATER RECLAMATION FACILITY
Address: 3331 LENA ROAD
City, State, Zip: BRADENTON, FL 34211

Year: 2017
Facility Id: 6084698
Active Date: Not reported
Inactive Date: Not reported
Sale Pending: Not reported
Original Date: Not reported
PLOT Source: Not reported
Latitude: Not reported
Longitude: Not reported
LEPC District: Not reported
Counties: Not reported
SERC: Not reported
Program Level: Not reported
PRIME: Not reported
SIC Code: Not reported
SIC Code 2: Not reported
NAICS Code: 221320
Last Modified Date: 02/28/2018
First Submit Date: 02/28/2018
Data Submitted By: Charles Froman
Company Name: Manatee County Utilities Department
Comments: Not reported

Contact:
Contact ID: Not reported
Year: 2017
Facility Id: 6084698
Contact Type: Emergency Contact
Contact Name: Victor Boucher
Contact Title: Not reported
Contact Phone: (941) 932-6122
Contact 24Hr Phone: Not reported
Contact Telephone 2: (941) 792-8811 ext 8028
Contact Telephone 3: Not reported
Contact Telephone 4: (941) 792-8811 ext 5162
SOUTHEAST WATER RECLAMATION FACILITY (Continued)  

Name: SOUTHEAST WATER RECLAMATION FACILITY  
Address: 3331 LENA ROAD  
City, State, Zip: BRADENTON, FL 34202  
Year: 2016  
Facility Id: 5840457  
Active Date: Not reported  
Inactive Date: Not reported  
Sale Pending: Not reported  
Original Date: Not reported  
PLOT Source: Not reported  
Latitude: Not reported  
Longitude: Not reported  
LEPC District: Not reported  
Counties: Not reported  
SERC: Not reported  
Program Level: Not reported  
PRIME: Not reported  
SIC Code: Not reported  
SIC Code 2: Not reported  
NAICS Code: 221320  
Last Modified Date: 02/22/2017  
First Submit Date: 02/22/2017  
Data Submitted By: Charles Froman  
Company Name: Manatee County Utilities Department  
Comments: Not reported  

Contact:  
Contact ID: Not reported  
Year: 2016  
Facility Id: 5840457  
Contact Type: Emergency Contact  
Contact Name: Dalton Cook  
Contact Title: Not reported  
Contact Phone: (941) 713-0269  
Contact 24Hr Phone: Not reported  
Contact Telephone 2: (941) 792-8811 ext 8021  
Contact Telephone 3: Not reported  
Contact Telephone 4: (941) 792-8811 ext 5162  
Contact Telephone 5: Not reported  
Contact Telephone 6: (941) 792-8811  
Contact Email: Dalton.Cook@mymanatee.org

Name: SOUTHEAST WATER RECLAMATION FACILITY  
Address: 3331 LENA ROAD  
City, State, Zip: BRADENTON, FL 34202  
Year: 2014  
Facility Id: 5115468  
Active Date: Not reported
SOUTHEAST WATER RECLAMATION FACILITY (Continued)  

Inactive Date: Not reported  
Sale Pending: Not reported  
Original Date: Not reported  
PLOT Source: Not reported  
Latitude: 27.4680454874654  
Longitude: -82.45146641014656  
LEPC District: Not reported  
Counties: Not reported  
SERC: Not reported  
Program Level: Not reported  
PRIME: Not reported  
SIC Code: 4952  
SIC Code 2: Not reported  
NAICS Code: 22132  
Last Modified Date: 06/08/2015  
First Submit Date: 06/08/2015  
Data Submitted By: Chris Collins / Supervisor  
Company Name: MANATEE COUNTY UTILITIES DEPARTMENT  
Comments: Not reported  

Contact:  
Contact ID: Not reported  
Year: 2014  
Facility Id: 5115468  
Contact Type: Emergency Contact  
Contact Name: Chuck Froman  
Contact Title: Not reported  
Contact Phone: 941-773-6830  
Contact 24Hr Phone: Not reported  
Contact Telephone 2: 941-792-8811  
Contact Telephone 3: Not reported  
Contact Telephone 4: Not reported  
Contact Telephone 5: Not reported  
Contact Telephone 6: Not reported  
Contact Email: chuck.froman@mymanatee.org  

Name: SOUTHEAST WATER RECLAMATION FACILITY  
Address: 3331 LENA ROAD  
City,State,Zip: BRADENTON, FL 34202  
Year: 2013  
Facility Id: 4566766  
Active Date: Not reported  
Inactive Date: Not reported  
Sale Pending: Not reported  
Original Date: Not reported  
PLOT Source: Not reported  
Latitude: 27.4676  
Longitude: -82.449900  
LEPC District: Not reported  
Counties: Not reported  
SERC: Not reported  
Program Level: Not reported  
PRIME: Not reported  
SIC Code: 4952  
SIC Code 2: Not reported
### SOUTHEAST WATER RECLAMATION FACILITY (Continued)

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<td>DALTON COOK, CHIEF OPERATOR</td>
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<td>MANATEE COUNTY UTILITIES DEPARTMENT</td>
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**Contact:**
- **Contact ID:** Not reported
- **Year:** 2013
- **Facility Id:** 4566766
- **Contact Type:** Emergency Contact
- **Contact Name:** CHUCK FROMAN
- **Contact Title:** Not reported
- **Contact Phone:** 941-773-6830
- **Contact 24Hr Phone:** Not reported
- **Contact Telephone 2:** 941-792-8811
- **Contact Telephone 3:** Not reported
- **Contact Telephone 4:** Not reported
- **Contact Telephone 5:** Not reported
- **Contact Telephone 6:** Not reported
- **Contact Email:** chuck.froman@mymanatee.org

**Name:** SOUTHEAST WATER RECLAMATION FACILITY
**Address:** 3331 LENA ROAD
**City, State, Zip:** BRADENTON, FL 34202
**Year:** 2012
**Facility Id:** 4218254
**Active Date:** Not reported
**Inactive Date:** Not reported
**Sale Pending:** Not reported
**Original Date:** Not reported
**PLOT Source:** Not reported
**Latitude:** 27.4676
**Longitude:** -82.449900
**LEPC District:** Not reported
**Counties:** Not reported
**SERC:** Not reported
**Program Level:** Not reported
**PRIME:** Not reported
**SIC Code:** 4952
**SIC Code 2:** Not reported
**NAICS Code:** 11111
**Last Modified Date:** 06/14/2013
**First Submit Date:** 06/14/2013
**Data Submitted By:** DALTON COOK, CHIEF OPERATOR
**Company Name:** MANATEE COUNTY UTILITIES DEPARTMENT
**Comments:** Not reported

**Contact:**
- **Contact ID:** Not reported
- **Year:** 2012
- **Facility Id:** 4218254
- **Contact Type:** Tier II Secondary Contact
- **Contact Name:** DALTON COOK
SOUTHEAST WATER RECLAMATION FACILITY (Continued)

Contact Title: Not reported
Contact Phone: 941-792-8811
Contact 24Hr Phone: Not reported
Contact Telephone 2: Not reported
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: Not reported
Contact ID: Not reported
Year: 2012
Facility Id: 4218254
Contact Type: Owner / Operator
Contact Name: CHRIS COLLINS
Contact Title: Not reported
Contact Phone: 941-920-2083
Contact 24Hr Phone: Not reported
Contact Telephone 2: 941-792-8811
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: UNKNOWN
Contact ID: Not reported
Year: 2012
Facility Id: 4218254
Contact Type: Tier II Emergency Contact
Contact Name: CHUCK FROMAN
Contact Title: Not reported
Contact Phone: 941-792-8811
Contact 24Hr Phone: Not reported
Contact Telephone 2: 941-773-6830
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: UNKNOWN

Name: SOUTHEAST WATER RECLAMATION FACILITY
Address: 3331 LENA ROAD
City, State, Zip: BRADENTON, FL 34202
Year: 2011
Facility Id: 3990509
Active Date: Not reported
Inactive Date: Not reported
Sale Pending: Not reported
Original Date: Not reported
PLOT Source: Not reported
Latitude: 27.4676
Longitude: -82.449900
LEPC District: Not reported
Counties: Not reported
SOUTHEAST WATER RECLAMATION FACILITY (Continued)

SERC: Not reported
Program Level: Not reported
PRIME: Not reported
SIC Code: Not reported
SIC Code 2: Not reported
NAICS Code: Not reported
Last Modified Date: 11/12/2012
First Submit Date: 11/09/2012
Data Submitted By: Florida Division of Emergency Management
Company Name: MANATEE COUNTY UTILITIES DEPARTMENT
Comments: Not reported

Contact:
Contact ID: Not reported
Year: 2011
Facility Id: 3990509
Contact Type: Tier II Secondary Contact
Contact Name: DALTON COOK
Contact Title: Not reported
Contact Phone: 941-792-8811
Contact 24Hr Phone: Not reported
Contact Telephone 2: Not reported
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: Not reported

Contact ID: Not reported
Year: 2011
Facility Id: 3990509
Contact Type: Tier II Emergency Contact
Contact Name: PAMALA KEYES
Contact Title: Not reported
Contact Phone: 941-792-8811
Contact 24Hr Phone: Not reported
Contact Telephone 2: Not reported
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: Not reported

Name: SOUTHEAST WATER RECLAMATION FACILITY
Address: 3331 LENA ROAD
City,State,Zip: BRADENTON, FL 34202
Year: 2010
Facility Id: Not reported
Active Date: Not reported
Inactive Date: Not reported
Sale Pending: Not reported
Original Date: Not reported
PLOT Source: Not reported
Latitude: 27.4684
Longitude: -82.45
### SOUTHEAST WATER RECLAMATION FACILITY (Continued)

**LEPC District:** Not reported  
**Counties:** Not reported  
**SERC:** Not reported  
**Program Level:** Not reported  
**PRIME:** Not reported  
**SIC Code:** Not reported  
**SIC Code 2:** Not reported  
**NAICS Code:** Not reported  
**Last Modified Date:** Not reported  
**First Submit Date:** Not reported  
**Data Submitted By:** Not reported  
**Company Name:** Not reported  
**Comments:** Not reported  

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<th>Location Name</th>
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<td>LIQUID</td>
<td>Bio Solids Dryer Building</td>
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**Name:** SOUTHEAST WATER RECLAMATION FACILITY  
**Address:** 3331 LENA ROAD  
**City, State, Zip:** BRADENTON, FL 34202  
**Year:** 2010  
**LEPC District:** Not reported  
**Counties:** Not reported  
**SERC:** Not reported  
**Program Level:** Not reported  
**PRIME:** Not reported  
**SIC Code:** Not reported  
**SIC Code 2:** Not reported  
**NAICS Code:** Not reported  
**Last Modified Date:** Not reported  
**First Submit Date:** Not reported  
**Data Submitted By:** Not reported  
**Company Name:** Not reported  
**Comments:** Not reported  

**Chemical Code:** 7727379  
**Chemical Name:** Nitrogen  
**Chemical State:** LIQUEFIED GAS  
**Location Name:** Bio Solids Dryer Building  
**Container Code:** A
SOUTHEAST WATER RECLAMATION FACILITY (Continued)  

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<td>Maximum Quantity</td>
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<td>Days On Site</td>
<td>365</td>
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Click this hyperlink while viewing on your computer to access 3 additional FL_TIER2: record(s) in the EDR Site Report.

WASTEWATER:
Name: MANATEE COUNTY SOUTHEAST REGIONAL WWTF
Address: 3331 LENA RD
City, State, Zip: BRADENTON, FL
Facility ID: FLR20DYS53
Facility Type: Construction Generic Dewatering
Status: Active - Existing, permitted facility/site for which effluent, reclaimed water or wastewater residual discharge into the environment and/or monitoring is taking place.

District Office: TLST
NPDES Permitted Site: Not reported
Environmental Interest: Not reported
Owner Type: County
Permit Capacity: Not reported
Party Name: Daniel Copeland, Project Engineer
Company Name: TLC Diversified
RP Address: 2719 17th St E
RP Address 2: Not reported
RP City, State, Zip: Palmetto FL 34221-9314
Telephone: 9417220621
Email: dcopeland@tlcdiversified.com
Issue Date: 10/19/2020
Effective Date: 10/19/2020
Expiration Date: 10/18/2025
DOC Description: Generic Permit

MAP FINDINGS

Name: SOUTHEAST WATER RECLAMATION FACILITY
Address: 3331 LENA RD
City, State, Zip: BRADENTON, FL
Facility ID: FLRNEE423
Facility Type: Stormwater No Exposure Certification
Status: Active - Existing, permitted facility/site for which effluent, reclaimed water or wastewater residual discharge into the environment and/or monitoring is taking place.

District Office: TLST
NPDES Permitted Site: Not reported
Environmental Interest: Not reported
Owner Type: County
Permit Capacity: Not reported
SOUTHEAST WATER RECLAMATION FACILITY (Continued)

Party Name: Mike Gore, PMTE
Company Name: MANATEE COUNTY UTILITIES
RP Address: 4410 66th Street West
RP Address 2: Not reported
RP City,Stat,Zip: Bradenton FL 34210
Telephone: 9417928811
Email: mike.gore@mymanatee.org
Issue Date: 11/02/2015
Effective Date: 11/01/2020
Expiration Date: 11/01/2020
DOC Description: Generic Permit
Latitude Degrees: 27
Latitude Minutes: 28
Latitude Seconds: 4
Longitude Degrees: 82
Longitude Minutes: 26
Longitude Seconds: 51
Treatment: Not reported
Decode For Fstatus: Active

Name: MANATEE COUNTY SOUTHEAST REGIONAL WWTF
Address: 3331 LENA RD
City,State,Zip: BRADENTON, FL
Facility ID: FLA012618
Facility Type: Domestic WWTP
Status: Active - Existing, permitted facility/site for which effluent, reclaimed water or wastewater residual discharge into the environment and/or monitoring is taking place.
District Office: SWD
NPDES Permitted Site: No
Environmental Interest: Not reported
Owner Type: County
Permit Capacity: 11
Party Name: Jeff Goodwin, Wastewater Division Manager
Company Name: Manatee County Utilities
RP Address: 4520 66th Street West
RP Address 2: Not reported
RP City,Stat,Zip: Bradenton FL 34210
Telephone: 9417928811
Email: jeff.goodwin@mymanatee.org
Issue Date: 08/10/2015
Effective Date: 11/16/2015
Expiration Date: 11/15/2025
DOC Description: Permit Revision
Latitude Degrees: Not reported
Latitude Minutes: Not reported
Latitude Seconds: Not reported
Longitude Degrees: Not reported
Longitude Minutes: Not reported
Longitude Seconds: Not reported
Treatment: Type I Conventional Activated Sludge (Carrousel)
Decode For Fstatus: Active

Name: MANATEE COUNTY SEWRF
Address: 3331 LENA RD
City,State,Zip: BRADENTON, FL
Facility ID: FLG072647
**SOUTHEAST WATER RECLAMATION FACILITY** (Continued)

- **Facility Type:** Dewatering GP
- **Status:** Active - Existing, permitted facility/site for which effluent, reclaimed water or wastewater residual discharge into the environment and/or monitoring is taking place.
- **District Office:** SWD
- **NPDES Permitted Site:** Yes
- **Environmental Interest:** Industrial Wastewater Program
- **Owner Type:** County
- **Permit Capacity:** Not reported
- **Company Name:** Poole & Kent Company of Florida
- **RP Address:** 1715 W Lemon St
- **Telephone:** Not reported
- **Email:** dylanp@pkflorida.com
- **Issue Date:** 03/02/2020
- **Effective Date:** 03/02/2020
- **Expiration Date:** 03/01/2025
- **DOC Description:** Generic Permit
- **Treatment:** Active

**B8**

**Target**

**Property**

**Site 5 of 19 in cluster B**

- **Actual:** 30 ft.
- **Focus Map:** 3

**BIOSOLIDS DRYER/SOUTHEAST WATER RECLAMATION FACILITY**

**Name:**

**Address:** 3331 LENA ROAD

**City, State, Zip:** BRADENTON, FL 34211

**Year:** 2019

**Facility Id:** 6633884

**Active Date:** Not reported

**Inactive Date:** Not reported

**Sale Pending:** Not reported

**Original Date:** Not reported

**PLOT Source:** Not reported

**Latitude:** Not reported

**Longitude:** Not reported

**LEPC District:** Not reported

**Counties:** Not reported

**SERC:** Not reported

**Program Level:** Not reported

**PRIME:** Not reported

**SIC Code:** Not reported

**SIC Code 2:** Not reported

**NAICS Code:** 221320

**Last Modified Date:** 02/20/2020
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**BIOSOLIDS DRYER/SOUTHEAST WATER RECLAMATION FACILITY** (Continued)

First Submit Date: 02/20/2020  
Data Submitted By: Christian Collins  
Company Name: Manatee County Utilities Department  
Comments: Not reported

Contact:  
Contact ID: Not reported  
Year: 2019  
Facility Id: 6633884  
Contact Type: Owner / Operator  
Contact Name: Manatee County Utilities Department  
Contact Title: Not reported  
Contact Phone: Not reported  
Contact 24Hr Phone: Not reported  
Contact Telephone 2: (941) 792-8811 ext. 8025  
Contact Telephone 3: Not reported  
Contact Telephone 4: Not reported  
Contact Telephone 5: Not reported  
Contact Telephone 6: Not reported  
Contact Email: Chris.Collins@mymanatee.org

Name: BIOSOLIDS DRYER/SOUTHEAST WATER RECLAMATION FACILITY  
Address: 3331 LENA ROAD  
City,State,Zip: BRADENTON, FL 34211  
Year: 2018  
Facility Id: 6365466  
Active Date: Not reported  
Inactive Date: Not reported  
Sale Pending: Not reported  
Original Date: Not reported  
PLOT Source: Not reported  
Latitude: Not reported  
Longitude: Not reported  
LEPC District: Not reported  
Counties: Not reported  
SERC: Not reported  
Program Level: Not reported  
PRIME: Not reported  
SIC Code: Not reported  
SIC Code 2: Not reported
BIOSOLIDS DRYER/SOUTHEAST WATER RECLAMATION FACILITY (Continued) S120696616

NAICS Code: 221320
Last Modified Date: 02/21/2019
First Submit Date: 02/12/2019
Data Submitted By: Charles Froman
Company Name: Manatee County Utilities Department

Contact:
Contact ID: Not reported
Year: 2018
Facility Id: 6365466
Contact Type: Owner / Operator
Contact Name: Manatee County Utilities Department
Contact Title: Not reported
Contact Phone: Not reported
Contact 24Hr Phone: Not reported
Contact Telephone 2: (941) 792-8811 ext. 5162
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: Chuck.Froman@mymanatee.org

Name: BIOSOLIDS DRYER/SOUTHEAST WATER RECLAMATION FACILITY
Address: 3331 LENA ROAD
City,State,Zip: BRADENTON, FL 34211

Year: 2017
Facility Id: 6084699
Active Date: Not reported
Inactive Date: Not reported
Sale Pending: Not reported
Original Date: Not reported
PLOT Source: Not reported
Latitude: Not reported
Longitude: Not reported
LEPC District: Not reported
Counties: Not reported
SERC: Not reported
Program Level: Not reported
PRIME: Not reported
BIOSOLIDS DRYER/SOUTHEAST WATER RECLAMATION FACILITY (Continued)

SIC Code: Not reported
SIC Code 2: Not reported
NAICS Code: 221320
Last Modified Date: 02/28/2018
First Submit Date: 02/28/2018
Data Submitted By: Charles Froman
Company Name: Manatee County Utilities Department
Comments: Not reported

Contact:
Contact ID: Not reported
Year: 2017
Facility Id: 6084699
Contact Type: Emergency Contact
Contact Name: Dalton Cook
Contact Title: Not reported
Contact Phone: (941) 713-0289
Contact 24Hr Phone: Not reported
Contact Telephone 2: (941) 792-8811 ext 8021
Contact Telephone 3: Not reported
Contact Telephone 4: (941) 792-8811 ext 5162
Contact Telephone 5: Not reported
Contact Telephone 6: (941) 792-8811 ext. 5162
Contact Email: Dalton.Cook@mymanatee.org

Name: BIOSOLIDS DRYER/SOUTHEAST WATER RECLAMATION FACILITY
Address: 3331 LENA ROAD
City, State, Zip: BRADENTON, FL 34202
Year: 2016
Facility Id: 5840458
Active Date: Not reported
Inactive Date: Not reported
Sale Pending: Not reported
Original Date: Not reported
PLOT Source: Not reported
Latitude: Not reported
Longitude: Not reported
LEPC District: Not reported
Counties: Not reported
SERC: Not reported
Program Level: Not reported
PRIME: Not reported
SIC Code: Not reported
SIC Code 2: Not reported
NAICS Code: 221320
Last Modified Date: 02/22/2017
First Submit Date: 02/22/2017
Data Submitted By: Charles Froman
Company Name: Manatee County Utilities Department
Comments: Not reported

Contact:
Contact ID: Not reported
Year: 2016
Facility Id: 5840458
### BIOSOLIDS DRYER/SOUTHEAST WATER RECLAMATION FACILITY (Continued)

**B9** MANATEE CNTY EAST PLANT

**Target** 3331 LENA RD

**Property** BRADENTON, FL 34202

**Site 6 of 19 in cluster B**

**Actual:**
- 30 ft.

**Focus Map:**
- 3

**Contact Type:** Emergency Contact
**Contact Name:** Dalton Cook
**Contact Title:** Not reported
**Contact Phone:** (941) 713-0269
**Contact 24Hr Phone:** Not reported
**Contact Telephone 2:** (941) 792-8811 ext 8021
**Contact Telephone 3:** Not reported
**Contact Telephone 4:** (941) 792-8811 ext 5162
**Contact Telephone 5:** Not reported
**Contact Telephone 6:** (941) 792-8811
**Contact Email:** Dalton.Cook@mymanatee.org

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<th>Distance</th>
<th>Elevation</th>
<th>Database(s)</th>
<th>EDR ID Number</th>
<th>EPA ID Number</th>
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</table>

Click here for Florida Oculus:
Site 7 of 19 in cluster B

Actual: 30 ft.
Focus Map: 3

AST:
Name: MANATEE CNTY-SE WWTP
Address: 3331 LENA RD
Facility ID: 9800602
Facility Status: CLOSED
Type Description: Chemical user
Facility Phone: 9417928811
DEP Contractor Own: D
Region: STATE
Positioning Method: AGPS
Lat/Long (dms): 27 28 4 / 82 26 52

Owner:
Owner Id: 5436
Owner Name: SIEMENS WATER TECHNOLOGIES
Owner Address: 2650 TALLEVAST RD
Owner Address 2: ATTN: STORAGE TANK REGIS
Owner City,St,Zip: SARASOTA, FL 34243
Owner Contact: CHARLES MALTBY
Owner Phone: 9413597942

Tank Id: 2
Status: Removed
Status Date: 05/01/2012
Install Date: 6/1/2008
Substance: Hazardous substance
Content Description: Hazardous Substance
Gallons: 6510
Tank Location: ABOVEGROUND

Tank Id: 1
Status: Removed
Status Date: 08/01/2000
Install Date: 1/1/1998
Substance: Waste oil
Content Description: Waste Oil
Gallons: 1000
Tank Location: ABOVEGROUND

Click here for Florida Oculus:

TIER 2:
Name: MANATEE COUNTY LANDFILL
Address: 3331 LENA ROAD
City,State,Zip: BRADENTON, FL 34211
Year: 2014
Facility Id: 5115472
Active Date: Not reported
Inactive Date: Not reported
Sale Pending: Not reported
MANATEE COUNTY PUBLIC UTILITIES - SE REGIONAL WWTP (Continued)

Original Date: Not reported
PLOT Source: Not reported
Latitude: 27.473603725708656
Longitude: -82.44684628390382
LEPC District: Not reported
Counties: Not reported
SERC: Not reported
Program Level: Not reported
PRIME: Not reported
SIC Code: 4953
SIC Code 2: Not reported
NAICS Code: 562219
Last Modified Date: 06/08/2015
First Submit Date: 06/08/2015
Data Submitted By: BRYAN WHITE, LANDFILL SUPERINTENDENT
Company Name: MANATEE COUNTY UTILITIES DEPARTMENT
Comments: Not reported

Contact:
Contact ID: Not reported
Year: 2014
Facility Id: 5115472
Contact Type: Emergency Contact
Contact Name: ANTHONY DEWEILER
Contact Title: Not reported
Contact Phone: 941-812-8796
Contact 24Hr Phone: Not reported
Contact Telephone 2: 941-792-8811
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: Not Listed

Name: MANATEE COUNTY PUBLIC UTILITIES - SE REGIONAL WWTP
Address: 3331 LENA ROAD
City,State,Zip: BRADENTON, FL 34202
Year: Not reported
Facility Id: Not reported
Active Date: Not reported
Inactive Date: Not reported
Sale Pending: False
Original Date: Not reported
PLOT Source: Google Maps
Latitude: 27.467600
Longitude: -82.449900
LEPC District: 8
Counties: Pinellas,Pasco,Manatee,Hillsborough,
SERC: 30699
Program Level: 0
PRIME: 3545
SIC Code: 4952
SIC Code 2: Not reported
NAICS Code: 22132

Other Chemical Data:
MANATEE COUNTY PUBLIC UTILITIES - SE REGIONAL WWTP (Continued) S107720669

Report Year: 2007
Tier 2 Report ID: 101014
Chemical ID: 283711
CAS Number: 1310732
Chemical Name: Sodium hydroxide
Chemical Date: 2/27/2008
Average Amount: 4
Maximum Amount: 6374
Location ID: 471726
Chemical State: Liquid
Mixture: True
Mixture Percent: .00
Container: A - ABOVE GROUND TANK
Pressure: 1 - AMBIENT PRESSURE
Temperature: 4 - AMBIENT TEMPERATURE
Average Amount: 4
Maximum Amount: 6374
Days on Site: 365
Site Plan: False
Site Plan Document: Not reported
Private Location: False
Location: EAST OF ADMIN BLDG. WEST OF LANDFILL

Report Year: 2007
Tier 2 Report ID: 101014
Chemical ID: 283709
CAS Number: 68476346
Chemical Name: DIESEL FUEL OIL (HIGH SULFUR)
Chemical Date: 2/27/2008
Average Amount: 5
Maximum Amount: 112640
Location ID: 471725
Chemical State: LIQUID
Mixture: True
Mixture Percent: .00
Container: A - ABOVE GROUND TANK
Pressure: 1 - AMBIENT PRESSURE
Temperature: 4 - AMBIENT TEMPERATURE
Average Amount: 5
Maximum Amount: 112640
Days on Site: 365
Site Plan: False
Site Plan Document: Not reported
Private Location: False
Location: DIRECTLY BEHIND ADMIN BLDG.

Report Year: 2007
Tier 2 Report ID: 101014
Chemical ID: 283708
CAS Number: 7681529
Chemical Name: Sodium hypochlorite
Chemical Date: 2/27/2008
Average Amount: 4
Maximum Amount: 64680
Location ID: 471724
MANATEE COUNTY PUBLIC UTILITIES - SE REGIONAL WWTP (Continued)

Chemical State: Liquid
Mixture: True
Mixture Percent: .00
Container: A - ABOVE GROUND TANK
Pressure: 1 - AMBIENT PRESSURE
Temperature: 4 - AMBIENT TEMPERATURE
Average Amount: 4
Maximum Amount: 64680
Days on Site: 365
Site Plan: False
Site Plan Document: Not reported
Private Location: False
Location: CHEMICAL STORAGE BLDG. NW END OF PLANT SOUTH OF HWY 64

Report Year: 2006
Tier 2 Report ID: 95587
Chemical ID: 270335
CAS Number: 68476346
Chemical Name: DIESEL FUEL OIL (HIGH SULFUR)
Chemical Date: 7/16/2007
Average Amount: 5
Maximum Amount: 118400
Location ID: 455243
Chemical State: LIQUID
Mixture: True
Mixture Percent: .00
Container: A - ABOVE GROUND TANK
Pressure: 1 - AMBIENT PRESSURE
Temperature: 4 - AMBIENT TEMPERATURE
Average Amount: 5
Maximum Amount: 118400
Days on Site: 365
Site Plan: False
Site Plan Document: Not reported
Private Location: False
Location: SEE MAP

Report Year: 2006
Tier 2 Report ID: 95587
Chemical ID: 270334
CAS Number: 7681529
Chemical Name: Sodium hypochlorite
Chemical Date: 7/16/2007
Average Amount: 4
Maximum Amount: 64680
Location ID: 455241
Chemical State: Liquid
Mixture: True
Mixture Percent: .00
Container: A - ABOVE GROUND TANK
Pressure: 1 - AMBIENT PRESSURE
Temperature: 4 - AMBIENT TEMPERATURE
Average Amount: 4
Maximum Amount: 64680
Days on Site: 365
MANATEE COUNTY PUBLIC UTILITIES - SE REGIONAL WWTP (Continued)  

Site Plan: False  
Site Plan Document: Not reported  
Private Location: False  
Location: CHEMICAL STORAGE BLDG. - NW END OF PLANT SOUTH OF HWY 64  

Report Year: 2005  
Tier 2 Report ID: 91247  
Chemical ID: 224971  
CAS Number: 7681529  
Chemical Name: Sodium hypochlorite  
Chemical Date: 1/30/2006  
Average Amount: 4  
Maximum Amount: 64680  
Location ID: 395842  
Chemical State: Liquid  
Mixture: True  
Mixture Percent: .00  
Container: A - ABOVE GROUND TANK  
Pressure: 1 - AMBIENT PRESSURE  
Temperature: 4 - AMBIENT TEMPERATURE  
Average Amount: 4  
Maximum Amount: 64680  
Days on Site: 365  
Site Plan: False  
Site Plan Document: Not reported  
Private Location: False  
Location: CHEMICAL STORAGE BLDG. NW END OF PLANT SOUTH OF HWY 64  

Report Year: 2004  
Tier 2 Report ID: 88662  
Chemical ID: 205955  
CAS Number: 7681529  
Chemical Name: Sodium hypochlorite  
Chemical Date: 3/15/2005  
Average Amount: 4  
Maximum Amount: 64680  
Location ID: 371040  
Chemical State: Liquid  
Mixture: False  
Mixture Percent: 100.00  
Container: A - ABOVE GROUND TANK  
Pressure: 1 - AMBIENT PRESSURE  
Temperature: 4 - AMBIENT TEMPERATURE  
Average Amount: 4  
Maximum Amount: 64680  
Days on Site: 365  
Site Plan: False  
Site Plan Document: Not reported  
Private Location: False  
Location: Not reported  

Report Year: 2003  
Tier 2 Report ID: 83750  
Chemical ID: 178242
MANATEE COUNTY PUBLIC UTILITIES - SE REGIONAL WWTP (Continued)  
CAS Number: 7681529  
Chemical Name: Sodium hypochlorite  
Chemical Date: 1/2/1972  
Average Amount: 4  
Maximum Amount: 32220  
Location ID: 336305  
Chemical State: Liquid  
Mixture: False  
Mixture Percent: 100.00  
Container: A - ABOVE GROUND TANK  
Pressure: 1 - AMBIENT PRESSURE  
Temperature: 4 - AMBIENT TEMPERATURE  
Average Amount: 4  
Maximum Amount: 32220  
Days on Site: 365  
Site Plan: False  
Site Plan Document: Not reported  
Private Location: False  
Location: SEE SITE PLAN  

Report Year: 2002  
Tier 2 Report ID: 79653  
Chemical ID: 165307  
CAS Number: 7681529  
Chemical Name: Sodium hypochlorite  
Chemical Date: 1/2/1972  
Average Amount: 4  
Maximum Amount: 32220  
Location ID: 320595  
Chemical State: Liquid  
Mixture: False  
Mixture Percent: 100.00  
Container: A - ABOVE GROUND TANK  
Pressure: 1 - AMBIENT PRESSURE  
Temperature: 4 - AMBIENT TEMPERATURE  
Average Amount: 4  
Maximum Amount: 32220  
Days on Site: 365  
Site Plan: False  
Site Plan Document: Not reported  
Private Location: False  
Location: SEE MAP ATTACHED  

Company Info:  
Company Name: MANATEE COUNTY - PROPERTY MANAGEMENT  
Company Address: POST OFFICE BOX 1000  
Company City,St,Zip: BRADENTON, FL 34210  
Company Phone: 941-792-8811  
Company Fax: Not reported  
Company Email: Not reported  
FEI Number: 596000727  
Company Contact Name: DAN GRAY, DIRECTOR  
Cmpny Contact Phone: 941-729-8811  
Reduced Fees: False  
Exempt Fees: True
B11 FINDS MANATEE COUNTY SOUTHEAST REGIONAL WWTF 1009686319
Target ECHO LENA RD N/A
Property BRADENTON, FL 34211

Site 8 of 19 in cluster B
Actual: 30 ft.
Focus Map: 3

Click Here:

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Florida Environmental System Today Application (FIESTA) Data Maintenance (FDM) system maintains entity, environmental interest and affiliation data for the State of Florida.

Registry ID: 110027955988

Click Here:

Environmental Interest/Information System:
US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

Florida Environmental System Today Application (FIESTA) Data Maintenance (FDM) system maintains entity, environmental interest and affiliation data for the State of Florida.

