



St. Johns River

Water Management District

Ann B. Shortelle, Ph.D., Executive Director

4049 Reid Street • P.O. Box 1429 • Palatka, FL 32178-1429 • 386-329-4500
On the internet at www.sjrwmd.com.

DATE: May 12, 2020

TO: Prospective Respondents

FROM: Gerald Cahalane, Assoc. Procurement Specialist

SUBJECT: Addendum #1 to Quote Request #35657, Tidal-Forested Freshwater Essential Fish Habitat – Trash and Debris Removal

This addendum is to correct a typographical error in the original Quote Request documentation.

Responses to this quote request are due by no later than 5:00PM on, Wednesday, May 20, 2020.

Additionally, please ensure that all quotes are sent in PDF format as an email attachment.

Please see below for the explanation and correction:

The Quote Request should be #35657, not #35567. The 35567 is a typographical error. The document has been updated to reflect the correction to QR #35657.

No other information within the quote request has changed. The Statement of Work has not been modified in any way. Please compare the original documentation to this addendum for confirmation.

The updated quote request documentation to QR #35657 begins on the next page:



St. Johns River

Water Management District

Ann B. Shortelle, Ph.D., Executive Director

4049 Reid Street • P.O. Box 1429 • Palatka, FL 32178-1429 • (386) 329-4500
On the Internet at floridaswater.com.

May 6, 2020

Interested Firms

Re: QR 35657 – Tidal-Forested Freshwater Essential Fish Habitat – Trash and Debris Removal

Dear Contractor,

The St. Johns River Water Management District (District) is requesting quotes for the above referenced project from qualified firms who have experience in providing these services. This letter is forwarded to you as an invitation to provide a quote based on the Statement of Work (SOW) attached as Exhibit 1. The quote shall include all labor, materials, insurance, and other related costs for the services described in the SOW.

If you are interested in this project, email (preferred) or fax your quote using the Cost Schedule provided (Exhibit 2) **by no later than 5:00 p.m. on Wednesday, May 20, 2020**. All quotes and questions may be e-mailed or faxed to Gerald Cahalane, Assoc. Procurement Specialist, at gcahalan@sjrwmd.com or fax (386) 329-4546. **All emailed submissions must be in PDF format. Please reference quote number #35657 on any and all correspondence.**

Minimum Qualifications:

Respondents must meet the minimum qualifications below and all supporting documentation must be submitted with the response to this quotation request:

1. Proof of firm's ability to do business in the state of Florida. (Documentation must be provided with quote response.)
2. Respondent must have completed at least one project of a similar nature (refer to the tasks outlined in the Statement of Work) in the past three years by the individual, firm, or foreman assigned to the project. (Documentation must be provided on attached form and must be included with quote response.)

Award of this quote shall be based on the lowest total cost that meets all requirements of this quote request.

If you need assistance or have any questions about submitting your quote, please contact Gerald Cahalane, Assoc. Procurement Specialist, at (386) 326-3034 or at gcahalan@sjrwmd.com. Between the release of this quote request and the posting of the notice of intended decision, Respondents to this quote request or persons acting on their behalf may not contact any employee or officer of the District concerning any aspect of this solicitation, except the procurement employee listed above. Violation of this provision is grounds for rejecting a response. **Please send any questions regarding the work via email.** Thank you for your consideration of this request.

Exhibit 1 – Statement of Work/Site Maps
Exhibit 2 – Cost Schedule
Exhibit 3 – Insurance Requirements
Exhibit 4 – Qualification Forms
Exhibit 5 – Environmental Site Assessment

Special Note Regarding Public Meetings:

Pursuant to the State of Florida Office of the Governor, Executive Order 20-52 (Emergency Management – COVID-19 Public Health Emergency) and the St. Johns River Water Management District Order 2020-05 (SJRWMD F.O.R. No. 2020-10) (Emergency Authorization For Continuity of Operations, Procurement, and Certain Other Measures Made Necessary By COVID-19), public meetings that are a part of District solicitations will be conducted by electronic means (webinar or telephone) during the terms of these orders. These meetings include, but are not limited to, solicitation openings, meetings for evaluation committees, presentations, negotiations, and pre-bid/pre-proposal meetings. For this solicitation, interested respondents may participate in these meetings via teleconference by calling _____ and entering the conference room number _____.

If a pre-bid meeting is scheduled, an addendum will be posted to the District's solicitation portals with the teleconference call number and conference room number.

NOTE: Please check the box provided if you are unable to provide a quotation for this service at this time and return to my attention at gcahalan@sjrwmd.com.

☐ I am unable to provide a quotation at this time for the following reason(s):

Respondent's Signature

Respondent's Company Name

**EXHIBIT 1 — STATEMENT OF WORK
DEEP CREEK CONSERVATION AREA
TIDAL FORESTED FRESHWATER ESSENTIAL FISH HABITAT
TRASH AND DEBRIS REMOVAL
PUTNAM & ST. JOHNS COUNTY 2020**

I. INTRODUCTION/BACKGROUND

The St. Johns River Water Management District's Bureau of Land Management (District) is actively managing Public Lands across the 18 counties within the District. Of this area, there is a diverse array of natural communities, some of which are in a very degraded state. The Tidal-Forested Freshwater Essential Fish Habitat (TFF-EFH) is proposed to provide a portion of the mitigation required to offset unavoidable adverse impacts associated with the First Coast Expressway (FCX) project. The TFF-EFH is located north of State Road 207, west of Hastings, on the border of Putnam and St Johns County (Figure 1), and it is within the Deep Creek Conservation Area., which is ±4,510-acres. Deep Creek is approximately three miles long (north to south) and two miles wide, with over two miles of frontage on the St. Johns River. Deep Creek is a tidally influenced blackwater stream which flows westerly to the St Johns River. Wetland natural communities within the conservation area are largely undisturbed and are extremely important in helping improve water quality in the creek, which is impacted by agricultural run-off from nearby farms. Floodplain swamp is the predominant natural community within the conservation area. The property lies within an area known as the St. Johns River Blueway Florida Forever Project. Acquisition within the project area is a priority; the project area is located in one of the fastest growing portions of the State and has been designed to protect the last remaining shorelines of the St. Johns River and several of its tributaries. The TFF-EFH mitigation falls along the western boundary of the Deep Creek Conservation Area.

II. OBJECTIVE

The overall goal of this project is to provide ecological benefit to the TFF-EFH Mitigation and Deep Creek Conservation Area by removing residential debris.

III. PROJECT DESCRIPTION

Contractor shall remove piles of residential debris (trash) from site and dispose of the materials accordingly and appropriately. The material is general trash debris and includes approximately 150-200 used tires that have been piled for removal. A copy of the Phase I environmental assessment is attached as Exhibit 5.

IV. TASKS

- a. Provide all materials, labor, equipment, and any incidentals necessary to successfully complete the removal of trash and residential debris.
- b. Appropriately dispose of all debris, including used tires, in accordance with Federal, State, and Local laws.
- c. District Project manager shall be notified a minimum of one week prior to the contractor beginning the work on the project site.
- d. District Project Manager and Contractor will coordinate for joint inspections of the project before final invoice is submitted.

Contractor Responsibilities:

- Contractor shall mobilize necessary equipment needed to execute the debris removal.
- Contractor shall remove all trash and residential debris from the property in the designated areas by the District's Project Manager.
- Contractor shall adhere to Federal, State, and Local laws regarding the disposal of all debris, including the approximately 150-200 used tires.
- Contractor shall access the site via easements depicted on Figure 2.
- Contractor shall ensure all equipment, trailers, and any other gear does not block any roadways. Care will be taken to ensure vehicles are operated at a safe speed while on the property.
- Contractor shall use care to minimize rutting or other alterations within the wetlands and trail roads during project. Contractor is responsible for repairing any rutting within the access routes, wetlands, and trail roads caused by contractor's equipment, vehicles, or employees beyond what is considered normal or expected.
- Contractor shall demobilize all equipment from the site upon completion of project. All rutting will be regraded prior to demobilization.
- Contractor shall be responsible for ensuring that all gates are closed and locked, if applicable, upon each entry, exit and at the end of each working day to ensure security on the property. including any debris generated during completion of the project.
- Work area shall be kept clear of rubbish. Discharge of petroleum products or other harmful/hazardous materials shall be prohibited on site. Should any harmful material be discharged, the District Project Manager shall be immediately notified.
- Contractor shall be solely responsible for any and all costs associated with any resulting clean up and remediation.
- Due care shall be exercised against starting and spreading fires during operations by Contractor and/or its employees.
- Contractor shall be held liable for all damage caused by such fires.
- Contractor shall repair or replace at their cost any damage to fences, cattle guards, gates, power lines, or other improvements.
- Contractor shall be responsible for complying with all federal, state, and local laws pertaining to project or project activities.
- Contractor shall provide the District's Project Manager advance notice of at least 24 hours to inspect all completed work.

District Responsibilities:

- District's Project Manager or their representative will inspect the work accomplished and the equipment to ensure compliance to job specifications and to evaluate overall job performance.
- District shall be notified a minimum of one week prior to the contractor entering the project site.
- The District reserves the right to award portions of the contract to multiple vendors if needed.
- If work is found to be unsatisfactory, Contractor will be notified and has 30 days to resolve. If problems are not resolved within 30 days of notification, District Project Manager reserves the right to offer remainder of contract to next lowest bidder.

V. BUDGET

The estimated budget for the Work is \$40,000.00. The budget is an estimate only and does not limit the District in awarding the Agreement. Respondents are cautioned to not make any assumptions from the budget estimate as to the total funds available for the Work. The District retains the right to adjust the estimated budget in awarding the Agreement. The District also reserves the right to reject any and all bids over this estimated budget amount. In addition, if all bids from responsive and responsible Respondents exceed the estimated budget, the District reserves the right to increase, decrease, or delete any class, item, or part of the Work. The District may discuss alternatives for reducing the cost of the Work with Respondents and make such modifications as it determines to be in its best interest. The District reserves the right to award portions of the contract to multiple vendors if needed to meet the requirements of the Work.

VI. TIMEFRAMES AND DELIVERABLES

The expiration date of this agreement is September 30, 2020. The Contractor shall invoice the District no more frequently than monthly. District Project Manager will inspect work before final invoice is submitted. Invoices shall be submitted to Accounts Payable at acctpay@sjrwmd.com, preferably in PDF format.