Registry ID: 110033633968

Click Here:

Environmental Interest/Information System:
US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

Registry ID: 110064416118

Click Here:

Environmental Interest/Information System:
US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

Registry ID: 110028292498
Click Here:

Environmental Interest/Information System:

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

Florida Environmental System Today Application (FIESTA) Data Maintenance (FDM) system maintains entity, environmental interest and affiliation data for the State of Florida.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1009686319
Registry ID: 110064416118
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110064416118
Name: SEWRF
Address: 3331 LENA RD
City,State,Zip: BRADENTON, FL 34211

Envid: 1009686319
Registry ID: 110027955988
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110027955988
Name: MANATEE COUNTY SOUTHEAST REGIONAL WWTF
Address: 3331 LENA RD
City,State,Zip: BRADENTON, FL 34211
MAP FINDINGS

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<thead>
<tr>
<th>Map ID</th>
<th>Site</th>
<th>Direction</th>
<th>Distance</th>
<th>Elevation</th>
<th>Database(s)</th>
<th>EPA ID Number</th>
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<td>MANATEE COUNTY FLEET SERVICE</td>
<td>RCRA-VSQG</td>
<td>FINDS</td>
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<td>3333 LENA RD</td>
<td>1997-11-26 00:00:00.0</td>
<td>PACIFIC TOMATO GROWERS</td>
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<td>BRADENTON, FL 34211-9458</td>
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<td>Property</td>
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<td>Contact Name:</td>
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<td>Handler City,State,Zip:</td>
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MANATEE COUNTY FLEET SERVICE (Continued)

Permit Workload Universe: Not reported
Permit Progress Universe: Not reported
Post-Closure Workload Universe: Not reported
Closure Workload Universe: Not reported
202 GPRA Corrective Action Baseline: No
Corrective Action Workload Universe: No
Subject to Corrective Action Universe: No
Non-TSDFs Where RCRA CA has Been Imposed Universe: No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe: No
TSDFs Only Subject to CA under Discretionary Auth Universe: No
Corrective Action Priority Ranking: No NCAPS ranking
Environmental Control Indicator: No
Institutional Control Indicator: No
Human Exposure Controls Indicator: N/A
Groundwater Controls Indicator: N/A
Operating TSDF Universe: Not reported
Full Enforcement Universe: Not reported
Significant Non-Complier Universe: No
Unaddressed Significant Non-Complier Universe: No
Addressed Significant Non-Complier Universe: No
Significant Non-Complier With a Compliance Schedule Universe: No
Financial Assurance Required: Not reported
Handler Date of Last Change: 2011-06-23 16:56:54.0
Recognized Trader-Importer: No
Recognized Trader-Exporter: No
Importer of Spent Lead Acid Batteries: No
Exporter of Spent Lead Acid Batteries: No
Recycler Activity Without Storage: Not reported
Manifest Broker: Not reported
Sub-Part P Indicator: No

Historic Generators:
Receive Date: 1997-11-26 00:00:00.0
Handler Name: PACIFIC TOMATO GROWERS
Federal Waste Generator Description: Conditionally Exempt Small Quantity Generator
State District Owner: FL
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Codes: No NAICS Codes Found

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found
MANATEE COUNTY FLEET SERVICE (Continued)

FINDS:
Registry ID: 110005584518

Click Here:

Environmental Interest/Information System:

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Florida Environmental System Today Application (FIESTA) Data Maintenance (FDM) system maintains entity, environmental interest and affiliation data for the State of Florida.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1014468201
Registry ID: 110005584518
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110005584518
Name: MANATEE COUNTY FLEET SERVICE
Address: 3333 LENA RD
City,State,Zip: BRADENTON, FL 34211

MAP FINDINGS

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<th>EDR ID Number</th>
<th>Database(s)</th>
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Focus Map: 3

Enforcement Action ID: FL000A0000120810005500046
FRS ID: 110012324047
Action Name: MANATEE COUNTY UTILITY OPERATIONS DEPT. 120810005500046
Facility Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Facility Address: 3333 LENA ROAD
BRADENTON, FL 34211

Enforcement Action Type: Notice of Violation
Facility County: MANATEE
Program System Acronym: AIR
Enforcement Action Forum Desc: Administrative - Informal
EA Type Code: NOV
Facility SIC Code: 4953
Federal Facility ID: Not reported
Latitude in Decimal Degrees: 27.470256
Longitude in Decimal Degrees: -82.444294
Permit Type Desc: Not reported
Program System Acronym: FL0000001208100055
Facility NAICS Code: 562212
Tribal Land Code: Not reported

Enforcement Action ID: FL000A0000120810005500046
FRS ID: 110012324047
Action Name: MANATEE COUNTY UTILITY OPERATIONS DEPT. 120810005500046
Facility Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
MANATEE COUNTY UTILITY OPERATIONS DEPT.  (Continued) 1005614030

Facility Address: 3333 LENA ROAD
BRADENTON, FL 34211

Enforcement Action Type: Administrative Order
Facility County: MANATEE
Program System Acronym: AIR
Enforcement Action Forum Desc: Administrative - Formal
EA Type Code: SCAAAO
Facility SIC Code: 4953
Federal Facility ID: Not reported
Latitude in Decimal Degrees: 27.470256
Longitude in Decimal Degrees: -82.444294
Permit Type Desc: Not reported
Program System Acronym: FL00000012081000055
Facility NAICS Code: 562212
Tribal Land Code: Not reported

Enforcement Action ID: FL000A0000120810005500002
FRS ID: 110012324047
Action Name: MANATEE COUNTY UTILITY OPERATIONS DEPT. 120810005500002
Facility Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Facility Address: 3333 LENA ROAD
BRADENTON, FL 34211

Enforcement Action Type: Notice of Violation
Facility County: MANATEE
Program System Acronym: AIR
Enforcement Action Forum Desc: Administrative - Informal
EA Type Code: NOV
Facility SIC Code: 4953
Federal Facility ID: Not reported
Latitude in Decimal Degrees: 27.470256
Longitude in Decimal Degrees: -82.444294
Permit Type Desc: Not reported
Program System Acronym: FL00000012081000055
Facility NAICS Code: 562212
Tribal Land Code: Not reported

US AIRS (AFS):
Envid: 1005614030
Region Code: 04
County Code: FL081
Programmatic ID: AIR FL00000012081000055
Facility Registry ID: 110012324047
D and B Number: Not reported
Facility Site Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Primary SIC Code: 4953
NAICS Code: 562212
Default Air Classification Code: MAJ
Facility Type of Ownership Code: CNG
Air CMS Category Code: TVM
HPV Status: Not reported

US AIRS (AFS):
Region Code: 04
Programmatic ID: AIR FL00000012081000055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued)

Default Air Classification Code: MAJ
Air Program: MACT Standards (40 CFR Part 63)
Activity Date: 2014-05-28 00:00:00
Activity Status Date: 2015-06-30 14:52:09
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR

Default Air Classification Code: MAJ
Air Program: MACT Standards (40 CFR Part 63)
Activity Date: 2014-08-20 00:00:00
Activity Status Date: 2015-07-16 07:18:27
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR

Default Air Classification Code: MAJ
Air Program: MACT Standards (40 CFR Part 63)
Activity Date: 2015-03-10 00:00:00
Activity Status Date: 2015-07-17 14:27:43
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR

Default Air Classification Code: MAJ
Air Program: MACT Standards (40 CFR Part 63)
Activity Date: 2015-05-21 00:00:00
Activity Status Date: 2015-07-31 14:25:33
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR

Default Air Classification Code: MAJ
Air Program: MACT Standards (40 CFR Part 63)
Activity Date: 2015-06-04 00:00:00
Activity Status Date: 2015-08-04 07:48:48
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 04
MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued)

Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: MACT Standards (40 CFR Part 63)
Activity Date: 2015-06-04 00:00:00
Activity Status Date: 2015-08-04 07:48:49
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: MACT Standards (40 CFR Part 63)
Activity Date: 2015-07-02 00:00:00
Activity Status Date: 2015-08-03 08:04:42
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: MACT Standards (40 CFR Part 63)
Activity Date: 2016-03-02 00:00:00
Activity Status Date: 2016-04-04 12:52:09
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: MACT Standards (40 CFR Part 63)
Activity Date: 2016-06-16 00:00:00
Activity Status Date: 2016-08-18 08:28:37
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: MACT Standards (40 CFR Part 63)
Activity Date: Not reported
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

TC6558351.5s Page 56
MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued) 1005614030

Activity Status: Not reported
Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: MACT Standards (40 CFR Part 63)
Activity Date: 2007-10-24 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: MACT Standards (40 CFR Part 63)
Activity Date: 2008-12-10 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: MACT Standards (40 CFR Part 63)
Activity Date: 2009-01-29 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: MACT Standards (40 CFR Part 63)
Activity Date: 2009-08-18 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: MACT Standards (40 CFR Part 63)
Activity Date: 2009-09-22 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported
MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued)

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Region Code: 04
Programmatic ID: AIR FL0000001208100055
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Default Air Classification Code: MAJ
Activity Date: 2014-08-20 00:00:00
Activity Status Date: 2015-07-16 07:18:27
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active
### MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued)

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MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued) 1005614030

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Facility Registry ID: 110012324047
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Activity Status Date: 2016-06-16 00:00:00
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MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued)

1005614030

Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: New Source Performance Standards
Activity Date: 2014-08-20 00:00:00
Activity Status Date: 2015-07-16 07:18:27
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

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Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: New Source Performance Standards
Activity Date: 2015-03-10 00:00:00
Activity Status Date: 2015-07-17 14:27:43
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

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Facility Registry ID: 110012324047
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Air Program: New Source Performance Standards
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Activity Status Date: 2015-07-31 14:25:33
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
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Default Air Classification Code: MAJ
Air Program: New Source Performance Standards
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Air Program: New Source Performance Standards
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| Facility Registry ID: | 110012324047 |
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| Default Air Classification Code: | MAJ |
| Air Program:     | New Source Performance Standards |
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| Activity Status: | Active |

| Region Code:     | 04     |
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| Facility Registry ID: | 110012324047 |
| Air Operating Status Code: | OPR |
| Default Air Classification Code: | MAJ |
| Air Program:     | New Source Performance Standards |
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| Activity Type:   | Inspection/Evaluation |
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| Air Program:     | New Source Performance Standards |
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| Default Air Classification Code: | MAJ |
| Air Program:     | New Source Performance Standards |
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MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued)

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Air Program: New Source Performance Standards
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Facility Registry ID: 110012324047
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MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued) 1005614030

Default Air Classification Code: MAJ
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Air Program: New Source Performance Standards
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Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
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Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued) 1005614030

Activity Status: Active

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
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Default Air Classification Code: MAJ
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Default Air Classification Code: MAJ
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Activity Date: 2015-05-21 00:00:00
Activity Status Date: 2015-07-31 14:25:33
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2015-06-04 00:00:00
Activity Status Date: 2015-08-04 07:48:48
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
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Region Code: 04
Programmatic ID: AIR FL0000001208100055
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Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2015-06-04 00:00:00
MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued)

Activity Status Date: 2015-08-04 07:48:49
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
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Region Code: 04
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Facility Registry ID: 110012324047
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Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2015-07-02 00:00:00
Activity Status Date: 2015-08-03 08:04:42
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
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Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2016-03-02 00:00:00
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Activity Group: Compliance Monitoring
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Facility Registry ID: 110012324047
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Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2016-06-16 00:00:00
Activity Status Date: 2016-08-18 08:28:37
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
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Facility Registry ID: 110012324047
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Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2001-12-27 00:00:00
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Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

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Facility Registry ID: 110012324047
Air Operating Status Code: OPR
MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued) 1005614030

Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2003-12-11 00:00:00
Activity Status Date: Not reported
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Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
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Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2003-12-30 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

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Facility Registry ID: 110012324047
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Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2006-05-24 00:00:00
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Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
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Activity Type: Inspection/Evaluation
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Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
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Region Code: 04
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MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued) 1005614030

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Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2011-03-09 00:00:00
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Air Program: Title V Permits
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Air Program: Title V Permits
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Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2015-05-21 00:00:00
Activity Status Date: 2015-07-31 14:25:33
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
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Air Program: Title V Permits
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Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 04
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| Air Operating Status Code: | OPR |
| Default Air Classification Code: | MAJ |
| Air Program: | Title V Permits |
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| Air Program: | Title V Permits |
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| Activity Status: | Active |

| Region Code: | 04 |
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| Default Air Classification Code: | MAJ |
| Air Program: | Title V Permits |
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MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued) 1005614030

Activity Status: Not reported
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MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued)

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MAP FINDINGS
MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued)

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Activity Date: 2006-05-24 00:00:00
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Air Operating Status Code: OPR
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Default Air Classification Code: MAJ
Air Program: Title V Permits
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Air Program: Title V Permits
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Elevation
Site
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Database(s)
EPA ID Number

MAP FINDINGS

MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued) 1005614030

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Facility Registry ID: 110012324047
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MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued)

Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported
Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2011-03-08 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported
Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2011-03-09 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported
Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2011-03-31 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported
Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued)

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MAP FINDINGS

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TC6558351.5s Page 83
MANATEE COUNTY UTILITY OPERATIONS DEPT. (Continued) 1005614030

Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2000-10-04 00:00:00
Activity Status Date: 2000-10-04 00:00:00
Activity Group: Enforcement Action
Activity Type: Administrative - Formal
Activity Status: Final Order Issued

Region Code: 04
Programmatic ID: AIR FL0000001208100055
Facility Registry ID: 110012324047
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 1999-08-19 00:00:00
Activity Status Date: 1999-08-19 00:00:00
Activity Group: Enforcement Action
Activity Type: Administrative - Informal
Activity Status: Achieved

Region Code: 04
Programmatic ID: AIR FL0000001208100055
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Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2011-02-14 00:00:00
Activity Status Date: 2011-02-14 00:00:00
Activity Group: Enforcement Action
Activity Type: Administrative - Informal
Activity Status: Achieved

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

B15 LENA ROAD CLASS I LANDFILL FINDS 1014882686
Target Property 3333 LENA ROAD BRADENTON, FL 34211 ECHO N/A

Site 12 of 19 in cluster B

Actual: 30 ft.
Focus Map: 3

Registry ID: 110043790662

Environmental Interest/Information System:
GREENHOUSE GAS REPORTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1014882686
Registry ID: 110043790662
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110043790662
Name: LENA ROAD CLASS I LANDFILL
Address: 3333 LENA ROAD
LEN A ROAD CLASS I LANDFILL (Continued)

City, State, Zip: BRADENTON, FL 34211

Site 13 of 19 in cluster B

Actual: 30 ft.

Focus Map: 3

Environmental Interest/Information System:

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

AIR MAJOR

Florida Environmental System Today Application (FIESTA) Data Maintenance (FDM) system maintains entity, environmental interest and affiliation data for the State of Florida.

HAZARDOUS AND CRITERIA AIR POLLUTANT MAJOR

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.
### Site 14 of 19 in cluster B

**Actual:** 30 ft.  
**Focus Map:** 3

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**RCRA-SQG:** 1995-05-30 00:00:00.0  
**Date Form Received by Agency:**

**Handler Name:** MANATEE COUNTY LENA RD LANDFILL  
**Handler Address:** 3333 LENA RD # B  
**Handler City,State,Zip:** BRADENTON, FL 34211-9458

**EPA ID:** FLD984244392  
**Contact Name:** GUS DIFONZO  
**Contact Address:** PO BOX 25010  
**Contact City,State,Zip:** BRADENTON, FL 34206-5010

**Contact Telephone:** 941-792-8811  
**Contact Fax:** Not reported  
**Contact Email:** Not reported  
**Contact Title:** MANAGER  
**EPA Region:** 04

**Land Type:** Other  
**Federal Waste Generator Description:** Small Quantity Generator

**Non-Notifier:** Not reported  
**Biennial Report Cycle:** Not reported  
**Accessibility:** Not reported

**Active Site Indicator:** Handler Activities  
**State District Owner:** FL  
**State District:** SW

**Mailing Address:** PO BOX 25010  
**Mailing City,State,Zip:** BRADENTON, FL 34206-5010

**Owner Name:** GUS DIFONZO  
**Owner Type:** Private  
**Operator Name:** GUS DIFONZO  
**Operator Type:** County

**Short-Term Generator Activity:** No  
**Importer Activity:** No  
**Mixed Waste Generator:** No  
**Transporter Activity:** No

**Transfer Facility Activity:** No  
**Recycler Activity with Storage:** No  
**Small Quantity On-Site Burner Exemption:** No  
**Smelting Melting and Refining Furnace Exemption:** No

**Underground Injection Control:** No  
**Off-Site Waste Receipt:** No  
**Universal Waste Indicator:** No  
**Universal Waste Destination Facility:** No  
**Federal Universal Waste:** No

**Active Site Fed-Reg Treatment Storage and Disposal Facility:** Not reported  
**Active Site Converter Treatment storage and Disposal Facility:** Not reported

**Active Site State-Reg Treatment Storage and Disposal Facility:** Not reported  
**Active Site State-Reg Handler:** ---

**Federal Facility Indicator:** Not reported  
**Hazardous Secondary Material Indicator:** NN  
**Sub-Part K Indicator:** Not reported  
**Commercial TSD Indicator:** No

**Treatment Storage and Disposal Type:** Not reported  
**2018 GPRA Permit Baseline:** Not on the Baseline  
**2018 GPRA Renewals Baseline:** Not on the Baseline

**Permit Renewals Workload Universe:** Not reported
MANATEE COUNTY LENA RD LANDFILL (Continued) 1000821470

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Hazardous Waste Summary:

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<td>D002</td>
<td>CORROSIVE WASTE</td>
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<td>D003</td>
<td>REACTIVE WASTE</td>
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Handler - Owner Operator:

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<td>Owner/Operator Address:</td>
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<td>Owner/Operator City,State,Zip:</td>
<td>BRADENTON, FL 34206-5010</td>
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Owner/Operator Indicator: Operator
MANATEE COUNTY LENA RD LANDFILL (Continued) 1000821470

Owner/Operator Name: GUS DIFONZO
Legal Status: County
Date Became Current: 1992-08-15 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: PO BOX 25010
Owner/Operator City,State,Zip: BRADENTON, FL 34206-5010
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: GUS DIFONZO
Legal Status: Private
Date Became Current: 1999-03-23 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: PO BOX 25010
Owner/Operator City,State,Zip: BRADENTON, FL 34206-5010
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: MANATEE COUNTY LENA RD LANDFILL
Legal Status: County
Date Became Current: 1992-08-15 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: PO BOX 25010
Owner/Operator City,State,Zip: BRADENTON, FL 34206-5010
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: GUS DIFONZO
Legal Status: Private
Date Became Current: 1999-03-23 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: PO BOX 25010
Owner/Operator City,State,Zip: BRADENTON, FL 34206-5010
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: MANATEE COUNTY LENA RD LANDFILL
Legal Status: County
Date Became Current: 1992-08-15 00:00:00.
Date Ended Current: Not reported
Owner/Operator Address: PO BOX 25010
Owner/Operator City,State,Zip: BRADENTON, FL 34206-5010
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported
MANATEE COUNTY LENA RD LANDFILL (Continued)

Owner/Operator Email: Not reported
Owner/Operator Indicator: Operator
Owner/Operator Name: MANATEE COUNTY LENA RD LANDFILL
Legal Status: County
Date Became Current: 1992-08-15 00:00:00
Date Ended Current: Not reported
Owner/Operator Address: PO BOX 25010
Owner/Operator City,State,Zip: BRADENTON, FL 34206-5010
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 1995-05-30 00:00:00.0
Handler Name: MANATEE COUNTY LENA RD LANDFILL
Federal Waste Generator Description: Small Quantity Generator
State District Owner: FL
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2007-12-27 00:00:00.0
Handler Name: MANATEE COUNTY LENA RD LANDFILL
Federal Waste Generator Description: Not a generator, verified
State District Owner: FL
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 562111
NAICS Description: SOLID WASTE COLLECTION

Facility Has Received Notices of Violation:
Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
MANATEE COUNTY LENA RD LANDFILL (Continued)

Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Evaluation Action Summary:
Evaluation Date: 1995-05-30 00:00:00.0
Found Violation: No
Found Violation Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: TBD
Evaluation Responsible Sub-Organization: SW
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

B18
Target 3333 LENA RD
Property BRADENTON, FL 34211

Site 15 of 19 in cluster B

Actual: 30 ft.
Focus Map: 3

RCRA-SQG: MANATEE COUNTY FLEET SERVICE
Date Form Received by Agency: 1995-05-30 00:00:00.0
Handler Name: MANATEE COUNTY FLEET SERVICE
Handler Address: 3333 LENA RD
Handler City,State,Zip: BRADENTON, FL 34211-9458
EPA ID: FLD982122004
Contact Name: JACK LEWELLYN
Contact Address: 26TH AVE E
MANATEE COUNTY FLEET SERVICE (Continued)

Contact City, State, Zip: BRADENTON, FL 34208-3928
Contact Telephone: 941-749-7105
Contact Fax: Not reported
Contact Email: Not reported
Contact Title: OP MG
EPA Region: 04
Land Type: Other
Federal Waste Generator Description: Small Quantity Generator
Non-Notifier: Not reported
Biennial Report Cycle: Not reported
Accessibility: Not reported
Active Site Indicator: Handler Activities
State District Owner: FL
State District: SW
Mailing Address: 26TH AVE E
Mailing City, State, Zip: BRADENTON, FL 34208-3928
Owner Name: JACK LEWELLYN
Owner Type: Private
Operator Name: Not reported
Operator Type: Not reported
Short-Term Generator Activity: No
Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility Activity: No
Recycler Activity with Storage: No
Small Quantity On-Site Burner Exemption: No
Smelting Melting and Refining Furnace Exemption: No
Underground Injection Control: No
Off-Site Waste Receipt: No
Universal Waste Indicator: No
Universal Waste Destination Facility: No
Federal Universal Waste: No
Active Site Fed-Reg Treatment Storage and Disposal Facility: Not reported
Active Site Converter Treatment storage and Disposal Facility: Not reported
Active Site State-Reg Treatment Storage and Disposal Facility: Not reported
Active Site State-Reg Handler: ---
Federal Facility Indicator: Not reported
Hazardous Secondary Material Indicator: NN
Sub-Part K Indicator: Not reported
Commercial TSD Indicator: No
Treatment Storage and Disposal Type: Not reported
2018 GPRA Permit Baseline: Not on the Baseline
2018 GPRA Renewals Baseline: Not on the Baseline
Permit Renewals Workload Universe: Not reported
Permit Workload Universe: Not reported
Permit Progress Universe: Not reported
Post-Closure Workload Universe: Not reported
Closure Workload Universe: Not reported
202 GPRA Corrective Action Baseline: No
Corrective Action Workload Universe: No
Subject to Corrective Action Universe: No
Non-TSDFs Where RCRA CA has Been Imposed Universe: No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe: No
TSDFs Only Subject to CA under Discretionary Auth Universe: No
Corrective Action Priority Ranking: No NCAPS ranking
Environmental Control Indicator: No
Hazardous Waste Summary:

<table>
<thead>
<tr>
<th>Waste Code</th>
<th>Waste Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D001</td>
<td>IGNITABLE WASTE</td>
</tr>
<tr>
<td>F001</td>
<td>THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: METHYLENE CHLORIDE, TRICHLOROETHYLENE, TETRACHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.</td>
</tr>
<tr>
<td>F002</td>
<td>THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.</td>
</tr>
<tr>
<td>F004</td>
<td>THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: CREOSOLS, CRESYLIC ACID, AND NITROBENZENE; AND THE STILL BOTTOMS FROM THE RECOVERY OF THESE SOLVENTS; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.</td>
</tr>
</tbody>
</table>
Owner/Operator Name: JACK LEWELLYN  
Legal Status: Private 
Date Became Current: 1996-10-18 00:00:00.00 
Date Ended Current: Not reported 
Owner/Operator Address: 1108 26TH AVE E 
Owner/Operator City,State,Zip: BRADENTON, FL 34208-3928 
Owner/Operator Telephone: Not reported 
Owner/Operator Telephone Ext: Not reported 
Owner/Operator Fax: Not reported 
Owner/Operator Email: Not reported 
Owner/Operator Indicator: Owner 
Owner/Operator Name: JACK LEWELLYN 
Legal Status: Private 
Date Became Current: 1996-10-18 00:00:00.00 
Date Ended Current: Not reported 
Owner/Operator Address: 1108 26TH AVE E 
Owner/Operator City,State,Zip: BRADENTON, FL 34208-3928 
Owner/Operator Telephone: Not reported 
Owner/Operator Telephone Ext: Not reported 
Owner/Operator Fax: Not reported 
Owner/Operator Email: Not reported 

Historic Generators: 
Receive Date: 1995-05-30 00:00:00.0 
Handler Name: MANATEE COUNTY FLEET SERVICE 
Federal Waste Generator Description: Small Quantity Generator 
State District Owner: FL 
Large Quantity Handler of Universal Waste: No 
Recognized Trader Importer: No 
Recognized Trader Exporter: No 
Spent Lead Acid Battery Importer: No 
Spent Lead Acid Battery Exporter: No 
Current Record: Yes 
Non Storage Recycler Activity: Not reported 
Electronic Manifest Broker: Not reported 

Receive Date: 1989-06-22 00:00:00.0 
Handler Name: MANATEE COUNTY FLEET SERVICE 
Federal Waste Generator Description: Small Quantity Generator 
State District Owner: FL 
Large Quantity Handler of Universal Waste: No 
Recognized Trader Importer: No 
Recognized Trader Exporter: No 
Spent Lead Acid Battery Importer: No 
Spent Lead Acid Battery Exporter: No 
Current Record: No 
Non Storage Recycler Activity: Not reported 
Electronic Manifest Broker: Not reported 

List of NAICS Codes and Descriptions: 
NAICS Code: 811111 
NAICS Description: GENERAL AUTOMOTIVE REPAIR 

Facility Has Received Notices of Violation: 
Found Violation: No
MANATEE COUNTY FLEET SERVICE (Continued) 1000700555

Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Evaluation Action Summary:
Evaluation Date: 1995-05-30 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: CWK
Evaluation Responsible Sub-Organization: SW
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported
### Site 16 of 19 in cluster B

**Target:** PACIFIC TOMATO GROWERS  
**Property:** 3333 LENA RD  
**Address:** BRADENTON, FL 34211  
**Actual:** 30 ft.  
**Focus Map:** 3

**Registry ID:** 110035700471

**Environmental Interest/Information System:**
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Florida Environmental System Today Application (FIESTA) Data Maintenance (FDM) system maintains entity, environmental interest and affiliation data for the State of Florida.

Click [this hyperlink](http://echo.epa.gov/detailed-facility-report?fid=110035700471) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

**ECHO:**
- **Envid:** 1011422533  
- **Registry ID:** 110035700471  
- **DFR URL:** [Click Here](http://echo.epa.gov/detailed-facility-report?fid=110035700471)

### Site 17 of 19 in cluster B

**Target:** MANATEE CNTY-LANDFILL  
**Property:** 3333 LENA RD  
**Address:** BRADENTON, FL 34211  
**Actual:** 30 ft.  
**Focus Map:** 3

**Database(s):** FINDS 1011422533  
**EPA ID Number:** N/A

**Financial Assurance:**  
**Tier:** TIER 2  
**NPDES:**

**SWF/LF:**
- **Name:** LENA RD COUNTY LF  
- **Address:** 3333 LENA ROAD  
- **City,State,Zip:** BRADENTON, FL 34211  
- **Facility ID:** 44795  
- **District:** SWD  
- **Lat/Long:** 27.28:12 / 82.26:37  
- **Class Type:** 100  
- **Classification:** CLASS I LANDFILL  
- **Class Status:** ACTIVE (A)  
- **Section:** 01  
- **Township:** 3S  
- **Range:** 18E  
- **Responsible Authority Name:** MANATEE COUNTY PUBLIC UTIL.  
- **Responsible Authority Address:** 4415 66TH ST WEST  
- **Responsible Authority City,St,Zip:** BRADENTON, FL 34210  
- **Responsible Authority Phone:** 9417485543  
- **EMail Address1:** Not reported  
- **EMail Address2:** bob.bennett@mymanatee.org
MANATEE CNTY-LANDFILL (Continued) U001360673

Site Supervisor Name: ROBERT BENNETT
Site Supervisor Addr: Not reported
Site Supervisor City/State/Zip: Not reported
Site Supervisor Telephone: 9417485543
Land Owner Name: SMR DEVELOPMENT CORP
Land Owner Address: 6000 LORRAINE RD
Land Owner City/State/Zip: BRADENTON, FL 34202
Land Owner Telephone: Not reported

Click here for Florida Oculus:

Name: LENA RD COUNTY LF
Address: 3333 LENA ROAD
City,State,Zip: BRADENTON, FL 34211
Facility ID: 44795
District: SWD
Lat/Long: 27:28:12 / 82:26:37
Class Type: 330
Classification: SOURCE-SEPARATED ORGANICS PROC. FAC. (SOPF)
Class Status: UNDER SOLID WASTE PERMIT (W)
Section: 01
Township: 35S
Range: 18E
Responsible Authority Name: MANATEE COUNTY PUBLIC UTIL.
Responsible Authority Address: 4415 66TH ST WEST
Responsible Authority City,St,Zip: BRADENTON, FL 34210
Responsible Authority Phone: 9417485543
EMail Address1: Not reported
EMail Address2: bob.bennett@mymanatee.org
Site Supervisor Name: ROBERT BENNETT
Site Supervisor Addr: Not reported
Site Supervisor City/State/Zip: Not reported
Site Supervisor Telephone: 9417485543
Land Owner Name: SMR DEVELOPMENT CORP
Land Owner Address: 6000 LORRAINE RD
Land Owner City/State/Zip: BRADENTON, FL 34202
Land Owner Telephone: Not reported

Click here for Florida Oculus:

Name: LENA RD COUNTY LF
Address: 3333 LENA ROAD
City,State,Zip: BRADENTON, FL 34211
Facility ID: 44795
District: SWD
Lat/Long: 27:28:12 / 82:26:37
Class Type: 710
Classification: WASTE TIRE PROCESSING FACILITY
Class Status: ACTIVE (A)
Section: 01
Township: 35S
Range: 18E
Responsible Authority Name: MANATEE COUNTY PUBLIC UTIL.
Responsible Authority Address: 4415 66TH ST WEST
Responsible Authority City,St,Zip: BRADENTON, FL 34210
Responsible Authority Phone: 9417485543
EMail Address1: Not reported
MANATEE CNTY-LANDFILL (Continued)

EMail Address2: bob.bennett@mymanatee.org
Site Supervisor Name: ROBERT BENNETT
Site Supervisor Addr: Not reported
Site Supervisor City/State/Zip: Not reported
Site Supervisor Telephone: 9417485543
Land Owner Name: SMR DEVELOPMENT CORP
Land Owner Address: 6000 LORRAINE RD
Land Owner City/State/Zip: BRADENTON, FL 34202
Land Owner Telephone: Not reported

Click here for Florida Oculus:

Name: LENA RD COUNTY LF
Address: 3333 LENA ROAD
City,State,Zip: BRADENTON, FL 34211
Facility ID: 44795
District: SWD
Lat/Long: 27:28:12 / 82:26:37
Class Type: 910
Classification: DISASTER DEBRIS MANAGEMENT SITE
Class Status: INACTIVE (I)
Section: 01
Township: 35S
Range: 18E
Responsible Authority Name: MANATEE COUNTY PUBLIC UTIL.
Responsible Authority Address: 4415 66TH ST WEST
Responsible Authority City,St,Zip: BRADENTON, FL 34210
Responsible Authority Phone: 9417485543
EMail Address1: Not reported
EMail Address2: bob.bennett@mymanatee.org
Site Supervisor Name: ROBERT BENNETT
Site Supervisor Addr: Not reported
Site Supervisor City/State/Zip: Not reported
Site Supervisor Telephone: 9417485543
Land Owner Name: SMR DEVELOPMENT CORP
Land Owner Address: 6000 LORRAINE RD
Land Owner City/State/Zip: BRADENTON, FL 34202
Land Owner Telephone: Not reported

Click here for Florida Oculus:

UST:
Facility Id: 8630173
Facility Status: OPEN
Type Description: Local Government
Facility Phone: 9417087513
Region: STATE
Positioning Method: AGPS
Lat/Long (dms): 27 28 25 / 82 26 49
Owner:
Owner Id: 13457
Owner Name: MANATEE CNTY - FUEL SRVCS OFFICE
Owner Address: 2908 12TH ST CT E
Owner Address 2: ATTN: BEN WILLIAMS JR
Owner City,St,Zip: BRADENTON, FL 34208
Owner Contact: BENJAMIN D WILLIAMS JR
MANATEE CNTY-LANDFILL (Continued)  U001360673

Owner Phone:  9417087513

Tank Info:
Name: MANATEE CNTY-LANDFILL
Address: 3333 LENA RD
City: BRADENTON
Zip: 34211
Tank Id: 31
Status: Removed
Status Date: 12/01/1999
Install Date: 11/1/1989
Substance: Unleaded gas
Content Description: Unleaded Gas
Gallons: 1000
Vessel Indicator: TANK
Tank Location: UNDERGROUND
DEP Contractor: D

Name: MANATEE CNTY-LANDFILL
Address: 3333 LENA RD
City: BRADENTON
Zip: 34211
Tank Id: 32
Status: Removed
Status Date: 12/01/1999
Install Date: 11/1/1989
Substance: Vehicular diesel
Content Description: Vehicular Diesel
Gallons: 10000
Vessel Indicator: TANK
Tank Location: UNDERGROUND
DEP Contractor: D

Construction:
Tank Id: 32
Construction Category: Primary Construction
Construction Description: Steel

Tank Id: 32
Construction Category: Overfill/Spill
Construction Description: Flow shut-Off

Tank Id: 32
Construction Category: Overfill/Spill
Construction Description: Spill containment bucket

Tank Id: 32
Construction Category: Overfill/Spill
Construction Description: Level gauges/alarms

Tank Id: 32
Construction Category: Secondary Containment
Construction Description: Double wall

Tank Id: 32
Construction Category: Miscellaneous Attributes
Construction Description: Compartmented
MANATEE CNTY-LANDFILL (Continued)  

Tank Id: 32  
Construction Category: Overfill/Spill  
Construction Description: Tight fill

Tank Id: 32  
Construction Category: Overfill/Spill  
Construction Description: Ball check valve

Tank Id: 32  
Construction Category: Primary Construction  
Construction Description: Fiberglass

Monitoring:  
Tank ID: 32  
Monitoring Description: Monitor dbl wall tank space

Tank ID: 32  
Monitoring Description: Visual inspection of ASTs

Tank ID: 32  
Monitoring Description: Continuous electronic sensing

Tank ID: 32  
Monitoring Description: Visual inspect dispenser liners

Tank ID: 32  
Monitoring Description: Manually sampled wells

Piping:  
Tank ID: 32  
Piping Category: Miscellaneous Attributes  
Piping Description: Dispenser liners

Tank ID: 32  
Piping Category: Corrosion Protection  
Piping Description: External protective coating

Tank ID: 32  
Piping Category: Miscellaneous Attributes  
Piping Description: Pressurized piping system

Tank ID: 32  
Piping Category: Miscellaneous Attributes  
Piping Description: Abv, no soil contact

Tank ID: 32  
Piping Category: Primary Construction  
Piping Description: Steel/galvanized metal

Click here for Florida Oculus:

AST:  
Name: MANATEE CNTY-LANDFILL  
Address: 3333 LENA RD
MANATEE CNTY-LANDFILL (Continued) U001360673

Facility ID: 8630173
Facility Status: OPEN
Type Description: Local Government
Facility Phone: 9417087513
DEP Contractor Own: D
Region: STATE
Positioning Method: AGPS
Lat/Long (dms): 27 28 25 / 82 26 49

Owner:
Owner Id: 13457
Owner Name: MANATEE CNTY - FUEL SRVCS OFFICE
Owner Address: 2908 12TH ST CT E
Owner Address 2: ATTN: BEN WILLIAMS JR
Owner City,St,Zip: BRADENTON, FL 34208
Owner Contact: BENJAMIN D WILLIAMS JR
Owner Phone: 9417087513

Tank Id: 2
Status: Removed
Status Date: 11/30/1989
Install Date: 7/1/1984
Substance: Unleaded gas
Content Description: Unleaded Gas
Gallons: 1000
Tank Location: ABOVEGROUND

Tank Id: 32
Status: In service
Status Date: 07/01/1999
Install Date: 7/1/1999
Substance: Vehicular diesel
Content Description: Vehicular Diesel
Gallons: 20000
Tank Location: ABOVEGROUND

Construction:
Tank Id: 32
Construction Category: Primary Construction
Construction Description: Steel

Tank Id: 32
Construction Category: Overfill/Spill
Construction Description: Flow shut-Off

Tank Id: 32
Construction Category: Overfill/Spill
Construction Description: Spill containment bucket

Tank Id: 32
Construction Category: Overfill/Spill
Construction Description: Level gauges/alarms

Tank Id: 32
Construction Category: Secondary Containment
Construction Description: Double wall
MANATEE CNTY-LANDFILL  (Continued)  U001360673

Tank Id: 32
Construction Category: Miscellaneous Attributes
Construction Description: Compartmented

Tank Id: 32
Construction Category: Overfill/Spill
Construction Description: Tight fill

Tank Id: 32
Construction Category: Overfill/Spill
Construction Description: Ball check valve

Tank Id: 32
Construction Category: Primary Construction
Construction Description: Fiberglass

Monitoring:
Tank ID: 32
Monitoring Description: Monitor dbl wall tank space

Tank ID: 32
Monitoring Description: Visual inspection of ASTs

Tank ID: 32
Monitoring Description: Continuous electronic sensing

Tank ID: 32
Monitoring Description: Visual inspect dispenser liners

Tank ID: 32
Monitoring Description: Manually sampled wells

Piping:
Tank ID: 32
Piping Category: Miscellaneous Attributes
Piping Description: Dispenser liners

Tank ID: 32
Piping Category: Corrosion Protection
Piping Description: External protective coating

Tank ID: 32
Piping Category: Miscellaneous Attributes
Piping Description: Pressurized piping system

Tank ID: 32
Piping Category: Miscellaneous Attributes
Piping Description: Abv, no soil contact

Tank ID: 32
Piping Category: Primary Construction
Piping Description: Steel/galvanized metal

Tank Id: 1
Status: Removed
Status Date: 11/30/1989
MANATEE CNTY-LANDFILL (Continued)

Install Date: 7/1/1979
Substance: Vehicular diesel
Content Description: Vehicular Diesel
Gallons: 10000
Tank Location: ABOVEGROUND

Click here for Florida Oculus:

AIRS:
Name: MANATEE COUNTY LENA RD LANDFILL
Address: 3333 LENA ROAD
City,State,Zip: BRADENTON, FL 34211
Facility ID: 810055
Facility Status: A
Office: SWD
Category: POINT
Owner Name: Manatee County Utility Operations Dept.
SIC Code: Electric, Gas And Sanitary Services
Title V: Y
Contact Name: Chris Collins
Contact Address: 3331 Lena Rd
Contact Address 2: Not reported
Contact City: Bradenton
Issue Date: 05/30/2014
Contact Zip Code: 34202
Contact Zip4: Not reported
Contact Phone: 941-792-8811
Contact EMail: chris.collins@mymanatee.org
Permit Number: 0810055010AC
Expiration Date: 02/16/2015
UTM Zone: 17
UTM North: 3039.08
UTM East: 357.01
Latitude Direction: 27
Latitude Minute: 28
Latitude Second: 3.8754
Longitude Direction: 82
Longitude Minute: 26
Longitude Second: 49.8723
NAICS: Not reported
Type: Not reported
Primary Resp. Official: Not reported
Primary Resp. Official Address 1: Not reported
Primary Resp. Official Address2: Not reported
Primary Resp. Official City: Not reported
Primary Resp. Official State: Not reported
Primary Resp. Official Zip5: Not reported
Primary Resp. Official Phone: Not reported
Primary Resp. Official Email: Not reported
Owner/Auth. Representative Address1: Not reported
Owner/Auth. Representative Address2: Not reported
Owner/Auth. Representative City: Not reported
Owner/Auth. Representative State: Not reported
Owner/Auth. Representative Zip5: Not reported
Owner/Auth. Representative Phone: Not reported
Owner/Auth. Representative Email: Not reported
MANATEE CNTY-LANDFILL (Continued)

Name: MANATEE COUNTY LENA RD LANDFILL
Address: 3333 LENA ROAD
City,State,Zip: BRADENTON, FL 34211
Facility ID: 810055
Facility Status: A
Office: SWD
Category: POINT
Owner Name: Manatee County Utility Operations Dept.
SIC Code: Electric, Gas And Sanitary Services
Title V: Y
Contact Name: Chris Collins
Contact Address: 3331 Lena Rd
Contact City: Bradenton
Issue Date: 10/08/2019
Contact Zip Code: 34202
Contact Zip4: Not reported
Contact Phone: 941-792-8811
Contact EMail: chris.collins@mymanatee.org
Permit Number: 0810055015AV
Expiration Date: 10/08/2024
UTM Zone: 17
UTM North: 3039.08
UTM East: 357.01
Latitude Direction: S
Latitude Minute: 27
Latitude Second: 28
Longitude Direction: W
Longitude Minute: 31
Longitude Second: 3.8754
Longitude Direction: W
Longitude Minute: 26
Longitude Second: 49.8723
NAICS: Solid Waste Landfill
Type: Municipal Solid Waste Landfill
Primary Resp. Official: Robert Shankle
Primary Resp. Official Address 1: 3333 Leana Road
Primary Resp. Official Address 2: Not reported
Primary Resp. Official City: Bradenton
Primary Resp. Official State: FL
Primary Resp. Official Zip5: 34211
Primary Resp. Official Phone: 941-748-5543
Primary Resp. Official Email: robert.shankle@mymanatee.org
Owner/Auth. Representative Address 1: 4410 66th St W
Owner/Auth. Representative Address 2: Not reported
Owner/Auth. Representative City: Bradenton
Owner/Auth. Representative State: FL
Owner/Auth. Representative Zip5: 34210
Owner/Auth. Representative Phone: Not reported
Owner/Auth. Representative Email: mike.gore@mymanatee.org
MANATEE CNTY-LANDFILL (Continued)

<table>
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<th>Title V:</th>
<th>Y</th>
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<tr>
<td>Contact Name:</td>
<td>Chris Collins</td>
</tr>
<tr>
<td>Contact Address:</td>
<td>3331 Lena Rd</td>
</tr>
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<td>Contact Address 2:</td>
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<td>Contact Zip Code:</td>
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<td>Contact Zip4:</td>
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<tr>
<td>Contact Phone:</td>
<td>941-792-8811</td>
</tr>
<tr>
<td>Contact EMail:</td>
<td><a href="mailto:chris.collins@mymanatee.org">chris.collins@mymanatee.org</a></td>
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<td>Municipal Solid Waste Landfill</td>
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<tr>
<td>Primary Resp. Official:</td>
<td>Robert Shankle</td>
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<tr>
<td>Primary Resp. Official Address 1:</td>
<td>3333 Leana Road</td>
</tr>
<tr>
<td>Primary Resp. Official Address 2:</td>
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<tr>
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<td>Primary Resp. Official Zip5:</td>
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<td>Primary Resp. Official Phone:</td>
<td>941-748-5543</td>
</tr>
<tr>
<td>Primary Resp. Official Email:</td>
<td><a href="mailto:robert.shankle@mymanatee.org">robert.shankle@mymanatee.org</a></td>
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<tr>
<td>Owner/Auth. Representative Address1:</td>
<td>4410 66th St W</td>
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<tr>
<td>Owner/Auth. Representative Address2:</td>
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<td>Owner/Auth. Representative Email:</td>
<td><a href="mailto:mike.gore@mymanatee.org">mike.gore@mymanatee.org</a></td>
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Name: MANATEE COUNTY LENA RD LANDFILL
Address: 3333 LENA ROAD
City, State, Zip: BRADENTON, FL 34211
Facility ID: 810055
Facility Status: A
Office: SWD
Category: POINT
Owner Name: Manatee County Utility Operations Dept.
SIC Code: Electric, Gas And Sanitary Services
Title V: Y
Contact Name: Chris Collins
Contact Address: 3331 Lena Rd
Contact Address 2: Not reported
Contact City: Bradenton
Issue Date: 03/16/2016
Contact Zip Code: 34202
Contact Zip4: Not reported
Contact Phone: 941-792-8811
MANATEE COUNTY-LANDFILL (Continued) U001360673

Contact EMail: chris.collins@mymanatee.org
Permit Number: 0810055013AC
Expiration Date: 12/31/2016
UTM Zone: 17
UTM North: 3039.08
UTM East: 357.01
Latitude Direction: 27
Latitude Minute: 28
Latitude Second: 3.8754
Longitude Direction: 26
Longitude Minute: 49.8723
UTM North: 357.01
UTM East: 27
Latitude Direction: 28
Latitude Minute: 3.8754
Latitude Second: 82
Longitude Direction: 27
Longitude Minute: 27
Longitude Second: 3.8754

MANATEE COUNTY LENA RD LANDFILL Name: 3333 LENA ROAD Address: BRADENTON, FL 34211 City, State, Zip: 810055 Facility ID: A Facility Status: SWD Category: POINT Owner Name: Manatee County Utility Operations Dept. SIC Code: Electric, Gas And Sanitary Services Title V: Y Contact Name: Chris Collins Contact Address: 3331 Lena Rd Contact City: Bradenton Issue Date: 02/24/2015 Contact Zip Code: 34202 Contact Zip4: Not reported Contact Phone: 941-792-8811 Contact EMail: chris.collins@mymanatee.org Permit Number: 0810055012AV Expiration Date: 02/24/2020 UTM Zone: 17 UTM North: 3039.08 UTM East: 357.01 Latitude Direction: 27 Latitude Minute: 28 Latitude Second: 3.8754
MANATEE CNTY-LANDFILL (Continued)

Longitude Direction: 82
Longitude Minute: 26
Longitude Second: 49.8723
NAICS: Solid Waste Landfill
Type: Municipal Solid Waste Landfill

Primary Resp. Official: Robert Shankle
Primary Resp. Official Address 1: 3333 Leana Road
Primary Resp. Official Address 2: Not reported
Primary Resp. Official City: Bradenton
Primary Resp. Official State: FL
Primary Resp. Official Zip5: 34211
Primary Resp. Official Phone: 941-748-5543
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Owner/Auth. Representative Address 1: 4410 66th St W
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Owner/Auth. Representative City: Bradenton
Owner/Auth. Representative State: FL
Owner/Auth. Representative Zip5: 34210
Owner/Auth. Representative Phone: Not reported
Owner/Auth. Representative Email: mike.gore@mymanatee.org

AIRS:
Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H118
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
MANATEE CNTY-LANDFILL (Continued)

Not reported
NOX:
PM10:
SO2:
VOC:
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H106
Annual Emission: Not reported
Emission Method: Not reported
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: Not reported
Not Emitted: X
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H114
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
MANATEE CNTY-LANDFILL  (Continued) U001360673

NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H128
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H167
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
MANATEE CNTY-LANDFILL (Continued)

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<td>See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.</td>
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<td>See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.</td>
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Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
MANATEE CNTY-LANDFILL (Continued) U001360673

Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H104
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H1119
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
MANATEE CNTY-LANDFILL (Continued)

Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: PM10
Annual Emission: Not reported
Emission Method: Not reported
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: Not reported
Not Emitted: X
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H017
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
MANATEE CNTY-LANDFILL (Continued)

MANATEE COUNTY UTILITY OPERATIONS DEPT.

Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H034
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H123
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
MANATEE CNTY-LANDFILL (Continued) U001360673

Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H166
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: CO
Annual Emission: Not reported
Emission Method: Not reported
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: Not reported
Not Emitted: X
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: SO2
Annual Emission: Not reported
Emission Method: Not reported
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: Not reported
Not Emitted: X
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H089
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
MANATEE CNTY-LANDFILL (Continued)

Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H094
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H184
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
MANATEE CNTY-LANDFILL (Continued)

Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 501000402
Pollutant: H185
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 501000402
Pollutant: H2S
Annual Emission: Not reported
Emission Method: Not reported
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: Not reported
Not Emitted: X
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
MANATEE CNTY-LANDFILL (Continued)

Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: NMOC
Annual Emission: 19.27
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 2-1 for calculations. There is no emission threshold for NMOC.
Below Threshold: Not reported
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H186
Annual Emission: Not reported
Emission Method: Not reported
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
MAP FINDINGS

MANATEE CNTY-LANDFILL (Continued)

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: HAPS
Annual Emission: 3.811
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 2-3 for calculations.
Below Threshold: Not reported
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: HAPS
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H085
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H041
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: H041
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Facility ID: 810055  
Facility Name: MANATEE COUNTY LENA RD LANDFILL  
Facility Status: A  
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.  
Type: Not reported  
CO: Not reported  
NOX: Not reported  
PM10: Not reported  
SO2: Not reported  
VOC: Not reported  
Facility Office: SWD  
Title V: 810055  
EU Description: Municipal Solid Waste Landfill  
EU ID: 3  
EU Status: A  
SCC: 501000402  
Pollutant: H032  
Annual Emission: Not reported  
Emission Method: 3B  
Emission Factor: Not reported  
Emission Calculation: Not reported  
Below Threshold: X  
Not Emitted: Not reported  
Primary Control: Not reported  
Secondary Control: Not reported  
Emission Comment: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
MANATEE CNTY-LANDFILL (Continued)

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: NOX
Annual Emission: Not reported
Emission Method: Not reported
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: Not reported
Not Emitted: X
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Municipal Solid Waste Landfill
EU ID: 3
EU Status: A
SCC: 50100402
Pollutant: VOC
Annual Emission: 20.76
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 2-2 for calculations.
Below Threshold: Not reported
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
### MANATEE CNTY-LANDFILL (Continued)

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<th>MANATEE COUNTY LENA RD LANDFILL</th>
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<td>Facility Status:</td>
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<td>Emission Comment:</td>
<td>See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.</td>
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</table>

| Facility ID:                    | 810055                                              |
| Facility Name:                  | MANATEE COUNTY LENA RD LANDFILL                     |
| Facility Status:                | A                                                   |
| Owner Name:                     | MANATEE COUNTY UTILITY OPERATIONS DEPT.             |
| Type:                           | Not reported                                       |
| CO:                             | Not reported                                       |
| NOX:                            | Not reported                                       |
| PM10:                           | Not reported                                       |
| SO2:                            | Not reported                                       |
| VOC:                            | Not reported                                       |
| Facility Office:                | SWD                                                 |
| Title V:                        | 810055                                              |
| EU Description:                 | Municipal Solid Waste Landfill                      |
| EU ID:                          | 3                                                   |
| EU Status:                      | A                                                   |
| SCC:                            | 50100402                                            |
| Pollutant:                      | H033                                                |
| Annual Emission:                | Not reported                                       |
| Emission Method:                | 3B                                                  |
| Emission Factor:                | Not reported                                       |
| Emission Calculation:           | Not reported                                       |
| Below Threshold:                | X                                                   |
| Not Emitted:                    | Not reported                                       |
| Percent Control Efficiency:     | Not reported                                       |
| Primary Control:                | Not reported                                       |
| Secondary Control:              | Not reported                                       |
| Emission Comment:               | See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR. |
MANATEE CNTY-LANDFILL (Continued)  

Facility ID: 810055  
Facility Name: MANATEE COUNTY LENA RD LANDFILL  
Facility Status: A  
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.  
Type: Not reported  
CO: Not reported  
NOX: Not reported  
PM10: Not reported  
SO2: Not reported  
VOC: Not reported  
Facility Office: SWD  
Title V: 810055  
EU Description: Municipal Solid Waste Landfill  
EU ID: 3  
EU Status: A  
SCC: 50100402  
Pollutant: H169  
Annual Emission: 1.36  
Emission Method: 3B  
Emission Factor: Not reported  
Emission Calculation: See Attachment 2-3 for calculations. Only HAPs above the 0.5 tpy threshold are reported in the AOR.  
Below Threshold: Not reported  
Not Emitted: Not reported  
Percent Control Efficiency: Not reported  
Primary Control: Not reported  
Secondary Control: Not reported  
Emission Comment: Not reported  

Facility ID: 810055  
Facility Name: MANATEE COUNTY LENA RD LANDFILL  
Facility Status: A  
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.  
Type: Not reported  
CO: Not reported  
NOX: Not reported  
PM10: Not reported  
SO2: Not reported  
VOC: Not reported  
Facility Office: SWD  
Title V: 810055  
EU Description: Sludge Dryer  
EU ID: 4  
EU Status: A  
SCC: 39900601  
Pollutant: H114  
Annual Emission: 0  
Emission Method: 3B  
Emission Factor: Not reported  
Emission Calculation: See Attachment 6-1.  
Below Threshold: X  
Not Emitted: Not reported  
Percent Control Efficiency: Not reported  
Primary Control: Not reported  
Secondary Control: Not reported  
Emission Comment: Not reported
MANATEE CNTY-LANDFILL (Continued)

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Sludge Dryer
EU ID: 4
EU Status: A
SCC: 39900601
Pollutant: CO
Annual Emission: 0.019
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 6-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Sludge Dryer
EU ID: 4
EU Status: A
SCC: 39900601
Pollutant: NOX
Annual Emission: 0.133
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 6-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
MANATEE CNTY-LANDFILL (Continued)  U001360673

Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Sludge Dryer
EU ID: 4
EU Status: A
SCC: 39900601
Pollutant: SO2
Annual Emission: 0
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 6-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Sludge Dryer
EU ID: 4
EU Status: A
SCC: 39900601
Pollutant: NMOC
Annual Emission: Not reported
Emission Method: Not reported
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: Not reported
Not Emitted: X
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
MANATEE CNTY-LANDFILL (Continued)

Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Sludge Dryer
EU ID: 4
EU Status: A
SCC: 39900601
Pollutant: PM
Annual Emission: 0.006
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 6-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Sludge Dryer
EU ID: 4
EU Status: A
SCC: 39900601
Pollutant: VOC
Annual Emission: 0.004
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 6-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
MANATEE CNTY-LANDFILL (Continued) U001360673

Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Sludge Dryer
EU ID: 4
EU Status: A
SCC: 39900601
Pollutant: PM10
Annual Emission: 0.006
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 6-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Sludge Dryer
EU ID: 4
EU Status: A
SCC: 50100421
Pollutant: NOX
Annual Emission: 0.32
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 6-2.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
**MANATEE CNTY-LANDFILL (Continued)**

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**Facility ID:** 810055

**Facility Name:** MANATEE COUNTY LENA RD LANDFILL

**Facility Status:** A

**Owner Name:** MANATEE COUNTY UTILITY OPERATIONS DEPT.

**Type:** Not reported

**CO:** Not reported

**NOX:** Not reported

**PM10:** Not reported

**SO2:** Not reported

**VOC:** Not reported

**Facility Office:** SWD

**Title V:** 810055

**EU Description:** Sludge Dryer

**EU Status:** A

**Pollutant:** CO

**Annual Emission:** 0.055

**Emission Method:** 3B

**Emission Factor:** Not reported

**Emission Calculation:** See Attachment 6-2.

**Below Threshold:** X

**Not Emitted:** Not reported

**Percent Control Efficiency:** Not reported

**Primary Control:** Not reported

**Secondary Control:** Not reported

**Emission Comment:** Not reported

---

**Facility ID:** 810055

**Facility Name:** MANATEE COUNTY LENA RD LANDFILL

**Facility Status:** A

**Owner Name:** MANATEE COUNTY UTILITY OPERATIONS DEPT.

**Type:** Not reported

**CO:** Not reported

**NOX:** Not reported

**PM10:** Not reported

**SO2:** Not reported

**VOC:** Not reported

**Facility Office:** SWD

**Title V:** 810055

**EU Description:** Sludge Dryer

**EU Status:** A

**Pollutant:** CO

**Annual Emission:** 0.0466

**Emission Method:** 3B

**Emission Factor:** Not reported

**Emission Calculation:** See Attachment 6-3. There is no threshold for NMOC.

**Below Threshold:** Not reported

**Not Emitted:** Not reported

**Percent Control Efficiency:** Not reported

**Primary Control:** Not reported

**Secondary Control:** Not reported

**Emission Comment:** Not reported

---

**Facility ID:** 810055

**Facility Name:** MANATEE COUNTY LENA RD LANDFILL

**Facility Status:** A

**Owner Name:** MANATEE COUNTY UTILITY OPERATIONS DEPT.

**Type:** Not reported
MANATEE CNTY-LANDFILL  (Continued)  

CO: Not reported  
NOX: Not reported  
PM10: Not reported  
SO2: Not reported  
VOC: Not reported  
Facility Office: SWD  
Title V: 810055  
EU Description: Sludge Dryer  
EU ID: 4  
EU Status: A  
SCC: 50100421  
Pollutant: PM  
Annual Emission: 0.08  
Emission Method: 3B  
Emission Factor: Not reported  
Emission Calculation: See Attachment 6-2.  
Below Threshold: X  
Not Emitted: Not reported  
Percent Control Efficiency: Not reported  
Primary Control: Not reported  
Secondary Control: Not reported  
Emission Comment: Not reported  

Facility ID: 810055  
Facility Name: MANATEE COUNTY LENA RD LANDFILL  
Facility Status: A  
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.  
Type: Not reported  
CO: Not reported  
NOX: Not reported  
PM10: Not reported  
SO2: Not reported  
VOC: Not reported  
Facility Office: SWD  
Title V: 810055  
EU Description: Sludge Dryer  
EU ID: 4  
EU Status: A  
SCC: 50100421  
Pollutant: PM10  
Annual Emission: 0.08  
Emission Method: 3B  
Emission Factor: Not reported  
Emission Calculation: See Attachment 6-2.  
Below Threshold: X  
Not Emitted: Not reported  
Percent Control Efficiency: Not reported  
Primary Control: Not reported  
Secondary Control: Not reported  
Emission Comment: Not reported  

Facility ID: 810055  
Facility Name: MANATEE COUNTY LENA RD LANDFILL  
Facility Status: A  
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.  
Type: Not reported  
CO: Not reported  
NOX: Not reported  
PM10: Not reported  
SO2: Not reported  
VOC: Not reported
MANATEE CNTY-LANDFILL (Continued)

Not reported

NOX:
PM10:
SO2:
VOC:
Facility Office:
Title V:
EU Description:
EU ID:
EU Status:
SCC:
Pollutant:
Annual Emission:
Emission Method:
Emission Factor:
Emission Calculation:
Below Threshold:
Not Emitted:
Percent Control Efficiency:
Primary Control:
Secondary Control:
Emission Comment:

Facility ID: 810055
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type:
CO:
NOX:
PM10:
SO2:
VOC:
Facility Office:
Title V:
EU Description:
EU ID:
EU Status:
SCC:
Pollutant:
Annual Emission:
Emission Method:
Emission Factor:
Emission Calculation:
Below Threshold:
Not Emitted:
Percent Control Efficiency:
Primary Control:
Secondary Control:
Emission Comment:

Facility ID: 810055
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
**MANATEE CNTY-LANDFILL** (Continued)

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**Facility ID:** 810055  
**Facility Name:** MANATEE COUNTY LENA RD LANDFILL  
**Facility Status:** A  
**Owner Name:** MANATEE COUNTY UTILITY OPERATIONS DEPT.
## MANATEE CNTY-LANDFILL (Continued)

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<td>Emission Comment:</td>
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Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
MAP FINDINGS

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<th>EPA ID Number</th>
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MANATEE CNTY-LANDFILL (Continued)  

- **VOC:** Not reported
- **Facility Office:** SWD
- **Title V:** 810055
- **EU Description:** Sludge Dryer
- **EU ID:** 4
- **EU Status:** A
- **SCC:** 50100791
- **Pollutant:** CO
- **Annual Emission:** Not reported
- **Emission Method:** Not reported
- **Emission Factor:** Not reported
- **Emission Calculation:** Not reported
- **Below Threshold:** Not reported
- **Not Emitted:** Not reported
- **Percent Control Efficiency:** Not reported
- **Primary Control:** Not reported
- **Secondary Control:** Not reported
- **Emission Comment:** Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Sludge Dryer
EU ID: 4
EU Status: A
SCC: 50100791
Pollutant: PM
Annual Emission: 0.015
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 6-4. PM10 emissions are assumed to be identical to PM emissions.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported

TC6558351.5s Page 134
MANATEE CNTY-LANDFILL (Continued)  U001360673

VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Sludge Dryer
EU ID: 4
EU Status: A
SCC: 50100791
Pollutant: VOC
Annual Emission: Not reported
Emission Method: Not reported
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: Not reported
Not Emitted: X
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Sludge Dryer
EU ID: 4
EU Status: A
SCC: 50100791
Pollutant: SO2
Annual Emission: Not reported
Emission Method: Not reported
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: Not reported
Not Emitted: X
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
MANATEE CNTY-LANDFILL (Continued)

Facility Office: SWD
Title V: 810055
EU Description: Sludge Dryer
EU ID: 4
EU Status: A
SCC: 50100791
Pollutant: PM10
Annual Emission: 0.015
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 6-4. PM10 emissions are assumed to be identical to PM emissions.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Dried product handling system
EU ID: 5
EU Status: A
SCC: 50100799
Pollutant: PM
Annual Emission: 0.004
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 7-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 127
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
MANATEE CNTY-LANDFILL (Continued)

Facility Office: SWD
Title V: 810055
EU Description: Dried product handling system
EU ID: 5
EU Status: A
SCC: 50100799
Pollutant: PM10
Annual Emission: 0.004
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 7-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Two Dried Product Storage Silos
EU ID: 6
EU Status: A
SCC: 50100799
Pollutant: PM
Annual Emission: 0.004
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 7-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
MANATEE CNTY-LANDFILL (Continued) U001360673

Title V: 810055
EU Description: Two Dried Product Storage Silos
EU ID: 6
EU Status: A
SCC: 50100799
Pollutant: PM10
Annual Emission: 0.004
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 7-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Dried Product Truck Loadout Station
EU ID: 7
EU Status: A
SCC: 50100799
Pollutant: PM10
Annual Emission: 0.359
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 7-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 127
Secondary Control: 62
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
MANATEE CNTY-LANDFILL (Continued)

EU Description: Dried Product Truck Loadout Station
EU ID: 7
EU Status: A
SCC: 50100799
Pollutant: PM
Annual Emission: 0.359
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 7-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 127
Secondary Control: 62
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: CO
Annual Emission: 91.36
Emission Method: 3A
Emission Factor: Not reported
Emission Calculation: See Attachment 3-1.
Below Threshold: Not reported
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
MANATEE CNTY-LANDFILL (Continued)

EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H2S
Annual Emission: 19.15
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-1.
Below Threshold: Not reported
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H088
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
MANATEE CNTY-LANDFILL (Continued)

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Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H184
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
MANATEE CNTY-LANDFILL (Continued) U001360673

EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H118
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H128
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
MAP FINDINGS

MANATEE CNTY-LANDFILL (Continued)

Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H041
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: VOC
Annual Emission: 12.12
Emission Method: 3A
Emission Factor: Not reported
Emission Calculation: See Attachment 3-1.
Below Threshold: Not reported
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
MANATEE CNTY-LANDFILL (Continued)

Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H185
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H167
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
MANATEE CNTY-LANDFILL (Continued)  U001360673

Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H106
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: NOX
Annual Emission: 10.82
Emission Method: 3A
Emission Factor: Not reported
Emission Calculation: See Attachment 3-1.
Below Threshold: Not reported
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
MANATEE CNTY-LANDFILL  (Continued)

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Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H104
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
MANATEE CNTY-LANDFILL (Continued)

VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H094
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H043
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
MANATEE CNTY-LANDFILL (Continued)

SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H186
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H176
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
MANATEE CNTY-LANDFILL (Continued)  U001360673

PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H169
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H166
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
MANATEE CNTY-LANDFILL (Continued)  U001360673

NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H123
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H114
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
MANATEE CNTY-LANDFILL (Continued) U001360673

CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: PM
Annual Emission: 3.15
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment:

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H119
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
MANATEE CNTY-LANDFILL (Continued)

CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H085
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H033
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
MANATEE CNTY-LANDFILL (Continued)

Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H032
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: LFG Fired Engine Generator Set (w/LFG Gas Treatment System)
EU ID: 12
EU Status: A
SCC: 20100807
Pollutant: H034
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
### MANATEE CNTY-LANDFILL (Continued)

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**MAP FINDINGS**

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<th>Site</th>
<th>Database(s)</th>
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TC6558351.5s Page 154
### MANATEE CNTY-LANDFILL (Continued)  
**Title V:**
LFG Fired Engine Generator Set (w/LFG Gas Treatment System)

**Facility ID:**
810055

**Facility Name:**
MANATEE COUNTY LENA RD LANDFILL

<table>
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<th>Map ID</th>
<th>Direction</th>
<th>Distance</th>
<th>Elevation</th>
<th>Site</th>
<th>Database(s)</th>
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#### FACILITY INFORMATION

- **Facility Status:** A
- **Owner Name:** MANATEE COUNTY UTILITY OPERATIONS DEPT.
- **Type:** Not reported
- **CO:** Not reported
- **NOX:** Not reported
- **PM10:** Not reported
- **SO2:** Not reported
- **VOC:** Not reported

- **Facility Office:** SWD
- **EU ID:** 12
- **SCC:** 20100807
- **Pollutant:** H061
- **Annual Emission:** Not reported
- **Emission Method:** 3B
- **Emission Factor:** Not reported
- **Emission Calculation:** See Attachment 3-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
- **Below Threshold:** X
- **Not Emitted:** Not reported
- **Percent Control Efficiency:** Not reported
- **Primary Control:** Not reported
- **Secondary Control:** Not reported
- **Emission Comment:** Not reported

---

**Facility ID:**
810055

**Facility Name:**
MANATEE COUNTY LENA RD LANDFILL

<table>
<thead>
<tr>
<th>Map ID</th>
<th>Direction</th>
<th>Distance</th>
<th>Elevation</th>
<th>Site</th>
<th>Database(s)</th>
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#### FACILITY INFORMATION

- **Facility Status:** A
- **Owner Name:** MANATEE COUNTY UTILITY OPERATIONS DEPT.
- **Type:** Not reported
- **CO:** Not reported
- **NOX:** Not reported
- **PM10:** Not reported
- **SO2:** Not reported
- **VOC:** Not reported

- **Facility Office:** SWD
- **EU ID:** 12
- **SCC:** 20100807
- **Pollutant:** NMOCP
- **Annual Emission:** 3.19
- **Emission Method:** Not reported
- **Emission Factor:** See Attachment 3-1.
- **Emission Calculation:** Not reported
- **Below Threshold:** Not reported
- **Not Emitted:** Not reported
- **Percent Control Efficiency:** Not reported
- **Primary Control:** Not reported
- **Secondary Control:** Not reported
- **Emission Comment:** Not reported

---

**Facility ID:**
810055

**Facility Name:**
MANATEE COUNTY LENA RD LANDFILL
MANATEE CNTY-LANDFILL (Continued)

Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H156
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported
Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H106
Annual Emission: 1.299
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: Not reported
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported
Facility ID: 810055
MANATEE COUNTY-LANDFILL (Continued) U001360673

Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H094
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: CO
Annual Emission: 56.44
Emission Method: 3A
Emission Factor: Not reported
Emission Calculation: See Attachment 4-1.
Below Threshold: Not reported
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
MANATEE CNTY-LANDFILL (Continued)

Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H2S
Annual Emission: 2.57
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-1.
Below Threshold: Not reported
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: VOC
Annual Emission: 0.35
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
MANATEE CNTY-LANDFILL (Continued) U001360673

Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H128
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H176
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
MANATEE CNTY-LANDFILL (Continued)

Facility Name: MANATEE COUNTY LENARA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H034
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENARA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H034
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported
MANATEE CNTY-LANDFILL (Continued)

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<td>Secondary Control:</td>
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<td>Emission Comment:</td>
<td>Not reported</td>
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MAP FINDINGS

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Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported
MANATEE CNTY-LANDFILL (Continued)

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: PM2.5
Annual Emission: 3.16
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-1. PM2.5 emissions are assumed to be identical to PM emissions.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: PM2.5
Annual Emission: 3.16
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-1. PM2.5 emissions are assumed to be identical to PM emissions.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported
MANATEE CNTY-LANDFILL (Continued)

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: PM
Annual Emission: 3.16
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-1.
Below Threshold: X
Not Emitted: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H186
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Emission Comment: Not reported
MANATEE CNTY-LANDFILL (Continued)

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H184
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H166
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported
MANATEE CNTY-LANDFILL (Continued)

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H085
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H167
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported
MANATEE CNTY-LANDFILL (Continued)

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H118
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H043
Annual Emission: Not reported
Emission Method: Not reported
Emission Factor: Not reported
Emission Calculation: Not reported
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: Not reported
**MANATEE CNTY-LANDFILL (Continued)**

| Facility ID: | 810055 |
| Facility Name: | MANATEE COUNTY LENA RD LANDFILL |
| Facility Status: | A |
| Owner Name: | MANATEE COUNTY UTILITY OPERATIONS DEPT. |
| Type: | Not reported |
| CO: | Not reported |
| NOX: | Not reported |
| PM10: | Not reported |
| SO2: | Not reported |
| VOC: | Not reported |
| Facility Office: | SWD |
| Title V: | 810055 |
| EU Description: | Landfill Gas (LFG) Flare |
| EU ID: | 13 |
| EU Status: | A |
| SCC: | 50100410 |
| Pollutant: | H088 |
| Annual Emission: | Not reported |
| Emission Method: | 3B |
| Emission Factor: | Not reported |
| Emission Calculation: | See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR. |
| Below Threshold: | X |
| Not Emitted: | Not reported |
| Percent Control Efficiency: | Not reported |
| Primary Control: | 23 |
| Secondary Control: | Not reported |
| Emission Comment: | Not reported |

| Facility ID: | 810055 |
| Facility Name: | MANATEE COUNTY LENA RD LANDFILL |
| Facility Status: | A |
| Owner Name: | MANATEE COUNTY UTILITY OPERATIONS DEPT. |
| Type: | Not reported |
| CO: | Not reported |
| NOX: | Not reported |
| PM10: | Not reported |
| SO2: | Not reported |
| VOC: | Not reported |
| Facility Office: | SWD |
| Title V: | 810055 |
| EU Description: | Landfill Gas (LFG) Flare |
| EU ID: | 13 |
| EU Status: | A |
| SCC: | 50100410 |
| Pollutant: | H088 |
| Annual Emission: | Not reported |
| Emission Method: | 3B |
| Emission Factor: | Not reported |
| Emission Calculation: | See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR. |
| Below Threshold: | X |
| Not Emitted: | Not reported |
| Percent Control Efficiency: | Not reported |
| Primary Control: | 23 |
| Secondary Control: | Not reported |
| Emission Comment: | Not reported |
MANATEE CNTY-LANDFILL (Continued)

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H104
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: NOX
Annual Emission: 11.29
Emission Method: 3A
Emission Factor: Not reported
Emission Calculation: See Attachment 4-1.
Below Threshold: Not reported
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported
Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H169
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H123
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported
MANATEE CNTY-LANDFILL (Continued)  

Facility ID: 810055  
Facility Name: MANATEE COUNTY LENA RD LANDFILL  
Facility Status: A  
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.  
Type: Not reported  
CO: Not reported  
NOX: Not reported  
PM10: Not reported  
SO2: Not reported  
VOC: Not reported  
Facility Office: SWD  
Title V: 810055  
EU Description: Landfill Gas (LFG) Flare  
EU ID: 13  
EU Status: A  
SCC: 50100410  
Pollutant: H089  
Annual Emission: Not reported  
Emission Method: 3B  
Emission Factor: Not reported  
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.  
Below Threshold: X  
Not Emitted: Not reported  
Percent Control Efficiency: Not reported  
Primary Control: 23  
Secondary Control: Not reported  
Emission Comment: Not reported  

Facility ID: 810055  
Facility Name: MANATEE COUNTY LENA RD LANDFILL  
Facility Status: A  
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.  
Type: Not reported  
CO: Not reported  
NOX: Not reported  
PM10: Not reported  
SO2: Not reported  
VOC: Not reported  
Facility Office: SWD  
Title V: 810055  
EU Description: Landfill Gas (LFG) Flare  
EU ID: 13  
EU Status: A  
SCC: 50100410  
Pollutant: H089  
Annual Emission: Not reported  
Emission Method: 3B  
Emission Factor: Not reported  
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.  
Below Threshold: X  
Not Emitted: Not reported  
Percent Control Efficiency: Not reported  
Primary Control: 23  
Secondary Control: Not reported  
Emission Comment: Not reported
MANATEE CNTY-LANDFILL (Continued)

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: PM10
Annual Emission: 3.16
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-1. PM10 emissions are assumed to be identical to PM emissions.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported
MANATEE CNTY-LANDFILL (Continued) U001360673

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H017
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H041
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported
MANATEE CNTY-LANDFILL (Continued)

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H185
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Landfill Gas (LFG) Flare
EU ID: 13
EU Status: A
SCC: 50100410
Pollutant: H009
Annual Emission: Not reported
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 4-2. Only HAPs above the 0.5 tpy threshold are reported in the AOR.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 23
Secondary Control: Not reported
Emission Comment: Not reported
MANATEE CNTY-LANDFILL (Continued)

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Three Diesel Emergency Generators (NSPS)
EU ID: 14
EU Status: A
SCC: 20200102
Pollutant: NOX
Annual Emission: 0.104
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 5-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 139
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Three Diesel Emergency Generators (NSPS)
EU ID: 14
EU Status: A
SCC: 20200102
Pollutant: NMHC+NOX
Annual Emission: 0.104
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 5-1.
Below Threshold: Not reported
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: Not reported
Secondary Control: Not reported
Emission Comment: There is no threshold for NMOC

Facility ID: 810055
MANATEE CNTY-LANDFILL (Continued)

Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Three Diesel Emergency Generators (NSPS)
EU ID: 14
EU Status: A
SCC: 20200102
Pollutant: PM10
Annual Emission: 0.0073
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 5-1. PM10 emissions are assumed to be identical to PM emissions.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 139
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Three Diesel Emergency Generators (NSPS)
EU ID: 14
EU Status: A
SCC: 20200102
Pollutant: CO
Annual Emission: 0.022
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 5-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 139
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
MANATEE CNTY-LANDFILL (Continued)  U001360673

Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD

Title V: 810055
EU Description: Three Diesel Emergency Generators (NSPS)
EU ID: 14
EU Status: A
SCC: 20200102
Pollutant: SO2
Annual Emission: 0.007
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 5-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 139
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD

Title V: 810055
EU Description: Three Diesel Emergency Generators (NSPS)
EU ID: 14
EU Status: A
SCC: 20200102
Pollutant: PM
Annual Emission: 0.0073
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 5-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 139
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
MANATEE CNTY-LANDFILL (Continued)

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Three Diesel Emergency Generators (NSPS)
EU ID: 14
EU Status: A
SCC: 20200102
Pollutant: VOC
Annual Emission: 0.008
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 5-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 139
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Four Diesel Emergency Generators (Pre-NSPS)
EU ID: 15
EU Status: A
SCC: 20200102
Pollutant: SO2
Annual Emission: 0.018
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 5-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 139
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
MANATEE CNTY-LANDFILL (Continued)

Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810005
EU Description: Four Diesel Emergency Generators (Pre-NSPS)
EU ID: 15
EU Status: A
SCC: 20200102
Pollutant: CO
Annual Emission: 0.059
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 5-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 139
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810005
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810005
EU Description: Four Diesel Emergency Generators (Pre-NSPS)
EU ID: 15
EU Status: A
SCC: 20200102
Pollutant: NOX
Annual Emission: 0.275
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 5-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 139
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810005
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
MANATEE CNTY-LANDFILL (Continued)

Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Four Diesel Emergency Generators (Pre-NSPS)
EU ID: 15
EU Status: A
SCC: 20200102
Pollutant: PM10
Annual Emission: 0.019
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 5-1. PM10 emissions are assumed to be identical to PM emissions.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 139
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported
Facility Office: SWD
Title V: 810055
EU Description: Four Diesel Emergency Generators (Pre-NSPS)
EU ID: 15
EU Status: A
SCC: 20200102
Pollutant: PM
Annual Emission: 0.019
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 5-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 139
Secondary Control: Not reported
Emission Comment: Not reported

Facility ID: 810055
Facility Name: MANATEE COUNTY LENA RD LANDFILL
Facility Status: A
Owner Name: MANATEE COUNTY UTILITY OPERATIONS DEPT.
MANATEE CNTY-LANDFILL (Continued)  U001360673

Type: Not reported
CO: Not reported
NOX: Not reported
PM10: Not reported
SO2: Not reported
VOC: Not reported

Facility Office: SWD

Title V:

EU Description: Four Diesel Emergency Generators (Pre-NSPS)
EU ID: 15
EU Status: A
SCC: 202000102

Pollutant:

Annual Emission: 0.022
Emission Method: 3B
Emission Factor: Not reported
Emission Calculation: See Attachment 5-1.
Below Threshold: X
Not Emitted: Not reported
Percent Control Efficiency: Not reported
Primary Control: 139
Secondary Control: Not reported

FL Financial Assurance 1:
Name: LENA ROAD CLASS I LANDFILL
Address: 3333 LENA ROAD
City,State,Zip: BRADENTON, FL 34211
Facility Id: 00044795
Region: 1
District: SW
Class: 100

Bond Issuer: Not reported
Bond Amount: Not reported
Insurance Company: Not reported
Insurance Amount: Not reported
Letter of Credit Bank: Not reported
Letter of Credit Amount: Not reported
Trustee: Not reported
Trust Fund Balance: Not reported
Financial Test: Fin. Test
Escrow: Not reported
Permittee Name: Manatee County
Financial Assurance Type: Fin Test
Contact Address: Post Office Box 25400
Contact City Zip: Bradenton 34206

FL Financial Assurance 3:
Name: MANATEE CNTY-LANDFILL
Address: 3333 LENA RD
City,State,Zip: BRADENTON, FL 34211
Region: 3
Facility ID: 8630173
Facility Phone: 9417087513
Facility Status: OPEN
MANATEE CNTY-LANDFILL (Continued)

Facility Type: H
Type Description: Local Government

Financial Responsibility: LOCAL GOVERNMENTS - BOND RATING TEST
Insurance Company: Not reported
Effective Date: 08/14/2003
Expire Date: 10/01/2018
Owner ID: 13457
Owner Name: MANATEE CNTY - FUEL SRVCS OFFICE
Owner Address: 2908 12TH ST CT E
Owner Address2: ATTN: BEN WILLIAMS JR
Owner City,St,Zip: BRADENTON, FL 34208
Contact: BENJAMIN D WILLIAMS JR
Resp Party Phone: 9417087513

Name: MANATEE CNTY-LANDFILL
Address: 3333 LENA RD
City,State,Zip: BRADENTON, FL 34211
Region: 3
Facility ID: 8630173
Facility Phone: 9417087513
Facility Status: OPEN
Facility Type: H
Type Description: Local Government

Financial Responsibility: LOCAL GOVERNMENTS - FINANCIAL TEST
Insurance Company: Not reported
Effective Date: 02/01/2015
Expire Date: 01/31/2016
Owner ID: 13457
Owner Name: MANATEE CNTY - FUEL SRVCS OFFICE
Owner Address: 2908 12TH ST CT E
Owner Address2: ATTN: BEN WILLIAMS JR
Owner City,St,Zip: BRADENTON, FL 34208
Contact: BENJAMIN D WILLIAMS JR
Resp Party Phone: 9417087513
MANATEE CNTY-LANDFILL (Continued)  U001360673

Resp Party Phone: 9417087513

Name: MANATEE CNTY-LANDFILL
Address: 3333 LENA RD
City,State,Zip: BRADENTON, FL 34211
Region: 3
Facility ID: 8630173
Facility Status: OPEN
Facility Type: H
Type Description: Local Government
DEP CO: D
Financial Responsibility: SELF-INSURANCE - LETTER FROM CHIEF FINANCIAL OFFIC
Insurance Company: Not reported
Effective Date: 02/01/2016
Expire Date: 01/31/2017
Owner ID: 13457
Owner Name: MANATEE CNTY - FUEL SRVCS OFFICE
Owner Address: 2908 12TH ST CT E
Owner Address2: ATTN: BEN WILLIAMS JR
Owner City,St,Zip: BRADENTON, FL 34208
Contact: BENJAMIN D WILLIAMS JR
Resp Party Phone: 9417087513

Map Findings

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<tr>
<th>Map ID</th>
<th>Direction</th>
<th>Distance</th>
<th>Elevation</th>
<th>Site</th>
<th>Database(s)</th>
<th>EPA ID Number</th>
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TC6558351.5s Page 182
MANATEE CNTY-LANDFILL (Continued) U001360673

Insurance Company: Not reported
Effective Date: 02/01/2018
Expire Date: 01/31/2019
Owner ID: 13457
Owner Name: MANATEE CNTY - FUEL SRVCS OFFICE
Owner Address: 2908 12TH ST CT E
Owner Address2: ATTN: BEN WILLIAMS JR
Owner City,St,Zip: BRADENTON, FL 34208
Contact: BENJAMIN D WILLIAMS JR
Resp Party Phone: 9417087513

Name: MANATEE CNTY-LANDFILL
Address: 3333 LENA RD
City,State,Zip: BRADENTON, FL 34211
Region: 3
Facility ID: 8630173
Facility Phone: 9417087513
Facility Status: OPEN
Facility Type: H
Type Description: Local Government
DEP CO: D
Financial Responsibility: SELF-INSURANCE - LETTER FROM CHIEF FINANCIAL OFFIC
Insurance Company: Not reported
Effective Date: 10/01/2019
Expire Date: 03/29/2021
Owner ID: 13457
Owner Name: MANATEE CNTY - FUEL SRVCS OFFICE
Owner Address: 2908 12TH ST CT E
Owner Address2: ATTN: BEN WILLIAMS JR
Owner City,St,Zip: BRADENTON, FL 34208
Contact: BENJAMIN D WILLIAMS JR
Resp Party Phone: 9417087513

HW GEN:
Site ID: 45069
Name: MANATEE COUNTY FLEET SERVICE
Address: 3333 LENA RD
City,State,Zip: BRADENTON, FL 34211 9458
Type: Small
Handler ID: FLD982122004
Office: SWD
Notified Date: 05/15/1989
Last Inspection Date: 05/30/1995
Facility Installation: -
Object ID: 794
Documents: https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/F
LD982122004/facility/search

TIER 2:
Name: MANATEE COUNTY LANDFILL
Address: 3333 LENA ROAD
City,State,Zip: BRADENTON, FL 34211-9458
Year: 2019
Facility Id: 6673256
Active Date: Not reported
MANATEE CNTY-LANDFILL (Continued)

Inactive Date: Not reported
Sale Pending: Not reported
Original Date: Not reported
PLOT Source: Not reported
Latitude: Not reported
Longitude: Not reported
LEPC District: Not reported
Counties: Not reported
SERC: Not reported
Program Level: Not reported
PRIME: Not reported
SIC Code: Not reported
SIC Code 2: Not reported
NAICS Code: 221320
Last Modified Date: 02/19/2020
First Submit Date: 02/19/2020
Data Submitted By: Bryan White
Company Name: Manatee County Landfill
Comments: Not reported

Contact:
Contact ID: Not reported
Year: 2019
Facility Id: 6673256
Contact Type: Owner / Operator
Contact Name: Manatee County Landfill
Contact Title: Not reported
Contact Phone: Not reported
Contact 24Hr Phone: Not reported
Contact Telephone 2: 9417928811
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: anthony.detweiler@mymanatee.org

Name: MANATEE COUNTY LANDFILL
Address: 3333 LENA ROAD
City,State,Zip: BRADENTON, FL 34211-9458
Year: 2018

TC6558351.5s Page 184
Facility Id: 6367774
Active Date: Not reported
Inactive Date: Not reported
Sale Pending: Not reported
Original Date: Not reported
PLOT Source: Not reported
Latitude: Not reported
Longitude: Not reported
LEPC District: Not reported
Counties: Not reported
SERC: Not reported
Program Level: Not reported
PRIME: Not reported
SIC Code: Not reported
SIC Code 2: Not reported
NAICS Code: 221320
Last Modified Date: 01/14/2019
First Submit Date: 01/14/2019
Data Submitted By: Bryan White
Company Name: Manatee County Landfill
Comments: Not reported

Contact:
Contact ID: Not reported
Year: 2018
Facility Id: 6367774
Contact Type: Owner / Operator
Contact Name: Manatee County Landfill
Contact Title: Not reported
Contact Phone: Not reported
Contact 24Hr Phone: Not reported
Contact Telephone 2: 9417485543
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: anthony.detweiler@mymanatee.org

Contact ID: Not reported
Year: 2018
Facility Id: 6367774
Contact Type: Owner / Operator
Contact Name: Manatee County Landfill
Contact Title: Not reported
Contact Phone: Not reported
Contact 24Hr Phone: Not reported
Contact Telephone 2: 9417485543
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: anthony.detweiler@mymanatee.org

Name: MANATEE COUNTY LANDFILL
Address: 3333 LENA ROAD
City,State,Zip: BRADENTON, FL 34211
MANATEE CNTY-LANDFILL (Continued) U001360673

Year: 2017
Facility Id: 6189473
Active Date: Not reported
Inactive Date: Not reported
Sale Pending: Not reported
Original Date: Not reported
PLOT Source: Not reported
Latitude: Not reported
Longitude: Not reported
LEPC District: Not reported
Counties: Not reported
SERC: Not reported
Program Level: Not reported
PRIME: Not reported
SIC Code: Not reported
SIC Code 2: Not reported
NAICS Code: 562212
Last Modified Date: 06/12/2018
First Submit Date: 06/12/2018
Data Submitted By: BRYAN WHITE, LANDFILL SUPERINTENDENT
Company Name: MANATEE COUNTY UTILITIES DEPARTMENT
Comments: Not reported

Contact:
Contact ID: Not reported
Year: 2017
Facility Id: 6189473
Contact Type: Emergency Contact
Contact Name: ANTHONY DEWEILER
Contact Title: Not reported
Contact Phone: 941-812-8796
Contact 24Hr Phone: Not reported
Contact Telephone 2: 941-792-8811
Contact Telephone 3: 941-812-2455
Contact Telephone 4: 941-792-8811
Contact Telephone 5: Not reported
Contact Telephone 6: 941-792-8811
Contact Email: Anthony.Deweiler@MyManatee.org

Name: MANATEE COUNTY LANDFILL
Address: 3333 LENA ROAD
City, State, Zip: BRADENTON, FL 34211

Year: 2013
Facility Id: 4566770
Active Date: Not reported
Inactive Date: Not reported
Sale Pending: Not reported
Original Date: Not reported
PLOT Source: Not reported
Latitude: 27.47053
Longitude: -82.458410
LEPC District: Not reported
Counties: Not reported
SERC: Not reported
Program Level: Not reported
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<tr>
<th>Map ID</th>
<th>Direction</th>
<th>Distance</th>
<th>Elevation</th>
<th>Site</th>
<th>Database(s)</th>
<th>EPA ID Number</th>
</tr>
</thead>
</table>

**MANATEE CNTY-LANDFILL (Continued)**

| PRIME: | Not reported |
| SIC Code: | 1111 |
| SIC Code 2: | Not reported |
| NAICS Code: | 562219 |
| Last Modified Date: | 04/02/2014 |
| First Submit Date: | 04/02/2014 |
| Data Submitted By: | BRYAN WHITE, LANDFILL SUPERINTENDENT |
| Company Name: | MANATEE COUNTY UTILITIES DEPARTMENT |
| Comments: | Not reported |

**Contact:**
- Contact ID: Not reported
- Year: 2013
- Facility Id: 4566770
- Contact Type: Emergency Contact
- Contact Name: BRYAN WHITE
- Contact Title: Not reported
- Contact Phone: 941-812-2455
- Contact 24Hr Phone: Not reported
- Contact Telephone 2: 941-792-8811
- Contact Telephone 3: Not reported
- Contact Telephone 4: Not reported
- Contact Telephone 5: Not reported
- Contact Telephone 6: Not reported
- Contact Email: UNKNOWN

**Name:** MANATEE COUNTY LANDFILL
**Address:** 3333 LENA ROAD
**City, State, Zip:** BRADENTON, FL 34211

| Year: | 2012 |
| Facility Id: | 4218258 |
| Active Date: | Not reported |
| Inactive Date: | Not reported |
| Sale Pending: | Not reported |
| Original Date: | Not reported |
| PLOT Source: | Not reported |
| Latitude: | 27.47053 |
| Longitude: | -82.458410 |
| LEPC District: | Not reported |
| Counties: | Not reported |
| SERC: | Not reported |
| Program Level: | Not reported |
| PRIME: | Not reported |
| SIC Code: | 1111 |
| SIC Code 2: | Not reported |
| NAICS Code: | 562219 |
| Last Modified Date: | 06/14/2013 |
| First Submit Date: | 06/14/2013 |
| Data Submitted By: | BRYAN WHITE, LANDFILL SUPERINTENDENT |
| Company Name: | MANATEE COUNTY UTILITIES DEPARTMENT |
| Comments: | Not reported |

**Contact:**
- Contact ID: Not reported
- Year: 2012

TC6558351.5s Page 187
MANATEE CNTY-LANDFILL (Continued)

Facility Id: 4218258
Contact Type: Tier II Secondary Contact
Contact Name: ANTHONY DEWEILER
Contact Title: Not reported
Contact Phone: 941-812-8796
Contact 24Hr Phone: Not reported
Contact Telephone 2: 941-792-8811
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: BRYAN.WHITE@MYMANATEE.ORG

Contact ID: Not reported
Year: 2012
Facility Id: 4218258
Contact Type: Owner / Operator
Contact Name: BRYAN WHITE
Contact Title: Not reported
Contact Phone: 941-792-8811
Contact 24Hr Phone: Not reported
Contact Telephone 2: 941-812-2455
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: UNKNOWN

Contact ID: Not reported
Year: 2012
Facility Id: 4218258
Contact Type: Tier II Emergency Contact
Contact Name: BRYAN WHITE
Contact Title: Not reported
Contact Phone: 941-792-8811
Contact 24Hr Phone: Not reported
Contact Telephone 2: 941-812-2455
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: Bryan.White@MyManatee.org

Name: MANATEE COUNTY LANDFILL
Address: 3333 LENA ROAD
City,State,Zip: BRADENTON, FL 34211

Year: 2011
Facility Id: 3993868
Active Date: Not reported
Inactive Date: Not reported
Sale Pending: Not reported
Original Date: Not reported
PLOT Source: Not reported
Latitude: 27.47053
MANATEE CNTY-LANDFILL (Continued)

Longitude: -82.458410
LEPC District: Not reported
Counties: Not reported
SERC: Not reported
Program Level: Not reported
PRIME: Not reported
SIC Code: Not reported
SIC Code 2: Not reported
NAICS Code: Not reported
Last Modified Date: 11/12/2012
First Submit Date: 11/09/2012
Data Submitted By: Florida Division of Emergency Management
Program Name: MANATEE COUNTY UTILITIES DEPARTMENT
Comments: Not reported

Contact:
Contact ID: Not reported
Year: 2011
Facility Id: 3993868
Contact Type: Tier II Secondary Contact
Contact Name: ANTHONY DEWEILER
Contact Title: Not reported
Contact Phone: 941-792-8811
Contact 24Hr Phone: Not reported
Contact Telephone 2: Not reported
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: Not reported

Contact ID: Not reported
Year: 2011
Facility Id: 3993868
Contact Type: Tier II Emergency Contact
Contact Name: BRYAN WHITE
Contact Title: Not reported
Contact Phone: 941-792-8811
Contact 24Hr Phone: Not reported
Contact Telephone 2: Not reported
Contact Telephone 3: Not reported
Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported
Contact Email: Bryan.White@MyManatee.org

Name: MANATEE COUNTY LANDFILL
Address: 3333 LENA ROAD
City, State, Zip: BRADENTON, FL 34210

Year: 2010
Facility Id: Not reported
Active Date: Not reported
Inactive Date: Not reported
Sale Pending: Not reported
Original Date: Not reported
MANATEE CNTY-LANDFILL (Continued) U001360673

PLOT Source: Not reported
Latitude: 27.4736
Longitude: -82.45
LEPC District: Not reported
Counties: Not reported
SERC: Not reported
Program Level: Not reported
PRIME: Not reported
SIC Code: Not reported
SIC Code 2: Not reported
NAICS Code: Not reported
Last Modified Date: Not reported
First Submit Date: Not reported
Data Submitted By: Not reported
Company Name: Not reported
Comments: Not reported

Chemical Code: 68476346
Chemical Name: Diesel Fuel Oil (low sulfur)
Chemical State: LIQUID
Location Name: Maintenance Building
Container Code: A
Pressure Code: 1
Temperature Code: 4
Average Quantity: 111000
Maximum Quantity: 111000
Days On Site: 365

Name: MANATEE COUNTY LANDFILL
Address: 3333 LENA ROAD
City, State, Zip: BRADENTON, FL 34210

Year: 2010
Facility Id: Not reported
Active Date: Not reported
Inactive Date: Not reported
Sale Pending: Not reported
Original Date: Not reported
PLOT Source: Not reported
Latitude: 27.4736
Longitude: -82.45
LEPC District: Not reported
Counties: Not reported
SERC: Not reported
Program Level: Not reported
PRIME: Not reported
SIC Code: Not reported
SIC Code 2: Not reported
NAICS Code: Not reported
Last Modified Date: Not reported
First Submit Date: Not reported
Data Submitted By: Not reported
Company Name: Not reported
Comments: Not reported

Chemical Code: 8006619
Chemical Name: GASOLINE
MANATEE CNTY-LANDFILL (Continued) U001360673

Chemical State: LIQUID
Location Name: Maintenance Building
Container Code: A
Pressure Code: 1
Temperature Code: 4
Average Quantity: 3200
Maximum Quantity: 3200
Days On Site: 365

WASTEWATER:
Name: LENA ROAD LANDFILL
Address: 3333 LENA RD
City,State,Zip: BRADENTON, FL
Facility ID: FLR05F797
Facility Type: Multi-Sector Stormwater GP
Status: Active - Existing, permitted facility/site for which effluent, reclaimed water or wastewater residual discharge into the environment and/or monitoring is taking place.

District Office: TLST
NPDES Permitted Site: Not reported
Environmental Interest: Not reported
Owner Type: Private
Permit Capacity: Not reported
Party Name: Mike Gore, PMTE
Company Name: Manatee County Government
RP Address: 4410 66th St W
RP Address 2: Not reported
RP City,Stat,Zip: Bradenton FL 34210
Telephone: 9417928811
Email: Mike.Gore@MyManatee.org
Issue Date: 01/17/2019
Effective Date: 01/17/2019
Expiration Date: 01/16/2024
DOC Description: Generic Permit
Latitude Degrees: 27
Latitude Minutes: 28
Latitude Seconds: 16.77
Longitude Degrees: 82
Longitude Minutes: 26
Longitude Seconds: 46.76
Treatment: Not reported
Decode For Fstatus: Active

B21 MANATEE CNTY-SE WWTP-1 UST U0013600880
Target Property 3335 LENA RD BRADENTON, FL 34211 Financial Assurance
AST N/A
Site 18 of 19 in cluster B
Actual: 30 ft.
Focus Map: 3

UST:
Facility Id: 8944388
Facility Status: OPEN
Type Description: County Government
Facility Phone: 9417087513
Region: STATE
Positioning Method: AGPS
MANATEE CNTY-SE WWTP-1 (Continued)  U001360880

Lat/Long (dms): 27 28 3 / 82 27 5

Owner:
Owner Id: 13457
Owner Name: MANATEE CNTY - FUEL SRVCS OFFICE
Owner Address: 2908 12TH ST CT E
Owner Address 2: ATTN: BEN WILLIAMS JR
Owner City,St,Zip: BRADENTON, FL 34208
Owner Contact: BENJAMIN D WILLIAMS JR
Owner Phone: 9417087513

Tank Info:
Name: MANATEE CNTY-SE WWTP-1
Address: 3335 LENA RD
City: BRADENTON
Zip: 34211
Tank Id: 60
Status: Removed
Status Date: 02/01/2002
Install Date: 1/1/1987
Substance: Diesel-emergen generator
Content Description: Emerg Generator Diesel
Gallons: 6000
Vessel Indicator: TANK
Tank Location: UNDERGROUND
DEP Contractor: D

Click here for Florida Oculus:

AST:
Name: MANATEE CNTY-SE WWTP-1
Address: 3335 LENA RD
Facility ID: 8944388
Facility Status: OPEN
Type Description: County Government
Facility Phone: 9417087513
DEP Contractor Own: D
Region: STATE
Positioning Method: AGPS
Lat/Long (dms): 27 28 3 / 82 27 5

Owner:
Owner Id: 13457
Owner Name: MANATEE CNTY - FUEL SRVCS OFFICE
Owner Address: 2908 12TH ST CT E
Owner Address 2: ATTN: BEN WILLIAMS JR
Owner City,St,Zip: BRADENTON, FL 34208
Owner Contact: BENJAMIN D WILLIAMS JR
Owner Phone: 9417087513

Tank Id: 78
Status: In service
Status Date: 12/01/2001
Install Date: 12/1/2001
Substance: Diesel-emergen generator
MANATEE CNTY-SE WWTP-1 (Continued)

<table>
<thead>
<tr>
<th>Content Description:</th>
<th>Emerg Generator Diesel</th>
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<tbody>
<tr>
<td>Gallons:</td>
<td>8000</td>
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<tr>
<td>Tank Location:</td>
<td>ABOVEGROUND</td>
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</tbody>
</table>

**Construction:**
- **Tank Id:** 78
- **Construction Category:** Primary Construction
- **Construction Description:** Steel

- **Tank Id:** 78
- **Construction Category:** Primary Construction
- **Construction Description:** Concrete

- **Tank Id:** 78
- **Construction Category:** Overfill/Spill
- **Construction Description:** Spill containment bucket

- **Tank Id:** 78
- **Construction Category:** Overfill/Spill
- **Construction Description:** Level gauges/alarms

- **Tank Id:** 78
- **Construction Category:** Secondary Containment
- **Construction Description:** Double wall - tank jacket

- **Tank Id:** 78
- **Construction Category:** Overfill/Spill
- **Construction Description:** Tight fill

**Monitoring:**
- **Tank ID:** 78
- **Monitoring Description:** Visual inspection of ASTs

- **Tank ID:** 78
- **Monitoring Description:** Monitor dbl wall tank space

- **Tank ID:** 78
- **Monitoring Description:** Monitor dbl wall pipe space

- **Tank ID:** 78
- **Monitoring Description:** Monitor piping/liner space

- **Tank ID:** 78
- **Monitoring Description:** Continuous electronic sensing

**Piping:**
- **Tank ID:** 78
- **Piping Category:** Secondary Containment
- **Piping Description:** Double wall - pipe jacket

- **Tank ID:** 78
- **Piping Category:** Primary Construction
- **Piping Description:** Fiberglass

- **Tank ID:** 78
- **Piping Category:** Secondary Containment
MANATEE CNTY-SE WWTP-1 (Continued) U001360880

Piping Description: Pipe trench liner
Tank ID: 78
Piping Category: Corrosion Protection
Piping Description: External protective coating

Tank ID: 78
Piping Category: Primary Construction
Piping Description: Steel/galvanized metal

Tank Id: 79
Status: In service
Status Date: 12/01/2001
Install Date: 12/1/2001
Substance: Diesel-emergen generator
Content Description: Emerg Generator Diesel
Gallons: 8000
Tank Location: ABOVEGROUND

Construction:
Tank Id: 79
Construction Category: Primary Construction
Construction Description: Steel

Tank Id: 79
Construction Category: Primary Construction
Construction Description: Concrete

Tank Id: 79
Construction Category: Overfill/Spill
Construction Description: Spill containment bucket

Tank Id: 79
Construction Category: Overfill/Spill
Construction Description: Level gauges/alarms

Tank Id: 79
Construction Category: Secondary Containment
Construction Description: Double wall - tank jacket

Tank Id: 79
Construction Category: Overfill/Spill
Construction Description: Tight fill

Monitoring:
Tank ID: 79
Monitoring Description: Visual inspection of ASTs

Tank ID: 79
Monitoring Description: Monitor dbl wall tank space

Tank ID: 79
Monitoring Description: Monitor dbl wall pipe space

Tank ID: 79
Monitoring Description: Monitor piping/liner space
MANATEE CNTY-SE WWTP-1  (Continued)  U001360880

Tank ID: 79
Monitoring Description: Continuous electronic sensing

Piping:
 Tank ID: 79
 Piping Category: Corrosion Protection
 Piping Description: External protective coating

 Tank ID: 79
 Piping Category: Primary Construction
 Piping Description: Fiberglass

 Tank ID: 79
 Piping Category: Secondary Containment
 Piping Description: Double wall - pipe jacket

 Tank ID: 79
 Piping Category: Secondary Containment
 Piping Description: Pipe trench liner

 Tank ID: 79
 Piping Category: Primary Construction
 Piping Description: Steel/galvanized metal

Click here for Florida Oculus:

FL Financial Assurance 3:
 Name: MANATEE CNTY-SE WWTP-1
 Address: 3335 LENA RD
 City,State,Zip: BRADENTON, FL 34211
 Region: 3
 Facility ID: 8944388
 Facility Phone: 9417087513
 Facility Status: OPEN
 Facility Type: I
 Type Description: County Government
 DEP CO: D
 Financial Responsibility: LOCAL GOVERNMENTS - BOND RATING TEST
 Insurance Company: Not reported
 Effective Date: 08/14/2003
 Expire Date: 10/01/2018
 Owner ID: 13457
 Owner Name: MANATEE CNTY - FUEL SRVCS OFFICE
 Owner Address: 2908 12TH ST CT E
 Owner Address2: ATTN: BEN WILLIAMS JR
 Owner City,St,Zip: BRADENTON, FL 34208
 Contact: BENJAMIN D WILLIAMS JR
 Resp Party Phone: 9417087513

Name: MANATEE CNTY-SE WWTP-1
Address: 3335 LENA RD
City,State,Zip: BRADENTON, FL 34211
Region: 3
Facility ID: 8944388
Facility Phone: 9417087513
MANATEE CNTY-SE WWTP-1 (Continued)

Facility Status: OPEN
Facility Type: I
Type Description: County Government
DEP CO: D
Financial Responsibility: LOCAL GOVERNMENTS - FINANCIAL TEST
Insurance Company: Not reported
Effective Date: 02/01/2015
Expire Date: 01/31/2016
Owner ID: 13457
Owner Name: MANATEE CNTY - FUEL SRVCS OFFICE
Owner Address: 2908 12TH ST CT E
Owner Address2: ATTN: BEN WILLIAMS JR
Owner City,St,Zip: BRADENTON, FL 34208
Contact: BENJAMIN D WILLIAMS JR
Resp Party Phone: 9417087513

Name: MANATEE CNTY-SE WWTP-1
Address: 3335 LENA RD
City,State,Zip: BRADENTON, FL 34211
Region: 3
Facility ID: 8944388
Facility Phone: 9417087513
Facility Status: OPEN
Facility Type: I
Type Description: County Government
DEP CO: D
Financial Responsibility: LOCAL GOVERNMENTS - FINANCIAL TEST
Insurance Company: Not reported
Effective Date: Not reported
Expire Date: Not reported
Owner ID: 13457
Owner Name: MANATEE CNTY - FUEL SRVCS OFFICE
Owner Address: 2908 12TH ST CT E
Owner Address2: ATTN: BEN WILLIAMS JR
Owner City,St,Zip: BRADENTON, FL 34208
Contact: BENJAMIN D WILLIAMS JR
Resp Party Phone: 9417087513

Name: MANATEE CNTY-SE WWTP-1
Address: 3335 LENA RD
City,State,Zip: BRADENTON, FL 34211
Region: 3
Facility ID: 8944388
Facility Phone: 9417087513
Facility Status: OPEN
Facility Type: I
Type Description: County Government
DEP CO: D
Financial Responsibility: SELF-INSURANCE - LETTER FROM CHIEF FINANCIAL OFFIC
Insurance Company: Not reported
Effective Date: 02/01/2016
Expire Date: 01/31/2017
Owner ID: 13457
Owner Name: MANATEE CNTY - FUEL SRVCS OFFICE
Owner Address: 2908 12TH ST CT E
Owner Address2: ATTN: BEN WILLIAMS JR
Owner City,St,Zip: BRADENTON, FL 34208
### MANATEE CNTY-SE WWTP-1 (Continued)

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<thead>
<tr>
<th>Contact</th>
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<tr>
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<tr>
<td>Name</td>
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<tr>
<td>Address</td>
<td>3335 LENA RD</td>
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<tr>
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<td>Owner Name</td>
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<tr>
<td>Owner Address</td>
<td>2908 12TH ST CT E</td>
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<tr>
<td>Owner Address2</td>
<td>ATTN: BEN WILLIAMS JR</td>
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<tr>
<td>Owner City,St,Zip</td>
<td>BRADENTON, FL 34208</td>
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<tr>
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### MANATEE CNTY-SE WWTP-1

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### MANATEE CNTY-SE WWTP-1

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<td>Type Description</td>
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<td>DEP CO</td>
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### MAP FINDINGS

<table>
<thead>
<tr>
<th>Map ID</th>
<th>Direction</th>
<th>Distance</th>
<th>Elevation</th>
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#### MANATEE CNTY-SE WWTP-1 (Continued)  
Financial Responsibility: SELF-INSURANCE - LETTER FROM CHIEF FINANCIAL OFFIC
Insurance Company: Not reported
Effective Date: 10/01/2019
Expire Date: 03/29/2021
Owner ID: 13457
Owner Name: MANATEE CNTY - FUEL SRVCS OFFICE
Owner Address: 2908 12TH ST CT E
Owner Address2: ATTN: BEN WILLIAMS JR
Owner City,St,Zip: BRADENTON, FL 34208
Contact: BENJAMIN D WILLIAMS JR
Resp Party Phone: 9417087513

#### B22  
MANATEE COUNTY LFGTE  
Target 3415 LENA RD  
Property BRADENTON, FL 34211

Site 19 of 19 in cluster B  
Actual: 30 ft.
Focus Map: 3  
Findings:
Registry ID: 110070398130
Click Here:
Environmental Interest/Information System: ELECTRIC GENERATOR
Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

#### C23  
SOUTHERN GUNITE, INC.  
Target 3302 81ST CT E  
Property BRADENTON, FL 34211

Site 1 of 3 in cluster C  
Actual: 29 ft.
Focus Map: 3  
AST:  
Name: SOUTHERN GUNITE, INC.
Address: 3302 81ST CT E
Facility ID: 9808317
Facility Status: OPEN
Type Description: Fuel user/Non-retail
Facility Phone: 9415674052
DEP Contractor Own: P
Region: STATE
Positioning Method: Not reported
Lat/Long (dms): Not reported
Owner:  
Owner Id: 70301
Owner Name: SOUTHERN GUNITE, INC.
Owner Address: 3302 81ST COURT EAST
Owner Address 2: Not reported
Owner City,St,Zip: BRADENTON, FL 34211
Owner Contact: STEVE HARTER
Owner Phone: 9415674052
Tank Id: 1
SOUTHERN GUNITE, INC. (Continued)

Status: In service
Status Date: 09/10/2014
Install Date: 7/1/2006
Substance: Vehicular diesel
Content Description: Vehicular Diesel
Gallons: 10000
Tank Location: ABOVEGROUND

Construction:
- Tank Id: 1
  - Construction Category: Primary Construction
  - Construction Description: Steel

- Tank Id: 1
  - Construction Category: Overfill/Spill
  - Construction Description: Level gauges/alarms

- Tank Id: 1
  - Construction Category: Secondary Containment
  - Construction Description: Double wall

- Tank Id: 1
  - Construction Category: Overfill/Spill
  - Construction Description: Tight fill

- Tank Id: 1
  - Construction Category: Overfill/Spill
  - Construction Description: Spill containment bucket

Monitoring:
- Tank ID: 1
  - Monitoring Description: Visual inspection of ASTs

- Tank ID: 1
  - Monitoring Description: Monitor dbl wall tank space

Piping:
- Tank ID: 1
  - Piping Category: Primary Construction
  - Piping Description: Steel/galvanized metal

- Tank ID: 1
  - Piping Category: Miscellaneous Attributes
  - Piping Description: Abv, no soil contact

- Tank ID: 1
  - Piping Category: Miscellaneous Attributes
  - Piping Description: Pressurized piping system

Click here for Florida Oculus:
C24 PRESTIGE GUNITE OF BRADENTON INC.  
Target 3302 EAST 81ST COURT  
Property BRADENTON, FL 34211  
Site 2 of 3 in cluster C

Actual:  
29 ft.  
Focus Map:  
3

Environmental Interest/Information System:

AIRS (Aerometric Information Retrieval System) Facility Subsystem replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AIRS is used to track emissions and compliance data from industrial plants. AIRS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AIRS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

AIR EMISSIONS CLASSIFICATION UNKNOWN

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

C25 SOUTHERN GUNITE-BRADENTON PLT.  
Target 3302 81ST CT E  
Property BRADENTON, FL 34211  
Site 3 of 3 in cluster C

Actual:  
29 ft.  
Focus Map:  
3

Environmental Interest/Information System:

AIRS (Aerometric Information Retrieval System) Facility Subsystem replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AIRS is used to track emissions and compliance data from industrial plants. AIRS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AIRS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

AIR EMISSIONS CLASSIFICATION UNKNOWN

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.
**SOUTHERN GUNITE-BRADENTON PLT. (Continued)**

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
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<tbody>
<tr>
<td>Contact EMail:</td>
<td><a href="mailto:yvonne@southerngunite.com">yvonne@southerngunite.com</a></td>
</tr>
<tr>
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<td>0810239001AG</td>
</tr>
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</table>

**Name:** SOUTHERN GUNITE-BRADENTON PLT.

**Address:** 3302 81ST CT E

**City, State, Zip:** BRADENTON, FL 34211

**Facility ID:** 810239

**Facility Status:** A

**Office:** SWD

**Category:** POINT

**Owner Name:** Southern Gunite, Inc.

**SIC Code:** Stone, Clay, Glass And Concrete Products

**Title V:** N

**Contact Name:** Yvonne Tucker

**Contact Address:** 9395 Weisman Way

**Contact Address 2:** Not reported

**Contact City:** West Palm Beach

**Issue Date:** 06/30/2019

**Contact Zip Code:** 33411

**Contact Zip4:** 3620

**Contact Phone:** 561-351-8744

**Contact EMail:** yvonne@southerngunite.com

**Permit Number:** 0810239001AG

**Expiration Date:** 06/30/2024

**UTM Zone:** 17

**UTM North:** 3039.32

**UTM East:** 356.01

**Latitude Direction:** 27

**Latitude Minute:** 28

**Latitude Second:** 11.4204
SOUTHERN GUNITE-BRADENTON PLT. (Continued)

Longitude Direction: 82
Longitude Minute: 27
Longitude Second: 26.2656
NAICS: Not reported
Type: Concrete Plant

Primary Resp. Official: Not reported
Primary Resp. Official Address 1: Not reported
Primary Resp. Official Address2: Not reported
Primary Resp. Official City: Not reported
Primary Resp. Official State: Not reported
Primary Resp. Official Zip5: Not reported
Primary Resp. Official Phone: Not reported
Primary Resp. Official Email: Not reported

Owner/Auth. Representative Address1: 9395b Weisman Way
Owner/Auth. Representative Address2: Not reported
Owner/Auth. Representative City: West Palm Beach
Owner/Auth. Representative State: FL
Owner/Auth. Representative Zip5: 33411
Owner/Auth. Representative Phone: 561-351-8744
Owner/Auth. Representative Email: yvonne@southerngunite.com

Name: SOUTHERN GUNITE-BRADENTON PLT.
Address: 3302 81ST CT E
City, State, Zip: BRADENTON, FL 34211
Facility ID: 810239
Facility Status: A
Office: SWD
Category: POINT
Owner Name: Southern Gunite, Inc.
SIC Code: Stone, Clay, Glass And Concrete Products
Title V: N
Contact Name: Yvonne Tucker
Contact Address: 9395 Weisman Way
Contact Address 2: Not reported
Contact City: West Palm Beach
Issue Date: 07/27/2018
Contact Zip Code: 33411
Contact Zip4: 3620
Contact Phone: 561-351-8744
Contact EMaiL: yvonne@southerngunite.com
Permit Number: 0810239002AG
Expiration Date: 06/30/2019
UTM Zone: 17
UTM North: 3039.32
UTM East: 356.01
Latitude Direction: 27
Latitude Minute: 11.4204
Latitude Second: 28
Longitude Direction: 82
Longitude Minute: 27
Longitude Second: 26.2656
NAICS: Not reported
Type: Concrete Plant
Primary Resp. Official: Not reported
Primary Resp. Official Address 1: Not reported
Primary Resp. Official Address2: Not reported
Primary Resp. Official City: Not reported
**SOUTHERN GUNITE-BRADENTON PLT. (Continued)**

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<td>Primary Resp. Official Email</td>
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<tr>
<td>Owner/Auth. Representative Address1</td>
<td>9395b Weisman Way</td>
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<tr>
<td>Owner/Auth. Representative Address2</td>
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<td>Owner/Auth. Representative City</td>
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<td>Owner/Auth. Representative Phone</td>
<td>561-351-8744</td>
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<td>Owner/Auth. Representative Email</td>
<td><a href="mailto:yvonne@southerngunite.com">yvonne@southerngunite.com</a></td>
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<td>FL Financial Assurance 3</td>
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<tr>
<td>Name</td>
<td>SOUTHERN GUNITE, INC.</td>
</tr>
<tr>
<td>Address</td>
<td>3302 81ST CT E</td>
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<tr>
<td>City,State,Zip</td>
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<tr>
<td>Region</td>
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</tr>
<tr>
<td>Facility ID</td>
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<td>Facility Phone</td>
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<tr>
<td>Facility Status</td>
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<tr>
<td>Facility Type</td>
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<tr>
<td>Type Description</td>
<td>Fuel user/Non-retail</td>
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<tr>
<td>DEP CO</td>
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<tr>
<td>Contact</td>
<td>STEVE HARTER</td>
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<td>Resp Party Phone</td>
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<table>
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<tr>
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<td>Type Description</td>
<td>Fuel user/Non-retail</td>
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<td>DEP CO</td>
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### SOUTHERN GUNITE-BRADENTON PLT. (Continued)

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**Name:** SOUTHERN GUNITE, INC.  
**Address:** 3302 81ST CT E  
**City, State, Zip:** BRADENTON, FL 34211  
**Region:** 3  
**Facility ID:** 9808317  
**Facility Phone:** 9415674052  
**Facility Status:** OPEN  
**Facility Type:** C  
**Type Description:** Fuel user/Non-retail  
**DEP CO:** P  
**Financial Responsibility:** INSURANCE  
**Insurance Company:** COMMERCE & INDUSTRY  
**Effective Date:** 08/21/2009  
**Expire Date:** 08/21/2010  
**Owner ID:** 70301  
**Owner Name:** SOUTHERN GUNITE, INC.  
**Owner Address:** 3302 81ST COURT EAST  
**Owner Address2:** Not reported  
**Owner City, St, Zip:** BRADENTON, FL 34211  
**Contact:** STEVE HARTER  
**Resp Party Phone:** 9415674052

---

**Name:** SOUTHERN GUNITE, INC.  
**Address:** 3302 81ST CT E  
**City, State, Zip:** BRADENTON, FL 34211  
**Region:** 3  
**Facility ID:** 9808317  
**Facility Phone:** 9415674052  
**Facility Status:** OPEN  
**Facility Type:** C  
**Type Description:** Fuel user/Non-retail  
**DEP CO:** P  
**Financial Responsibility:** INSURANCE  
**Insurance Company:** COMMERCE & INDUSTRY  
**Effective Date:** 08/21/2010  
**Expire Date:** 08/21/2011  
**Owner ID:** 70301  
**Owner Name:** SOUTHERN GUNITE, INC.  
**Owner Address:** 3302 81ST COURT EAST  
**Owner Address2:** Not reported  
**Owner City, St, Zip:** BRADENTON, FL 34211  
**Contact:** STEVE HARTER  
**Resp Party Phone:** 9415674052

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**Name:** SOUTHERN GUNITE, INC.  
**Address:** 3302 81ST CT E  
**City, State, Zip:** BRADENTON, FL 34211  
**Region:** 3  
**Facility ID:** 9808317  
**Facility Phone:** 9415674052  
**Facility Status:** OPEN  
**Facility Type:** C  
**Type Description:** Fuel user/Non-retail  
**DEP CO:** P  
**Financial Responsibility:** INSURANCE  
**Insurance Company:** COMMERCE & INDUSTRY  
**Effective Date:** 08/21/2011

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SOUTHERN GUNITE-BRADENTON PLT. (Continued)  S113719778

Expire Date: 08/21/2012
Owner ID: 70301
Owner Name: SOUTHERN GUNITE, INC.
Owner Address: 3302 81ST COURT EAST
Owner Address2: Not reported
Owner City,St,Zip: BRADENTON, FL 34211
Contact: STEVE HARTER
Resp Party Phone: 9415674052

Name: SOUTHERN GUNITE, INC.
Address: 3302 81ST CT E
City,State,Zip: BRADENTON, FL 34211
Region: 3
Facility ID: 9808317
Facility Phone: 9415674052
Facility Status: OPEN
Facility Type: C
Type Description: Fuel user/Non-retail
DEP CO: P
Financial Responsibility: INSURANCE
Insurance Company: COMMERCE & INDUSTRY
Effective Date: 08/21/2013
Expire Date: 08/21/2014
Owner ID: 70301
Owner Name: SOUTHERN GUNITE, INC.
Owner Address: 3302 81ST COURT EAST
Owner Address2: Not reported
Owner City,St,Zip: BRADENTON, FL 34211
Contact: STEVE HARTER
Resp Party Phone: 9415674052