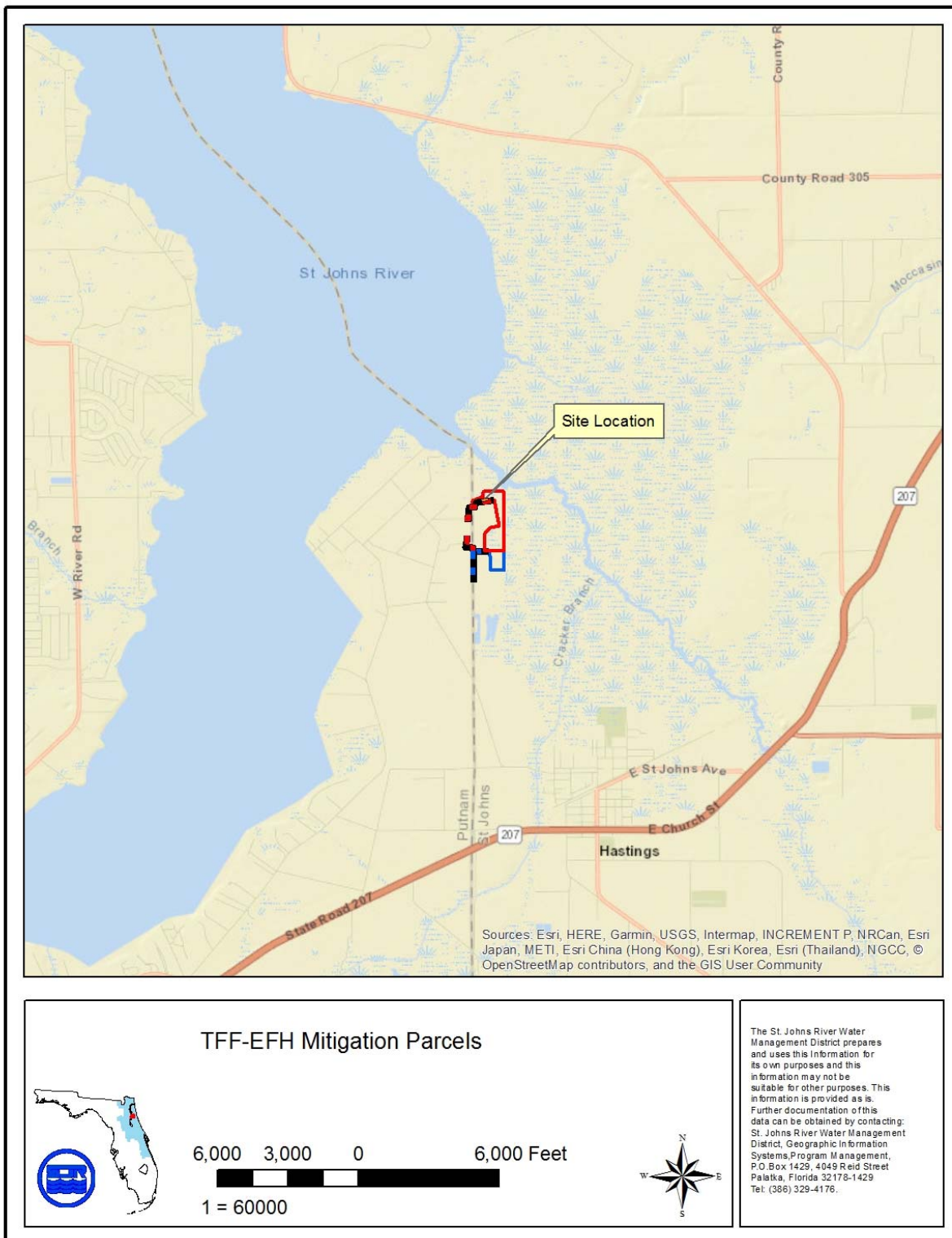


Figure 1. General Location of the TFF-EFH Mitigation Area

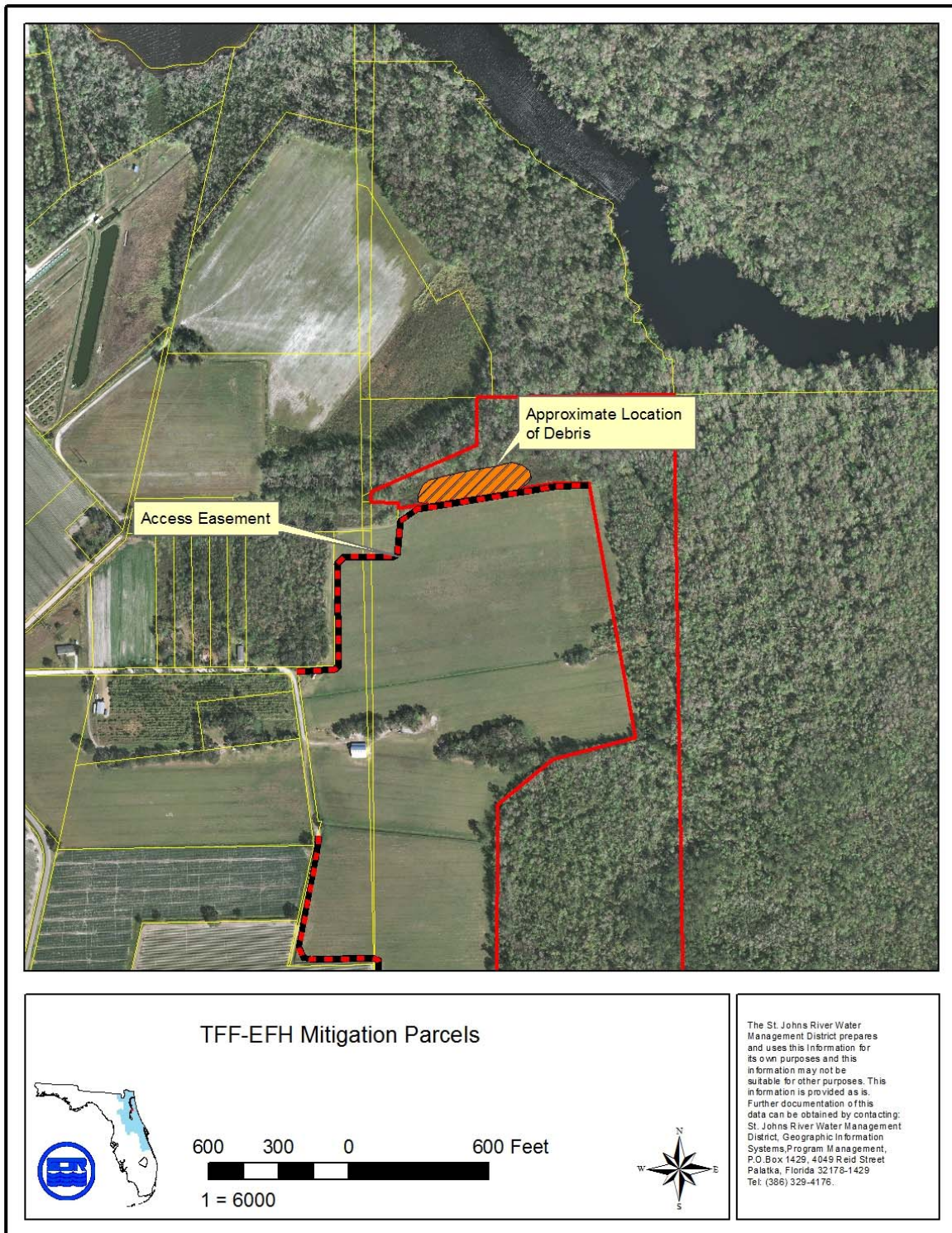


Figure 2. TFF-EFH Approximate Location of Piled Trash and Debris

EXHIBIT 2 — COST SCHEDULE

DUE BY NO LATER THAN 5:00 PM, WEDNESDAY, MAY 20, 2020
RESPONSES SHALL BE SUBMITTED TO THE PROCUREMENT SPECIALIST AS IDENTIFIED
ON THE FIRST PAGE OF THIS REQUEST.

TRASH & DEBRIS REMOVAL	TOTAL COST
DEEP CREEK CONSERVATION AREA – TFF-EFH	

I hereby acknowledge, as Authorized Representative for the Respondent, that I have fully read and understand all terms and conditions as set forth in this quotation, and upon award of such quotation, shall fully comply with such terms and conditions.

RESPONDENT (FIRM NAME)

ADDRESS

SIGNATURE

TYPED NAME & TITLE

TELEPHONE NUMBER

EMAIL ADDRESS

EXHIBIT 3 — INSURANCE

Contractor shall acquire and maintain until completion of the Work the insurance coverage listed below, which constitutes primary coverage. Contractor shall not commence the Work until the District receives and approves Certificates of Insurance documenting required coverage. **Contractor's General Liability policy shall name the St. Johns River Water Management District (the "District") as Additional Insured.** All required policies shall include: (1) endorsement that waives any right of subrogation against the District for any policy of insurance provided under this requirement or under any state or federal worker's compensation or employer's liability act; (2) endorsement to give the District no less than 30 days' notice in the event of cancellation or material change. Certificates of Insurance must be accompanied by copies of the requested endorsements.

Any deductibles or self-insured retentions above \$100,000 must be declared to and approved by the District. Approval will not be unreasonably withheld. Contractor is responsible for any deductible or self-insured retention. Insurance must be placed with insurers having an A.M. Best rating of A-V or greater. District receipt of insurance certificates providing less than the required coverage does not waive these insurance requirements.

- (a) **Workers' Compensation Insurance.** Workers' compensation and employer's liability coverage, including maritime worker's compensation, if applicable, in not less than the minimum limits required by Florida law. If an exemption from workers' compensation is declared, an exemption letter issued by Florida Department of Financial Services, Division of Workers' Compensation, shall be submitted to the District.
- (b) **General Liability.** Commercial General Liability Insurance on an "Occurrence Basis," with limits of liability not less than \$500,000 per occurrence and/or aggregate combined single limit, personal injury, bodily injury, and property damage. Coverage shall include: (1) contractual liability, (2) products and completed operations, (3) independent contractors, and (4) broad form property damage. Extensions shall be added, or exclusions deleted to provide the necessary coverage. "Claims made" coverage will be accepted only after verification that "occurrence" coverage is not available.
- (c) **Automobile Liability.** Minimum requirements per Florida law.

EXHIBIT 4 — QUALIFICATIONS DOCUMENTATION FORMS
(This form to be included with quote submittal)

As part of the quote request, Respondent shall complete the following so that the District can determine Respondent's ability, experience, and facilities for performing the Work.

Name of Respondent: _____

Respondent's tax identification No.: _____

Year company was organized/formed: _____

Number of years Respondent has been engaged in business under the present firm or trade name:

Total number of years Respondent has experience in similar work described in quote request of the
Instructions to Respondents: _____

Has Respondent previously been engaged in the same or similar business under another firm or trade name?
If so, please describe each such instance.

Has Respondent ever been adjudicated bankrupt, initiated bankruptcy, or been the subject of bankruptcy proceedings on behalf of the current entity submitting this bid or a prior entity that Respondent substantially operated or controlled? If yes, please describe the nature and result of those proceedings and the entity involved.

Describe the background/experience of the person or persons who will be primarily responsible for directing the Work that will be performed pursuant to this bid. This inquiry is intended to encompass the project manager and/or superintendent who will be engaged on a daily basis in directing performance of the Work.

QUALIFICATIONS – SIMILAR PROJECT
(This form to be included with quote submittal)

Respondent must have completed at least one project of a similar nature (refer to the tasks outlined in the Statement of Work) in the past three years by the individual, firm, or project manager assigned to the project. (Documentation must be provided on this form and must be included with quote response.)

Completed Project 1:

Agency/company: _____

Current contact person at agency/company: _____

Telephone: _____ Fax: _____ E-mail: _____

Address of agency/company: _____

Name of project: _____

Description: _____

Start date: _____ Completion date: _____

(month/year)

(month/year)

EXHIBIT 5 — PHASE I ENVIRONMENTAL SITE ASSESSMENT

**FREEMAN PROPERTY
ST. JOHNS COUNTY, FLORIDA
LA 2017-029**



PREPARED BY:



Aerostar SES LLC
535 Cooper Commerce Drive, Suite 300
Apopka, Florida 32703
407-464-0832

PREPARED FOR:

Ms. Carol Brown, P.E.
St. Johns River Water Management District
Bureau of Project Management
4049 Reid Street, PO Box 1429
Palatka, Florida 32178-1429

Aerostar Project Number: M3010.1624.0009.02

July 16, 2019

TABLE OF CONTENTS

GENERAL INFORMATION	1
Environmental Professional Certification.....	1
1.0 EXECUTIVE SUMMARY.....	3
1.1 Findings and Opinions.....	3
1.2 Conclusions.....	4
1.3 Recommendations	4
2.0 SUBJECT PROPERTY DESCRIPTION.....	5
2.1 Location	5
2.2 Environmental Liens and Activity and Use Limitations	5
2.3 Physical Setting	5
2.4 Site and Vicinity Characteristics	5
2.5 Description of Site Structures and Improvements.....	5
2.6 Current Uses of the Site.....	6
3.0 HISTORICAL USE INFORMATION.....	7
3.1 Historical Background.....	7
3.1.1 Aerial Photographs	7
3.1.2 Topographic Map.....	9
3.1.3 Sanborn Maps	9
3.1.4 City Directories	9
3.1.5 Review of Environmental Reports or Investigations	9
4.0 REGULATORY DATABASE LISTINGS	10
4.1 Standard Environmental Record Sources	10
4.2 Summary of Database Hits.....	10
4.3 Area Reconnaissance / Unmapped Facilities	11
4.4 Other Databases	11
5.0 LOCAL AGENCY RECORDS.....	12
6.0 SITE RECONNAISSANCE	13
6.1 Methodology	13
6.2 On-site Reconnaissance	13
6.2.1 Site Operations, Processes and Equipment	13
6.2.2 Aboveground Chemical or Waste Storage.....	13
6.2.3 Underground Chemical or Waste Storage, Drainage or Collection Systems	13
6.2.4 Electrical Transformers / PCBs.....	14
6.2.5 Releases or Potential Releases.....	14
6.2.6 Other Notable Site Features.....	14
7.0 INTERVIEWS.....	15
7.1 Interview with Site Owner	15
7.2 Interview with Site Manager.....	15
7.3 Interviews with Occupants.....	15
7.4 Interviews with Government Officials	15
7.5 Interviews with Others	16
8.0 OFF-SITE RECONNAISSANCE.....	17
9.0 PRODUCT INFORMATION	18
9.1 Purpose.....	18
9.2 Scope of Work	18
9.2.1 Records Review	18
9.2.2 Site Reconnaissance	19
9.2.3 Interviews.....	19
9.2.4 Report Preparation.....	19

9.3	Vapor Intrusion.....	19
9.4	Limitations.....	20
9.4.1	Data Gaps	20
9.5	Special Terms and Conditions	21
9.6	User Reliance	21
10.0	USER PROVIDED INFORMATION	22
10.1	Title Records.....	22
10.2	Environmental Liens or Activity and Use Limitations	22
10.3	Specialized Knowledge	22
10.4	Commonly Known or Reasonably Ascertainable Information.....	22
10.5	Valuation Reduction for Environmental Issues	22
10.6	Owner, Property Manager, and Occupant Information	22
10.7	Reason for Performing Phase I ESA	23
10.8	Degree of Obviousness	23
10.9	Other	23
11.0	NON-ASTM SCOPE ITEMS.....	24
11.1	Physical Setting Sources	24
11.1.1	Regional Geology.....	24
11.1.2	Soils/Geology	24
11.1.3	Hydrogeology.....	24

APPENDICES

APPENDIX A	Site Photographs
APPENDIX B	Site Maps
APPENDIX C	Property Record Information
APPENDIX D	Historical References Documentation
APPENDIX E	Regulatory Database Report and Regulatory Records
APPENDIX F	Supporting Documentation
APPENDIX G	Qualifications of Assessors

LIST OF ACRONYMS AND ABBREVIATIONS

--	Not Observed
Aerostar	Aerostar SES LLC
amsl	Above Mean Sea Level
APLUS	Florida Department of Transportation Aerial Photo Look Up System
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
AUL	Activity and Use Limitation
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CERCLIS	Comprehensive Environmental Response Compensation and Liability Information System
CORRACTS	RCRA Corrective Action
DRO	Diesel Range Organics
EPA	Environmental Protection Agency
ERIS	Environmental Risk Information Services
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
FDEP	Florida Department of Environmental Protection
FPL	Florida Power and Light
GRO	Gasoline Range Organics
IC/EC	Institutional Controls/E0.35435ineering Controls
LUST	Leaking Underground Storage Tank
mya	Million Years Ago
NA	Not Applicable
NFRAP	No Further Remedial Action Planned
NPL	National Priority List
NRCS	National Resources Conservation Service
OCULUS	FDEP's Document Management System
ORO	Oil Range Organics
PAH	Polycyclic Aromatic Hydrocarbons
PALMM	Publication of Archival, Library & Museum Materials
PCB	Polychlorinated Biphenyl
PRC	Property Record Card
RCRA	Resource Conservation and Recovery Act
RE#	Real Estate Number
REC	Recognized Environmental Condition
SEMS	Superfund Enterprise Management System
SJCPAO	St. Johns County Property Appraiser's Office
SJRWMD	St. Johns River Water Management District
SVOC	Semivolatile Organic Compounds
SWF/LF	Solid Waste Facilities/Landfills
TECO	Tampa Electric Company
TPH	Total Petroleum Hydrocarbons
TRPH	Total Recoverable Petroleum Hydrocarbons
TSD	Treatment, Storage and Disposal
USGS	United States Geological Survey
UST	Underground Storage Tank
VOA	Volatile Organic Aromatics
VOC	Volatile Organic Compounds

GENERAL INFORMATION

Project / Site Information:

Freeman Property
St. Johns County, Florida
LA 2017-029
Lat/Long: 29.7474 / -81.5223
Site Access Contact: Mr. Leonard Freeman

Client Information:

St. Johns River Water Management District
Bureau of Project Management
4049 Reid Street, PO Box 1429
Palatka, Florida 32178-1429
Ms. Carol Brown, P.E.

Consultant Information:

Aerostar SES LLC
535 Cooper Commerce Drive, Suite 300
Apopka, Florida 32703
407-464-0832
Email: sriffe@aerostar.net
Inspection Date: 6/18/2019

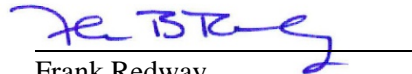
Users Information:

St. Johns River Water Management District
Leonard D. and Linda K. Freeman, Sellers

Site Assessor:


Brooks Hammer, GIT
Geologist

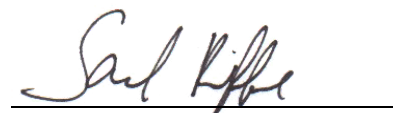
Project Manager:


Frank Redway
Senior Project Manager

Environmental Professional Certification

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 40 CFR Part 312.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.


Sarah Riffe, PG, CHMM
Senior Project Manager

PROFESSIONAL REVIEW
PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF FLORIDA

This is to certify the geological and hydrogeological aspects of the **Phase I Environmental Site Assessment of the Freeman Property, LA 2017-029**, located in **St. Johns County, Florida**, have been examined by the undersigned and comply with the standard professional practices, other rules of the Department and any other applicable laws and rules governing the profession.



Signature: _____

Sarah Riffe, PG
Florida Registration Number: 2995

1.0 EXECUTIVE SUMMARY

Aerostar has performed a Phase I ESA in conformance with the scope and limitations of ASTM Standard E 1527-13 of the Freeman Property (LA 2017-029), located in St. Johns County, Florida; hereafter referred to as the site. Any exceptions to, or deletions from, this practice are described in Section 9 of this report. The Executive Summary serves as a summary of this report and presents the significant findings and conclusions of this assessment. The Executive Summary should not be considered a stand-alone document and must be evaluated in conjunction with the discussions, supporting documentation, and limitations within this ESA report.

Aerostar conducted the site reconnaissance on June 18, 2019. The site consisted of approximately 34 acres of wooded land developed with a canal. During the site inspection, no evidence of the use, storage, disposal, or generation of hazardous substances and petroleum products was observed. On-site concerns were noted from the significant amounts of trash and debris including paper, glass, plastic, and waste tires were observed on the northwestern portion of the site. *De minimis* quantities of hazardous substances and/or petroleum products were observed in the surficial trash and debris; however, the potential exists for significant quantities of these types of materials to remain buried or otherwise concealed during the time of the inspection. Dense vegetation prevented a thorough inspection of the volume and types of products disposed. *De minimis* solid waste litter was observed throughout the remainder of the site.

Historical resources were available from 1942 until the present. In summary, the site appears to have been agricultural and wooded land from at least 1942 to at least 1994, and wooded and partially wooded land since at least 2008.

On- and off-site concerns were noted from the agricultural land visible on the site from at least 1942 to at least 1994, and on the northern, southern, and western adjoining properties since at least 1942. Stormwater run-off from the surrounding agricultural properties also drains through the site via the canal observed during the site inspection and visible in the historical aerial photographs since at least 1953. Typical operations associated with agricultural properties include the storage, handling, and application of herbicides and pesticides.

The site was not listed in the ERIS report for any of the ASTM-specified databases. Potential off-site concerns were noted from the Anguilla Fish Farm SWF/LF facility identified in the ERIS report; however, the facility is not suspected of negatively impacting the site at this time based on distance, topography, regional groundwater flow, regulatory information reviewed, and/or the facility's limited operation time.

1.1 Findings and Opinions

On- and off-site concerns were noted from the agricultural land visible in the historical aerial photographs on the site from at least 1942 to at least 1994, and on the northern, southern, and western adjoining properties since at least 1942. Stormwater run-off from the surrounding agricultural properties also drains through the site via the canal observed during the site inspection and visible in the historical aerial photographs since at least 1953. Typical operations associated with agricultural properties include the storage, handling, and application of herbicides and pesticides.

On- and off-site concerns were noted from the mounds of solid waste trash and debris including paper, glass, plastic, and waste tires visible in the 2008 historical aerial photograph and observed on the northwestern portion of the site and extending onto one of the western adjoining properties. Dense vegetation prevented a thorough inspection of the volume and types of products disposed. *De minimis* quantities of hazardous substances and/or petroleum products were observed in the surficial trash and

debris; however, the potential exists for significant quantities of these types of materials to remain buried or otherwise concealed during the time of the inspection.

1.2 Conclusions

This assessment has revealed no evidence of recognized environmental conditions associated with the site, except for the following:

- On- and off-site concerns were noted from the agricultural land visible in the historical aerial photographs on the site from at least 1942 to at least 1994, and on the northern, southern, and western adjoining properties since at least 1942. Stormwater run-off from the surrounding agricultural properties also drains through the site via the canal observed during the on-site inspection and visible in the historical aerial photographs since at least 1953. Typical operations associated with agricultural properties include the storage, handling, and application of herbicides and pesticides.
- On- and off-site concerns were noted from the mounds of solid waste trash and debris including paper, glass, plastic, and waste tires visible in the 2008 historical aerial photograph and observed on the northwestern portion of the site and extending onto one of the western adjoining properties. Dense vegetation prevented a thorough inspection of the volume and types of products disposed. *De minimis* quantities of hazardous substances and/or petroleum products were observed in the surficial trash and debris; however, the potential exists for significant quantities of these types of materials to remain buried or otherwise concealed during the time of the inspection.

1.3 Recommendations

Based on the information reviewed as part of this investigation, further assessment of the site is recommended. Soil and groundwater samples should be collected from the former agricultural areas and analyzed for organochlorine pesticides by EPA Method 8081, organophosphorus pesticides by EPA Method 8141, chlorinated herbicides by EPA Method 8151, and arsenic and copper by EPA Method 6010. If future site activities include the possible disturbance of sediments in the on-site canals, Aerostar would also recommend the collection of sediment samples.

Additionally, Aerostar recommends the removal and proper disposal of the solid waste trash and debris. No additional soil and groundwater sampling is recommended at this time, but further assessment may be warranted if evidence of the disposal of hazardous substances or petroleum products is observed during the removal activities. Aerostar understands that the site may consist of wetlands intended for restoration and conservation. If the area impacted by trash and debris consists of wetlands, additional restoration activities may be necessary depending on the extent of impacts to the area.

2.0 SUBJECT PROPERTY DESCRIPTION

2.1 Location

The site is located in St. Johns County, Florida. The site is comprised of the wooded land located on the eastern portion of the parcel identified by the SJCPAO as 0369400000. Photographs of the site are presented in Appendix A.

A Street Site Location Map is presented as Figure 1. A Site Plan is presented as Figure 2. The figures are included in Appendix B. County property record information for the site is included in Appendix C.

2.2 Environmental Liens and Activity and Use Limitations

According to the 50-Year Environmental Lien/Chain-of-Title Search Report provided by American Government Services Corporation, dated June 3, 2019, no environmental liens or AULs are associated with the site.

2.3 Physical Setting

USGS topographic quadrangle maps, database information, and regulatory files available regarding properties of environmental concern in the site vicinity were reviewed as sources for obtaining information regarding the physical setting of the site and surrounding vicinity.

Topography	
Site Elevation (amsl)	~0-5 feet
Surface Runoff Direction	Northeast
Regional Topography	Northeast
Closest Surface Water Body / Direction	Deep Creek/Northeast
Regional Hydraulic Gradient*	Northeast
Other:	None
Source of Information	Site Inspection and the 1991 Riverdale, Florida, and 1992 Hastings, Florida, Topographic Quadrangle Maps

- * The groundwater flow direction and the depth to shallow, unconfined groundwater, if present, would likely vary depending upon seasonal variations in rainfall and other hydrogeological features. Without the benefit of on-site groundwater monitoring wells surveyed to a datum, groundwater depth and flow direction beneath the site cannot be directly ascertained.

2.4 Site and Vicinity Characteristics

At the time of the investigation, the site consisted of approximately 34 acres of wooded land. The immediate vicinity surrounding the site is primarily characterized by residential, agricultural, and wooded properties.

2.5 Description of Site Structures and Improvements

The site is developed with a canal. Access to the site is available through the parent parcel via Pierce Road to the west.

Utilities are not presently provided to the site. FPL provides electric service to the parent parcel. St. Johns County provides potable water and sanitary sewer services to the site vicinity. TECO provides natural gas service to the site vicinity.

2.6 Current Uses of the Site

The site is currently wooded land developed with a canal.

3.0 HISTORICAL USE INFORMATION

3.1 Historical Background

Historical resources were available from 1942 until the present. In summary, the site appears to have been agricultural and wooded land from at least 1942 to at least 1994, and wooded and partially wooded land since at least 2008.

On- and off-site concerns were noted from the agricultural land visible on the site from at least 1942 to at least 1994, and on the northern, southern, and western adjoining properties since at least 1942; and from the canal visible on the site since at least 1953. The canal is further discussed in Section 6.2.6. Typical operations associated with agricultural properties include the storage, handling, and application of herbicides and pesticides.

On- and off-site concerns were noted from the trash and debris visible on site and extending onto one of the western adjoining properties in the 2008 historical aerial photograph. The waste is further discussed in Sections 6.2.5 and 8.0.

The historical sources reviewed are summarized in the following table:

Historical Source	Source Location	Dates Reviewed
Aerial Photographs	APLUS/PALMM	1942 to 2017
Topographic Maps	USGS	1991/1992
Property Record Information	SJCPAO	2019

3.1.1 Aerial Photographs

To evaluate the previous land uses of the property and surrounding area, a series of aerial photographs was reviewed. The aerial photographs provide a progressive overview of parcels pertaining to this assessment.