Name: SOUTHERN GUNITE, INC.
Address: 3302 81ST CT E
City,State,Zip: BRADENTON, FL 34211
Region: 3
Facility ID: 9808317
Facility Phone: 9415674052
Facility Status: OPEN
Facility Type: C
Type Description: Fuel user/Non-retail
DEP CO: P
Financial Responsibility: INSURANCE
Insurance Company: COMMERCE & INDUSTRY
Effective Date: 08/21/2014
Expire Date: 08/21/2015
Owner ID: 70301
Owner Name: SOUTHERN GUNITE, INC.
Owner Address: 3302 81ST COURT EAST
Owner Address2: Not reported
Owner City,St,Zip: BRADENTON, FL 34211
Contact: STEVE HARTER
Resp Party Phone: 9415674052

Name: SOUTHERN GUNITE, INC.
Address: 3302 81ST CT E
City,State,Zip: BRADENTON, FL 34211
Region: 3
## SOUTHERN GUNITE-BRADENTON PLT. (Continued)

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### Facilities Details

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<th>Insurance Company</th>
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<th>Expire Date</th>
<th>Owner ID</th>
<th>Owner Name</th>
<th>Owner Address</th>
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<tr>
<td>9808317</td>
<td>9415674052</td>
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<td>Fuel user/Non-retail</td>
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<td>3302 81ST COURT EAST</td>
<td>STEVE HARTER</td>
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- Owner Name: SOUTHERN GUNITE, INC.
- Owner Address: 3302 81ST COURT EAST, BRADENTON, FL 34211
- Contact: STEVE HARTER
- Resp Party Phone: 9415674052

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**Note:** The data is repeated with minor variations in the dates and ID numbers. It seems to be a template or example data for demonstration purposes.
### SOUTHERN GUNITE-BRADENTON PLT. (Continued)

- **Owner Address2:** Not reported
- **Owner City, St., Zip:** BRADENTON, FL 34211
- **Contact:** STEVE HARTER
- **Resp Party Phone:** 9415674052

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<th>Site</th>
<th>Database(s)</th>
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<th>LENA TOWERS BUSINESS PARK</th>
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<th>ECHO N/A</th>
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<td><strong>Actual:</strong> 29 ft.</td>
<td><strong>Focus Map:</strong> 3</td>
<td><strong>Environmental Interest/Information System:</strong> US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality. Florida Environmental System Today Application (FIESTA) Data Maintenance (FDM) system maintains entity, environmental interest and affiliation data for the State of Florida. <strong>Click this hyperlink</strong> while viewing on your computer to access additional FINDS: detail in the EDR Site Report.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>ECHO:</th>
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<td><strong>Envid:</strong> 1009313603</td>
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<tr>
<td><strong>Registry ID:</strong> 110024387215</td>
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<td><strong>Name:</strong> LENA TOWERS BUSINESS PARK</td>
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<td><strong>Lat/Long (dms):</strong> Not reported</td>
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DAVIS CONCRETE (Continued)  

Owner:  
Owner Id: 5388  
Owner Name: DAVIS CONCRETE INC  
Owner Address: 1670 SUNSHINE DR  
Owner Address 2: ATTN: STORAGE TANK REGIS  
Owner City,St,Zip: CLEARWATER, FL 33765  
Owner Contact: RANDY DAVIS  
Owner Phone: 7277333141

Tank Id: 1  
Status: In service  
Status Date: 08/01/2005  
Install Date: 8/1/2005  
Substance: Vehicular diesel  
Content Description: Vehicular Diesel  
Gallons: 12000  
Tank Location: ABOVEGROUND

Construction:  
Tank Id: 1  
Construction Category: Primary Construction  
Construction Description: Steel

Tank Id: 1  
Construction Category: Secondary Containment  
Construction Description: Double wall

Tank Id: 1  
Construction Category: Miscellaneous Attributes  
Construction Description: Compartmented

Tank Id: 1  
Construction Category: Overfill/Spill  
Construction Description: Spill containment bucket

Tank Id: 1  
Construction Category: Overfill/Spill  
Construction Description: Tight fill

Tank Id: 1  
Construction Category: Overfill/Spill  
Construction Description: Ball check valve

Monitoring:  
Tank ID: 1  
Monitoring Description: Monitor dbl wall tank space

Tank ID: 1  
Monitoring Description: Visual inspection of ASTs

Tank ID: 1  
Monitoring Description: Visual inspect dispenser liners

Piping:  
Tank ID: 1
### DAVIS CONCRETE (Continued)

Piping Category: Miscellaneous Attributes  
Piping Description: Suction piping system

Tank ID: 1  
Piping Category: Miscellaneous Attributes  
Piping Description: Abv. no soil contact

Tank ID: 1  
Piping Category: Primary Construction  
Piping Description: Steel/galvanized metal

Tank ID: 1  
Piping Category: Miscellaneous Attributes  
Piping Description: Dispenser liners

Click here for Florida Oculus:

---

### FREEDOM RECYCLING C&DD WASTE PROCESSING FACILITY

<table>
<thead>
<tr>
<th>Piping Category</th>
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<td>Primary Construction</td>
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<td>Piping Description</td>
<td>Steel/galvanized metal</td>
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Click here for Florida Oculus:
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<tr>
<th>Map ID</th>
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<th>Elevation</th>
<th>Site</th>
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<td>2275 ft.</td>
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**TIRE AND WHEEL OUTLET**

7218 36TH AVE E  
BRADENTON, FL 34208

**Actual:** 27 ft.

**Focus Map:** 3

**SWF/LF:**

- **Name:** TIRE AND WHEEL OUTLET
- **Address:** 7218 36TH AVE E
- **City,State,Zip:** BRADENTON, FL 34208
- **Facility ID:** 106138
- **District:** SWD
- **Lat/Long:** :: / ::
- **Class Type:** 754
- **Classification:** WASTE TIRE COLLECTOR
- **Class Status:** INACTIVE (I)
- **Section:** Not reported
- **Township:** Not reported
- **Range:** Not reported
- **Responsible Authority Name:** Not reported
- **Responsible Authority Address:** Not reported
- **Responsible Authority City,St,Zip:** Not reported
- **Responsible Authority Phone:** Not reported
- **EMail Address1:** Not reported
- **EMail Address2:** Not reported
- **Site Supervisor Name:** Not reported
- **Site Supervisor Addr:** Not reported
- **Site Supervisor City/State/Zip:** Not reported
- **Site Supervisor Telephone:** Not reported
- **Land Owner Name:** Not reported
- **Land Owner Address:** Not reported
- **Land Owner City/State/Zip:** Not reported
- **Land Owner Telephone:** Not reported

Click here for Florida Oculus:
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<td>BRADENTON</td>
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<td>I-75 RAMP, GOING N. BOND I-75 TO W. BOUND SR 64</td>
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<td>S118684699</td>
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<td>BRADEN RIVER, BY 2415 51ST BLVD E</td>
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<td>1025433650</td>
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<td>34211</td>
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<td>BRADENTON</td>
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<td>PIER PROPERTY DRUM</td>
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<td>INTERSECTION OF I-75 &amp; UNIVERSITY PARKWAY</td>
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</table>
To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

**STANDARD ENVIRONMENTAL RECORDS**

**Federal NPL site list**

NPL: National Priority List
National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA’s Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

| Date of Government Version: 04/27/2021  | Source: EPA |
| Date Data Arrived at EDR: 05/03/2021   | Telephone: N/A |
| Date Made Active in Reports: 05/19/2021 | Last EDR Contact: 06/29/2021 |
| Number of Days to Update: 16           | Next Scheduled EDR Contact: 10/11/2021 |

**NPL Site Boundaries**

**Sources:**

- EPA’s Environmental Photographic Interpretation Center (EPIC)
  Telephone: 202-564-7333

- EPA Region 1
  Telephone 617-918-1143

- EPA Region 3
  Telephone 215-814-5418

- EPA Region 4
  Telephone 404-562-8033

- EPA Region 5
  Telephone 312-886-6686

- EPA Region 6
  Telephone 214-655-6659

- EPA Region 7
  Telephone 913-551-7247

- EPA Region 8
  Telephone 303-312-6774

- EPA Region 9
  Telephone 415-947-4246

- EPA Region 10
  Telephone 206-553-8665

**Proposed NPL: Proposed National Priority List Sites**

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

| Date of Government Version: 04/27/2021  | Source: EPA |
| Date Data Arrived at EDR: 05/03/2021   | Telephone: N/A |
| Date Made Active in Reports: 05/19/2021 | Last EDR Contact: 06/29/2021 |
| Number of Days to Update: 16           | Next Scheduled EDR Contact: 10/11/2021 |

**NPL LIENS: Federal Superfund Liens**

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.
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<thead>
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<th><strong>Federal Delisted NPL site list</strong></th>
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<tr>
<td>Delisted NPL: National Priority List Deletions</td>
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<td>The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.</td>
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<td>Date of Government Version: 04/27/2021</td>
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<td>Date Made Active in Reports: 05/19/2021</td>
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<td>Data Release Frequency: Varies</td>
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<th><strong>Federal CERCLIS list</strong></th>
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<tr>
<td>FEDERAL FACILITY: Federal Facility Site Information listing</td>
</tr>
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<td>A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.</td>
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<td>Date of Government Version: 02/22/2021</td>
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<th><strong>SEMS: Superfund Enterprise Management System</strong></th>
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<td>SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.</td>
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<td>Date Data Arrived at EDR: 05/03/2021</td>
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<tr>
<th><strong>Federal CERCLIS NFRAP site list</strong></th>
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</thead>
<tbody>
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<td>SEMS-ARCHIVE: Superfund Enterprise Management System Archive</td>
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</table>
SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA’s knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be potential NPL site.

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.
RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA’s comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57
Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 06/21/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA’s comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57
Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 06/21/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/09/2021
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 39
Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/05/2021
Next Scheduled EDR Contact: 08/23/2021
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 02/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 85
Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/21/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 02/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 85
Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/21/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies
Federal ERNS list

ERNS: Emergency Response Notification System
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/24/2021
Date Made Active in Reports: 06/17/2021
Number of Days to Update: 85

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

State-and-tribal - equivalent CERCLIS

SHWS: Florida’s State-Funded Action Sites
State Hazardous Waste Sites. State hazardous waste site records are the states’ equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 01/13/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 04/28/2020
Number of Days to Update: 69

Source: Department of Environmental Protection
Telephone: 850-488-0190
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Semi-Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facility Database
Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 04/12/2021
Date Data Arrived at EDR: 04/13/2021
Date Made Active in Reports: 06/28/2021
Number of Days to Update: 76

Source: Department of Environmental Protection
Telephone: 850-922-7121
Last EDR Contact: 04/13/2021
Next Scheduled EDR Contact: 07/26/2021
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST: Petroleum Contamination Detail Report
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 01/25/2021
Date Data Arrived at EDR: 01/27/2021
Date Made Active in Reports: 04/16/2021
Number of Days to Update: 79

Source: Department of Environmental Protection
Telephone: 850-245-8839
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Quarterly

LAST: Leaking Aboveground Storage Tank Listing
The file for Leaking Aboveground Storage Tanks. Please remember STCM does not track the source of the discharge so the agency provides a list of facilities with an aboveground tank and an open discharge split by facilities with aboveground tanks only and facilities with aboveground and underground tanks.

Date of Government Version: 02/01/2021
Date Data Arrived at EDR: 02/02/2021
Date Made Active in Reports: 04/23/2021
Number of Days to Update: 80

Source: Department of Environmental Protection
Telephone: 850-245-8799
Last EDR Contact: 04/21/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Varies
INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

Date of Government Version: 11/12/2020  Source: EPA Region 10
Date Data Arrived at EDR: 12/16/2020  Telephone: 206-553-2857
Date Made Active in Reports: 03/12/2021  Last EDR Contact: 06/11/2021
Number of Days to Update: 86  Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/07/2020  Source: EPA, Region 5
Date Data Arrived at EDR: 12/16/2020  Telephone: 312-886-7439
Date Made Active in Reports: 03/12/2021  Last EDR Contact: 06/11/2021
Number of Days to Update: 86  Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/01/2020  Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/16/2020  Telephone: 415-972-3372
Date Made Active in Reports: 03/12/2021  Last EDR Contact: 06/11/2021
Number of Days to Update: 86  Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/09/2020  Source: EPA Region 8
Date Data Arrived at EDR: 12/16/2020  Telephone: 303-312-6271
Date Made Active in Reports: 03/12/2021  Last EDR Contact: 06/11/2021
Number of Days to Update: 86  Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 09/30/2020  Source: EPA Region 7
Date Data Arrived at EDR: 12/22/2020  Telephone: 913-551-7003
Date Made Active in Reports: 03/12/2021  Last EDR Contact: 06/11/2021
Number of Days to Update: 80  Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/02/2020  Source: EPA Region 4
Date Data Arrived at EDR: 12/18/2020  Telephone: 404-562-8677
Date Made Active in Reports: 03/12/2021  Last EDR Contact: 06/17/2021
Number of Days to Update: 84  Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/01/2020  Source: EPA Region 1
Date Data Arrived at EDR: 12/16/2020  Telephone: 617-918-1313
Date Made Active in Reports: 03/12/2021  Last EDR Contact: 06/11/2021
Number of Days to Update: 86  Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies
Indian LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/12/2020
Number of Days to Update: 84
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/29/2021
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 33
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

FF Tanks: Federal Facilities Listing
A listing of federal facilities with storage tanks.

Date of Government Version: 03/29/2021
Date Data Arrived at EDR: 03/30/2021
Date Made Active in Reports: 06/17/2021
Number of Days to Update: 79
Source: Department of Environmental Protection
Telephone: 850-245-8250
Last EDR Contact: 06/15/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

UST: Storage Tank Facility Information
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 01/26/2021
Date Data Arrived at EDR: 01/28/2021
Date Made Active in Reports: 02/02/2021
Number of Days to Update: 5
Source: Department of Environmental Protection
Telephone: 850-245-8839
Last EDR Contact: 04/21/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Quarterly

AST: Storage Tank Facility Information
Registered Aboveground Storage Tanks.

Date of Government Version: 01/26/2021
Date Data Arrived at EDR: 01/28/2021
Date Made Active in Reports: 02/02/2021
Number of Days to Update: 5
Source: Department of Environmental Protection
Telephone: 850-245-8839
Last EDR Contact: 04/21/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Quarterly

Indian UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/07/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86
Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies
INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

<table>
<thead>
<tr>
<th>Date of Government Version:</th>
<th>04/08/2020</th>
<th>Source: EPA Region 6</th>
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<td>Telephone: 214-665-7591</td>
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<td>Data Release Frequency:</td>
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INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

<table>
<thead>
<tr>
<th>Date of Government Version:</th>
<th>10/09/2020</th>
<th>Source: EPA Region 8</th>
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<td>Data Release Frequency:</td>
<td>Varies</td>
<td></td>
</tr>
</tbody>
</table>

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

<table>
<thead>
<tr>
<th>Date of Government Version:</th>
<th>09/30/2020</th>
<th>Source: EPA Region 7</th>
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<tbody>
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<td>Telephone: 913-551-7003</td>
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<td>Data Release Frequency:</td>
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INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

<table>
<thead>
<tr>
<th>Date of Government Version:</th>
<th>10/01/2020</th>
<th>Source: EPA Region 9</th>
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<tbody>
<tr>
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<tr>
<td>Data Release Frequency:</td>
<td>Varies</td>
<td></td>
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</tbody>
</table>

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

<table>
<thead>
<tr>
<th>Date of Government Version:</th>
<th>10/01/2020</th>
<th>Source: EPA, Region 1</th>
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</thead>
<tbody>
<tr>
<td>Date Data Arrived at EDR:</td>
<td>12/16/2020</td>
<td>Telephone: 617-918-1313</td>
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<tr>
<td>Date Made Active in Reports:</td>
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<td>Number of Days to Update:</td>
<td>86</td>
<td>Next Scheduled EDR Contact: 08/02/2021</td>
</tr>
<tr>
<td>Data Release Frequency:</td>
<td>Varies</td>
<td></td>
</tr>
</tbody>
</table>

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations).

<table>
<thead>
<tr>
<th>Date of Government Version:</th>
<th>10/02/2020</th>
<th>Source: EPA Region 4</th>
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<td>Date Data Arrived at EDR:</td>
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<td>Number of Days to Update:</td>
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<td>Data Release Frequency:</td>
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Indian Underground Storage Tanks on Indian Land


<table>
<thead>
<tr>
<th>Date of Government Version: 11/12/2020</th>
<th>Source: EPA Region 10</th>
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<tbody>
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<td>Date Data Arrived at EDR: 12/16/2020</td>
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<td>Number of Days to Update: 86</td>
<td>Next Scheduled EDR Contact: 08/02/2021</td>
</tr>
<tr>
<td></td>
<td>Data Release Frequency: Varies</td>
</tr>
</tbody>
</table>

Tanks: Storage Tank Facility List

This listing includes storage tank facilities that do not have tank information. The tanks have either been closed or removed from the site, but the facilities were still registered at some point in history.

<table>
<thead>
<tr>
<th>Date of Government Version: 01/26/2021</th>
<th>Source: Department of Environmental Protection</th>
</tr>
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<tbody>
<tr>
<td>Date Data Arrived at EDR: 01/29/2021</td>
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<td>Number of Days to Update: 5</td>
<td>Next Scheduled EDR Contact: 08/09/2021</td>
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<td>Data Release Frequency: Quarterly</td>
</tr>
</tbody>
</table>

State and Tribal Institutional Control / Engineering Control Registries

Eng Controls: Institutional Controls Registry

The registry is a database of all contaminated sites in the state of Florida which are subject to engineering controls. Engineering Controls encompass a variety of engineered remedies to contain and/or reduce contamination, and/or physical barriers intended to limit access to property. ECs include fences, signs, guards, landfill caps, provision of potable water, slurry walls, sheet pile (vertical caps), pumping and treatment of groundwater, monitoring wells, and vapor extraction systems.

<table>
<thead>
<tr>
<th>Date of Government Version: 03/29/2021</th>
<th>Source: Department of Environmental Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Data Arrived at EDR: 03/30/2021</td>
<td>Telephone: 850-245-8927</td>
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<tr>
<td>Date Made Active in Reports: 06/17/2021</td>
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<td>Number of Days to Update: 79</td>
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</table>

Inst Control: Institutional Controls Registry

The registry is a database of all contaminated sites in the state of Florida which are subject to institutional and engineering controls.

<table>
<thead>
<tr>
<th>Date of Government Version: 03/29/2021</th>
<th>Source: Department of Environmental Protection</th>
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State and Tribal Voluntary Cleanup Sites

Indian VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

<table>
<thead>
<tr>
<th>Date of Government Version: 07/27/2015</th>
<th>Source: EPA, Region 1</th>
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<tr>
<td>Date Data Arrived at EDR: 09/29/2015</td>
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<td>Data Release Frequency: Varies</td>
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Indian VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.
GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

VCP: Voluntary Cleanup Sites
Listing of closed and active voluntary cleanup sites.

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Sites Database
Brownfields are defined by the Florida Department of Environmental Protection (FDEP) as abandoned, idled, or underused industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination.

BSRA: Brownfield Site Rehabilitation Agreements Listing
The BSRA provides DEP and the public assurance that site rehabilitation will be conducted in accordance with Florida Statutes and DEP’s Contaminated Site Cleanup Criteria rule. In addition, the BSRA provides limited liability protection for the voluntary responsible party. The BSRA contains various commitments by the voluntary responsible party, including milestones for completion of site rehabilitation tasks and submittal of technical reports and plans. It also contains a commitment by DEP to review technical reports according to an agreed upon schedule. Only those brownfield sites with an executed BSRA are eligible to apply for a voluntary cleanup tax credit incentive pursuant to Section 376.30781, Florida Statutes.

BROWNFIELDS AREAS: Brownfields Areas Database
A “brownfield area” means a contiguous area of one or more brownfield sites, some of which may not be contaminated, that has been designated as such by a local government resolution. Such areas may include all or portions of community redevelopment areas, enterprise zones, empowerment zones, other such designated economically deprived communities and areas, and Environmental Protection Agency (EPA) designated brownfield pilot projects. This layer provides a polygon representation of the boundaries of these designated Brownfield Areas in Florida.

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists
US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 03/15/2021
Date Data Arrived at EDR: 03/16/2021
Date Made Active in Reports: 06/10/2021
Number of Days to Update: 86

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: Recycling Centers
A listing of recycling centers located in the state of Florida.

Date of Government Version: 12/03/2018
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/14/2019
Number of Days to Update: 58

INeDS: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.
**Local Lists of Hazardous waste / Contaminated Sites**

**US HIST CDL:** National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

- **Date of Government Version:** 12/07/2020
- **Source:** Drug Enforcement Administration
- **Telephone:** 202-307-1000

**FL SITES:** Sites List

This summary status report was developed from a number of lists including the Eckhardt list, the Moffit list, the EPA Hazardous Waste Sites list, EPA’s Emergency & Remedial Response information System list (RCRA Section 3012) & existing department lists such as the obsolete uncontrolled Hazardous Waste Sites list. This list is no longer updated.

- **Date of Government Version:** 12/31/1989
- **Source:** Department of Environmental Protection
- **Telephone:** 850-245-8705

**US CDL:** Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

- **Date of Government Version:** 12/07/2020
- **Source:** Drug Enforcement Administration
- **Telephone:** 202-307-1000

**PFAS:** PFOS and PFOA stand for perfluorooctane sulfonate and perfluorooctanoic acid

PFOS and PFOA stand for perfluorooctane sulfonate and perfluorooctanoic acid, respectively. Both are fluorinated organic chemicals, part of a larger family of compounds referred to as perfluoroalkyl substances (PFASs).

- **Date of Government Version:** 10/26/2020
- **Source:** Department of Environmental Protection
- **Telephone:** 850-245-8690
**Local Land Records**

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

| Date of Government Version: 04/27/2021 | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 05/03/2021 | Telephone: 202-564-6023 |
| Date Made Active in Reports: 05/19/2021 | Last EDR Contact: 06/29/2021 |
| Number of Days to Update: 16 | Next Scheduled EDR Contact: 10/11/2021 |
| Date Made Active in Reports: 05/19/2021 | Data Release Frequency: Semi-Annually |

**Records of Emergency Release Reports**

HMIRS: Hazardous Materials Information Reporting System

HMIRS contains hazardous material spill incidents reported to DOT.

| Date of Government Version: 03/22/2021 | Source: U.S. Department of Transportation |
| Date Data Arrived at EDR: 03/24/2021 | Telephone: 202-366-4555 |
| Date Made Active in Reports: 06/17/2021 | Last EDR Contact: 06/17/2021 |
| Number of Days to Update: 85 | Next Scheduled EDR Contact: 10/04/2021 |
| Date Made Active in Reports: 06/17/2021 | Data Release Frequency: Quarterly |

SPILLS: Oil and Hazardous Materials Incidents

Statewide oil and hazardous materials inland incidents.

| Date of Government Version: 04/05/2021 | Source: Department of Environmental Protection |
| Date Data Arrived at EDR: 04/06/2021 | Telephone: 850-245-2010 |
| Date Made Active in Reports: 06/24/2021 | Last EDR Contact: 06/29/2021 |
| Number of Days to Update: 79 | Next Scheduled EDR Contact: 10/18/2021 |
| Number of Days to Update: 79 | Data Release Frequency: Semi-Annually |

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

| Date of Government Version: 12/10/2012 | Source: FirstSearch |
| Date Data Arrived at EDR: 01/03/2013 | Telephone: N/A |
| Date Made Active in Reports: 03/04/2013 | Last EDR Contact: 01/03/2013 |
| Number of Days to Update: 60 | Next Scheduled EDR Contact: N/A |
| Date Made Active in Reports: 03/04/2013 | Data Release Frequency: No Update Planned |

SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

| Date of Government Version: 09/01/2001 | Source: FirstSearch |
| Date Data Arrived at EDR: 01/03/2013 | Telephone: N/A |
| Date Made Active in Reports: 03/06/2013 | Last EDR Contact: 01/03/2013 |
| Number of Days to Update: 62 | Next Scheduled EDR Contact: N/A |
| Number of Days to Update: 62 | Data Release Frequency: No Update Planned |

**Other Ascertainable Records**

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.
GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FUDS: Formerly Used Defense Sites
The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

DOD: Department of Defense Sites
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

FEDLAND: Federal and Indian Lands

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing
The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

US FIN ASSUR: Financial Assurance Information
All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.
EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013  Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/21/2014  Telephone: 617-520-3000
Date Made Active in Reports: 06/17/2014  Last EDR Contact: 04/30/2021
Number of Days to Update: 88  Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017  Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/08/2018  Telephone: 703-308-4044
Date Made Active in Reports: 07/20/2018  Last EDR Contact: 05/07/2021
Number of Days to Update: 73  Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016  Source: EPA
Date Data Arrived at EDR: 06/17/2020  Telephone: 202-260-5521
Date Made Active in Reports: 09/10/2020  Last EDR Contact: 06/17/2021
Number of Days to Update: 85  Next Scheduled EDR Contact: 09/27/2021
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018  Source: EPA
Date Data Arrived at EDR: 08/14/2020  Telephone: 202-566-0250
Date Made Active in Reports: 11/04/2020  Last EDR Contact: 05/17/2021
Number of Days to Update: 82  Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 01/20/2021  Source: EPA
Date Data Arrived at EDR: 01/21/2021  Telephone: 202-564-4203
Date Made Active in Reports: 03/22/2021  Last EDR Contact: 04/20/2021
Number of Days to Update: 60  Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Annually
ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Annually

Source: EPA
Telephone: 703-416-0223

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 01/22/2021
Date Data Arrived at EDR: 02/18/2021
Date Made Active in Reports: 05/11/2021
Number of Days to Update: 82
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Varies

Source: Environmental Protection Agency
Telephone: 202-564-8600

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

Source: EPA
Telephone: 202-564-4104

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 03/05/2021
Number of Days to Update: 50
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Quarterly

Source: EPA
Telephone: 202-564-6023

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB’s who are required to notify the EPA of such activities.

Date of Government Version: 11/19/2020
Date Data Arrived at EDR: 01/08/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 73
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Annually
ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement
and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES)
program.
Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA,
TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the
Agency on a quarterly basis.
Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSPI: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.
Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which
possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency,
EDR contacts the Agency on a quarterly basis.
Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/11/2021
Date Made Active in Reports: 05/11/2021
Number of Days to Update: 61
Next Scheduled EDR Contact: 08/02/2021
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.
Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 70
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.
Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Varies
PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.
Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 05/07/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.
Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 06/22/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.
Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INS: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.
Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.
Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/27/2021
Next Scheduled EDR Contact: 08/09/2021
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.
### Biennial Reporting System (BRS)

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

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### Indian Reservations (INDIAN RESERV)

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

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### Formerly Utilized Sites Remedial Action Program (FUSRAP)

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

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### Uranium Mill Tailings Sites (UMTRA)

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

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<tr>
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<td>04/27/2021</td>
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<td>05/19/2021</td>
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</tr>
</tbody>
</table>

### Lead Smelter Sites

A listing of former lead smelter site locations.

<table>
<thead>
<tr>
<th>Date of Government Version</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>04/27/2021</td>
<td>Environmental Protection Agency</td>
</tr>
<tr>
<td>05/03/2021</td>
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<tr>
<td>05/03/2021</td>
<td>Environmental Protection Agency</td>
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<tr>
<td>05/19/2021</td>
<td>Environmental Protection Agency</td>
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<td>05/03/2021</td>
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<td>Environmental Protection Agency</td>
</tr>
<tr>
<td>05/03/2021</td>
<td>Environmental Protection Agency</td>
</tr>
</tbody>
</table>

### Lead Smelter Sites 2

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust.
US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.
US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011  Source: USGS
Date Data Arrived at EDR: 06/08/2011  Telephone: 703-648-7709
Date Made Active in Reports: 09/13/2011  Last EDR Contact: 05/27/2021
Number of Days to Update: 97  Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/23/2021  Source: Department of Interior
Date Data Arrived at EDR: 03/25/2021  Telephone: 202-208-2609
Date Made Active in Reports: 06/17/2021  Last EDR Contact: 06/14/2021
Number of Days to Update: 84  Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/03/2021  Source: EPA
Date Data Arrived at EDR: 03/03/2021  Telephone: (404) 562-9900
Date Made Active in Reports: 04/05/2021  Last EDR Contact: 05/18/2021
Number of Days to Update: 33  Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 11/03/2020  Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/17/2020  Telephone: 202-564-0527
Date Made Active in Reports: 02/09/2021  Last EDR Contact: 05/21/2021
Number of Days to Update: 84  Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 04/04/2021  Source: Environmental Protection Agency
Date Data Arrived at EDR: 04/06/2021  Telephone: 202-564-2280
Date Made Active in Reports: 06/25/2021  Last EDR Contact: 04/06/2021
Number of Days to Update: 80  Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations
<table>
<thead>
<tr>
<th>Program</th>
<th>Date of Government Version</th>
<th>Date Data Arrived at EDR</th>
<th>Date Made Active in Reports</th>
<th>Number of Days to Update</th>
<th>Source</th>
<th>Telephone</th>
<th>Last EDR Contact</th>
<th>Next Scheduled EDR Contact</th>
<th>Data Release Frequency</th>
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<tbody>
<tr>
<td><strong>FUELS PROGRAM:</strong> EPA Fuels Program Registered Listing</td>
<td>02/17/2021</td>
<td>02/17/2021</td>
<td>03/22/2021</td>
<td>33</td>
<td>EPA</td>
<td>800-385-6164</td>
<td>05/14/2021</td>
<td>08/30/2021</td>
<td>Quarterly</td>
</tr>
<tr>
<td><strong>AIRS:</strong> Permitted Facilities Listing</td>
<td>01/26/2021</td>
<td>01/28/2021</td>
<td>02/03/2021</td>
<td>6</td>
<td>Department of Environmental Protection</td>
<td>850-921-9558</td>
<td>04/21/2021</td>
<td>08/09/2021</td>
<td>Varies</td>
</tr>
<tr>
<td><strong>ASBESTOS:</strong> Asbestos Notification Listing</td>
<td>02/16/2021</td>
<td>02/17/2021</td>
<td>05/07/2021</td>
<td>79</td>
<td>Department of Environmental Protection</td>
<td>850-717-9086</td>
<td>05/12/2021</td>
<td>08/30/2021</td>
<td>Varies</td>
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<tr>
<td><strong>CLEANUP SITES:</strong> DEP Cleanup Sites - Contamination Locator Map Listing</td>
<td>02/23/2021</td>
<td>02/24/2021</td>
<td>05/14/2021</td>
<td>79</td>
<td>Department of Environmental Protection</td>
<td>866-282-0787</td>
<td>05/21/2021</td>
<td>09/06/2021</td>
<td>Quarterly</td>
</tr>
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<td><strong>DEDB:</strong> Ethylene Dibromide Database Results</td>
<td>12/09/2020</td>
<td>12/10/2020</td>
<td>02/25/2021</td>
<td>77</td>
<td>Department of Environmental Protection</td>
<td>850-245-8335</td>
<td>06/22/2021</td>
<td>09/27/2021</td>
<td>Varies</td>
</tr>
<tr>
<td><strong>DRYCLEANERS:</strong> Drycleaning Facilities</td>
<td>12/09/2020</td>
<td>12/10/2020</td>
<td>02/25/2021</td>
<td>77</td>
<td>Department of Environmental Protection</td>
<td>850-245-8335</td>
<td>06/22/2021</td>
<td>09/27/2021</td>
<td>Varies</td>
</tr>
</tbody>
</table>
DWM CONTAM: DWM CONTAMINATED SITES
A listing of active or known sites. The listing includes sites that need cleanup but are not actively being worked on because the agency currently does not have funding (primarily petroleum and drycleaning).

Financial Assurance 1: Financial Assurance Information Listing
A list of hazardous waste facilities required to provide financial assurance under RCRA.

Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities.

Financial Assurance 3: Financial Assurance Information Listing
A listing of financial assurance information for storage tanks sites.

FL Cattle Dip. Vats: Cattle Dipping Vats
From the 1910's through the 1950's, these vats were filled with an arsenic solution for the control and eradication of the cattle fever tick. Other pesticides, such as DDT, were also widely used. By State law, all cattle, horses, mules, goats, and other susceptible animals were required to be dipped every 14 days. Under certain circumstances, the arsenic and other pesticides remaining at the site may present an environmental or public health hazard.

HW GEN: Hazardous Waste Generators
Small Quantity Hazardous Waste Generators are regulated under the federal Resource Conservation and Recovery Act (RCRA) and applicable state regulations as generators of hazardous wastes in quantities greater than 100 Kg but less than 1,000 Kg in any one calendar month. Large Quantity Generators of Hazardous Waste are tracked in this coverage based on their notification to the Department of Environmental Protection as to their handler status, or based on inspections conducted at their facilities. These facilities are regulated under the federal Resource Conservation and Recovery Act (RCRA) and applicable state regulations as generators of hazardous wastes in quantities equal to or greater than 1,000 Kg in any one calendar month.
<table>
<thead>
<tr>
<th>Database Name</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>RESP PARTY</td>
<td>Responsible Party Sites Listing. Open, inactive and closed responsible party sites.</td>
</tr>
<tr>
<td>SITE INV SITES</td>
<td>Site Investigation Section Sites Listing. Statewide coverage of Site Investigation Section (SIS) sites. Site Investigation is a Section within the Bureau of Waste Cleanup, Division of Waste Management. SIS provides technical support to FDEP District Waste Cleanup Programs and conducts contamination assessments throughout the state.</td>
</tr>
<tr>
<td>TIER 2</td>
<td>Tier 2 Facility Listing. A listing of facilities which store or manufacture hazardous materials that submit a chemical inventory report.</td>
</tr>
<tr>
<td>UIC</td>
<td>Underground Injection Wells Database Listing. A listing of Class I wells. Class I wells are used to inject hazardous waste, nonhazardous waste, or municipal waste below the lowermost USDW.</td>
</tr>
<tr>
<td>WASTEWATER</td>
<td>Wastewater Facility Regulation Database. Domestic and industrial wastewater facilities.</td>
</tr>
<tr>
<td>PCS INACTIVE</td>
<td>Listing of Inactive PCS Permits. An inactive permit is a facility that has shut down or is no longer discharging.</td>
</tr>
</tbody>
</table>
PCS ENF: Enforcement data
No description is available for this data
Date of Government Version: 12/31/2014
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29
Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Varies

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.
Date of Government Version: 07/14/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55
Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 03/31/2021
Next Scheduled EDR Contact: 07/19/2021
Data Release Frequency: Semi-Annually

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System
Date of Government Version: 04/06/2018
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3
Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 05/27/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS
EDR Exclusive Records
EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR’s researchers. Manufactured gas sites were used in the United States from the 1800’s to 1950’s to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.
Date of Government Version: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A
Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR’s review was limited to those categories of sources that might, in EDR’s opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as “High Risk Historical Records”, or HRHR. EDR’s HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.
Date of Government Version: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A
Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies
EDR Hist Cleaner: EDR Exclusive Historical Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential
dry cleaner sites that were available to EDR researchers. EDR’s review was limited to those categories of sources
that might, in EDR’s opinion, include dry cleaning establishments. The categories reviewed included, but were
not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls
within a category of information EDR classifies as “High Risk Historical Records”, or HRHR. EDR’s HRHR effort
presents unique and sometimes proprietary data about past sites and operations that typically create environmental
concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List
The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived
from historical databases and includes many records that no longer appear in current government lists. Compiled
from Records formerly available from the Department of Environmental Protection in Florida.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List
The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases
and includes many records that no longer appear in current government lists. Compiled from Records formerly available
from the Department of Environmental Protection in Florida.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/10/2014
Number of Days to Update: 193

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank
The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents
derived from historical databases and includes many records that no longer appear in current government lists.
Compiled from Records formerly available from the Department of Environmental Protection in Florida.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALACHUA COUNTY:

FACILITY LIST ALACHUA: Facility List
List of all regulated facilities in Alachua County.

Date of Government Version: 03/19/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 06/09/2021
Number of Days to Update: 78

Source: Alachua County Environmental Protection Department
Telephone: 352-264-6800
Last EDR Contact: 06/15/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Annually

BROWARD COUNTY:


AST BROWARD: Aboveground Storage Tanks
Aboveground storage tank locations in Broward County.

Date of Government Version: 02/12/2021  
Source: Broward County Environmental Protection Department
Date Data Arrived at EDR: 06/10/2021  
Telephone: 954-818-7509
Date Made Active in Reports: 06/11/2021  
Last EDR Contact: 05/18/2021
Number of Days to Update: 1  
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

UST BROWARD: Underground Storage Tanks
All known regulated storage tanks within Broward County, including those tanks that have been closed

Date of Government Version: 02/12/2021  
Source: Broward County Environmental Protection Department
Date Data Arrived at EDR: 06/10/2021  
Telephone: 954-818-7509
Date Made Active in Reports: 06/11/2021  
Last EDR Contact: 05/18/2021
Number of Days to Update: 1  
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

HILLSBOROUGH COUNTY:

LF HILLSBOROUGH: Hillsborough County LF
Hillsborough county landfill sites.

Date of Government Version: 04/07/2021  
Source: Hillsborough County Environmental Protection Commission
Date Data Arrived at EDR: 04/07/2021  
Telephone: 813-627-2600
Date Made Active in Reports: 06/24/2021  
Last EDR Contact: 06/29/2021
Number of Days to Update: 78  
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

MIAMI-DADE COUNTY:

DADE CO AP: Air Permit Sites
Facilities that release or have a potential to release pollutants.