Aerostar personnel reviewed aerial photographs from 1942, 1953, 1960, 1971, 1980, 1994, 2008, and 2017. Copies of the aerial photographs are provided in Appendix D. Descriptions of Aerostar's observations are outlined in the following table:

Aerial Photograph Summary			
Source	Photograph Year	Site	Adjoining Properties
PALMM	1942	Agricultural and wooded land visible	North: Agricultural and wooded land visible, followed by Deep Creek East: Partially wooded and wooded land visible, followed by Deep Creek South: Agricultural and partially wooded land visible West: Agricultural land visible; multiple small structures visible
PALMM	1953	The present-day canal is visible along the eastern edge of the agricultural land; no other significant changes visible	North: No significant changes visible East: No significant changes visible South: No significant changes visible West: No significant changes visible

Aerial Photograph Summary			
Source	Photograph Year	Site	Adjoining Properties
PALMM	1960	A trail road is visible on the central portion; no other significant changes visible	North: No significant changes visible East: A trail road is visible on the central portion; no other significant changes visible South: The present-day canal is visible on the southeastern portion; grassy land visible on the southeastern corner; no other significant changes visible West: No significant changes visible
APLUS	1971	The trail road is no longer visible; no other significant changes visible	North: No significant changes visible East: The trail road is no longer visible; no significant changes visible South: Wooded land visible on the southeastern corner; no other significant changes visible West: No significant changes visible
APLUS	1980	No significant changes visible	North: No significant changes visible East: No significant changes visible South: No significant changes visible West: No significant changes visible
APLUS	1994	No significant changes visible	North: No significant changes visible East: No significant changes visible South: No significant changes visible West: The structures are no longer visible; no other significant changes
APLUS	2008	Former agricultural land is now wooded land on the northern portion; apparent solid waste trash and debris visible on the northwest portion	North: No significant changes visible East: No significant changes visible South: Former agricultural land is now partially wooded on the south-central portion; no other significant changes visible West: Former agricultural land is now wooded on the northern portion; apparent solid waste trash and debris visible on the northern portion extending onto the site
APLUS	2017	Former agricultural land is now wooded land on the eastern portion; no other significant changes	North: Row crops no longer visible; apparent sod farming visible; no other significant changes East: No significant changes visible South: Row crops no longer visible; apparent sod farming visible; wooded land visible on the southeast portion and partially wooded land visible on the central portion West: The present-day barn structure is visible; row crops no longer visible; apparent sod farming visible

On- and off-site concerns were noted from the agricultural land visible on the site from at least 1942 to at least 1994, and on the northern, southern, and western adjoining properties since at least 1942. A drainage canal that reportedly receives stormwater runoff from the surrounding agricultural areas was also visible on the site since at least 1953. The canal is further discussed in Section 6.2.6. Typical operations associated with agricultural properties include the storage, handling, and application of herbicides and pesticides.

On- and off-site concerns were noted from the apparent trash and debris visible on-site and extending onto one of the western adjoining properties in the 2008 historical aerial photograph and observed during the site visit. The waste is further discussed in Sections 6.2.5 and 8.0.

3.1.2 Topographic Map

A copy of the topographic maps reviewed is included in Appendix D. A summary of Aerostar's observations is provided in the following table:

Topographic Map Summary			
Quad	Year(s)	Site	Adjoining Properties
Riverdale/ Hastings, Florida	1991/1992	Developed/Wooded Marsh or Swamp	North: Developed/Wooded Marsh or Swamp East: Wooded Marsh or Swamp South: Developed/Wooded Marsh or Swamp West: Developed

3.1.3 Sanborn Maps

Sanborn Fire Insurance Maps did not provide coverage of the site vicinity.

3.1.4 City Directories

Aerostar personnel attempted to perform a review of historical city directories for the cities of Hastings and East Palatka; however, no addresses are associated with the site or the adjoining properties.

3.1.5 Review of Environmental Reports or Investigations

No prior environmental reports or investigations were provided to Aerostar for review as part of this investigation.

4.0 REGULATORY DATABASE LISTINGS

4.1 Standard Environmental Record Sources

As a part of this assessment, Aerostar reviewed information sources to obtain existing information pertaining to hazardous substances or petroleum products on or near the site. Aerostar obtained an ASTM regulatory database search through ERIS. A copy of the database report is included in Appendix E. Aerostar also reviewed other available standard environmental record sources on the FDEP OCULUS website, as needed. The following table presents the summary of the regulatory database report.

Regulatory Database Summary				
Source	Search Distance	Site	Adjoining Property	Number Within ASTM's Minimum Search Distances
Federal NPL Facility	1.0 mile	0	0	0
Federal Delisted NPL	0.5 mile	0	0	0
Federal SEMS (former CERCLIS List)	0.5 mile	0	0	0
Federal SEMS-ARCHIVE (former CERCLIS NFRAP Facilities List)	0.5 mile	0	0	0
Federal RCRA CORRACTS and TSD Facilities	1.0 mile	0	0	0
Federal RCRA Non-CORRACTS TSD Facilities	0.5 mile	0	0	0
Federal RCRA Generators Lists	Site and adjoining properties	0	0	0
Federal IC/EC Registries	Site Only	0	NA	0
Federal ERNS	Site Only	0	NA	0
State- and Tribal-equivalent NPL Facilities	1.0 mile	0	0	0
State- and Tribal-equivalent CERCLIS Facilities	0.5 mile	0	0	0
State and Tribal Landfill and/or Solid Waste Disposal site Lists	0.5 mile	0	0	1
State and Tribal LUST Lists	0.5 mile	0	0	0
State and Tribal Registered UST Lists	Site and adjoining properties	0	0	0
State and Tribal IC/EC	Site Only	0	NA	0
State and Tribal Voluntary Cleanup Facilities	0.5 mile	0	0	0
State and Tribal Brownfield Facilities	0.5 mile	0	0	0

4.2 Summary of Database Hits

Regulatory information reviewed concerning the nearest identified facility in each cardinal direction is detailed below.

Facility's Name(s):	Anguilla Fish Farm
Facility ID:	103168

Database(s):	SWF/LF
Address(es):	181 School Road, East Palatka
Distance (ft):	~1,200
Direction:	Northwest
Comments:	According to the ERIS report, this facility's SWF disposal class is "Unauthorized Disposal/Processing-Complaint." According to documents reviewed on OCULUS, a complaint was filed concerning 10 to 50 tons of dead fish rotting at the facility. An inspection report, dated October 31, 2016, stated that the entire fish crop at the aquaculture facility was destroyed during Hurricane Matthew. The FDEP advised the facility owner on proper waste disposal practices for the fish carcasses and documentation of proper disposal was recorded. Based on the information reviewed as part of this assessment, this facility is not suspected of negatively impacting the site at this time.

4.3 Area Reconnaissance / Unmapped Facilities

In addition to reviewing the database report, Aerostar performed reconnaissance of the site vicinity to identify any sites not mapped by ERIS due to inadequate or inaccurate address information and to look for unregistered facilities. No additional facilities of potential concern were observed within the vicinity of the site during the field reconnaissance performed by Aerostar.

4.4 Other Databases

Aerostar reviewed the FDEP MapDirect website to identify any sites not mapped by ERIS due to inadequate or inaccurate address information. No additional facilities of potential concern were noted in the site vicinity.

5.0 LOCAL AGENCY RECORDS

Aerostar contacted the following agencies to obtain information concerning the site and, if applicable, other properties of concern.

Agency	Contact Name / Phone Number	Date	Findings
Hastings Drainage District	Mr. Johnny Counts/ 386-937-0000	6/26/2019	Obtained information regarding the Hastings Drainage District's maintenance activities.
SJCPAO	NA/Internet	6/6/2019	Obtained PRC.
FDEP	OCULUS/Website	6/6/2019	Reviewed regulatory records.
FDEP MapDirect	MapDirect/Website	6/6/2019	Searched for facilities of potential concern.

6.0 SITE RECONNAISSANCE

6.1 Methodology

Visual and physical inspections conducted as part of this investigation included walking the interior of the site and the site perimeter, where accessible. Additionally, observations of access to and egress from the site were noted, as well as the interior and exterior conditions of any on-site buildings or other improvements. This visual and physical inspection of the property focused primarily on its surface features. Any limitations to the site reconnaissance are detailed in Section 9.4.

6.2 On-site Reconnaissance

6.2.1 Site Operations, Processes and Equipment

Item or Feature	Observed	REC
Emergency Generators	--	
Air Compressors	--	
Hydraulic Lifts	--	
Drycleaning	--	
Photo Processing	--	
Laboratory Hoods and/or Incinerators	--	
Solid Waste and/or Water Treatment Systems	--	
Heating and/or Cooling Systems	--	
Other:	--	

No operations, processes, or equipment were observed during the site inspection.

6.2.2 Aboveground Chemical or Waste Storage

Item or Feature	Observed	REC
ASTs	--	
Drums, Barrels and/or Containers Exceeding 5 Gallons (Individually or Aggregate)	--	
Safety Data Sheet (SDS) Review	--	
Parts Washer	--	
Other:	--	

No aboveground chemical or waste storage devices were observed during the site inspection.

6.2.3 Underground Chemical or Waste Storage, Drainage or Collection Systems

Item or Feature	Observed	REC
UST or Ancillary UST Equipment	--	
Sumps, Cisterns, Catch Basins, and/or Dry Wells	--	
Grease Traps	--	
Septic Tanks and/or Leach Fields	--	
Oil/Water Separators	--	
Pipeline Markers	--	
Interior Floor Drains	--	
Other:	--	

No underground chemical or waste storage devices were observed during the site inspection.

6.2.4 Electrical Transformers / PCBs

Item or Feature	Observed	REC
Pole- or Pad-Mounted Transformers/Capacitors	--	
Other:	--	

No electrical transformers or evidence of PCB-containing equipment were observed during the site inspection.

6.2.5 Releases or Potential Releases

Item or Feature	Observed	REC
Stressed Vegetation	--	
Stained Soil	--	
Stained Pavement or Similar Surfaces	--	
Leachate and/or Waste Seeps	--	
Trash, Debris, and/or Waste Materials	X	Yes
Dumping	--	
Disposal Areas	--	
Construction/Demolition Debris	--	
Fill Dirt	--	
Surface Water Discoloration, Sheen, and/or Free Floating Product	--	
Strong, Pungent, and/or Noxious Odor(s)	--	
Exterior Pipe Discharges and/or Other Effluent Discharges	--	
Other:	--	

On-site concerns were noted from mounds of solid waste trash and debris including paper, glass, plastic, and waste tires observed on the northwestern portion of the site. Dense vegetation prevented a thorough assessment of the volume and types of products disposed. *De minimis* quantities of hazardous substances and/or petroleum products were observed in the surficial trash and debris; however, the potential exists for significant quantities of these types of materials to remain buried or otherwise concealed during the time of the inspection.

De minimis solid waste litter was observed throughout the remaining portions of the site. No hazardous materials or petroleum products were noted and no evidence of a discharge to the site was observed.

6.2.6 Other Notable Site Features

Item or Feature	Observed	REC
Surface Water Bodies	X	Yes
Quarries and/or Pits	--	
Wells (Irrigation, Potable, Industrial, Etc.)	--	
Stormwater Discharges to the Site	X	Yes
Other:	--	

A canal was observed on site. According to Mr. Johnny Counts, Hastings Drainage District, and Mr. Leonard Freeman, site owner, stormwater runoff from thousands of acres of the surrounding agricultural land drains through the on-site canal to Deep Creek, located northeast of the site. On-site concerns were noted from the potential impact to the site from agriculture-related substances (herbicides and pesticides) in the stormwater runoff.

7.0 INTERVIEWS

Reasonable attempts were made to interview the site owner, available key site manager, and occupants. Aerostar also conducted interviews with other individuals familiar with the site, as well as local, state, tribal, or federal agency representatives, where available, regarding issues which could have an adverse effect on the environmental status of the site. The people interviewed by Aerostar are summarized in the following table:

Interviewee	Date Interviewed	Relationship to the Investigation	Contact Number
Mr. Leonard Freeman	6/18/2019	Site Owner	386-937-4826
Mr. Johnny Counts	6/26/2019	Hastings Drainage District	386-329-0000
Ms. Carol Brown, P.E.	6/6/2019	User	386-329-4816

7.1 Interview with Site Owner

Aerostar interviewed Mr. Leonard Freeman, site owner, concerning the site. Mr. Freeman stated that he has owned the site since May 2014 and that he has been acquainted with the area since 1972. He indicated that a Phase I ESA was not performed at the time he purchased the property. Mr. Freeman was not aware of any environmental concerns or obvious signs of contamination at the site. According to Mr. Freeman, previous site owners farmed the western and southern adjoining agricultural land for potatoes and cabbage. He indicated that he had no knowledge of the previous owners' use of herbicides and pesticides. Mr. Freeman stated that the western and southern adjoining agricultural lands are currently utilized for sod production. According to Mr. Freeman, the on-site canal was probably constructed hundreds of years ago, and the berm was made from the excavated spoils. He stated that the ditch drains run-off from the surrounding agricultural areas into Deep Creek to the northeast and that the Hastings Water Control District maintains the ditch.

7.2 Interview with Site Manager

See Section 7.1.

7.3 Interviews with Occupants

The site is not occupied.

7.4 Interviews with Government Officials

Aerostar interviewed Mr. Johnny Counts, Hastings Drainage District, concerning the site and the maintenance practices for the drainage canal observed during the site inspection. According to Mr. Counts, the adjacent canals drain thousands of acres of farmland in Putnam and St. Johns counties. Mr. Counts indicated that many farmers perform their own maintenance on the canals as needed. He stated that typical maintenance activities performed by the Hastings Drainage District include clearing fallen trees, vegetation, and accumulated sediments from canals where flow has been significantly impacted. Mr. Counts said that the current practice is to spread spoils excavated from canals along the banks of the canal. He indicated that in previous years, spoils have been stockpiled near the canals and have since become overgrown with dense vegetation. Mr. Counts stated that the Hastings Drainage District does not collect any samples for laboratory analysis of water quality. According to Mr. Counts, the Hastings Drainage District has not accessed the portions of the canals in the vicinity of the site for several years. He stated that dense vegetation and undeveloped land pose significant access constraints to the portions of the canals near the site. Mr. Counts indicated that the most recent maintenance performed in the vicinity of the site has been clearing fallen

trees from previous hurricanes. Mr. Counts has not observed any evidence of dumping, hazardous chemical storage, or any other environmental concerns in the vicinity of the site.

7.5 Interviews with Others

Aerostar provided the User, Ms. Carol Brown, P.E., SJRWMD, the User Questionnaire to complete. A copy of the User Questionnaire is included in Appendix F.

8.0 OFF-SITE RECONNAISSANCE

The current uses of the adjoining properties are as follows:

Description of Adjoining Parcels			
Direction From Site	Address/Parcel ID	Description of Current Use	Potential Concerns
North	0369500000	Wooded/Partially Wooded Land	None
	0332800010	Partially Wooded/Sod Farm	Agricultural Use
	0332800000	Wooded Land	None
East	0332700000	Wooded Land	None
	0369300000	Wooded Land	None
	0369800000	Wooded Land	None
South	0369700000	Wooded Land/Sod Farm	Agricultural Use
West	0369400000	Sod Farm	Agricultural Use
	0369600000	Sod Farm	Solid Waste Trash and Debris/Agricultural Use
	01-09-27-0000-0120-0010	Wooded Land/Sod Farm	Agricultural Use

Off-site concerns were noted from the mounds of solid waste trash and debris including paper, glass, plastic, and waste tires visible in the 2008 historical aerial photograph and observed on the northwestern portion of the site and extending onto one of the western adjoining properties. Dense vegetation prevented a thorough inspection of the volume and types of products disposed. *De minimis* quantities of hazardous substances and/or petroleum products were observed in the surficial trash and debris; however, the potential exists for significant quantities of these types of materials to remain buried or otherwise concealed during the time of the inspection.

Off-site concerns were noted from the sod farms located on the northern, southern, and western adjoining properties. Typical operations associated with agricultural properties include the storage, handling, and application of herbicides and pesticides.

9.0 PRODUCT INFORMATION

9.1 Purpose

The purpose of this Phase I ESA is to identify, to the extent feasible pursuant to ASTM Standard E 1527-13, recognized environmental conditions in connection with the site. Per the ASTM standard, the term recognized environmental conditions is defined as, “the presence or likely presence of any *hazardous substances* or *petroleum products* in, on, or at a *property*: (1) due to release to the environment; (2) under conditions indicative of a *release* to the *environment*; or (3) under conditions that pose a *material threat* of a future *release* to the *environment*. *De minimis conditions* are not *recognized environmental conditions*.”

Although performance of this investigation in a manner that is generally consistent with the ASTM Standard E 1527-13 is of benefit, it should be recognized that the Standard of “All Appropriate Inquiry” or “good commercial or customary practice” can only be made on a case-by-case basis and is subject to judicial interpretation.

9.2 Scope of Work

This Phase I ESA was conducted in general accordance with ASTM Standard E 1527-13, “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.” The assessment consisted of four components: records review, site reconnaissance, interviews, and report preparation.

The scope of work does not include an evaluation of asbestos-containing building materials, lead-based paint, lead in drinking water, regulatory compliance, soil or groundwater sampling and analysis, cultural and historical resources, industrial hygiene, health and safety, ecological resources, indoor air quality, radon, site geotechnics (soils, foundations, site retention, etc.), wetlands, endangered species, or construction materials testing. Aerostar can provide these additional services, if requested.

9.2.1 Records Review

Historical Research: Sources such as historical aerial photographs, city directories, and fire insurance maps were reviewed, if reasonably ascertainable, to evaluate the historical usage of the site and surrounding properties. Additionally, a chain-of-title and an environmental lien search were reviewed if provided by the Users.

Physical Setting Sources: Various maps, reports, and technical publications were reviewed and observations of site conditions were made to evaluate the hydrogeological/geological conditions associated with the site and surrounding properties. This data can provide pertinent information about the site, including soil classification, surface water flow directions, and possibly, an indication of the local directions of surficial aquifer groundwater flow.

Environmental Public Records Review: Reasonably ascertainable local, state, tribal, and federal environmental records and the regulatory database search were reviewed to help assess the likelihood of problems from migrating hazardous substance or petroleum products. Public records identifying these facilities can provide indications of the potential for recognized environmental conditions to be present at the site.

Aerostar obtained, reviewed, and evaluated reasonably ascertainable information from the Client, Users, site owner; local, state, tribal, or federal entities; and the environmental regulatory database search. The conclusions and recommendations of this report are based, in part, on this information. The data reviewed

during this investigation appeared to be accurate; however, the provided services do not include the verification of the accuracy or authenticity of information provided by others.

9.2.2 Site Reconnaissance

On-site Reconnaissance: Visual and physical inspections conducted as part of this investigation included walking the interior of the site and the site perimeter, where accessible. Additionally, observations of access to and egress from the site were noted, as well as the presence and condition of any on-site buildings, utilities, or other improvements. This visual and physical inspection of the property focused primarily on its surface features.

Off-site Reconnaissance: Off-site reconnaissance conducted as part of this investigation included visual and physical inspections of the adjoining properties from the site boundary and from publicly accessible areas. Additionally, a vehicular reconnaissance of the surrounding properties was conducted. During these inspections, an emphasis was placed on observing the operations or conditions exhibiting the potential for recognized environmental conditions. If any sources were identified, the inspector would document the name and location of the facility.

9.2.3 Interviews

Aerostar conducted interviews with available individuals familiar with the site, as well as local, state, tribal, or federal agency representatives, regarding issues which could have an adverse effect on the environmental status of the subject site.

Aerostar depends on the Client, tenant, and other site personnel to provide data pertinent to determining the environmental status of the site, which may or may not exist within public records. The conclusions and recommendations of this report are based, in part, on this information. The data obtained during this investigation appeared to be accurate; however, the provided services do not include the verification of the accuracy or authenticity of information provided by others.

9.2.4 Report Preparation

This report was prepared based upon the information provided by the Client and the Users, the observations made during the site reconnaissance, and the information obtained from a review of readily available records. Given the inherent limitations of environmental assessment work, Aerostar will not guarantee that any site is free of hazardous or potentially hazardous materials or that latent or undiscovered conditions will not become evident in the future. This report was prepared within the professional conduct of the industry and in accordance with the proposal and the standard terms and conditions presented in the contract. No other warranties, representations, or certifications are made.

9.3 Vapor Intrusion

Aerostar evaluated the potential for vapor intrusion conditions as part of this investigation. A Phase I ESA with RECs associated with volatilizing chemicals of concern (such as, but not limited to, VOCs, SVOC, and TPH and the associated subsets of these analyte lists like BTEX/VOAs, PAHs, and TRPH/TPH [GRO]/TPH [DRO]/TPH [ORO]) being or possibly being present in the site's subsurface has the potential for vapor intrusion to occur in the current and/or future site structure(s).

9.4 Limitations

Aerostar has prepared this assessment for the Client and Users. Aerostar's assessment represents a review of certain information relating to the site that was obtained by methods described above and does not include sampling or other monitoring activities at the property. While Aerostar has used reasonable care to avoid reliance upon data and information that is inaccurate, Aerostar is not able to verify the accuracy or completeness of all data and information available during the investigation. Some of the conclusions in this report would be different if the information upon which they are based is determined to be false, inaccurate, or incomplete.

Aerostar makes no legal representations whatsoever concerning any matter including, but not limited to, ownership of any property or the interpretation of any law. Aerostar further disclaims any obligations to update the report for events taking place after the time during which the assessment was conducted.

This report is not a comprehensive site characterization and should not be construed as such. The opinions presented in this report are based upon the findings derived from a site reconnaissance, a limited review of specified regulatory records and historical sources, and comments made by the interviewees.

Phase I ESAs, by their very nature, are limited. Aerostar has endeavored to meet what it believes is the applicable standard of care, and, in doing so, is obliged to advise the Client and Users of Phase I ESA limitations. Aerostar believes that providing information about limitations is essential to help the Client and Users identify and thereby manage its risks. Through additional research, these risks can be mitigated, but they cannot be eliminated. Aerostar will, upon request, advise the Client and Users of the additional research opportunities available, their impact, and their cost.

As noted above, the Phase I ESA was conducted at the referenced site, and this report was prepared for the sole use of the Client and Users. This report shall not be relied upon by or transferred to any other party without the express written authorization of Aerostar.

Along with all of the limitations set forth in various sections of the ASTM Standard E 1527-13 protocol, the accuracy and completeness of this report is necessarily limited by the following:

- Heavy vegetative groundcover and/or standing water prevented a thorough inspection of the site.

9.4.1 **Data Gaps**

Data gaps are the lack or inability to obtain information required by ASTM Standard E 1527-13 despite good faith efforts to gather such information, such as, but not limited to, the inability to conduct a site visit, inability to conduct interviews, and the inability to establish historical uses of the site or surrounding properties. Not all data gaps are significant, and a data gap will only be discussed in this section if: 1) a data gap occurs during investigation; and 2) the data gap impairs Aerostar's ability to meet the objectives of ASTM Standard E 1527-13.

Historical Data Source Failures: Aerial photographs were not available for review prior to 1942. No addresses are associated with the site or adjoining properties; therefore, a city directory search could not be performed. Sanborn Fire Insurance Maps were not available for the site. The historical records readily available for review did not allow the property's history to be traced back to 1940 or to the property's first developed use (whichever is earlier), which constitutes historical data failure per ASTM Standard E 1527-13 § 8.3.2.3.

No apparent significant data gaps were noted during the investigation of the site.

9.5 Special Terms and Conditions

This report, and the information contained herein, shall be the sole property of Aerostar until payment of any unpaid balance is made in full. The Client and Users agree that until payment is made in full, the Client and Users shall not have a proprietary interest in this report or the information contained herein. Aerostar shall have the absolute right to request the return of any and all copies of this report submitted to other parties, public or private, on behalf of the Client and Users in the event of nonpayment of outstanding fees by the Client pursuant to Aerostar's proposal.

9.6 User Reliance

This report is intended for the sole use of Client and Users. Its contents may not be relied upon by other parties without the explicit written consent of Aerostar. This is not a statement of suitability of the property for any use or purpose.

10.0 USER PROVIDED INFORMATION

10.1 Title Records

A 50-Year Environmental Lien/Chain-of-Title Search Report, dated June 3, 2019, prepared by American Government Services Corporation was provided to Aerostar by the Client. A summary of the chain-of-title is provided in the following table. Please refer to Appendix C for a copy of the report.

Chain-of-Title Summary			
Date	From	To	Type/Book/Page
6/5/1912	Cora H. and Josephine Augustine	L. D. Brubaker	Warranty Deed/25/491
3/1/1946	Sarah Brown	George Rawson	Administrator Deed/162/218
10/27/1970	George Rawson	Eula A. Rawson	Fee Simple Deed/180/107
10/2/1984	Ula A. Rawson	Ula A. Rawson and Peggy A. Jones	Warranty Deed/658/1140
7/11/1990	Ula A. Rawson and Peggy A. Jones	Ula A. Rawson and Peggy A. Jones	Warranty Deed/867/1623
12/3/1994	Peggy A. Jones		Certificate of Death/1147/1287
11/29/1995	Estate of Ula A. Rawson	Rebecca Jones, Marshall Jones, and Victoria Andrews	Probate/1141/1574
5/1/2014	Rebecca Jones, Victoria Jones, and Marshal Jones	Leonard D. and Linda K. Freeman	Warranty Deed/3878/716

10.2 Environmental Liens or Activity and Use Limitations

According to a 50-Year Environmental Lien/Chain-of-Title Search Report search provided by American Government Services Corporation, dated June 3, 2019, no environmental liens or AULs are associated with the site.

10.3 Specialized Knowledge

The Users indicated that they did not have any specialized knowledge associated with the site.

10.4 Commonly Known or Reasonably Ascertainable Information

The Users were not aware of any commonly known or reasonably ascertainable information about the site that would indicate the presence of recognized environmental conditions associated with the property.

10.5 Valuation Reduction for Environmental Issues

The Users indicated the property value reflected the fair market value of the site.

10.6 Owner, Property Manager, and Occupant Information

According to the PRC, the property is owned by Leonard D. and Linda K. Freeman. The site is currently wooded land.

10.7 Reason for Performing Phase I ESA

The Users indicated that the Phase I ESA is being performed as due diligence prior to a potential real estate transaction.

10.8 Degree of Obviousness

The Users indicated that there were not any obvious indicators that contamination is present or likely present at the site.

10.9 Other

No other information was provided by the Users.

11.0 NON-ASTM SCOPE ITEMS

Under the terms of the agreement between the Client and Aerostar, the following sections detail additional client-requested information provided as part of this investigation.

11.1 Physical Setting Sources

USGS topographic quadrangle maps, NRCS Web Soil Service website, and regulatory files available regarding properties of environmental concern in the site vicinity were reviewed as sources for obtaining information regarding the physical setting of the site and surrounding vicinity.

11.1.1 Regional Geology

The State of Florida lies principally on the Florida Platform, which consists of a thick sequence of carbonate rocks capped by a thin, siliciclastic sediment-rich sequence. These sediments range in age from mid-Mesozoic (200 mya) to Recent. Florida's aquifer system developed in the Cenozoic era with sediments ranging from late Paleocene (55 mya) to late Pleistocene (<100,000 years ago) in age. The sediments overlaying the Floridan aquifer system include quartz, sands, silts, and clay (siliciclastics) with varying admixtures of carbonates as discrete beds and sediment matrix. Deposition of these sediments occurred from Miocene (24 mya) to the Recent. The Neogene (24 mya to 1.6 mya) and Quaternary (1.6 mya to the present) sediments form the intermediate aquifer and/or confining unit and the surficial aquifer system.