Date of Government Version: 02/23/2021  
Source: Department of Environmental Resources Management
Date Data Arrived at EDR: 02/23/2021  
Telephone: 305-372-6755
Date Made Active in Reports: 05/12/2021  
Last EDR Contact: 05/24/2021
Number of Days to Update: 78  
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Semi-Annually

DADE CO AW: Agricultural Waste Listing
A listing of agricultural waste sites

Date of Government Version: 02/23/2021  
Source: Miami-Dade County Division of Environmental Resources Management
Date Data Arrived at EDR: 02/23/2021  
Telephone: 305-372-6715
Date Made Active in Reports: 05/12/2021  
Last EDR Contact: 05/24/2021
Number of Days to Update: 78  
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

DADE CO LW: Liquid Waste Transporter List
The Liquid Waste Transporter permit regulates the transportation of various types of liquid and solid waste, including hazardous waste, waste oil and oily waste waters, septic and grease trap waste, biomedical waste, spent radiator fluid, photo chemical waste, dry sewage sludge, and other types of non-hazardous industrial waste. The Liquid Waste Transporter permits needed to protect the environment and the public from improperly handled and transported waste.

Date of Government Version: 02/23/2021  
Source: DERM
Date Data Arrived at EDR: 02/23/2021  
Telephone: 305-372-6755
Date Made Active in Reports: 05/12/2021  
Last EDR Contact: 05/24/2021
Number of Days to Update: 78  
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Quarterly
DADE GTO: Grease Trap Sites
Any non-residential facility that discharges waste to a sanitary sewer.

Date of Government Version: 02/23/2021  
Source: Dade County Dept. of Env. Resources Mgmt.
Date Data Arrived at EDR: 02/23/2021  
Telephone: 305-372-6508
Date Made Active in Reports: 05/12/2021  
Last EDR Contact: 05/24/2021
Number of Days to Update: 78  
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Semi-Annually

DADE MOP: Marine Facilities Operating Permit
What is this permit used for? Miami-Dade County Ordinance 89-104 and Section 24-18 of the Code of Miami-Dade County require the following types of marine facilities to obtain annual operating permits from DERM: All recreational boat docking facilities with ten (10) or more boat slips, moorings, davit spaces, and vessel tie-up spaces. All boat storage facilities contiguous to tidal waters in Miami-Dade County with ten (10) or more dry storage spaces including boatyards and boat manufacturing facilities.

Date of Government Version: 02/23/2021  
Source: DERM
Date Data Arrived at EDR: 02/23/2021  
Telephone: 305-372-3576
Date Made Active in Reports: 05/12/2021  
Last EDR Contact: 05/24/2021
Number of Days to Update: 78  
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Quarterly

DADE MRE: Miami River Enforcement
The Miami River Enforcement database files were created for facilities and in some instances vessels that were inspected by a workgroup within the Department that was identified as the Miami River Enforcement Group. The files do not all necessarily reflect enforcement cases and some were created for locations that were permitted by other Sections within the Department.

Date of Government Version: 06/05/2013  
Source: DERM
Date Data Arrived at EDR: 06/06/2013  
Telephone: 305-372-3576
Date Made Active in Reports: 08/06/2013  
Last EDR Contact: 05/24/2021
Number of Days to Update: 61  
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Quarterly

DADE_IW2_4: Industrial Waste Type 2-4 Sites
IW2s are facilities having reclaim or recycling systems with no discharges, aboveground holding tanks or spill prevention and countermeasure plans. IW4s are facilities that discharge an effluent to the ground.

Date of Government Version: 02/23/2021  
Source: Department of Environmental Resources Management
Date Data Arrived at EDR: 02/23/2021  
Telephone: 305-372-6700
Date Made Active in Reports: 05/12/2021  
Last EDR Contact: 05/24/2021
Number of Days to Update: 78  
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Semi-Annually

DADE_IW5: Industrial Waste Type 5 Sites
Generally these facilities fall under the category of "conditionally exempt small quantity generator" or "small quantity generator".

Date of Government Version: 02/23/2021  
Source: Department of Environmental Resources Management
Date Data Arrived at EDR: 02/23/2021  
Telephone: 305-372-6700
Date Made Active in Reports: 05/12/2021  
Last EDR Contact: 05/24/2021
Number of Days to Update: 78  
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Semi-Annually

DADE_IW6: Industrial Waste Type 6
Permits issued to those non-residential land uses located within the major drinking water wellfield protection areas that are not served by sanitary sewers. These facilities do not handle hazardous materials but are regulated because of the env. sensitivity of the areas where they are located.
DADE_IWP: Industrial Waste Permit Sites
Facilities that either generate more than 25,000 of wastewater per day to sanitary sewers or are pre-defined by EPA.

ENF: Enforcement Case Tracking System Sites
Enforcement cases monitored by the Dade County Department of Environmental Resources Management.

SPILLS DADE: Fuel Spills Cases
DERM documents fuel spills of sites that are not in a state program.

UST DADE: Storage Tanks
A listing of aboveground and underground storage tank site locations.

PALM BEACH COUNTY:

LF PALM BEACH: Palm Beach County LF
Palm Beach County Inventory of Solid Waste Sites.
Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
- Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.
- Date of Government Version: 10/05/2020
- Date Data Arrived at EDR: 02/17/2021
- Date Made Active in Reports: 05/10/2021
- Number of Days to Update: 82
- Source: Department of Energy & Environmental Protection
- Telephone: 860-424-3375
- Last EDR Contact: 05/11/2021
- Next Scheduled EDR Contact: 08/23/2021
- Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
- Hazardous waste manifest information.
- Date of Government Version: 12/31/2018
- Date Data Arrived at EDR: 04/10/2019
- Date Made Active in Reports: 05/16/2019
- Number of Days to Update: 36
- Source: Department of Environmental Protection
- Telephone: N/A
- Last EDR Contact: 04/09/2021
- Next Scheduled EDR Contact: 07/19/2021
- Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
- Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.
- Date of Government Version: 01/01/2019
- Date Data Arrived at EDR: 04/29/2020
- Date Made Active in Reports: 07/10/2020
- Number of Days to Update: 72
- Source: Department of Environmental Conservation
- Telephone: 518-402-8651
- Last EDR Contact: 04/30/2021
- Next Scheduled EDR Contact: 08/09/2021
- Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
- Hazardous waste manifest information.
- Date of Government Version: 06/30/2018
- Date Data Arrived at EDR: 07/19/2019
- Date Made Active in Reports: 09/10/2019
- Number of Days to Update: 53
- Source: Department of Environmental Protection
- Telephone: 717-783-8990
- Last EDR Contact: 04/09/2021
- Next Scheduled EDR Contact: 07/26/2021
- Data Release Frequency: Annually

RI MANIFEST: Manifest Information
- Hazardous waste manifest information.
- Date of Government Version: 12/31/2019
- Date Data Arrived at EDR: 02/11/2021
- Date Made Active in Reports: 02/24/2021
- Number of Days to Update: 13
- Source: Department of Environmental Management
- Telephone: 401-222-2797
- Last EDR Contact: 05/13/2021
- Next Scheduled EDR Contact: 08/30/2021
- Data Release Frequency: Annually

WI MANIFEST: Manifest Information
- Hazardous waste manifest information.
- Date of Government Version: 05/31/2018
- Date Data Arrived at EDR: 06/19/2019
- Date Made Active in Reports: 09/03/2019
- Number of Days to Update: 76
- Source: Department of Natural Resources
- Telephone: N/A
- Last EDR Contact: 06/03/2021
- Next Scheduled EDR Contact: 09/20/2021
- Data Release Frequency: Annually
Oil/Gas Pipelines  
Source: Endeavor Business Media  
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data  
Source: Endeavor Business Media  
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:  
Source: American Hospital Association, Inc.  
Telephone: 312-280-5991  
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing  
Source: Centers for Medicare & Medicaid Services  
Telephone: 410-786-3000  
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes  
Source: National Institutes of Health  
Telephone: 301-594-6248  
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools  
Source: National Center for Education Statistics  
Telephone: 202-502-7300  
The National Center for Education Statistics’ primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools  
Source: National Center for Education Statistics  
Telephone: 202-502-7300  
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Department of Children & Families  
Source: Provider Information  
Telephone: 850-488-4900

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.  
Source: FEMA  
Telephone: 877-336-2627  

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory  
Source: Department of Environmental Protection  
Telephone: 850-245-8238
Appendix F – Pond Siting Memo
Pond Siting

Technical Memorandum

Lena Road

Project Development and Corridor Study Report

November 2021
CONTENTS

Executive Summary .......................................................................................................................................................................................4

1.0 Introduction...........................................................................................................................................................................................6
  1.1 Project Location ...............................................................................................................................................................................6
  1.2 Project Description .........................................................................................................................................................................8

2.0 Vertical Datum ......................................................................................................................................................................................8

3.0 Land Use..................................................................................................................................................................................................8

4.0 Soil ..........................................................................................................................................................................................................10

5.0 Floodplains ..........................................................................................................................................................................................10

6.0 Sea Level Rise......................................................................................................................................................................................10

7.0 Existing Typical Section ..................................................................................................................................................................10

8.0 Existing Cross Drains ........................................................................................................................................................................10

9.0 Existing Drainage ..............................................................................................................................................................................11
  9.1 Watersheds ......................................................................................................................................................................................11
  9.2 Runoff Conveyance ......................................................................................................................................................................11
  9.3 Environmental Resource Permits ............................................................................................................................................11

10.0 Proposed Typical Sections .............................................................................................................................................................12

11.0 Floodplain Impacts ...........................................................................................................................................................................13

12.0 Design Criteria ................................................................................................................................................................................14

13.0 Permitting Requirements .............................................................................................................................................................16

14.0 Proposed Cross Drains .....................................................................................................................................................................16

15.0 Proposed Drainage ..........................................................................................................................................................................16

16.0 Pond Design ........................................................................................................................................................................................16
  16.1 Basin 1 ...............................................................................................................................................................................................17
  16.2 Basin 2 ...............................................................................................................................................................................................17
  16.3 Basin 3 ...............................................................................................................................................................................................17
  16.4 Lena Road South of Basin 1 .......................................................................................................................................................18

17.0 Conclusion ...........................................................................................................................................................................................18
FIGURES

Figure 1-1 | Location Map .................................................................................................................................7
Figure 3-1 | Land Use .............................................................................................................................................9
Figure 10-1 | Proposed Typical Section 1 ............................................................................................................12
Figure 10-2 | Proposed Typical Section 2 ............................................................................................................13
Figure 10-3 | Proposed Typical Section 3 ............................................................................................................13

TABLES

Table 1 | Preferred Pond Sites ............................................................................................................................5
Table 8-1 | Existing Cross Drains ......................................................................................................................11
Table 9-1 | Environmental Resource Permits ..................................................................................................11
Table 11-1 | Floodplain Impacts ........................................................................................................................14
Table 11-2 | Floodplain Compensation .............................................................................................................14
Table 12-1 | Design Criteria ................................................................................................................................14
Table 15-1 | Proposed Basins .............................................................................................................................16

APPENDICES

Appendix A ......................................................................................................................................................Drainage Maps
Appendix B ......................................................................................................................................................Soil Report and Figures
Appendix C ......................................................................................................................................................FEMA FIRMs and FIS Excerpts
Appendix D ......................................................................................................................................................Preliminary Pond Sizing
Appendix E ......................................................................................................................................................Existing Permit Excerpts
Appendix F ......................................................................................................................................................Utilities Figures
Appendix G ......................................................................................................................................................Pond Site Matrices
Executive Summary

Manatee County is preparing a study of the Lena Road corridor located east of I-75 in western Manatee County, within Sections 01 and 12, Township 35S, Range 18E - shown in Figure 1-1. Study limits begin at the northern termini of the southern segment of Lena Road, and extend approximately 0.7-miles north to 81st Court East. The study corridor then continues approximately 0.35-miles north along 81st Court East to Powell Johnson Road – Landfill Road. North of Powell Johnson Road, 81st Court East becomes Lena Road. The study corridor continues north along Lena Road 0.26-miles. The Lena Road Corridor Study includes alternatives for reducing congestion, improving safety and operational performance, and addressing future transportation needs. Proposed improvements include a new north-south connection between the southern segment of Lena Road and 81st Court East. Proposed improvements also include a new intersection at 44th Avenue East – an extension of 44th Avenue being developed by Manatee County.

This Pond Siting Memorandum is included within the Lena Road Corridor Study to assess right of way acquisition alternatives for required stormwater ponds and floodplain impact compensation. Analysis follows Southwest Florida Water Management District (SWFWMD) and Manatee County requirements and guidelines. Stormwater analysis herein is preliminary and does not benefit for detailed survey or geotechnical investigation.

The existing southern segment of Lena Road is a two lane (one lane each way) north-south rural roadway with valley gutter along the edge of pavement. Existing 81st Court East and the existing northern segment of Lena Road are two lane (one lane each way) north-south rural roadways with flush shoulders and ditches.

Three alternative typical sections are provided. Typical Section 1 includes an 84-foot right of way, two 11-foot lanes (one lane each way), curb and gutter, a 22’ raised grassed median, and a 5-foot sidewalk along the northbound and southbound right of ways. Typical Section 2 includes an 84-foot right of way, two 11-foot lanes (one lane each way), curb and gutter, an 18’ raised grassed median, a 5-foot sidewalk along the northbound right of way, and a 12-foot shared use path along the southbound right of way. Typical Section 3 is the same as Typical Section 1 except for the raised median, which is replaced by a 14-foot two-way left turn lane.

Typical Section 2 is recommended from the beginning of the project to the southern limits of Lena Road Business Park at station 241+00. Typical Section 2 is also recommended from just north of Lena Road Business Park at station 263+72 to the end of the project at SR 64. Typical Section 3 is proposed within Lena Road Business Park, from station 241+00 to station 263+72. Pond sizing analysis is based on the recommended typical sections.

Drainage Maps are found in Appendix A. The study corridor includes three stormwater runoff basins. Basins 1 outfalls to Braden River Below Ward Lake (WBID 1876). Basins 2 and 3 outfall to Cypress Strand (WBID 1875). WBID 1876 and WBID 1875 are not impaired for nutrients or dissolved oxygen. The proposed project requires an Environmental Resource Permit (ERP) from SWFWMD. All project tailwaters are estimated to be hydrologically isolated from the influence of sea level rise.

Right of way acquisition is not required to provide stormwater facilities for Basins 1 and 3. Therefore only one pond site alternative is provided for each. Two pond site alternatives are provided for Basin 2, which does require right of way acquisition. Basin 1 runoff outfalls to Pond 1. The 44th Avenue East project currently in design will include final design of Pond 1 and all of Basin 1 except for the portion of Lena Road north of the roundabout at 44th Avenue East (station 281+00). However, final design of Pond 1 included with the 44th Avenue East project will include stormwater treatment and attenuation capacity for all of Basin 1 including the portion of Lena Road north of the roundabout. The 44th Avenue East project refers to Basin 1 and Pond 1 as SMF 12 ROW and SMF 12, respectively. Two alternative wet detention pond sites, Pond 2A and Pond 2B, are provided for Basin 2 which requires right of way acquisition. Pond 2A is recommended as it results in a smaller floodplain impact and does not require modification of an existing pond. Pond 3 is a wet detention facility located on County
property in the Central County Complex project. The final location of Pond 3 within the County project will be determined with final design of that project.

Table 1 | Preferred Pond Sites

<table>
<thead>
<tr>
<th>Basin</th>
<th>Preferred Pond Site</th>
<th>Right of Way Acquisition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pond 1</td>
<td>0.00 Acres(^A)</td>
</tr>
<tr>
<td>2</td>
<td>Pond 2A</td>
<td>1.87 Acres</td>
</tr>
<tr>
<td>3</td>
<td>Pond 3</td>
<td>0.00 Acres(^B)</td>
</tr>
</tbody>
</table>

\(^A\) Known as SMF 12 in the 44\(^{th}\) Avenue East project. Right of way acquisition is included with that project.

\(^B\) Pond located on existing County property.
1.0 Introduction

Manatee County Government is conducting a Project Development and Corridor Study for Lena Road to develop corridor alternatives for reducing congestion, improving safety and operational performance, and addressing future transportation needs. The project will add vehicular capacity and shared use access to Lena Road. Proposed improvements connect two north-south roadways – Lena Road and 81st Court East – to create a continuous corridor from SR 70 to SR 64. Proposed improvements also include a new intersection at 44th Avenue East – an extension of 44th Avenue being developed by Manatee County.

This Preliminary Pond Siting Report is included within the Lena Road Corridor Study to assess right of way acquisition alternatives for required stormwater treatment facilities and floodplain impact compensation areas. The stormwater and pond site sizing analysis herein are preliminary and does not benefit for detailed survey or geotechnical investigation.

1.1 Project Location

The study corridor located east of I-75 in western Manatee County, within Sections 01 and 12, Township 35S, Range 18E – shown below in Figure 1-1. Study limits begin at the northern termini of the southern segment of Lena Road, and extend approximately 0.7-miles north to 81st Court East. The study corridor continues along 81st Court East approximately 0.35-miles to Powell Johnson Road – Landfill Road. North of Powell Johnson Road, 81st Court East becomes Lena Road. The study corridor continues north along Lena Road 0.26-miles.
Figure 1-1 | Location Map

Legend

Yellow

Lena Road 500ft Buffer

Source: (ESRI USGS Imagery, 2021)
1.2 Project Description
The project will add vehicular capacity and shared use access to Lena Road. Proposed improvements connect two north-south roadways – Lena Road and 81st Court East – to create a continuous corridor from SR 70 to SR 64. Proposed improvements also include new intersection at 44th Avenue East – an extension of 44th Avenue being developed by Manatee County. Depending on the typical section chosen, improvements will either include a shared use path along the southbound right of way or sidewalks and bike lanes in both directions.

2.0 Vertical Datum
All analysis herein is in North American Vertical Datum 1988 (NAVD 88). Data sources in National Geodetic Vertical Datum 1929 (NGVD 29) such as historical plans are converted to NAVD 88. Per the NOAA NGS Coordinate Conversion and Transformation Tool, the conversion from NGVD 29 to NAVD 88 is:

NAVD 88 = NGVD 29 + 1.65’

3.0 Land Use
The study corridor land use is shown below on Figure 3-1. Predominant corridor land uses include industrial, low density residential, cropland and pastureland, and natural areas such as pine flatwoods, freshwater marshes, forested wetlands, and wet prairies.
Figure 3-1 | Land Use
4.0  **Soil**
Soil classification, and hydrologic soil group figures, and a United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Custom Soil Resource Report are provided in Appendix B. Soils are predominately fine sands with hydrologic soil group A/D.

5.0  **Floodplains**
Lena Road is within Manatee County Unincorporated Area shown on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) 12081C0329E and 12081C0327E, both with an effective date March 17, 2014. FIRMs and Flood Insurance Study (FIS) excerpts are found in Appendix C. The study corridor impacts multiple floodplain areas associated with Cypress Strand. Floodplains from south of 44th Avenue East to Powell Johnson Road are designated Zone A, meaning the areas are within the 1% annual chance flood but do not have established flood elevations. North of Powell Johnson Road, floodplains continue along the northbound Lena Road right of way. Then, beginning south of the Cypress Strand cross drain beneath Lena Road and continuing to SR 64, Lena Road right of way is included in the floodplain. Floodplains north of Powell Johnson road are designated Zone AE, meaning they are within 1% annual chance flood and have established flood elevations. Flood elevation drops from 30’ at Powell Johnson Road to 20’ downstream of the Cypress Strand cross drain beneath Lena Road. The study corridor also impacts the Manatee County 25-year floodplain in the vicinity of the Cypress Strand cross drain beneath Lena Road.

6.0  **Sea Level Rise**
The FDOT Drainage Manual specifies coastal projects must incorporate sea-level rise analysis to assess the vulnerability of flooding over the design life of the facility. The closest NOAA Sea Level Trends tide gauge is station 8726520 in St. Petersburg. The mean higher high tide (MHHW) at this station is elevation 0.78-feet. The NOAA estimated relative sea level trend is an increase of 2.75-mm per year based on monthly mean sea-level data from 1947 to 2017. The FEMA FIS Flood Profile for Cypress Strand indicates Lena Road is 1.6 miles upstream of combined coastal and riverine effects. All project tailwaters are estimated to be hydrologically isolated from the influence of sea level rise. Other project tailwaters, including Williams Creek and a tributary leading to Braden River above Ward lake, are both beyond the FEMA limits of detailed study, upstream of the limits of combined coastal and riverine effects, and outside of the 500-year floodplain.

7.0  **Existing Typical Section**
Existing Lena Road is divided into two segments. The first segment, from the beginning of the project at the Lena Road cul-de-sac to the 81st Court East cul-de-sac at station 242+00, is through predominately undeveloped land. The second segment, along 81st Court East and then Lena Road, is a two lane (one lane each way) rural section with approximately 55-feet to 80-feet of right of way, 12-foot lanes, unpaved shoulders, and should swales.

8.0  **Existing Cross Drains**
Table 8-1 summarizes the two existing cross drains within the project limits.
Table 8-1 | Existing Cross Drains

<table>
<thead>
<tr>
<th>Station</th>
<th>Size</th>
<th>Flow Direction</th>
<th>Channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>251+00</td>
<td>36&quot;</td>
<td>East</td>
<td>Cypress Strand Tributary</td>
</tr>
<tr>
<td>294+00</td>
<td>Unknown</td>
<td>West</td>
<td>Cypress Strand</td>
</tr>
</tbody>
</table>

9.0 Existing Drainage
Corridor drainage patterns can be found on the Appendix A Drainage Maps. Runoff basins are delineated using 44th Avenue East project survey, historical plans and permit documents, and aerials.

9.1 Watersheds
Existing corridor runoff is divided between three watersheds: Williams Creek (WBID 1901), Braden River Below Ward Lake (WBID 1876), and Cypress Strand (WBID 1875). The existing area within the project limits from the beginning of the project to south of 44th Avenue East (station 212+00) outfalls to Williams Creek which flows westward beneath I-75 into the Braden River. This portion of Basin 1 is routed to Braden River Below Ward Lake (WBID 1875) in the proposed condition to avoid additional wetland impacts for an additional pond site. Corridor runoff from south of 44th Avenue (station 212+00) to 34th Avenue East (station 248+00) outfalls to a network of wetlands leading to a channel which flows west, beneath I-75 on the north side of 44th Avenue East. The channel ultimately flows to Braden River and is within the Braden River Below Ward Lake Watershed. From 34th Avenue East (station 248+00) to the end of the project, runoff flows northeast to Cypress Strand. Cypress Strand flows north to Manatee River. Williams Creek is listed as impaired for nutrients on the FDEP comprehensive study list. Braden River Below Ward Lake and Cypress Strand are impaired for nutrients or dissolved oxygen.

9.2 Runoff Conveyance
South of the 81st Court East cul-de-sac the corridor is predominately undeveloped area which drains via a series of connected depressions and channels. Developed residential areas south of the cul-de-sac drain via shoulder swales. North of the cul-de-sac the corridor follows 81st Court East and Lena Road which drain via shoulder swales.

9.3 Environmental Resource Permits
Table 9-1 summarizes the existing Environmental Resource Permits for within the study corridor. Existing permit excerpts are included in Appendix E. Permits are organized around two business and industrial parks, each of which includes multiple permit modifications as parcels were build-out. The only existing runoff within the corridor which drains to permitted treatment facilities is within Lena Road Business Park, within Basin 2. No stormwater facility modifications are proposed to Creekwood East Corp Park which is located at the southern limits of the study corridor.

Table 9-1 | Environmental Resource Permits

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>3143.004</td>
<td>Lena Road Business Park</td>
</tr>
<tr>
<td>5641.021</td>
<td>Creekwood East Corp Park</td>
</tr>
</tbody>
</table>
10.0 Proposed Typical Sections

Analysis includes three alternative roadway typical sections. All alternatives follow the same alignment. Proposed typical sections are shown below on Figures 10-1, 10-2, and 10-3. Typical Section 1 includes an 84-foot right of way, two 12-foot lanes (one lane each way), 4-foot bike lanes, curb and gutter, a 22' raised grassed median, and a 5-foot sidewalk along the northbound and southbound right of ways. Typical Section 2 includes an 84-foot right of way, two 11-foot lanes (one lane each way), curb and gutter, an 18' raised grassed median, a 5-foot sidewalk along the northbound right of way, and a 12-foot shared use path along the southbound right of way. Typical Section 3 is the same as Typical Section 1 except for the raised median, which is replaced by a 14-foot two-way left turn lane.

Typical Section 2 is recommended from the beginning of the project to the southern limits of Lena Road Business Park at station 241+00. Typical Section 2 is also recommended from just north of Lena Road Business Park at station 263+72 to the end of the project at SR 64. Typical Section 3 is proposed within Lena Road Business Park, from station 241+00 to station 263+72. Pond sizing is based on the recommended typical sections.

Figure 10-1 | Proposed Typical Section 1
11.0 Floodplain Impacts

Floodplain impacts are anticipated to Zones A and AE associated with Cypress Strand. No-rise certification will be required for impacts to the FEMA floodplain. Analysis assumes the required floodplain compensation is equal in total area to the total impacted floodplain area. Floodplain impacts and compensation within Basin 1 south of 41st Avenue East are documented in the 44th Avenue East design and are therefore not included herein. Floodplain impact and compensation areas are shown on the Drainage Maps found in Appendix A. The existing Lena Road Business Park includes floodplain compensation (ERP 3143.004). It is assumed that redeveloping areas in the floodplain that were previously developed for the business park, such as 81st Court East, will not result in additional floodplain impacts. Floodplain impacts are summarized below in Table 11-1. Floodplain impacts are based on the recommended typical sections and pond sites. 2.72-acres of floodplain impacts are proposed in the Braden River Below Ward Lake watershed. 6.08-acres of floodplain impacts are proposed in the Cypress Strand watershed.
Floodplain compensation is summarized below in Table 11-2. 44th Compensation includes 1.14-acres of surplus floodplain compensation within the 44th Avenue East project. The 44th Avenue East surplus and Floodplain Compensation Area 1 provide a total of 2.75-acres of compensation in the Braden River Below Ward Lake watershed. Floodplain Compensation Area 2 provides 6.22-acres of compensation in the Cypress Strand watershed. Constructing Pond 2B (Impact Area 4) rather than recommended Pond 2A (Impact Area 3) would result in 0.70-acres of additional impacts to the Cypress Strand floodplain. Compensation Area 2 could be expanded to accommodate this increase. Floodplain Compensation Area 2 is located on County property in the Central County Complex project. The final location of Floodplain Compensation Area 2 within County property will be determined with final design of that project.

Table 11-1 | Floodplain Impacts

<table>
<thead>
<tr>
<th>Impact Area</th>
<th>Location</th>
<th>Watershed</th>
<th>Area (ac.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lena Road</td>
<td>Braden River Below Ward Lake</td>
<td>1.13</td>
</tr>
<tr>
<td>2</td>
<td>Lena Road</td>
<td>Braden River Below Ward Lake</td>
<td>1.59</td>
</tr>
<tr>
<td>3</td>
<td>Pond 2A</td>
<td>Cypress Strand</td>
<td>0.92</td>
</tr>
<tr>
<td>4*</td>
<td>Pond 2B</td>
<td>Cypress Strand</td>
<td>1.62*</td>
</tr>
<tr>
<td>5</td>
<td>Lena Road</td>
<td>Cypress Strand</td>
<td>5.16</td>
</tr>
</tbody>
</table>

*Not a recommended alternative

Table 11-2 | Floodplain Compensation

<table>
<thead>
<tr>
<th>Compensation Area</th>
<th>Watershed</th>
<th>Area (ac.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>44 Ave E Surplus*</td>
<td>Braden River Below Ward Lake</td>
<td>1.14</td>
</tr>
<tr>
<td>1</td>
<td>Braden River Below Ward Lake</td>
<td>1.61</td>
</tr>
<tr>
<td>2</td>
<td>Cypress Strand</td>
<td>6.22</td>
</tr>
</tbody>
</table>

*Surplus compensation from the 44th Avenue E. project

12.0 Design Criteria

Preliminary pond sizing calculations found in Appendix D are based on SWFWMD water quality and water quantity requirements, and Manatee County stormwater design requirements. Design criteria are summarized below in Table 12-1.

Table 12-1 | Design Criteria

<table>
<thead>
<tr>
<th>Design Element</th>
<th>Source</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Element</td>
<td>Source</td>
<td>Criteria</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Water Quantity, Rate Control | SWFWMD Applicant’s Handbook Vol. II, Part III, Section 3.1            | Off-site discharge is limited to amounts which will not cause adverse off-site impacts.  
  a. For a project or portion of a project located within an open drainage basin, the allowable discharge is:  
  1. 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.  
  b. Except in situations as described in Section 3.0 above, off-site discharges and peak stages for the existing and developed conditions shall be computed using the Southwest Florida Water Management District’s 24-hour, 25-year rainfall maps... |
| Freeboard              | Manatee County Stormwater Management Design Manual, Section 2.3.16     | Retention basins constructed for flow attenuation purposes must have sufficient volume to contain the volume of post development runoff from the design storm rainfall, or shall have sufficient volume to contain said runoff volume with a minimum of one (1) foot of freeboard. |
| Side Slope             | Manatee County Stormwater Management Design Manual, Section 2.3.17     | B. (2) The maximum allowable side slope is that of 4:1 (4 feet horizontally for every 1 foot vertical), and is to be maintained for a minimum of three (3) feet vertically below the normal water level |
| Storm Sewer & Cross Drain | Manatee County Stormwater Management Design Manual, Section 2.3.6       | New streets shall be designed with traffic lanes a minimum of six (6) inches freeboard above the design storm base flood elevation measured to the crown of the road.  
  A. For all streets, bridges and culverts within the published FEMA 100 Year Floodplain, the design storm shall be one hundred (100) year return frequency.  
  C. For local streets, bridges and culverts not in the published one hundred (100) year floodplain, the design storm shall be twenty-five (25) year frequency. |
| Pond Access            | Manatee County Stormwater Management Design Manual, Section 2.4.11     | Detention and retention basins shall have an unobstructed access route at least 20-feetwide from the nearest street and shall have an unobstructed maintenance access area a minimum of 20-feet from the top of bank completely around their perimeter. |
13.0 Permitting Requirements
Anticipated permit requirements include the following.

- An Environmental Resource Permit (ERP) from the Florida Department of Environmental Protection (FDEP) per F.A.C. 62-330.
- A National Pollutant Discharge Elimination System (NPDES) permit from the Environmental Protection Agency (EPA) per the Clean Water Act.

14.0 Proposed Cross Drains
The existing 36” cross drain at station 251+00 and the existing unknown size Cypress Strand cross drain at 294+00 are extended in the proposed design. Two additional cross drains are required, at 206+30 and 238+00. A 6’x6’ box culvert is proposed at 206+30 to convey Williams Branch beneath proposed Lena Road. The conceptual cross drain size is based on the existing 6’x6’ box culvert approximately 1300-feet downstream which conveys Williams Creek beneath I-75. A 42” cross drain is proposed at 238+00 to convey a wetland channel flowing west to Braden River. The conceptual cross drain size is based on an existing 54” cross drain beneath I-75 approximately 1900’ downstream.

15.0 Proposed Drainage
The corridor is divided into three stormwater basins. Roadway runoff is conveyed to pond sites using piped conveyance. Table 15-1 below summarizes the proposed runoff basins. The proposed design shifts some basin divides to avoid proposing pond sites which would impact environmentally sensitive areas. Attenuation analysis demonstrates the proposed outflow to each watershed does not exceed the existing condition. Corridor runoff from the beginning of the project to station 212+00 is routed away from the Williams Creek watershed to Pond 1 which outfalls into the Braden River Below Ward Lake watershed. Runoff from station 236+15 to 240+00 is routed away from the Braden River Below Ward Lake watershed and into Pond 2A which outfalls into the Cypress Strand watershed.

<table>
<thead>
<tr>
<th>Basin</th>
<th>Begin Station</th>
<th>End Station</th>
<th>Recommended Pond</th>
<th>Tailwater</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>202+00</td>
<td>236+15</td>
<td>Pond 1 – Wet Detention</td>
<td>Braden River Below Ward Lake</td>
</tr>
<tr>
<td>2</td>
<td>236+15</td>
<td>261+03</td>
<td>Pond 2A – Wet Detention</td>
<td>Cypress Strand</td>
</tr>
<tr>
<td>3</td>
<td>261+03</td>
<td>309+79</td>
<td>Pond 3 – Wet Detention</td>
<td>Cypress Strand</td>
</tr>
</tbody>
</table>

16.0 Pond Design
Preliminary pond sizing calculations are found in Appendix D. Pond sizing is based on the recommended typical sections. Pond sizes are estimated by combining the required attenuation volume and treatment volume with 1-foot of freeboard. The required attenuation volume is calculated as the difference in runoff volume between the existing and proposed condition as determined using the NRCS rainfall excess method.

Pond site matrices are found in Appendix G. Two alternative pond sites are evaluated for Basin 2 which requires right of way acquisition for a pond. Only one pond site each is provided for Basins 1 and 3 which have sufficient
right of way for ponds. All ponds are assumed to be wet detention based on evident high groundwater. Ponds were not modeled using storm routing software.

16.1 Basin 1
Basin 1 includes 44th Avenue East and adjacent portions of proposed Lena Road through existing wetlands, undeveloped uplands, and residential parcels. The south end of the Lena Road corridor within Basin 1 connects to the existing Lena Road cul-de-sac within Creekwood East Corporate Park (ERP 5641.021). Basin 1 is included with the 44th Avenue East roadway project as “SMF 12 ROW”. That project includes Stormwater Management Facility (SMF) 12 to treat and attenuate runoff from SMF 12 ROW (Basin 1 herein). SMF 12 is known herein as Pond 1. Pond 1 is a proposed wet detention facility on County-owned land which outflows into the Braden River Below Ward Lake watershed. Detailed analysis of Pond 1 is included with the 44th Avenue East project. The 44th Avenue East project also includes Floodplain Compensation Area 2 which includes surplus compensation volume, documented herein as Floodplain Compensation Area 1.

16.2 Basin 2
Existing Basin 2 includes wetlands, open land, and 81st Court East – within Lena Road Business Park (ERP 3143.004). Existing Basin runoff within Lena Road Business Park, outfalls to five existing wet detention ponds. All five existing stormwater facilities receive runoff from 81st Court East and adjacent parcels. Lake 1, Lake 2, and Lake 4 outfall east to Cypress Strand. Lake 5 and Lake 6 outfall south to adjacent wetlands which ultimately flow to Braden River. Analysis herein does not include the existing stormwater ponds as their impact on basin outflow is equal in the existing and proposed conditions. In the proposed condition the existing ponds will continue to receive runoff from Lena Road and adjacent parcels, and outfall to their existing tailwaters. Analysis herein determines the pond size and location required to supplement the capacity in the existing ponds.

Two pond site alternatives are provided. Alternative Pond 2A is a 1.87-acre wet detention facility proposed along northbound Lena Road. The pond outfalls east into Cypress Strand. Wetland impacts are not anticipated. The Natural Resources Assessment did not identify any wildlife in the area. The Cultural Resource Assessment did not locate any historic structures or archaeological sites within the pond site. The Contamination review did not identify any potential contamination. The Utilities Technical Memorandum identified utilities along 81st Court East which may be impacted to connect the Basin 4 collection system to the pond, including a 16” PVC force main and a 30” DIP reclaimed water line, both owned by Manatee County. No utilities were identified at the pond site. Alternative Pond 4A includes 0.92-acres of floodplain impacts.

Alternative Pond 2B converts an existing wet detention pond associated with Lena Road Business Park to a joint-use facility. The alternative expands the existing pond, requiring 1.62-acres of right of way acquisition. Wetland impacts are not anticipated. The Natural Resources Assessment did not identify any wildlife in the area. The Cultural Resource Assessment did not locate any historic structures or archaeological sites within the pond site. The Contamination review did not identify any potential contamination. The Utilities Technical Memorandum identified utilities along 81st Court East which may be impact by the Basin 4 collection system including a 16” PVC force main and a 30” DIP reclaimed water line, both owned by Manatee County. No utilities were identified at the pond site. The entire 1.62-acre pond site is a floodplain impact.

16.3 Basin 3
Basin 3 includes Lena Road from Powell Johnson Road – Landfill Road to SR 64. The majority of the northbound right of way within the basin is bordered by County parcel 1462800359, associated with the Central County Complex project. Only one pond site is provided as the final pond site (or multiple sites) will be selected within the existing County parcel in coordination with the Central County complex project. Pond 3 shown on the
Drainage Maps is provided as visual order-of-magnitude reference for that coordination process. Similarly, the final location of Floodplain Compensation Area 3 within the County parcel will be determined with final design of the Central County Complex project.

The final location of Pond 3 and Floodplain Compensation Area 3 within the Central County Complex project are unknown. The parcel includes wetlands and floodplains. However, there are locations within the property in which both facilities could avoid wetland and floodplain impacts. The Natural Resources Assessment identified a Bald Eagle in the area. The Cultural Resource Assessment did not locate any historic structures or archaeological sites within the parcel. The Contamination review identified an area of medium potential at the southwest corner of the parcel, adjacent to Lena Road. The Utilities Technical Memorandum identified utilities along Lena Road which may be impacted to connect the Basin 6 collection system to the pond, including Florida Power and Light distribution lines, and a 30” DIP reclaimed water line, a 16” PVC sewer force main, and buried fiber optic line - all owned by Manatee County.

16.4 Lena Road South of Basin 1

Lena Road from SR 70 north to the existing cul-de-sac at the southern limits of Basin 1 is outside of the project limits. Pond siting analysis was not performed for this segment of Lena Road. The segment traverses Creekwood East Corporate Park (ERP 5641.021) and drains to Williams Creek. Pond site opportunities are limited by adjacent development and wetlands. Design is further challenged by apparent high groundwater.

17.0 Conclusion

Pond sites are selected to minimize right of way acquisition, environmental impacts, and impacts to developed sites while meeting SWFWMD and Manatee County design and permitting requirements. Pond site matrices are found in Appendix F. Pond sizing, found in Appendix D, is based on the recommended typical sections. Two alternative pond sites are evaluated for Basin 2 which requires right of way acquisition for a pond. Only one pond site each is provided for Basins 1 and 3 which have sufficient existing County right of way for ponds.