11.1.2 Soils/Geology

The NRCS Web Soil Service website was reviewed to identify native soil characteristics in the vicinity of the site. A *Custom Soil Resource Report for St. Johns County, Florida*, is presented in Appendix F of this report. The following table lists the soil types and corresponding depths to water.

Soil Resource Report Summary	
Classification	Depth to Water
Floridana fine sand, 0 to 2 percent slopes, frequently flooded	About 0 to 6 inches
Wabasso fine sand, 0 to 2 percent slopes	About 6 to 18 inches
Riviera fine sand, frequently flooded	About 0 to 12 inches
EauGallie fine sand	About 6 to 18 inches
Floridana fine sand, 0 to 2 percent slopes	About 0 to 6 inches
Terra Ceia muck, 0 to 1 percent slopes, frequently flooded	About 0 to 6 inches

11.1.3 Hydrogeology

The three major components to the subsurface hydrogeology of northeastern Florida are the unconfined surficial aquifer system, the Floridan aquifer system, and the intermediate confining unit, which separates the two aquifer systems. In northeastern Florida, the surficial aquifer system consists of, in ascending order: the upper Hawthorn Formation, which was deposited during the middle Miocene epoch; the upper Miocene or Pliocene deposits; and the Pleistocene and recent deposits. Sediments of Pleistocene and more recent epochs were deposited during the formation of marine terraces and beach ridges. The thicknesses of these

deposits range from less than 10 feet in the St. Johns River Valley to approximately 100 feet in western Clay County. They consist of muck, coarse to fine sand, shell and some clayey sand. The surficial sand yields small amounts of water while the sand and shell beds along the coast yield moderate quantities. The potentiometric surface of the shallow aquifer system generally parallels the land surface. High water levels occur after periods of heavy rainfall, and the lowest water levels occur after the drier periods of the year. Water levels may be as deep as 35 feet below land surface.

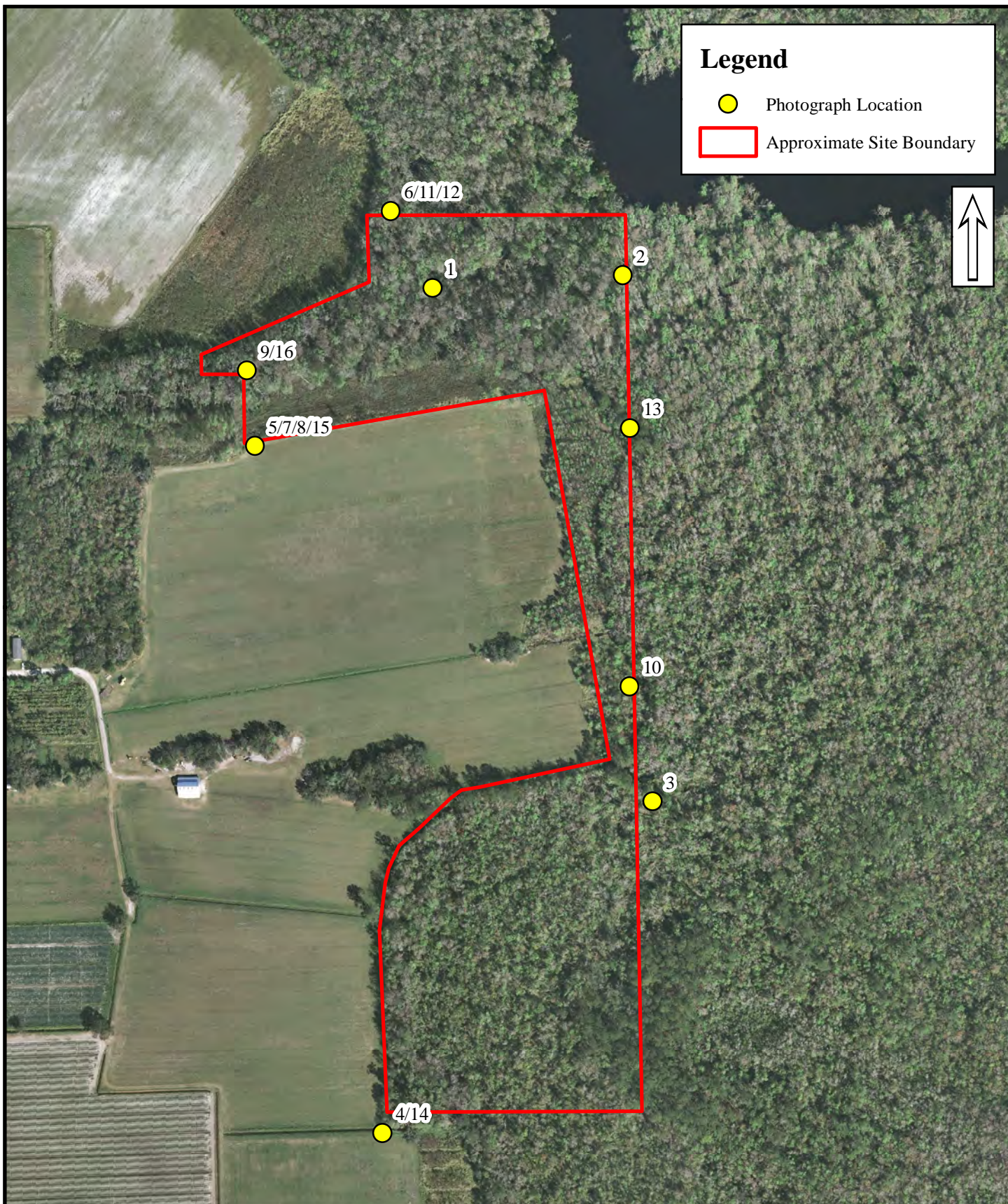
The intermediate confining unit consists primarily of sediments within the Hawthorn Formation. The Hawthorn Formation, deposited during the middle Miocene epoch, consists primarily of dark-gray to olive-green silty clay, clayey soil, and dry and sandy limestone, all containing moderate to large amounts of black phosphate sand, granules, and pebbles. Throughout most of northeast Florida, the clay and silty clay within the Hawthorn Formation serves as a confining layer or aquiclude that retards upward movement of water from the underlying artesian Floridan aquifer system as well as inhibiting downward movement of surficial aquifer waters. The Hawthorn Formation ranges in thickness from about 250 feet to as much as 500 feet.

In northeast Florida, the top of the Floridan aquifer system is approximately 250 to 600 feet below land surface and ranges from 1,500 to 2,400 feet in thickness. The Floridan is a confined, artesian aquifer throughout most of northeast Florida and is highly permeable. The Floridan aquifer system is the principal source of fresh water for northeast Florida, with the limestone and porous dolomite beds yielding very large quantities of water. Municipal wells range from 1,000 to 1,500 feet in depth and penetrate the Ocala Group, the Avon Park and the Lake City Limestones of Eocene age. These formations and the Suwannee Limestone Formation comprise the Floridan aquifer system.

APPENDICES

APPENDIX A

SITE PHOTOGRAPHS





1) Looking south at the central portion of the site from the north central portion.



2) Looking southwest at the site from the northeastern portion.



3) Looking west at the site from the eastern boundary.



4) Looking northeast at the site from the southwest corner.



5) Looking northeast at the site from the western property boundary.



6) Looking southeast at the site from the northwest corner.



7) View of the solid waste trash and debris on the northwestern portion of the site.



8) View of the solid waste trash and debris intergrown with roots and vegetation on the northwestern portion of the site.



9) Looking south along the site boundary in the vicinity of the solid waste trash and debris.



10) Looking east at the canal on the central portion of the site.



11) Looking northwest towards the partially wooded land on the northern adjoining properties.



12) Looking north at the wooded land on the northern adjoining properties.



13) Looking east at the wooded land on the eastern adjoining properties.



14) Looking southwest across the sod farm on the southern adjoining property.



15) Looking south across the sod farm on the western adjoining property.



16) Looking west at the wooded land on the western adjoining properties.

APPENDIX B

SITE MAPS

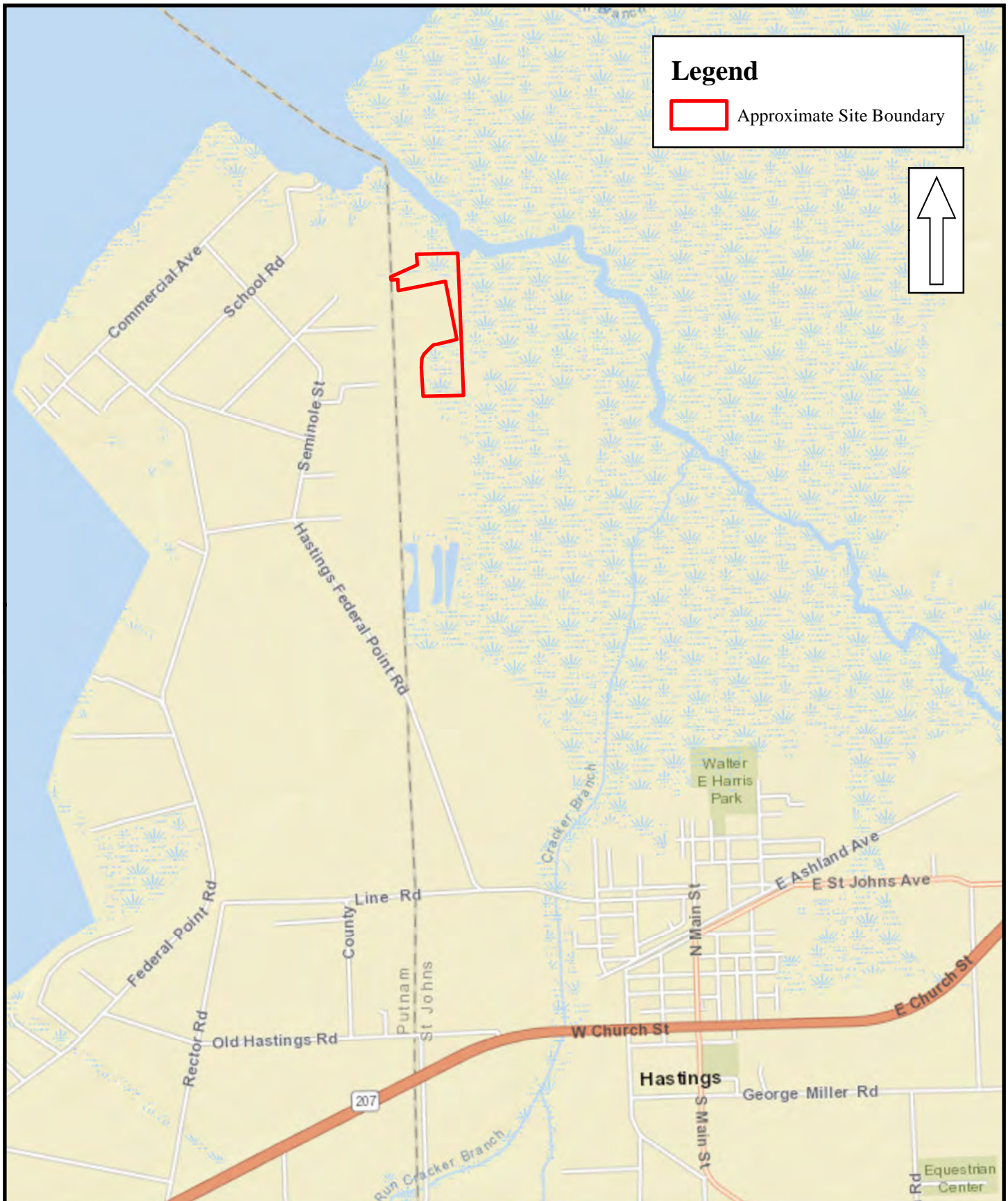


FIGURE 1: STREET SITE LOCATION MAP



FREEMAN PROPERTY
ST. JOHNS COUNTY, FLORIDA
LA 2017-029

REFERENCE: MAP OF
EAST PALATKA, FLORIDA
PREPARED BY: ESRI

1 inch = 2,500 feet

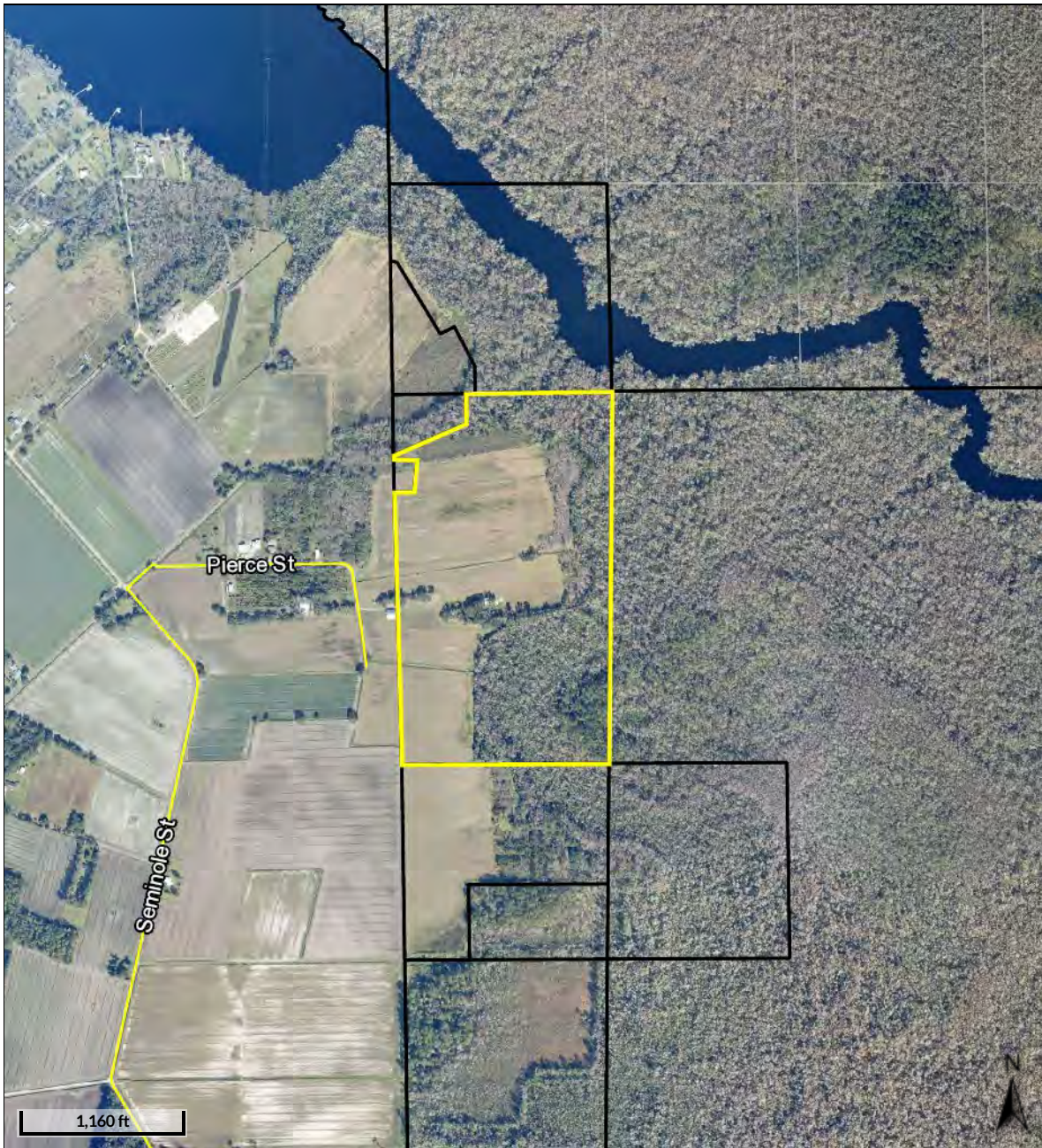


FIGURE 2: SITE PLAN

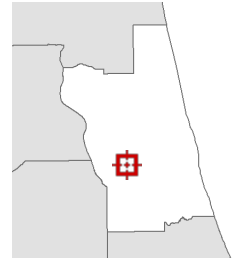
APPENDIX C

PROPERTY RECORD INFORMATION

Freeman Property



Overview



Legend

- Parcels
- Cities

The St. Johns County Property Appraiser's Office makes every effort to produce the most accurate information possible. No warranties, expressed or implied, are provided for the data herein, its use or interpretation.

Date created: 6/6/2019

Last Data Uploaded: 6/5/2019 11:11:19 PM

Developed by  **Schneider**
GEOSPATIAL



St. Johns County, FL

Tax Bill

[My Tax Bill](#)

Estimate Taxes

[Tax Estimator](#)

2018 TRIM Notice

[2018 TRIM Notice](#)

2017 TRIM Notice

[2017 TRIM Notice](#)

Summary

Parcel ID	0369400000
Location Address	FEDERAL POINT RD HASTINGS 32145-0000
Neighborhood	M&B MA7 G6 (SF) (4760)
Tax Description*	2 W1/2 OF NW (EX 1AC TO MC KINNEY & 3.5ACS TO HUNDERTMARK) OR3878/716 <i>*The Description above is not to be used on legal documents.</i>
Property Use Code	Cropland Class 3 (5300)
Subdivision	N/A
Sec/Twp/Rng	6-9-28
District	County (District 300)
Millage Rate	14.1233
Acreage	75.500
Homestead	N

Owner Information

Owner Name	Freeman Leonard D,Linda K 100%
	Freeman Linda K 100%
Mailing Address	422 RIVER ST PALATKA, FL 32177-0000

Map



Valuation Information

	2019
Building Value	\$0
Extra Features Value	\$0
Total Land Value	\$314,250
Agricultural (Assessed) Value	\$33,190
Agricultural (Market) Value	\$314,250
Just (Market) Value	\$33,190
Total Deferred	\$0
Assessed Value	\$33,190
Total Exemptions	\$0
Taxable Value	\$33,190

Values listed are from our working tax roll and are subject to change.

Historical Assessment Information

Year	Building Value	Extra Feature Value	Total Land Value	Ag (Market) Value	Ag (Assessed) Value	Just (Market) Value	Assessed Value	Exempt Value	Taxable Value
2018	\$0	\$0	\$314,250	\$314,250	\$29,152	\$29,152	\$29,152	\$0	\$29,152
2017	\$0	\$0	\$314,250	\$314,250	\$31,915	\$31,915	\$31,915	\$0	\$31,915
2016	\$0	\$0	\$314,250	\$314,250	\$31,915	\$31,915	\$31,915	\$0	\$31,915
2015	\$0	\$0	\$314,250	\$314,250	\$31,915	\$31,915	\$31,915	\$0	\$31,915
2014	\$0	\$0	\$314,250	\$314,250	\$33,388	\$33,388	\$33,388	\$0	\$33,388
2013	\$0	\$0	\$314,250	\$314,250	\$33,388	\$33,388	\$33,388	\$0	\$33,388
2012	\$0	\$0	\$247,312	\$247,312	\$47,780	\$47,780	\$47,780	\$0	\$47,780
2011	\$0	\$0	\$247,312	\$247,312	\$43,343	\$43,343	\$43,343	\$0	\$43,343
2010	\$0	\$0	\$273,875	\$273,875	\$39,400	\$39,400	\$39,400	\$0	\$39,400

Land Information

Use Description	Front	Depth	Total Land Units	Unit Type	Land Value
Row Crop/Crop Land Class 3	0	0	42.5	AC	\$28,900
Timberlands Wetlands	0	0	33	AC	\$4,290
Market Ag Uplands	0	0	42.5	AC	\$306,000
Market Ag Wetlands	0	0	33	AC	\$8,250

Sale Information

Recording Date	Sale Date	Sale Price	Instrument Type	Book	Page	Qualification	Vacant/Improved	Grantor	Grantee
5/9/2014	5/1/2014	\$0.00	WD	3878	716	U	V	JONES REBECCA & JONES VICTORIA(FKA/ANDREWS) &	FREEMAN LEONARD D.LINDA K
	1/2/1996	\$0.00	DC	1147	1287	U	V	RAWSON ULA A ETAL	RAWSON ULA A ESTATE
	7/1/1990	\$0.00		867	1623	U	I		RAWSON ULA A ETAL
	10/1/1984	\$0.00		658	1140	U	I		

Area Sales Report

Recent Sales in Area

No data available for the following modules: Exemption Information, Building Information, Extra Feature Information, Sketch Information.

The St. Johns County Property Appraiser's Office makes every effort to produce the most accurate information possible. No warranties, expressed or implied, are provided for the data herein, its use or interpretation.

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Developed by
 Schneider
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50 Year Environmental Lien / Chain of Title Search Report

American Government Services Corporation
3812 West Linebaugh Ave.
Tampa, Florida 33618
813-933-3322

AGS Search No.: 28382-1
Work Order No.: 35 / LA 2017-029-P1
Project: FDOT Mitigation for First Coast
Expressway
County: St. Johns

Contractor's Tax I.D. No.: 59-2346160

To: Diana Bankhardt
St. Johns River Water Management District
4049 Reid Street
Palatka, FL 32177
386-329-4500
dianabankhardt@sjrwmd.com

Pursuant to your request, we have made a search of the Official Records of St. Johns County, Florida, from 1960 through June 3, 2019 at 8:00 a.m., for the specific purpose of researching any and all recorded environmental liens and/or leases for the following described property:

See Exhibit "A", attached hereto.

Fee Title appears to be vested in:

Leonard D. Freeman and Linda K. Freeman, husband and wife
By virtue of deed recorded in Official Records Book 3878, Page 716.

No environmental liens found of record.

Chain of Title:

1. Warranty Deed from Cora H. Augustine and Josephine Augustine, his wife, to L. D. Brubaker, dated June 5, 1912 and recorded January 13, 1913 in Deed Book 25, Page 491. (contains additional property)
2. Administrator Deed from Sarah Brown, formerly Sarah Brubaker, wife of Oren Brubaker, now deceased, and as Administratrix of the Estate of Oren Brubaker, deceased, joined by her husband H. E. Brown, William L. Brubaker, single, an heir at law of Oren Brubaker, deceased, Leroy Van Brubaker, single, an heir at law of Oren Brubaker, deceased, Helen Louise Tillman, an heir at law of Oren Brubaker, deceased, joined by her husband Earl Tillman, and Julia Evelyn Buck, an heir at law of Oren Brubaker, deceased, joined by her husband, Ralph H. Buck, to George Rawson, dated March 1, 1946 and recorded October 3, 1946 in Deed Book 162, Page 218. (contains additional property)

3. Fee Simple Deed from George Rawson, to Eula Atkinson Rawson, dated October 27, 1970 and recorded October 28, 1970 in Official Records Book 180, Page 107. (contains additional property)
4. Warranty Deed from Ula A. Rawson, a/k/a Eula A. Rawson, to Ula A. Rawson and Peggy Jones, dated October 2, 1984 and recorded October 22, 1984 in Official Records Book 658, Page 1140. (contains additional property)
5. Warranty Deed from Ula A. Rawson, an unmarried widow, and Peggy A. Jones, married (non-homestead), to Ula A. Rawson and Peggy A. Jones, as joint tenants with right of survivorship, dated July 11, 1990 and recorded September 4, 1990 in Official Records Book 867, Page 1623. (contains additional property)
6. Certificate of Death filed for Peggy Ann Rawson Jones, deceased December 3, 1994, recorded on January 2, 1996 in Official Records Book 1147, Page 1287.
7. Probate No. 95-9178 CP for the Estate of Ula A. Rawson, a/k/a Eula A. Rawson, deceased April 28, 1995; Petition for Administration, Letters of Administration, Proof of Publication, Non-Taxable Certificate and Receipt for Estate Tax, and Petition for Discharge recorded November 29, 1995 in Official Records Book 1141 Page 1574. Note: Beneficiaries of estate are Rebecca Jones, Marshall Jones and Victoria Andrews. Probate was originally filed in Putnam County, Florida.
8. Warranty Deed from Rebecca Jones, a single woman, Victoria Jones, a single woman, f/k/a Victoria Andrews, and Marshal Jones, a married man (non-homestead), to Leonard D. Freeman and Linda K. Freeman, husband and wife, dated May 1, 2014 and recorded May 9, 2014 in Official Records Book 3878, Page 716. (contains additional property)

All of the above instruments were recorded in the Public Records of St. Johns County, Florida, unless otherwise noted.

Tax Information:

Tax / Parcel ID No.: 036940-0000. Taxes for 2018 were paid in the amount of \$411.71. Current assessment is \$29,152.00. Homestead exemption was not filed in 2018.

American Government Services Corporation assumes no responsibility for any defects or omissions in or from the instruments appearing in the chain of title to the property described herein, which defects or omissions would render such instruments void.

This report is furnished at your request for information only and is not to be construed as a title opinion nor a guarantee of title. It is not a title insurance policy.

This report is not title insurance. Pursuant to s. 627.7843, Florida Statutes, the maximum liability of the issuer of this property information report for errors or omissions in this property information report is limited to the amount paid for this property information report, and is further limited to the person(s) expressly identified by name in the property information report as the recipients(s) of the property information report.

AMERICAN GOVERNMENT SERVICES CORPORATION

COUNTERSIGNED: Wmca

EXHIBIT "A"

All of the NW 1/4 of the NW 1/4 of Section 6, Township 9 South, Range 28 East, St. Johns County, Florida, except the following two parcels:

Begin at a point on the Range line dividing Ranges 27 and 28 East, 7 chains and 17 links South of the Northwest corner of said Section 6; run thence East, 1 chain and 90 links; thence South 1 degrees East, 4 chains and 16 links; thence West, 1 chain and 90 links to said Range line; thence North, along said Range line to the point of beginning.

Begin at the Northwest corner of Section 6, Township 9 South, Range 28 East; thence East, 500 feet, along North line of said Section to an iron pipe; thence due South, 200 feet to an iron pipe; thence in a straight line in a Southwesterly direction, 544.25 feet to an iron pipe in the West line of said Section; thence North, along West line of said Section, a distance of 415 feet to the Northwest corner thereof and the place of beginning.