Basin 1 runoff flows to Pond 1, a stormwater management facility associated with the 44th Avenue East project (SMF 12) which outfalls into the Braden River Below Ward lake watershed. Two wet detention pond site alternatives are provided for Basin 2. Alternative Pond 2A requires 1.87-acres of right of way acquisition and 0.92-acres of floodplain impacts. Alternative Pond 2B includes expanding Lake 1 (ERP 3143.004) and converting it into a joint-use facility. Alternative Pond 2B requires 1.62-acres of both right of way acquisition and floodplain impacts. Both alternatives outflow to the Cypress Strand watershed. Alternative Pond 2A is recommended to reduce floodplain impacts, to avoid modifying an existing pond, its central location within the basin, and its location adjacent the outfall ditch leading to Cypress Strand.

Only one pond site is provided for Basin 3. Pond 3 and Floodplain Compensation Area 3 are located on existing County property. The ultimate locations of Pond 3 and Floodplain Compensation Area 3 will be determined with final design of the Central County Complex project. Pond 3 outfalls to Cypress Strand.

2.72-acres of impacts and 2.75-acres of compensation are proposed within the Braden River Below Ward Lake watershed. 6.08-acres of impacts and 6.22-acres of compensation are proposed within the Cypress Strand watershed.
Appendix A – Drainage Maps
ANALYSIS OF FLOODPLAIN IMPACT AND COMPENSATION AREA TO LEN ROAD IS INCLUDED THE 4TH AVENUE EAST PROJECT.
Appendix B – Soil Report and Figures
Legend

- 500ft Buffer

Soil Classification (NRCS, 2018)

- 7; CANOVA, ANCLOTE, AND OKEELANTA SOILS
- 11; CASSIA FINE SAND, 0 TO 2 PERCENT SLOPES
- 12; CASSIA FINE SAND, MODERATELY WELL DRAINED
- 16; DELRAY COMPLEX
- 20; EAUGALLIE FINE SAND, 0 TO 2 PERCENT SLOPES
- 26; FLORIDANA-IMMOKALEE-OKEELANTA ASSOCIATION
- 35; ONA FINE SAND, ORSTEIN SUBSTRATUM
- 45; TAVARES FINE SAND, 0 TO 5 PERCENT SLOPES
- 48; WABASSO FINE SAND
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

Preface.................................................................................................................................................. 2
How Soil Surveys Are Made............................................................................................................. 5
Soil Map.............................................................................................................................................. 8
  Soil Map........................................................................................................................................... 9
  Legend.................................................................................................................................................. 10
Map Unit Legend................................................................................................................................. 11
Map Unit Descriptions......................................................................................................................... 11
  Manatee County, Florida.................................................................................................................... 13
    7—Canova, Anclote, and Okeelanta soils....................................................................................... 13
    11—Cassia fine sand, 0 to 2 percent slopes................................................................................. 16
    12—Cassia fine sand, moderately well drained........................................................................... 18
    16—Delray complex....................................................................................................................... 19
    20—EauGallie-EauGallie wet, fine sand, 0 to 2 percent slopes.................................................. 21
    26—Floridana-Immokalee-Okeelanta association....................................................................... 24
    35—Ona fine sand, orstein substratum....................................................................................... 27
    45—Tavares fine sand, 0 to 5 percent slopes............................................................................... 30
    48—Wabasso-Wabasso, wet, fine sand, 0 to 2 percent slopes.................................................... 32
Soil Information for All Uses.............................................................................................................. 36
  Soil Properties and Qualities............................................................................................................ 36
  Soil Qualities and Features............................................................................................................... 36
Hydrologic Soil Group......................................................................................................................... 36
References.......................................................................................................................................... 41
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.
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: 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: Manatee County, Florida
Survey Area Data: Version 17, Jun 8, 2020

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

Date(s) aerial images were photographed: Feb 5, 2020—Mar 10, 2020

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

<table>
<thead>
<tr>
<th>Map Unit Symbol</th>
<th>Map Unit Name</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Canova, Anclote, and Okeelanta soils</td>
<td>66.1</td>
<td>11.0%</td>
</tr>
<tr>
<td>11</td>
<td>Cassia fine sand, 0 to 2 percent slopes</td>
<td>20.0</td>
<td>3.3%</td>
</tr>
<tr>
<td>12</td>
<td>Cassia fine sand, moderately well drained</td>
<td>11.7</td>
<td>2.0%</td>
</tr>
<tr>
<td>16</td>
<td>Delray complex</td>
<td>4.7</td>
<td>0.8%</td>
</tr>
<tr>
<td>20</td>
<td>EauGallie-EauGallie wet, fine sand, 0 to 2 percent slopes</td>
<td>382.4</td>
<td>63.6%</td>
</tr>
<tr>
<td>26</td>
<td>Floridana-Immokalee-Okeelanta association</td>
<td>77.0</td>
<td>12.8%</td>
</tr>
<tr>
<td>35</td>
<td>Ona fine sand, orstein substratum</td>
<td>5.3</td>
<td>0.9%</td>
</tr>
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<td>45</td>
<td>Tavares fine sand, 0 to 5 percent slopes</td>
<td>21.3</td>
<td>3.5%</td>
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<tr>
<td>48</td>
<td>Wabasso-Wabasso, wet, fine sand, 0 to 2 percent slopes</td>
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<td>2.1%</td>
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<tr>
<td><strong>Totals for Area of Interest</strong></td>
<td></td>
<td><strong>601.4</strong></td>
<td><strong>100.0%</strong></td>
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</table>

### 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.
Manatee County, Florida

7—Canova, Anclote, and Okeelanta soils

Map Unit Setting
- National map unit symbol: 1hg9b
- Elevation: 0 to 130 feet
- Mean annual precipitation: 48 to 56 inches
- Mean annual air temperature: 68 to 75 degrees F
- Frost-free period: 350 to 365 days
- Farmland classification: Not prime farmland

Map Unit Composition
- Canova and similar soils: 40 percent
- Anclote and similar soils: 25 percent
- Okeelanta and similar soils: 20 percent
- Minor components: 15 percent

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

Description of Canova

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

Typical profile
- Oa - 0 to 8 inches: muck
- A - 8 to 24 inches: fine sand
- B/C - 24 to 68 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 inches
- Frequency of flooding: None
- Frequency of ponding: Frequent
- 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: Moderate (about 6.5 inches)

Interpretive groups
- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 7w
- Hydrologic Soil Group: A/D
- Forage suitability group: Organic soils in depressions and on flood plains (G155XB645FL)
**Other vegetative classification:** Organic soils in depressions and on flood plains (G155XB645FL)

**Hydric soil rating:** Yes

### Description of Anclote

#### Setting

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

#### Typical profile

- **A - 0 to 16 inches:** fine sand
- **Cg2 - 16 to 80 inches:** fine sand

#### Properties and qualities

- **Slope:** 0 to 2 percent
- **Depth to restrictive feature:** More than 80 inches
- **Drainage class:** Very poorly drained
- **Runoff class:** 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 6 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):** 3w
- **Hydrologic Soil Group:** A/D
- **Forage suitability group:** Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
- **Other vegetative classification:** Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
- **Hydric soil rating:** Yes

### 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 20 inches:** muck
- **C - 20 to 54 inches:** sand

#### 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): 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
Calcium carbonate, maximum content: 5 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): 7w
Hydrologic Soil Group: A/D
Forage suitability group: Organic soils in depressions and on flood plains (G155XB645FL)
Other vegetative classification: Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Minor Components
Manatee
Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G155XB345FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Chobee
Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G155XB345FL)
Hydric soil rating: Yes

Floridana
Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes
11—Cassia fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2tzx6
Elevation: 0 to 110 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: Farmland of unique importance

Map Unit Composition

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

Description of Cassia

Setting

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

Typical profile

A - 0 to 5 inches: fine sand
E - 5 to 26 inches: fine sand
Bh - 26 to 42 inches: fine sand
C - 42 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 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 5.8 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
(G155XB131FL)
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands
(G155XB131FL), Sand Pine Scrub (R155XY001FL)
Hydric soil rating: No

Minor Components

Myakka
Percent of map unit: 7 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands
(G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Pomello
Percent of map unit: 6 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Side slope, interfluve, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: R155XY001FL - Sand Pine Scrub
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands
(G155XB131FL), Sand Pine Scrub (R155XY001FL)
Hydric soil rating: No

Satellite
Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces, rises on marine terraces
Landform position (three-dimensional): Tread, talf, rise
Down-slope shape: Linear, convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands
(G155XB131FL), Sand Pine Scrub (R155XY001FL)
Hydric soil rating: No

Jonathan
Percent of map unit: 3 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, tread, rise
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL)
Hydric soil rating: No
12—Cassia fine sand, moderately well drained

Map Unit Setting
- National map unit symbol: 1hg7q
- Elevation: 0 to 130 feet
- Mean annual precipitation: 48 to 56 inches
- Mean annual air temperature: 68 to 75 degrees F
- Frost-free period: 350 to 365 days
- Farmland classification: Not prime farmland

Map Unit Composition
- Cassia, moderately well drained, and similar soils: 90 percent
- Minor components: 10 percent
- Estimates are based on observations, descriptions, and transects of the map unit.

Description of Cassia, Moderately Well Drained

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

Typical profile
- A - 0 to 5 inches: fine sand
- E - 5 to 29 inches: fine sand
- Bh - 29 to 41 inches: fine sand
- C - 41 to 80 inches: fine sand

Properties and qualities
- Slope: 0 to 2 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Moderately well drained
- Runoff class: Negligible
- Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 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: Low (about 3.5 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, knolls, and ridges of mesic uplands (G155XB121FL)
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL), Sand Pine Scrub (R155XY001FL)
Hydric soil rating: No

Minor Components

Pomello
Percent of map unit: 10 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: Sandy soils on rises and knolls of mesic uplands (G155XB131FL), Sand Pine Scrub (R155XY001FL)
Hydric soil rating: No

16—Delray complex

Map Unit Setting
National map unit symbol: 1hg7v
Elevation: 10 to 60 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition
Delray and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Delray
Setting
Landform: Flats on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Parent material: Sandy and loamy marine deposits

Typical profile
A - 0 to 15 inches: fine sand
E - 15 to 55 inches: fine sand
Btg - 55 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 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 5.4 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 (G155XB141FL)
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), Slough (R155XY011FL)
Hydric soil rating: Yes

Minor Components
Floridana, depressional
Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Gator
Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Organic soils in depressions and on flood plains (G155XB645FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Felda, hydric
Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL), Slough (R155XY011FL)
Hydric soil rating: Yes

Anclote
Percent of map unit: 5 percent
Landform: Drainageways on marine terraces, depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Ona, 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: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

20—EauGallie-EauGallie wet, fine sand, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: 2y9gx
Elevation: 10 to 150 feet
Mean annual precipitation: 45 to 61 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 335 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition
Eaugallie and similar soils: 70 percent
Eaugallie, wet, and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eaugallie

Setting
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, 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 23 inches: fine sand
Bh - 23 to 47 inches: fine sand
Bw - 47 to 55 inches: fine sand
Btg - 55 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: Moderate (about 6.7 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: R155XY003FL - South Florida Flatwoods
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), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Description of Eaugallie, Wet

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

Typical profile
A - 0 to 5 inches: fine sand
E - 5 to 17 inches: fine sand
Bh - 17 to 26 inches: fine sand
Bw - 26 to 48 inches: fine sand
E'g - 48 to 72 inches: fine sand
Btg - 72 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 high to high (0.60 to 2.00 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Ecological site: R155XY003FL - South Florida Flatwoods
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), South Florida Flatwoods (R155XY003FL)

Hydric soil rating: Yes

Minor Components

Wabasso

Percent of map unit: 6 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)

Hydric soil rating: No

Delray

Percent of map unit: 3 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, convex, linear
Across-slope shape: Concave, linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)

Hydric soil rating: Yes

Pinellas

Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL), Cabbage Palm Flatwoods (R155XY005FL)

Hydric soil rating: No

Myakka

Percent of map unit: 2 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)

Hydric soil rating: No

Riviera

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

Hydric soil rating: Yes
26—Floridana-Immokalee-Okeelanta association

Map Unit Setting

- National map unit symbol: 1hg86
- Elevation: 0 to 150 feet
- Mean annual precipitation: 48 to 56 inches
- Mean annual air temperature: 68 to 75 degrees F
- Frost-free period: 350 to 365 days
- Farmland classification: Not prime farmland

Map Unit Composition

- Floridana, depressional, and similar soils: 35 percent
- Immokalee and similar soils: 30 percent
- Okeelanta and similar soils: 20 percent
- Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the map unit.

Description of Floridana, Depressional

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 19 inches: fine sand
- E - 19 to 36 inches: fine sand
- Btg - 36 to 63 inches: sandy clay loam
- Cg - 63 to 80 inches: fine sand

Properties and qualities

- Slope: 0 to 2 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Very poorly drained
- Runoff class: 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: Moderate (about 7.8 inches)

Interpretive groups

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

Description of Immokalee

Setting
Landform: Depressions on marine terraces
Landform position (three-dimensional): Interfluve, t alf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Sandy marine deposits

Typical profile
A - 0 to 10 inches: fine sand
E - 10 to 34 inches: fine sand
Bh - 34 to 43 inches: fine sand
C - 43 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 low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 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 3.5 inches)

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

Description of Okeelanta

Setting
Landform: Depressions on marine terraces
Landform position (three-dimensional): Interfluve, t alf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Herbaceous organic material over sandy marine deposits
Typical profile
  Oa - 0 to 20 inches: muck
  C - 20 to 54 inches: sand

Properties and qualities
  Slope: 0 to 1 percent
  Depth to restrictive feature: More than 80 inches
  Drainage class: Very poorly drained
  Runoff class: Negligible
  Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
  Depth to water table: About 0 inches
  Frequency of flooding: None
  Frequency of ponding: Frequent
  Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
  Sodium adsorption ratio, maximum: 4.0
  Available water supply, 0 to 60 inches: Moderate (about 7.7 inches)

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

Minor Components

Delray
  Percent of map unit: 3 percent
  Landform: Depressions on marine terraces
  Landform position (three-dimensional): Dip
  Down-slope shape: Concave
  Across-slope shape: Concave
  Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL), Freshwater Marshes and Ponds (R155XY010FL)
  Hydric soil rating: Yes

Anclote
  Percent of map unit: 3 percent
  Landform: Drainageways on marine terraces, depressions on marine terraces
  Landform position (three-dimensional): Dip
  Down-slope shape: Linear, concave
  Across-slope shape: Concave
  Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
  Hydric soil rating: Yes

Chobee
  Percent of map unit: 3 percent
  Landform: Depressions on marine terraces
  Landform position (three-dimensional): Dip
  Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G155XB345FL)
Hydric soil rating: Yes

Pomona, non-hydric
Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Manatee
Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G155XB345FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Myakka, non-hydric
Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

35—Ona fine sand, orstein substratum

Map Unit Setting
National map unit symbol: 1hg8j
Elevation: 20 to 150 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

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

Description of Ona, 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: fine sand
Bh - 5 to 16 inches: fine sand
E - 16 to 52 inches: fine sand
B'h1 - 52 to 68 inches: fine sand
B'h2 - 68 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: 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 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 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
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), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Description of Ona, Hydric

Setting

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

Typical profile

A - 0 to 5 inches: fine sand
Bh - 5 to 16 inches: fine sand
E - 16 to 52 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: 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 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 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
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), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: Yes

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 (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

St. johns, non-hydric

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

Wauchula, 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 over loamy soils on flats of hydric or mesic lowlands (G155XB241FL), South Florida Flatwoods (R155XY003FL)
**Hydric soil rating:** No

**Waveland, 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
- **Other vegetative classification:** Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
- **Hydric soil rating:** No

---

**45—Tavares fine sand, 0 to 5 percent slopes**

**Map Unit Setting**

- **National map unit symbol:** 2sw00
- **Elevation:** 0 to 130 feet
- **Mean annual precipitation:** 42 to 63 inches
- **Mean annual air temperature:** 66 to 77 degrees F
- **Frost-free period:** 340 to 365 days
- **Farmland classification:** Not prime farmland

**Map Unit Composition**

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

**Description of Tavares**

**Setting**

- **Landform:** Flats on marine terraces, hills on marine terraces, ridges on marine terraces, knolls on marine terraces
- **Landform position (two-dimensional):** Summit
- **Landform position (three-dimensional):** Interfluve, side slope, tread, rise
- **Down-slope shape:** Convex, linear
- **Across-slope shape:** Linear, convex
- **Parent material:** Eolian or sandy marine deposits

**Typical profile**

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

**Properties and qualities**

- **Slope:** 0 to 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):** High to very high (6.00 to 20.00 in/hr)
- **Depth to water table:** About 18 to 42 inches
**Frequency of flooding:** None  
**Frequency of ponding:** None  
**Maximum salinity:** Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
**Sodium adsorption ratio, maximum:** 4.0  
**Available water supply, 0 to 60 inches:** Low (about 4.8 inches)

### Interpretive groups

- **Land capability classification (irrigated):** None specified  
- **Land capability classification (nonirrigated):** 3s  
- **Hydrologic Soil Group:** A  
- **Forage suitability group:** Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL)  
- **Other vegetative classification:** Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL), Longleaf Pine-Turkey Oak Hills (R155XY002FL), Sand Pine Scrub (R155XY001FL)  
- **Hydric soil rating:** No

### Minor Components

#### Cassia

- **Percent of map unit:** 5 percent  
- **Landform:** Rises on marine terraces, knolls on marine terraces  
- **Landform position (three-dimensional):** Tread, talf  
- **Down-slope shape:** Convex  
- **Across-slope shape:** Linear  
- **Other vegetative classification:** Sandy soils on rises and knolls of mesic uplands (G155XB131FL), Sand Pine Scrub (R155XY001FL)  
- **Hydric soil rating:** No

#### Pomello

- **Percent of map unit:** 4 percent  
- **Landform:** Ridges on marine terraces, knolls on marine terraces  
- **Landform position (two-dimensional):** Summit, backslope  
- **Landform position (three-dimensional):** Side slope, interfluve, riser  
- **Down-slope shape:** Linear, convex  
- **Across-slope shape:** Linear  
- **Ecological site:** R155XY001FL - Sand Pine Scrub  
- **Other vegetative classification:** Sandy soils on rises and knolls of mesic uplands (G155XB131FL), Sand Pine Scrub (R155XY001FL)  
- **Hydric soil rating:** No

#### Apopka

- **Percent of map unit:** 3 percent  
- **Landform:** Hills 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  
- **Across-slope shape:** Linear  
- **Other vegetative classification:** Sandy soils on ridges and dunes of xeric uplands (G155XB111FL), Longleaf Pine-Turkey Oak Hills (R155XY002FL)  
- **Hydric soil rating:** No

#### Astatula

- **Percent of map unit:** 3 percent  
- **Landform:** Hills on marine terraces, ridges on marine terraces, knolls on marine terraces  
- **Landform position (two-dimensional):** Summit, backslope
Landform position (three-dimensional): Interflue, side slope, riser, rise
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands
(G155XB111FL)
Hydric soil rating: No

Adamsville
Percent of map unit: 2 percent
Landform: Rises on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Tread, rise
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands
(G155XB131FL), Upland Hardwood Hammock (R155XY008FL)
Hydric soil rating: No

48—Wabasso-Wabasso, wet, fine sand, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: 2y9dx
Elevation: 0 to 150 feet
Mean annual precipitation: 43 to 60 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 335 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition
Wabasso and similar soils: 70 percent
Wabasso, wet, and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wabasso

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

Typical profile
A - 0 to 7 inches: fine sand
E - 7 to 24 inches: fine sand
Bh - 24 to 35 inches: fine sand
Bw - 35 to 39 inches: fine sand
Btg - 39 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 (0.57 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 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 7.5 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
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), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Description of Wabasso, Wet

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

Typical profile
A - 0 to 7 inches: fine sand
E - 7 to 24 inches: fine sand
Bh - 24 to 35 inches: fine sand
Bw - 35 to 39 inches: fine sand
Btg - 39 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 (0.57 to 1.98 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 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 7.5 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
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), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: Yes

Minor Components

Augallie
Percent of map unit: 5 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands
(G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: Yes

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

Riviera
Percent of map unit: 3 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
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic
lowlands (G155XB241FL), Slough (R155XY011FL)
Hydric soil rating: Yes

Aripeka
Percent of map unit: 2 percent
Landform: Rises on karstic marine terraces
Landform position (three-dimensional): Tread, rise
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 (G155XB521FL), Wetland Hardwood
Hammock (R155XY012FL)
Hydric soil rating: No

Basinger
Percent of map unit: 1 percent
Landform: Depressions on flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
**Other vegetative classification:** Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), Freshwater Marshes and Ponds (R155XY010FL)

**Hydric soil rating:** Yes

**Paisley**

- **Percent of map unit:** 1 percent
- **Landform:** Flats on marine terraces
- **Landform position (three-dimensional):** Talf
- **Down-slope shape:** Linear
- **Across-slope shape:** Linear

**Other vegetative classification:** Wetland Hardwood Hammock (R155XY012FL), Loamy and clayey soils on flats of hydric or mesic lowlands (G155XB341FL)

**Hydric soil rating:** Yes
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 projection: Web Mercator   Corner coordinates: WGS84   Edge tics: UTM Zone 17N WGS84

Map Scale: 1:21,600 if printed on A portrait (8.5" x 11") sheet.
### MAP LEGEND

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<th>C/D</th>
<th>D</th>
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<td>A</td>
<td></td>
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<tr>
<td>A/D</td>
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<td>Aerial Photography</td>
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### 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: 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: Manatee County, Florida
Survey Area Data: Version 17, Jun 8, 2020

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

Date(s) aerial images were photographed: Feb 5, 2020—Mar 10, 2020

The orthoimage 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

<table>
<thead>
<tr>
<th>Map unit symbol</th>
<th>Map unit name</th>
<th>Rating</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
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<td>7</td>
<td>Canova, Anclote, and Okeelanta soils</td>
<td>A/D</td>
<td>66.1</td>
<td>11.0%</td>
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<tr>
<td>11</td>
<td>Cassia fine sand, 0 to 2 percent slopes</td>
<td>A</td>
<td>20.0</td>
<td>3.3%</td>
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<tr>
<td>12</td>
<td>Cassia fine sand, moderately well drained</td>
<td>A</td>
<td>11.7</td>
<td>2.0%</td>
</tr>
<tr>
<td>16</td>
<td>Delray complex</td>
<td>A/D</td>
<td>4.7</td>
<td>0.8%</td>
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<td>20</td>
<td>EauGallie-EauGallie wet, fine sand, 0 to 2 percent slopes</td>
<td>A/D</td>
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<td>63.6%</td>
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<td>26</td>
<td>Floridana-Immokalee-Okeelanta association</td>
<td>C/D</td>
<td>77.0</td>
<td>12.8%</td>
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<td>35</td>
<td>Ona fine sand, orstein substratum</td>
<td>B/D</td>
<td>5.3</td>
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<td>45</td>
<td>Tavares fine sand, 0 to 5 percent slopes</td>
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<td>21.3</td>
<td>3.5%</td>
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<td>48</td>
<td>Wabasso-Wabasso, wet, fine sand, 0 to 2 percent slopes</td>
<td>B/D</td>
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<td>2.1%</td>
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<td><strong>Totals for Area of Interest</strong></td>
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<td><strong>100.0%</strong></td>
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### Rating Options—Hydrologic Soil Group

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Higher
References


Appendix C – FEMA FIRMs and FIS Excerpts
Appendix D – Preliminary Pond Sizing
### Basin 1 Stormwater Analysis

#### Existing CN

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<thead>
<tr>
<th>Soil Type</th>
<th>CN</th>
<th>C</th>
<th>Area</th>
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</thead>
<tbody>
<tr>
<td>Open Space (Good)</td>
<td>D</td>
<td>80</td>
<td>0.20</td>
</tr>
<tr>
<td>Impervious</td>
<td>-</td>
<td>98</td>
<td>0.95</td>
</tr>
<tr>
<td>Drt Road</td>
<td>D</td>
<td>89</td>
<td>0.95</td>
</tr>
<tr>
<td>Woods/ Forest (Good)</td>
<td>D</td>
<td>77</td>
<td>0.20</td>
</tr>
<tr>
<td>Wetlands (Woods Poor)</td>
<td>D</td>
<td>93</td>
<td>0.20</td>
</tr>
<tr>
<td>Water</td>
<td>-</td>
<td>100</td>
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<tr>
<td><strong>Total</strong></td>
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<td></td>
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</tbody>
</table>

25-year, 24-hour rainfall, P = 8.72 in 
Soil Storage, S = 1.89 in
25-year, 24-hour runoff = 6.80 in
25-year, 24-hour runoff volume = 7.15 ac-ft

#### Proposed CN and Runoff Coefficient

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>CN</th>
<th>C</th>
<th>Area</th>
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<tbody>
<tr>
<td>Impervious</td>
<td>-</td>
<td>98</td>
<td>0.95</td>
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<tr>
<td>Pond Surface</td>
<td>-</td>
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<td>1.00</td>
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<tr>
<td>Open Space (Good)</td>
<td>A/D</td>
<td>80</td>
<td>0.20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
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</table>

CN 92.4
C 0.71

25-year, 24-hour rainfall, P = 8.72 in 
Soil Storage, S = 0.82 in
25-year, 24-hour runoff = 7.81 in
25-year, 24-hour runoff volume = 11.55 ac-ft
Basin 1 Stormwater Analysis

Required Treatment Volume (Wet Detention)

Min. Water Quality Treatment Volume (1" of Runoff)

\[
TV = \text{Basin Area} \times 1.0" \times (1/12")
\]

\[
TV = 1.48 \text{ ac-ft}
\]

Required Attenuation Volume

Required attenuation volume = proposed 25-year, 24-hour runoff - existing 25-year, 24-hour runoff

Required attenuation volume = 4.40 ac-ft

Required Pond Volume

Required pond volume = required attenuation volume + required treatment volume

Required pond volume = 5.88 ac-ft

Proposed Pond 2 (Wet Detention)

Top of bank = 32.00 ft
Normal water elevation = 27.74 ft

Max allowable peak stage = top of bank - 1’ of freeboard
Max allowable peak stage = 31 ft

Treatment depth + attenuation depth = Max allowable peak stage - normal water elevation
Treatment depth + attenuation depth = 3.26 ft

Cubed pond footprint = required pond volume / (treatment depth + attenuation depth)
Cubed pond footprint = 1.81 ac
Cubed side length = 280 ft

Bank length at NWL = 267 ft
Area at NWL = 1.64 ac

Bank length at design high water = 293 ft
Area at design high water = 1.98 ac

Top of bank length = 314 ft
Maintenance berm width = 20 ft
Back of maintenance berm length = 354 ft
Back of maintenance berm area = 2.88 ac

Factor of safety = 5%
Back of maintenance berm area = 3.03 ac
Back of maintenance berm length = 363 ft

Pond site length = Back of maintenance berm length + 5’ on each side
Pond site length = 373 ft

Minimum pond site area = 3.20 ac
## Pond 2A Stormwater Analysis

### Existing CN

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<th>Soil Type</th>
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<th>Area</th>
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</thead>
<tbody>
<tr>
<td>Impervious</td>
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<td>0.95</td>
<td>1.46</td>
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<td>Open Space (Good)</td>
<td>A/D</td>
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<td><strong>Total</strong></td>
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<td><strong>6.27 ac.</strong></td>
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</table>

- CN: 84.2
- C: 0.37

25-year, 24-hour rainfall, $P = 8.72$ in  
Soil Storage, $S = 1.88$ in  
25-year, 24-hour runoff = 6.81 in  
25-year, 24-hour runoff volume = 3.56 ac-ft  

### Proposed CN and Runoff Coefficient

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>CN</th>
<th>C</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impervious</td>
<td>98</td>
<td>0.95</td>
<td>3.50</td>
</tr>
<tr>
<td>Pond Surface</td>
<td>100</td>
<td>1.00</td>
<td>0.27</td>
</tr>
<tr>
<td>Open Space (Good)</td>
<td>A/D</td>
<td>0.20</td>
<td>2.50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>6.27 ac.</strong></td>
</tr>
</tbody>
</table>

- CN: 90.9
- C: 0.65

25-year, 24-hour rainfall, $P = 8.72$ in  
Soil Storage, $S = 1.00$ in  
25-year, 24-hour runoff = 7.63 in  
25-year, 24-hour runoff volume = 3.98 ac-ft
## Pond 2A Stormwater Analysis

### Required Treatment Volume (Wet Detention)

<table>
<thead>
<tr>
<th>Min. Water Quality Treatment Volume (1&quot; of Runoff)</th>
</tr>
</thead>
<tbody>
<tr>
<td>( TV = \text{Basin Area} \times 1.0'' \times (1&quot;/12'') )</td>
</tr>
</tbody>
</table>
| \( TV = 0.52 \text{ ac-ft} \)

### Required Attenuation Volume

Required attenuation volume = proposed 25-year, 24-hour runoff - existing 25-year, 24-hour runoff

Required attenuation volume = 0.42 ac-ft

### Required Pond Volume

Required pond volume = required attenuation volume + required treatment volume

Required pond volume = 0.95 ac-ft

### Proposed Pond 4A (Wet Detention)

<table>
<thead>
<tr>
<th>Top of bank = 34.65 ft</th>
<th>per ERP 3143.004 as-builts, Lake 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal water elevation = 30.75 ft</td>
<td>per ERP 3143.004 as-builts, Lake 3</td>
</tr>
</tbody>
</table>

Max allowable peak stage = top of bank - 1' of freeboard

Max allowable peak stage = 33.65 ft

Treatment depth + attenuation depth = Max allowable peak stage - normal water elevation

Treatment depth + attenuation depth = 2.9 ft

Cubed pond footprint = required pond volume / (treatment depth + attenuation depth)

Cubed pond footprint = 0.33 ac

Cubed side length = 119 ft

Bank length at NWL = 108 ft

Area at NWL = 0.27 ac

Bank length at design high water = 131 ft

Area at design high water = 0.39 ac

Top of bank length = 150 ft

Maintenance berm width = 20 ft

Back of maintenance berm length = 190 ft

Back of maintenance berm area = 0.83 ac

Factor of safety = 5%

Back of maintenance berm area = 0.87 ac

Impact to Lake 5 (ERP 3143.004) = 0.47 ac

Total back of maintenance berm area = 1.34 ac

Back of maintenance berm length = 242 ft

Pond site length = Back of maintenance berm length + 5' on each side

Pond site length = 252 ft

**Minimum pond site area = 1.46 ac**
## Existing CN

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>CN</th>
<th>C</th>
<th>Area</th>
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<tbody>
<tr>
<td>Impervious</td>
<td>-</td>
<td>98</td>
<td>0.95</td>
</tr>
<tr>
<td>Open Space (Good)</td>
<td>A/D</td>
<td>80</td>
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<td><strong>Total</strong></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CN</th>
<th>84.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.37</td>
</tr>
</tbody>
</table>

25-year, 24-hour rainfall, P = 8.72 in  

Soil Storage, S = 1.89 in  

25-year, 24-hour runoff = 6.80 in  

25-year, 24-hour runoff volume = 3.64 ac-ft  

## Proposed CN and Runoff Coefficient

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>CN</th>
<th>C</th>
<th>Area</th>
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</thead>
<tbody>
<tr>
<td>Impervious</td>
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</tr>
<tr>
<td>Pond Surface</td>
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<td>1.00</td>
</tr>
<tr>
<td>Open Space (Good)</td>
<td>A/D</td>
<td>80</td>
<td>0.20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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</table>

<table>
<thead>
<tr>
<th>CN</th>
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</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.66</td>
</tr>
</tbody>
</table>

25-year, 24-hour rainfall, P = 8.72 in  

Soil Storage, S = 0.98 in  

25-year, 24-hour runoff = 7.64 in  

25-year, 24-hour runoff volume = 4.09 ac-ft  

---

**Pond 2B Stormwater Analysis**

- **Existing CN**
  - Soil Type: CN, C, Area
- **Proposed CN and Runoff Coefficient**
  - Soil Type: CN, C, Area
## Pond 2B Stormwater Analysis

### Required Treatment Volume (Wet Detention)

\[
TV = \text{Basin Area} \times 1.0" \times (1/12"
\]

\[
TV = 0.54 \text{ ac-ft}
\]

**Min. Water Quality Treatment Volume (1” of Runoff)**

*SWFWMD App. Handbook Vol. II, Section 4.1*

### Required Attenuation Volume

- **Required attenuation volume** = proposed 25-year, 24-hour runoff - existing 25-year, 24-hour runoff
- **Required attenuation volume** = 0.45 ac-ft

### Required Pond Volume

- **Required pond volume** = required attenuation volume + required treatment volume
- **Required pond volume** = 0.99 ac-ft

### Proposed Pond 4B (Wet Detention)

- **Top of bank** = 33.14 ft
- **Normal water elevation** = 29.95 ft

*per ERP 3143.004 as-builts, Lake 1*

- **Max allowable peak stage** = top of bank - 1’ of freeboard
- **Max allowable peak stage** = 32.14 ft

- **Treatment depth + attenuation depth** = Max allowable peak stage - normal water elevation
- **Treatment depth + attenuation depth** = 2.19 ft

- **Cubed pond footprint** = required pond volume / (treatment depth + attenuation depth)
- **Cubed pond footprint** = 0.45 ac
- **Cubed side length** = 140 ft

- **Bank length at NWL** = 131 ft
- **Area at NWL** = 0.40 ac

- **Bank length at design high water** = 149 ft
- **Area at design high water** = 0.51 ac

- **Top of bank length** = 166 ft
- **Maintenance berm width** = 20 ft
- **Back of maintenance berm length** = 206 ft
- **Back of maintenance berm area** = 0.97 ac

- **Factor of safety** = 5%
- **Back of maintenance berm area** = 1.02 ac
- **Impact to Lake 5 (ERP 3143.004)** = 0.47 ac
- **Total back of maintenance berm area** = 1.49 ac
- **Back of maintenance berm length** = 255 ft

- **Pond site length** = Back of maintenance berm length + 5’ on each side
- **Pond site length** = 265 ft
- **Minimum pond site area** = 1.61 ac
# Pond 3 Stormwater Analysis

<table>
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<th>Soil Type</th>
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</thead>
<tbody>
<tr>
<td>Impervious</td>
<td>-</td>
<td>98</td>
<td>0.95</td>
</tr>
<tr>
<td>Open Space (Good)</td>
<td>A/D</td>
<td>80</td>
<td>0.20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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- CN 82.6
- C 0.31

25-year, 24-hour rainfall, $P = 8.72$ in 
Soil Storage, $S = 2.11$ in 
25-year, 24-hour runoff = 6.61 in 
25-year, 24-hour runoff volume = 6.48 ac-ft

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>CN</th>
<th>C</th>
<th>Area</th>
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</thead>
<tbody>
<tr>
<td>Impervious</td>
<td>-</td>
<td>98</td>
<td>0.95</td>
</tr>
<tr>
<td>Pond Surface</td>
<td>-</td>
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<td>1.00</td>
</tr>
<tr>
<td>Open Space (Good)</td>
<td>A/D</td>
<td>80</td>
<td>0.20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
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</tbody>
</table>

- CN 91.7
- C 0.68

25-year, 24-hour rainfall, $P = 8.72$ in 
Soil Storage, $S = 0.91$ in 
25-year, 24-hour runoff = 7.72 in 
25-year, 24-hour runoff volume = 7.56 ac-ft

References:
- NOAA Atlas 14
- FDOT Drainage Design Guide Section 2.2.4.2
Pond 3 Stormwater Analysis

<table>
<thead>
<tr>
<th>Required Treatment Volume (Wet Detention)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV = Basin Area x 1.0&quot; x (1'/12&quot;)</td>
</tr>
<tr>
<td>TV = 0.98 ac-ft</td>
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<table>
<thead>
<tr>
<th>Required Attenuation Volume</th>
</tr>
</thead>
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<tr>
<td>Required attenuation volume = proposed 25-year, 24-hour runoff - existing 25-year, 24-hour runoff</td>
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<tr>
<td>Required attenuation volume = 1.08 ac-ft</td>
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<table>
<thead>
<tr>
<th>Required Pond Volume</th>
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</thead>
<tbody>
<tr>
<td>Required pond volume = required attenuation volume + required treatment volume</td>
</tr>
<tr>
<td>Required pond volume = 2.06 ac-ft</td>
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</table>

<table>
<thead>
<tr>
<th>Proposed Pond 6 (Wet Detention)</th>
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<tbody>
<tr>
<td>Top of bank = 22.0 ft</td>
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<tr>
<td>Normal water elevation = 18.1 ft</td>
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<tr>
<td>Max allowable peak stage = top of bank - 1' of freeboard</td>
</tr>
<tr>
<td>Max allowable peak stage = 21.0 ft</td>
</tr>
</tbody>
</table>

Treatment depth + attenuation depth = Max allowable peak stage - normal water elevation
Treatment depth + attenuation depth = 2.9 ft

Cubed pond footprint = required pond volume / (treatment depth + attenuation depth)
Cubed pond footprint = 0.71 ac
Cubed side length = 176 ft

Bank length at NWL = 164 ft
Area at NWL = 0.62 ac

Bank length at design high water = 188 ft
Area at design high water = 0.81 ac

Top of bank length = 207 ft
Maintenance berm width = 20 ft
Back of maintenance berm length = 247 ft
Back of maintenance berm area = 1.40 ac

Factor of safety = 5%
Back of maintenance berm area = 1.47 ac
Back of maintenance berm length = 253 ft

Pond site length = Back of maintenance berm length + 5' on each side
Pond site length = 263 ft

Minimum pond site area = 1.59 ac
Appendix E – Existing Permit Excerpts
<table>
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<th>Boring Number</th>
<th>Existing Ground Surface Elevation (feet, NGVD)</th>
<th>Existing Water Table Elevation (feet, NGVD)</th>
<th>Date (Day-Mo-Yr)</th>
<th>Seasonal High Water Table Elevation (feet, NGVD)</th>
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<td>26-Jul-99</td>
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<td>27.8</td>
<td>26-Jul-99</td>
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<td>3</td>
<td>29.5</td>
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<td>27.5</td>
<td>26-Jul-99</td>
<td>28.7</td>
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</table>
Appendix F – Utilities Figures
Utility ID 1
10" PVC Potable Water Main
Owner: Manatee County

Utility ID 2
8" PVC Gravity Sewer
Owner: Manatee County

Lena Road
Lena Road, 81st Ct. E., & Landfill Road Intersection
Enlarged Utility Location Map with Water and Sewer Utility Identification Call-outs

Utility ID 116
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 118
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 121
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 122
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 123
8" PVC Sewer Force Main
Owner: Manatee County

Utility ID 124
8" PVC Sewer Force Main
Owner: Manatee County

Utility ID 93
8" PVC Sewer Force Main
Owner: Manatee County

Utility ID 94
8" PVC Sewer Force Main
Owner: Manatee County

Utility ID 91
4" PVC Sewer Force Main
Owner: Manatee County

Utility ID 117
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 119
6" UNK Material Potable Water Main
Owner: Manatee County

Utility ID 120
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 125
6" PVC Sewer Force Main
Owner: Manatee County

Utility ID 126
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 127
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 128
12" DIP Reclaim
Owner: Manatee County

Utility ID 129
12" DIP Reclaim
Owner: Manatee County

Utility ID 130
12" DIP Reclaim
Owner: Manatee County

Utility ID 131
30" DIP Reclaim
Owner: Manatee County

Utility ID 132
16" PVC Sewer Force Main
Owner: Manatee County

Utility ID 133
30" DIP Reclaim
Owner: Manatee County

Utility ID 134 & 135
16" PVC Sewer Force Main
Owner: Manatee County

Utility ID 136
16" PVC Sewer Force Main
Owner: Manatee County

Utility ID 138
16" PVC Sewer Force Main
Owner: Manatee County

Utility ID 139
16" PVC Sewer Force Main
Owner: Manatee County

Utility ID 140
16" PVC Sewer Force Main
Owner: Manatee County

Utility ID 115
4" PVC Sewer Force Main
Owner: Manatee County

Utility ID 118
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 119
6" UNK Material Potable Water Main
Owner: Manatee County

Utility ID 120
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 121
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 122
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 123
8" PVC Sewer Force Main
Owner: Manatee County

Utility ID 124
8" PVC Sewer Force Main
Owner: Manatee County

Utility ID 93
8" PVC Sewer Force Main
Owner: Manatee County

Utility ID 94
8" PVC Sewer Force Main
Owner: Manatee County

Utility ID 91
4" PVC Sewer Force Main
Owner: Manatee County

Lena Road

81st Ct. E.

Landfill Road
- Utility ID 142
  16" PVC Sewer Force Main
  Owner: Manatee County

- Utility ID 140
  30" DIP Reclaim
  Owner: Manatee County

- Utility ID 141
  16" PVC Sewer Force Main
  Owner: Manatee County

- Utility ID 127
  8" PVC Potable Water Main
  Owner: Manatee County

- Spectrum Facilities route onto FPL Overhead Lines

- FPL Distribution Wires

- Lena Road

- Manatee Co. BFO

- Crown Castle BFO
Utility ID 158
16" PVC Sewer Force Main
Owner: Manatee County

Utility ID 155
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 157
30" DIP HDPE Reclaim
Owner: Manatee County

Lena Road

ZAYO BFO

Crown Castle BFO

FPL Distribution Wires

Manatee Co. BFO

UNITI BFO
Appendix G – Pond Site Matrices
<table>
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<th></th>
<th>Alternative 2A (Recommended)</th>
<th>Alternative 2B</th>
</tr>
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<tr>
<td>Pond Site</td>
<td>Pond 2A, Wet Detention</td>
<td>Pond 2B, Wet Detention</td>
</tr>
<tr>
<td>Parcel Count</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Parcel Size (ac.)</td>
<td>8.63</td>
<td>3.74</td>
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<tr>
<td>RW Acquisition (ac.)</td>
<td>1.87</td>
<td>1.62</td>
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<tr>
<td>Conveyance to/ from Pond</td>
<td>Approx. 55 feet of pipe</td>
<td>Existing pipe</td>
</tr>
<tr>
<td>Apparent Land Use</td>
<td>Undeveloped, Commercial</td>
<td>Undeveloped, Commercial</td>
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<tr>
<td>Wetland Risk</td>
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<td>Low</td>
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<tr>
<td>Contamination Risk</td>
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<td>Low</td>
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<td>Utilities Risk</td>
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<td>Wildlife Risk</td>
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<tr>
<td>Cultural Resources Risk</td>
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<td>Floodplain Impacts</td>
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<tr>
<td>Advantages/ Disadvantages</td>
<td>Moderate floodplain impact</td>
<td>High floodplain impact</td>
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</tbody>
</table>
Appendix G – Utilities Memo
CONTENTS

1.0 Introduction ................................................................................................................................. 3

1.1 Project Description ....................................................................................................................... 3

FIGURES

Figure 1-1: Project Location ............................................................................................................... 4

Figure 1-2: Utilities .............................................................................................................................. 5

APPENDICES

Appendix A – Utility Information Table .......................................................................................... 6

Appendix B – Detailed Location Map ................................................................................................ 6
1.0 Introduction
Manatee County conducted a Project Development and Corridor Study (Study) to develop alternatives along Lena Road for reducing congestion, improving safety and operational performance, and addressing future transportation needs. This Utilities Technical Memorandum documents the County-owned utility information within the Study area.

1.1 Project Description
Manatee County proposes the extension of Lena Road to State Road (SR) 64. The project limits extend from the cul-de-sac at the north end of existing Lena Road to the intersection with SR 64, providing a new north-south corridor between SR 70 and SR 64 in Bradenton, Manatee County, Florida, as shown in Figure 1-1. An overview of the County owned utilities overlayed with the proposed 500-foot roadway buffer zone is presented below in Figure 1-2.
Figure 1-1: Project Location
Figure 1-2: Utilities
Appendix A – Utility Information Table
<table>
<thead>
<tr>
<th>Utility ID</th>
<th>Description</th>
<th>Owner</th>
<th>Length (LF)</th>
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<th>Install Date</th>
<th>Diameter (in.)</th>
<th>Material</th>
<th>Location: Parallel/Crossing</th>
<th>Record Drawing Name</th>
<th>Record Drawing OnBase Link</th>
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<td>Manatee County</td>
<td>695</td>
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<td>01/12/2001</td>
<td>4</td>
<td>PVC</td>
<td>East side</td>
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<td><a href="https://www.mymanatee.org/onbasegisutil/docpop/docpop.aspx?clienttype=html&amp;docid=10650754&amp;pageId=001608">https://www.mymanatee.org/onbasegisutil/docpop/docpop.aspx?clienttype=html&amp;docid=10650754&amp;pageId=001608</a></td>
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<tr>
<td>221</td>
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<td>Manatee County</td>
<td>695</td>
<td>SPM000750</td>
<td>01/12/2001</td>
<td>10</td>
<td>PVC</td>
<td>East side</td>
<td>LENA ROAD BUSINESS PARK - LENA ROAD BUSINESS PARK (02288) - UTD - REC - Record Drawing</td>
<td><a href="https://www.mymanatee.org/onbasegisutil/docpop/docpop.aspx?clienttype=html&amp;docid=10650754&amp;pageId=001618">https://www.mymanatee.org/onbasegisutil/docpop/docpop.aspx?clienttype=html&amp;docid=10650754&amp;pageId=001618</a></td>
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<td>60 PVC force main running North-South and parallel to Lena Road along the East side</td>
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<td>60 PVC force main parallel to Lena Road and to the East side of Lena Road</td>
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<td>30 Di Sewer main on the South side of 41st Ave. E.</td>
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<td>30 Di Sewer main running through 17P. (Eastman) (East Side)</td>
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<td>8&quot; Gravity sewer on west side of Lena Road, terminates at manhole within the cul-de-sac on Lena Road</td>
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<td>8&quot; Gravity Sewer Main running under the center of CR 67.</td>
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<td>8&quot; Gravity Sewer Main running down center of CR 67. (parallel)</td>
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<td>8&quot; Gravity Sewer Main running West down the center of 28th Ave. North MH 6330</td>
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<td>8&quot; gravity sewer running parallel to CR 67, E. of stray main parallel fr. the center of the roadway to the East side of the roadway</td>
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<td>8&quot; Gravity Sewer Main routed west towards Lft Station 15S</td>
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<td>8&quot; PVC Gravity Main running thru underneath CR 67. E. - perpendicular to CR 67.</td>
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Lena Road Utilities (From S. to N.)

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## Lena Road Utilities (From S. to N.)

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Utility ID 167  County Main Line, Reclaimed Manatee County 107 RPM060023 11/12/2005 30 DIP 30" DIP reclined running North-South along East side of Lena Road parallel to 41st Ave. E. and 90-deg bend to West-East alignment running directly underneath and transitions with 90-deg bend to East-West alignment along the West side of 81st Ave. E.

Utility ID 169  County Main Line, Reclaimed Manatee County 122 RPM060024 11/12/2005 30 DIP 30" DIP reclined running North-South along East side of Lena Road parallel to 41st Ave. E. and 90-deg bend to West-East alignment running directly underneath and transitions with 90-deg bend to East-West alignment along the West side of 81st Ave. E.

Utility ID 170  County Main Line, Reclaimed Manatee County 155 RPM060026 11/12/2005 30 DIP 30" DIP reclined running North-South along East side of Lena Road parallel to 41st Ave. E. and 90-deg bend to West-East alignment running directly underneath and transitions with 90-deg bend to East-West alignment along the West side of 81st Ave. E.

Utility ID 171  County Main Line, Reclaimed Manatee County 203 RPM060029 11/12/2005 30 DIP 30" DIP reclined running North-South along East side of Lena Road parallel to 41st Ave. E. and 90-deg bend to West-East alignment running directly underneath and transitions with 90-deg bend to East-West alignment along the West side of 81st Ave. E.

Utility ID 172  County Main Line, Reclaimed Manatee County 140 RPM060032 11/12/2005 30 DIP 30" DIP reclined running North-South along East side of Lena Road parallel to 41st Ave. E. and 90-deg bend to West-East alignment running directly underneath and transitions with 90-deg bend to East-West alignment along the West side of 81st Ave. E.

Utility ID 173  County Main Line, Reclaimed Manatee County 199 RPM060041 11/12/2005 30 DIP 30" DIP reclined running North-South along East side of Lena Road parallel to 41st Ave. E. and 90-deg bend to West-East alignment running directly underneath and transitions with 90-deg bend to East-West alignment along the West side of 81st Ave. E.

Utility ID 174  County Main Line, Reclaimed Manatee County 68 RPM060050 11/12/2005 30 DIP 30" DIP reclined running North-South along East side of Lena Road parallel to 41st Ave. E. and 90-deg bend to West-East alignment running directly underneath and transitions with 90-deg bend to East-West alignment along the West side of 81st Ave. E.

Utility ID 176  County Main Line, Reclaimed Manatee County 126 RPM060056 11/12/2005 30 DIP 30" DIP reclined running North-South along East side of Lena Road parallel to 41st Ave. E. and 90-deg bend to West-East alignment running directly underneath and transitions with 90-deg bend to East-West alignment along the West side of 81st Ave. E.

Utility ID 177  County Main Line, Reclaimed Manatee County 55 RPM060065 11/12/2005 30 DIP 30" DIP reclined running North-South along East side of Lena Road parallel to 41st Ave. E. and 90-deg bend to West-East alignment running directly underneath and transitions with 90-deg bend to East-West alignment along the West side of 81st Ave. E.

Utility ID 178  County Main Line, Reclaimed Manatee County 190 RPM060072 11/12/2005 30 DIP 30" DIP reclined running North-South along East side of Lena Road parallel to 41st Ave. E. and 90-deg bend to West-East alignment running directly underneath and transitions with 90-deg bend to East-West alignment along the West side of 81st Ave. E.

Utility ID 179  County Main Line, Reclaimed Manatee County 191 RPM060079 11/12/2005 30 DIP 30" DIP reclined running North-South along East side of Lena Road parallel to 41st Ave. E. and 90-deg bend to West-East alignment running directly underneath and transitions with 90-deg bend to East-West alignment along the West side of 81st Ave. E.
## Lena Road Utilities (From S. to N.)

<table>
<thead>
<tr>
<th>Utility ID</th>
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<th>Owner</th>
<th>Length (LF)</th>
<th>Asset_ID</th>
<th>Install Date</th>
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<th>Location: Parallel/Crossing</th>
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## Diagram

- **Lena Road Utilities (From S. to N.)**
- **Utility ID**
- **Description**
- **Owner**
- **Length (LF)**
- **Asset_ID**
- **Install Date**
- **Diameter (in.)**
- **Material**
- **Location: Parallel/Crossing**
- **Record Drawing Name**
- **Record Drawing OnBase Link**
- **Object ID**
### Lena Road Utilities (From S. to N.)

<table>
<thead>
<tr>
<th>Utility ID</th>
<th>Description</th>
<th>Owner</th>
<th>Length (LF)</th>
<th>Asset_ID</th>
<th>Install Date</th>
<th>Diameter (in.)</th>
<th>Material</th>
<th>Location</th>
<th>Record Drawing</th>
<th>Record Drawing OnBase Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>238</td>
<td>County Main Line, Water</td>
<td>Manatee County</td>
<td>20</td>
<td>WPM0038276</td>
<td>11/29/2004</td>
<td>10</td>
<td>PVC</td>
<td>PVC Water Main bored underneath sidewalk on the North side of SR64; Water Main is parallel to Lena Road</td>
<td>HERITAGE HARBOUR - SR 64 IMPROVEMENTS (WATER)</td>
<td><a href="https://www.mymanatee.org/onbasegisutil/docpop/docpop.aspx?clienttype=html&amp;docid=11581220&amp;pageId=0136202">https://www.mymanatee.org/onbasegisutil/docpop/docpop.aspx?clienttype=html&amp;docid=11581220&amp;pageId=0136202</a></td>
</tr>
<tr>
<td>239</td>
<td>County Main Line, Water</td>
<td>Manatee County</td>
<td>736</td>
<td>WPM0063275</td>
<td>11/29/2004</td>
<td>42</td>
<td>DIP</td>
<td>42&quot; DIP Water Main on North side of SR64 and directly to the north side of the adjacent sidewalk (pavement) parallel to SR64</td>
<td>HERITAGE HARBOUR - SR 64 IMPROVEMENTS (WATER)</td>
<td><a href="https://www.mymanatee.org/onbasegisutil/docpop/docpop.aspx?clienttype=html&amp;docid=11581220&amp;pageId=0136201">https://www.mymanatee.org/onbasegisutil/docpop/docpop.aspx?clienttype=html&amp;docid=11581220&amp;pageId=0136201</a></td>
</tr>
<tr>
<td>147</td>
<td>Private Force Main, Sewer</td>
<td>Private</td>
<td>95</td>
<td>SPM006760</td>
<td>7/22/2005</td>
<td>2</td>
<td>HDPE</td>
<td>2&quot; HDPE Lateral running East from Lena Road and is perpendicular to Lena Road</td>
<td>FP&amp;L - RYE SUBSTATION</td>
<td><a href="https://www.mymanatee.org/onbasegisutil/docpop/docpop.aspx?clienttype=html&amp;docid=12889987&amp;pageId=0027661">https://www.mymanatee.org/onbasegisutil/docpop/docpop.aspx?clienttype=html&amp;docid=12889987&amp;pageId=0027661</a></td>
</tr>
<tr>
<td>7</td>
<td>Private Force Main, Sewer</td>
<td>Private</td>
<td>1119</td>
<td>SPM007231</td>
<td>Null</td>
<td>12</td>
<td>PVC</td>
<td>Sewer force main on North side of 41st Ave. E.</td>
<td>No documents available</td>
<td>Polyline</td>
</tr>
<tr>
<td>BFO Manatee County</td>
<td>3,400</td>
<td>Several IDs</td>
<td>2</td>
<td>HDPE</td>
<td>Conduit</td>
<td>2</td>
<td>HDPE</td>
<td>Conduit</td>
<td>UnitI Fiber</td>
<td>UNITI Fiber, BFO running along the East side of the North section of Lena Road and diverts to Cell tower on East side of Lena Road</td>
</tr>
<tr>
<td>BFO UNITI Fiber</td>
<td>UNK</td>
<td>NA</td>
<td>2</td>
<td>HDPE</td>
<td>Conduit</td>
<td>UNITI Fiber has BFO running along the East side of the North section of Lena Road and diverts to Cell tower on East side of Lena Road</td>
<td>UNITI Fiber has BFO running along the East side of the North section of Lena Road and diverts to Cell tower on East side of Lena Road</td>
<td>UNITI Fiber has BFO running along the East side of the North section of Lena Road and diverts to Cell tower on East side of Lena Road</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BFO Charter-Spectrum</td>
<td>UNK</td>
<td>NA</td>
<td>UNK</td>
<td>HDPE</td>
<td>Conduit</td>
<td>From Spectrum, BFO has run on FPL. Route is from the West side of Lena Road and eventually run onto FRP power poles and continues route on FPL.</td>
<td>From Spectrum, BFO has run on FPL. Route is from the West side of Lena Road and eventually run onto FRP power poles and continues route on FPL Lines for duration of Lena Road Corridor.</td>
<td>From Spectrum, BFO has run on FPL. Route is from the West side of Lena Road and eventually run onto FRP power poles and continues route on FPL Lines for duration of Lena Road Corridor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BFO Frontier</td>
<td>UNK</td>
<td>NA</td>
<td>UNK</td>
<td>UNK</td>
<td>Conduit</td>
<td>BFO running throughout Lena Road Corridor. Main BFO occurs on the West side of Lena Road (North side of corridor)</td>
<td>BFO running throughout Lena Road Corridor. Main BFO occurs on the West side of Lena Road (North side of corridor)</td>
<td>BFO running throughout Lena Road Corridor. Main BFO occurs on the West side of Lena Road (North side of corridor)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BFO MCI</td>
<td>UNK</td>
<td>NA</td>
<td>UNK</td>
<td>UNK</td>
<td>Conduit</td>
<td>BFO running throughout Lena Road Corridor. Main BFO occurs on the West and East side of Lena Road Corridor.</td>
<td>BFO running throughout Lena Road Corridor. Main BFO occurs on the West and East side of Lena Road Corridor.</td>
<td>BFO running throughout Lena Road Corridor. Main BFO occurs on the West and East side of Lena Road Corridor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas FGT</td>
<td>UNK</td>
<td>NA</td>
<td>UNK</td>
<td>UNK</td>
<td>Gas Line</td>
<td>Gas force main on North side of corridor</td>
<td>Gas force main on North side of corridor</td>
<td>Gas force main on North side of corridor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas TECO</td>
<td>UNK</td>
<td>NA</td>
<td>UNK</td>
<td>UNK</td>
<td>Gas Line</td>
<td>Gas force main on North side of corridor</td>
<td>Gas force main on North side of corridor</td>
<td>Gas force main on North side of corridor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Voltage Transmission and Distribution Wires (Overhead) FPL</td>
<td>UNK</td>
<td>NA</td>
<td>UNK</td>
<td>UNK</td>
<td>Power Lines</td>
<td>FPL has high-voltage transmission lines running through their easement. In addition, FPL has Distribution Wires running on the East and West side of Lena Road Corridor.</td>
<td>FPL has high-voltage transmission lines running through their easement. In addition, FPL has Distribution Wires running on the East and West side of Lena Road Corridor.</td>
<td>FPL has high-voltage transmission lines running through their easement. In addition, FPL has Distribution Wires running on the East and West side of Lena Road Corridor.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B – Detailed Location Map
Utility ID 1
10" PVC Potable Water Main
Owner: Manatee County

Utility ID 3
20" DI Sewer Force Main
Owner: Manatee County

Utility ID 4
20" PVC Sewer Force Main
Owner: Manatee County

Utility ID 5
20" PVC Sewer Force Main
Owner: Manatee County

FPL High-Voltage Transmission Wires

CrownCastle BFO

FPL Distribution Wire for Manatee County Landfill and WWTP

Utility ID 3
20" DI Sewer Force Main
Owner: Manatee County

Utility ID 4
20" PVC Sewer Force Main
Owner: Manatee County

Utility ID 5
20" PVC Sewer Force Main
Owner: Manatee County

FPL Distribution Wire for Manatee County Landfill and WWTP

FPL High-Voltage Transmission Wires

CrownCastle BFO

Utility ID 1
10" PVC Potable Water Main
Owner: Manatee County

Lena Road

Detail Sheet
Utility ID 4
20" PVC Sewer Force Main
Owner: Manatee County

Utility ID 5
20" PVC Sewer Force Main
Owner: Manatee County

FPL High-Voltage Transmission Wires

FPL Distribution Wire for Manatee County Landfill and WWTP

FPL Distribution Wires

CrownCastle BFO

FPL High-Voltage Transmission Wires
81st Ct. E. Cul-De-Sac
Enlarged Utility Location Map with Sewer Utility Identification Call-outs

Utility ID 28
2" UNK Lateral
Owner: Manatee County

Utility ID 26
8" PVC Gravity Main
Owner: Manatee County

Utility ID 27
2" UNK Lateral
Owner: Manatee County

Utility ID 25
2" UNK Lateral
Owner: Manatee County

Utility ID 11
16" PVC Force Main
Owner: Manatee County

FPL Distribution Wires

81st Ct. E. Cul-De-Sac
Enlarged Utility Location Map with Sewer Utility Identification Call-outs

Detail Sheet
Lena Road, 81st Ct. E., & Landfill Road Intersection
Enlarged Utility Location Map with Water and Sewer Utility Identification Call-outs

Utility ID 116
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 118
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 117
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 115
4" PVC Sewer Force Main
Owner: Manatee County

Utility ID 119
6" DIP Reclaim
Owner: Manatee County

Utility ID 120
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 122
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 123
8" PVC Sewer Force Main
Owner: Manatee County

Utility ID 124
8" PVC Sewer Force Main
Owner: Manatee County

Utility ID 125
6" PVC Sewer Force Main
Owner: Manatee County

Utility ID 126
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 127
8" PVC Potable Water Main
Owner: Manatee County

Utility ID 128
12" DIP Reclaim
Owner: Manatee County

Utility ID 129
12" DIP Reclaim
Owner: Manatee County

Utility ID 130
12" DIP Reclaim
Owner: Manatee County

Utility ID 131
30" DIP Reclaim
Owner: Manatee County

Utility ID 132
12" DIP Reclaim
Owner: Manatee County

Utility ID 132 & 135
16" PVC Sewer Force Main
Owner: Manatee County

Utility ID 133
30" DIP Reclaim
Owner: Manatee County

Utility ID 134
16" PVC Sewer Force Main
Owner: Manatee County

Utility ID 135
16" PVC Sewer Force Main
Owner: Manatee County

Utility ID 136
16" PVC Sewer Force Main
Owner: Manatee County

Utility ID 137
16" PVC Sewer Force Main
Owner: Manatee County

Utility ID 138
16" PVC Sewer Force Main
Owner: Manatee County

Utility ID 139
16" PVC Sewer Force Main
Owner: Manatee County

Utility ID 140
16" PVC Sewer Force Main
Owner: Manatee County

Utility ID 141
16" PVC Sewer Force Main
Owner: Manatee County
Please see following page for detailed site map of the south side intersection with SR 64.
Appendix H – Agency Coordination Minutes
Lena Road

SWFWMD Pre-Application Minutes
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
RESOURCE REGULATION DIVISION
PRE-APPLICATION MEETING NOTES

<table>
<thead>
<tr>
<th>Date</th>
<th>10/7/2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>1:00</td>
</tr>
<tr>
<td>Project Name:</td>
<td>Manatee County/Lena Road</td>
</tr>
<tr>
<td>District Engineer:</td>
<td>Monte Ritter</td>
</tr>
<tr>
<td>District ES:</td>
<td>Jeff Glas</td>
</tr>
<tr>
<td>Attendees:</td>
<td>Jason Starr <a href="mailto:Jason.Starr@hdrinc.com">Jason.Starr@hdrinc.com</a>, Paul Herman, Scott Ennis, Barry Lenz, Eric Shroyer, Darin Rice</td>
</tr>
<tr>
<td>County:</td>
<td>Manatee</td>
</tr>
<tr>
<td>Total Land Acreage:</td>
<td>1,12/35/18;36/34/18</td>
</tr>
<tr>
<td>Project Acreage:</td>
<td>acres</td>
</tr>
</tbody>
</table>

Prior On-Site/Off-Site Permit Activity:
- ERP 5641.020 (Creekwood East Corporate Park); ERP 3143.004 (Lena Road Business Park); ERP 24001.000 (MANATEE CO-RECLAIMED WATER MAIN N-SE)

Project Overview:
- Proposed 4-lane roadway from Lena Road north to 81st St Ct E, and road widening from two to four lanes from 81st St Ct E and along Lena Road to SR 64. Six basins/stormwater ponds are proposed. Proposed activity will qualify for a new Individual SWERP.

Environmental Discussion:
- Wetlands present, impacts proposed.
- Provide the limits of jurisdictional wetlands and surface waters. Roadside ditches or other water conveyances, including permitted and constructed water conveyance features, can be claimed as surface waters per Chapter 62-340 F.A.C. if they do not meet the definition of a swale as stated under Rule 403.803 (14) F.S.
- Provide appropriate mitigation using UMAM for impacts, if applicable.
- The site is located in the Manatee River ERP Basin. Mitigation Banks that serve this area include the Mangrove Point, Manatee Mitigation, and Braden River, Tampa Bay. For an interactive map of permitted mitigation banks and their service areas, use this LINK.
- If the wetland mitigation is appropriate and the applicant is proposing to utilize mitigation bank credit as wetland mitigation, the following applies: Provide letter or credit availability or, if applicable, a letter of reservation from the wetland mitigation bank. The wetland mitigation bank current credit ledgers can be found out the following link: https://www.swfwmd.state.fl.us/business/epermitting/environmental-resource-permit. Go to “ERP Mitigation Bank Wetland Credit Ledgers”
- Demonstrate elimination and reduction of wetland impacts.
- Maintain minimum 15 foot, average 25 foot wetland conservation area setback or address secondary impacts.
- Please demonstrate that adverse impacts to the wetland hydro-periods will not occur by providing hydrographs of the 2.33 year mean annual storm. The graph should start and end at the pop-off elevation with Existing Condition and Proposed Condition hydrographs superimposed for comparison. Please provide a supporting narrative for the hydrographs explaining any variations that are shown. The invert of the agricultural ditches may be the existing ‘pop-off’ elevation, or SHWL of the wetland and may need to be considered when designing the storm water management system.
- Determine SHWL’s at pond locations, wetlands, and OSWs.
- Determine normal pool elevations of wetlands.
- Determine ‘pop-off’ locations and elevations of wetlands.
- Please note, the Florida Department of Environmental Protection (FDEP) has assumed the Federal dredge and fill permitting program under section 404 of the Federal Clean Water Act within certain waters. State 404 Program streamlining intentions direct Agency staff to coordinate joint site visits for overall consistency.
between the two State programs. As such, District staff and the FDEP will need to conduct a joint site visit for evaluation of the wetland/surface water systems proposed for impact. District staff will coordinate with FDEP staff on determining dates/times of joint Agency availability. Upon determination of joint availability, staff will provide the applicant’s representative with site visit scheduling options.

- Bald eagle nest (MN032) located within close proximity to project area, coordination with USFWS (Ulgonda Kirkpatrick) may be required

**Site Information Discussion:** (SHW Levels, Floodplain, Tailwater Conditions, Adjacent Off-Site Contributing Sources, Receiving Waterbody, etc.)

- Watersheds – No District watershed study available. 100-year floodplain associated with wetlands and surface waters within and adjacent to project must be established.
- WBIDs – Williams Creek (WBID 1901) and Cypress Strand (WBID 1875). WBID 1901 is currently listed for nutrient related impairments. Net improvement will be required for discharges to this WBID. WBIDs need to be independently verified by the consultant.
- Document/justify SHWE’s at pond locations, wetlands, and OSWs.
- Provide documentation to support tailwater conditions for quality and quantity design.
- Contamination issues need to be resolved with the FDEP. Check FDEP MapDirect layer for possible contamination points within/adjacent to the project area. FDEP Map Direct
  - Solid Waste Facility No. 93193 located within or adjacent to site.

Please verify with FDEP if it has current contamination issues after the application is submitted.

For known contamination within the site or within 500’ beyond the proposed stormwater management system:

- After the application is submitted, please contact FDEP staff listed below and provide them with the ERP Application ID # along with a mounding analysis (groundwater elevation versus distance) of the proposed stormwater management system that shows the proposed groundwater mound will not adversely impact the contaminated area. FDEP will review the plans submitted to the District and mounding analysis to determine any adverse impacts. Provide documentation from FDEP that the proposed construction will not result in adverse impacts. This is required prior to the ERP Application being deemed complete.

For known offsite contamination between 1500’ and 500’ beyond the site: FDEP may also require a mounding analysis (groundwater elevation versus distance) for the proposed stormwater systems. SWFWMD will issue the permit when contamination sites are located outside the 500 ft radius prior to concurrence from DEP, however, it is the Permittee’s responsibility to resolve contaminated site assessment concerns with the FDEP prior to beginning any construction activities. A permit condition will be used to reiterate this. You are advised to contact DEP as soon as possible, preferably during permit application period.

- FDEP Contacts:
  - For projects located within Citrus, Hernando, Pasco, Hillsborough, Pinellas, Manatee, Polk and Hardee Counties: Yanisa Angulo Yanisa.angulo@floridadep.gov

- Any wells on site should be identified and their future use/abandonment must be designated.
- Stormwater retention and detention systems are classified as moderate sanitary hazards with respect to public and private drinking water wells. Stormwater treatment facilities shall not be constructed within 100 feet of an existing public water supply well and shall not be constructed within 75 feet of an existing private drinking water well. Subsection 4.2, A.H.V.II.

**Water Quantity Discussions:** (Basin Description, Storm Event, Pre/Post Volume, Pre/Post Discharge, etc.)

- Demonstrate that post development peak discharges from proposed project area will not cause an adverse impact for a 25-year, 24-hour storm event.
- Demonstrate that site will not impede the conveyance of contributing off-site flows.
- Demonstrate that the project will not increase flood stages up- or down-stream of the project area(s).
- Provide equivalent compensating storage for all 100-year, 24-hour floodplain impacts if applicable. Providing cup-for-cup storage in dedicated areas of excavation is the preferred method of compensation, if no impacts to flood conveyance are proposed and storage impacts and compensation occur within the same basin. In this case, tabulations should be provided at 0.5-foot increments to demonstrate encroachment and compensation occur at the same levels. Otherwise, storage modeling will be required to demonstrate no increase in flood stages will occur on off-site properties, using the mean annual, 10-year, 25-year, and 100-year storm events for the pre- and post-development conditions.

**Water Quality Discussions:** (Type of Treatment, Technical Characteristics, Non-presumptive Alternatives, etc.)

- Presumptive Water Quality Treatment for Alterations to Existing Public Roadway Projects:
Refer to Section 4.5 A.H.V.II for Alterations to Existing Public Roadway Projects.

- All co-mingled existing & new impervious that is proposed to be connected to a treatment pond will require treatment for an area equal to the co-mingled existing & new impervious (times ½” for dry treatment or 1” for wet treatment). This applies whether or not equivalent treatment concepts are used.

- However, if equivalent treatment concepts are used it is possible to strategically locate the pond(s) so that the minimum treatment requirement may be for an area equivalent to the new impervious area only. That is, co-mingled existing & new impervious that is not connected to a treatment pond may bypass treatment (as per Section 4.5(2), A.H.V.II); if the ‘total impervious area’ that is connected to the treatment pond(s) is at least equivalent to the area of new impervious only. The ‘total impervious area’ that is connected to the pond(s) may be composed of co-mingled existing & new impervious.

- Offsite impervious not required to be treated; but may be useful to be treated when using equivalent treatment concepts.

- Existing treatment capacity displaced by any road project will require additional compensating volume. Refer to Subsection 4.5(c), A.H.V.II.

- Net improvement
  - Refer to rule 62-330.301(2), F.A.C.
  - Please verify accuracy of WBID boundaries and status of impairment.
  - The application must demonstrate a net improvement for nutrients for discharges to WBID 1901. Applicant may demonstrate a net improvement for the parameters of concern by performing a pre/post pollutant loading analysis based on existing land use and the proposed land use. Refer to ERP Applicant's Handbook Vol. II Subsection 4.1(g).

  - Effluent filtration is known to be ineffective for treating nutrient related impairments, unless special nutrient adsorption media provided. However, please note special nutrient adsorption media has extremely low conductivity values compared to typical sand type effluent filtration filter media. Note: if treatment volume required for net improvement is less than the treatment volume required for 'presumptive' treatment, then use of effluent filtration is ok.

**Sovereign Lands Discussion:** (Determining Location, Correct Form of Authorization, Content of Application, Assessment of Fees, Coordination with FDEP)

- The project may be located within state owned sovereign submerged lands (SSSL). Be advised that a title determination will be required from FDEP to verify the presence and/or location of SSSL.

- If use of SSSL is proposed, authorization will be required. Refer to Chapter 18-21, F.A.C. and Chapter 18-20, F.A.C. for guidance on projects that impact SSSL and Aquatic Preserves.

- Include discussion on the potential type of SSSL authorization that may be required. Refer to Chapter 18-21.005, F.A.C.

- Title request process provided to Barry Lenz via email.

**Operation and Maintenance/Legal Information:** (Ownership or Perpetual Control, O&M Entity, O&M Instructions, Homeowner Association Documents, Coastal Zone requirements, etc.)

- The permit must be issued to entity that owns or controls the property. Manatee County will be permittee.

- Provide evidence of ownership or control by deed, easement, contract for purchase, etc.

**Application Type and Fee Required:**

- SWERP Individual – Sections A, C, and E of the ERP Application. Fee will be based on project area and amount of wl/sw impacts.

- Consult the fee schedule for different thresholds.

**Other:** (Future Pre-Application Meetings, Fast Track, Submittal Date, Construction Start Date, Required District Permits – WUP, WOD, Well Construction, etc.)

- An application for an individual permit to construct or alter a dam, impoundment, reservoir, or appurtenant work, requires that a notice of receipt of the application must be published in a newspaper within the affected area. Provide documentation that such noticing has been accomplished. Note that the published notices of receipt for an ERP can be in accordance with the language provided in Rule 40D-1.603(10), F.A.C.

- The plans and drainage report submitted electronically must include the appropriate information required under Rules 61G15-23.005 and 61G15-23.004 (Digital), F.A.C. The following text is required by the Florida Board of Professional Engineers (FBPE) to meet this requirement when a digitally created seal is not used and must appear where the signature would normally appear:
• Provide soil erosion and sediment control measures for use during construction. Refer to ERP Applicant’s Handbook Vol. 1 Part IV Erosion and Sediment Control.

• Demonstrate that excavation of any stormwater ponds does not breach an aquitard (see Subsection 2.1.1, A.H.V.II) such that it would allow for lesser quality water to pass, either way, between the two systems. In those geographical areas of the District where there is not an aquitard present, the depth of the pond(s) shall not be excavated to within two (2) feet of the underlying limestone which is part of a drinking water aquifer. [Refer to Subsection 5.4.1(b), A.H.V.II]

• If lowering of SHWE is proposed, then burden is on Applicant to demonstrate no adverse onsite or offsite impacts as per Subsection 3.6, A.H.V.II. Groundwater drawdown ‘radius of influence’ computations may be required to demonstrate no adverse onsite or offsite impacts. Please note that new roadside swales or deepening of existing roadside swales may result in lowering of SHWE. Proposed ponds with control elevation less than SHWE may result in adverse lowering of onsite or offsite groundwater.

• On December 17, 2020, the Environmental Protection Agency (EPA) formally transferred permitting authority under CWA Section 404 from the U.S. Army Corps of Engineers (Corps) to the State of Florida for a broad range of water resources within the State. The primary State 404 Program rules are adopted by the Florida Department of Environmental Protection (FDEP) as Chapter 62-331 of the Florida Administrative Code (F.A.C.). While the State 404 Program is a separate permitting program from the Environmental Resource Permitting program (ERP) under Chapter 62-330, F.A.C., and agency action for State 404 Program verifications, notices, or permits shall be taken independently from ERP agency action, the FDEP and the Southwest Florida Water Management District (SWFWMD) will be participating in a Joint application Process. Upon submittal of an ERP application that proposes dredge/fill activities in wetlands or surface waters within state assumed waters, the SWFWMD will forward a copy of your application to the FDEP for activities under State 404 jurisdiction. The applicant may choose to have the State 404 Program and ERP agency actions issued concurrently to help ensure consistency and reduce the need for project modifications that may occur when the agency actions are issued at different times. Additional information on the FDEP’s 404 delegation can be found at: https://floridadep.gov/water/submerged-lands-environmental-resources-coordination/content/state-404-program

• Additionally, for those projects located in areas where the Corps retains jurisdiction, the applicant is advised that the District will not send a copy of an application that does not qualify for a State Programmatic General Permit (SPGP) to the U.S. Army Corps of Engineers. If a project does not qualify for a SPGP, you will need to apply separately to the Corps using the appropriate federal application form for activities under federal jurisdiction. Please see the Corps’ Jacksonville District Regulatory Division Sourcebook for more information about federal permitting. Please call your local Corps office if you have questions about federal permitting. Link: http://www.saj.usace.army.mil/Missions/Regulatory/Source-Book/
<table>
<thead>
<tr>
<th>Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Item Price</th>
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<tr>
<td>CLEARING &amp; GRUBBING</td>
<td>LS/AC</td>
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<tr>
<td>EARTHWORK (ROADWAY EXCAVATION/EMBANKMENT)</td>
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<td>$8.37</td>
<td>$1,898,717.76</td>
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<td>EARTHWORK (ROADWAY, EMBANKMENT TO FILL EXISTING POND)</td>
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