COMMITMENT FOR TITLE INSURANCE SCHEDULE A

File Number - 28382-1
WO Number - 35
Project Name - FDOT Mitigation for First Coast Expressway
LA 2017-029-P1

Effective Date: June 3, 2019 at 8:00 a.m.

1. Policy or policies to be issued:

A. ALTA Owners 2006 with Florida Modifications

OWNER'S: \$1,000.00

PROPOSED INSURED: St. Johns River Water Management District, a public body

2. The estate or interest in the land described in this Commitment and covered herein is Fee Simple, and the title thereto is at the effective date hereof vested in:

Leonard D. Freeman and Linda K. Freeman, husband and wife
By virtue of deed recorded in Official Records Book 3878, Page 716.

3. The land referred to in this Commitment is described as follows:

See Exhibit "A", attached hereto.

AMERICAN GOVERNMENT SERVICES CORPORATION

COUNTERSIGNED: WJmca

**COMMITMENT FOR TITLE INSURANCE
SCHEDULE B - SECTION 1**

File Number - 28382-1

All the following requirements must be met:

1. The proposed insured must notify the Company in writing of the name of any party not referred to in this commitment who will obtain an interest in the land or who will make a loan on the land. The Company will then make additional requirements or exceptions.
2. Documents satisfactory to the Company that convey the title or create the mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records:
 - A) Warranty Deed from Leonard D. Freeman and Linda K. Freeman, husband and wife, to St. Johns River Water Management District, a public body, conveying the land described in Exhibit "A".
3. Pay the agreed amount for the estate or interest to be insured.
4. Pay the premiums, fees and charges for the Policy to the Company.
5. Payment of all taxes, charges, assessments, levied and assessed against subject premises, which are due and payable or which may be escrowed under the provisions of F.S. 196.295.
6. Satisfactory evidence should be had that improvements and/or repairs or alterations thereto are completed; that contractor, sub-contractors, labor and materialmen are paid.
7. Evidence must be furnished from any taxing authorities having jurisdiction of the property that there do not exist pending assessments or liens against the property not shown by the Public Records.
8. Proof of payment, satisfactory to the Company, of all special assessments, recorded or unrecorded, including but not limited to special assessments arising under Chapter 159 of the Florida Statutes.
9. Payment of all County and/or municipal taxes, charges, assessments, levied and assessed against subject premises, which are due and payable.
10. The Proposed Policy Amount(s) must be disclosed to the Company, and subject to approval by the Company, entered as the Proposed Policy Amount. An owner's policy should reflect the purchase price of or full value of the Land. A loan policy should reflect the loan amount or value of the property as collateral. Proposed Policy Amount(s) will be revised and premiums charged consistent therewith when the final amounts are approved.

**COMMITMENT FOR TITLE INSURANCE
SCHEDULE B - SECTION 2**

File Number - 28382-1

THIS POLICY DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS POLICY TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following exceptions unless cleared to the satisfaction of the Company:

1. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date the proposed Insured acquires for value of record the estate or interest or mortgage thereon covered by this Commitment.
2. Rights or claims of parties in possession not shown by the public records.
3. Easements or claims of easements not shown by the public records.
4. Encroachments, overlaps, boundary line disputes, and any other matters which would be disclosed by an accurate survey and inspection of the premises.
5. Any lien, or right to a lien, for services, labor, or material heretofore or hereafter furnished, imposed by law and not shown by the public records.
6. Any claim that any part of said land is owned by the State of Florida by right of sovereignty, and riparian rights, if any.
7. Taxes for the year 2019 and subsequent years, which are not yet due and payable. NOTE: The Insured is exempt during its period of ownership.
8. Any county and/or municipal resolutions for public improvements or special assessments which are not recorded or are not properly recorded in the public records and which do not provide notice to the owner of record in the public records.
9. Any lien provided by Chapter 159, Florida Statutes, in favor of any city, town, village or port authority for unpaid service charges for service by any water, sewer or gas system supplying the insured land.

**COMMITMENT FOR TITLE INSURANCE
SCHEDULE B - SECTION 2 (con't.)**

File Number - 28382-1

NOTE: Items 1, 2, 5, 8, and 9 will be deleted upon receipt of fully executed affidavits regarding the issues raised in said items.

NOTE: Items 3 and 4 will be deleted upon receipt of a satisfactory survey.

NOTE: In accordance with Florida Statutes section 627.4131, please be advised that the insured hereunder may present inquiries, obtain information about coverage, or receive assistance in resolving complaints, by contracting Commonwealth Land Title Insurance Company Regional Office, 2400 Maitland Center Parkway, Maitland, Florida 32751. Telephone 877-947-5483.

EXHIBIT "A"

All of the NW 1/4 of the NW 1/4 of Section 6, Township 9 South, Range 28 East, St. Johns County, Florida, except the following two parcels:

Begin at a point on the Range line dividing Ranges 27 and 28 East, 7 chains and 17 links South of the Northwest corner of said Section 6; run thence East, 1 chain and 90 links; thence South 1 degrees East, 4 chains and 16 links; thence West, 1 chain and 90 links to said Range line; thence North, along said Range line to the point of beginning.

Begin at the Northwest corner of Section 6, Township 9 South, Range 28 East; thence East, 500 feet, along North line of said Section to an iron pipe; thence due South, 200 feet to an iron pipe; thence in a straight line in a Southwesterly direction, 544.25 feet to an iron pipe in the West line of said Section; thence North, along West line of said Section, a distance of 415 feet to the Northwest corner thereof and the place of beginning.

Dennis W. Hollingsworth Tax Collector

generated on 6/7/2019 4:38:54 PM EDT

Tax Record

Last Update: 6/7/2019 4:38:53 PM EDT

Ad Valorem Taxes and Non-Ad Valorem Assessments

The information contained herein does not constitute a title search and should not be relied on as such.

Account or Parcel Number		Tax Type		Tax Year	
036940-0000		REAL ESTATE		2018	
Mailing Address FREEMAN LEONARD D,LINDA K 422 RIVER ST PALATKA FL 32177-0000		Physical Address FEDERAL POINT RD			
Exempt Amount		Taxable Value			
\$0.00		\$29,152.00			
Exemption Detail NO EXEMPTIONS Legal Description 06-09-28 75.50 Acres 2 W1/2 OF NW (EX 1AC TO MC KINNEY & 3.5ACS TO HUNDERTMARK) OR3878/716		Millage Code 300		Escrow Code	
Ad Valorem Taxes					
Taxing Authority	Rate	Assessed Value	Exemption Amount	Taxable Value	Taxes Levied
COUNTY					
GENERAL	5.1000	29,152	0	\$29,152	\$148.68
ROAD	0.7500	29,152	0	\$29,152	\$21.86
HEALTH	0.0171	29,152	0	\$29,152	\$0.50
SCHOOL					
SCHOOL - STATE LAW	4.0300	29,152	0	\$29,152	\$117.48
SCHOOL - LOCAL BOARD	2.2480	29,152	0	\$29,152	\$65.53
SJRWMD	0.2562	29,152	0	\$29,152	\$7.47
FIRE	1.4700	29,152	0	\$29,152	\$42.85
MOSQUITO	0.2200	29,152	0	\$29,152	\$6.41
FL INLAND NAV DISTRICT	0.0320	29,152	0	\$29,152	\$0.93
Total Millage		14.1233	Total Taxes		\$411.71
Non-Ad Valorem Assessments					
Code	Levying Authority				Amount
Total Assessments					\$0.00
Taxes & Assessments					\$411.71
If Paid By					Amount Due
					\$0.00

Date Paid	Transaction	Receipt	Item	Amount Paid
3/29/2019	PAYMENT	7008843.0001	2018	\$411.71

Prior Year Taxes Due

NO DELINQUENT TAXES

Public Records of St. Johns County, FL Clerk # 2014026588, O.R. 3878 PG 716,
05/09/2014 at 04:38 PM REC. \$13.00 SUR. \$14.00

Return to: (enclose self-addressed stamped envelope)

Name: Leonard D. Freeman

Address: 422 River Street
Palatka, FL 32177

This instrument Prepared by: Warren Wilhite
Palatka Abstract & Title Guaranty Co., Inc.
Address: 113 North 4th Street
Palatka, FL 32177

Property Appraisers Parcel Identification (Folio) Number(s):
01-09-27-0000-0090-0000 (Putnam)
01-09-27-0000-0060-0000 (Putnam)
37-09-27-0000-0310-0000 (Putnam)
036970-0000 & 036940-0000 (St Johns)

WARRANTY DEED
LONG FORM

RAMCO FORM 1

Inst: 201454795092 Date: 5/5/2014 Time: 10:17 AM
Doc Stamp-Deed: 1855.00
DC, Tim Smith, Putnam County Page 1 of 3 B: 1377 P: 1957

SPACE ABOVE THIS LINE FOR RECORDING DATA

This Warranty Deed Made the 1st day of May A.D. 2014 by
Rebecca Jones, a single woman, Victoria Jones, a single woman, f/k/a Victoria
Andrews, and Marshal Jones, a married man conveying non-homestead property
hereinafter called, the grantor, to Leonard D. Freeman and Linda K. Freeman, husband and wife

whose post office address is 422 River Street
Palatka, FL 32177

hereinafter called the grantees:

(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth: That the grantor, for and in consideration of the sum of \$ 265,000.00 and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantees all that certain land situate in Putnam and St. Johns County, State of Florida, viz:

See Exhibit A attached hereto and by this reference made a part hereof.

Together, with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

To Have and to Hold, the same in fee simple forever.

And the grantor hereby covenants with said grantees that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land, and hereby warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to December 31, 2013

In Witness Whereof, the said grantor has signed and sealed these presents the day and year first above written.

Signed, sealed and delivered in the presence of:

Witness Signature: Warren Wilhite

Warren Wilhite

Printed Signature

Witness Signature: Gwendolyn O. Bobbitt

Gwendolyn O. Bobbitt

Printed Signature

Witness Signature: Rebecca Jones

Rebecca Jones

Printed Signature

291 Federal Point Rd East Palatka, FL 32131

Post Office Address

Witness Signature: Victoria Jones

Victoria Jones

Printed Signature

535 Federal Point Rd East Palatka, FL 32131

Post Office Address

Witness Signature: Marshal Jones

Marshal Jones

Printed Signature

111 Unicorn Rd St. Augustine, FL 32086

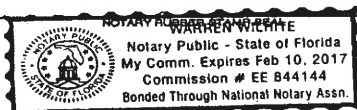
Post Office Address

STATE OF Florida
COUNTY OF Putnam

I hereby Certify that on this day, before me, an officer duly authorized to administer oaths and take acknowledgments, personally appeared

Rebecca Jones, Victoria Jones and Marshal Jones

known to me to be the person S described in and who executed the foregoing instrument, who acknowledged before me that they executed the same, and an oath was not taken. (Check one) ☐ Said person(s) is/are personally known to me. ☒ Said person(s) provided the following type of identification: drivers license



Witness my hand and official seal in the County and State last aforesaid this
1st day of May A.D. 2014

Notary Signature: Warren Wilhite
Printed Notary Signature: Warren Wilhite

EXHIBIT A

Beginning at the intersection of the East line of the Cocifacio Grant with Pierce Street; thence Southerly, along said Grant line, 10 chains and 60 links to the intersection of Seminole Street with said Grant line; thence Northwesterly, along the Northeast side of said Seminole Street to Kingsley Street; thence Northeasterly, along the Southeast side of Kingsley street to Pierce Street; thence East, along the South side of Pierce Street to point of beginning.

AND

Commencing on the East line of the Cocifacio Grant at the Northwest corner of land conveyed by J. F. Tenney to Orin Brubaker; thence North 89 degrees East, 16 chains 73 links to a road; thence Northerly, along said road, 6 chains and 40 links to road running at right angles with the last mentioned road; thence South 82 degrees 50' West, 15 chains 16 links to said Grant line; thence Southerly, along said Grant line, 4 chains 84 links to point of beginning, containing 9.40 acres, according to survey and plat made by J. J. Harvey in the year 1890, and being part of Lot 1 in Section 1, Township 9 South, Range 27 East.

AND

A strip of land 40 links wide adjoining and extending along the entire North side of that certain 9 and 40/100 acre tract of land conveyed by Ellen Ingall and Laura Ingall to Francis P. Tenney of record in the office of the Clerk of the Circuit Court of Putnam County, Florida, in Book of Conveyances 63 at page 428.

Being the same land conveyed the 5th day of July, 1937, by Francis P. Tenney, et ux, to George Rawson, by deed recorded in Deed Book 132, page 245 of the public records of Putnam County, Florida.

AND

Begin at the Southwest corner of the SW 1/4 of the NW 1/4 of Section 6, Township 9 South, Range 28 East; run thence North, 1 and 94/100 chains to South line of original D. L. Green Tract; thence South 89 degrees West, 5 and 20/100 chains to road; thence North 12 degrees 30' East, 9 and 64/100 chains to Northwest corner of original James McCullough Tract; thence South 84 degrees East, 11 and 42/100 chains to the Northeast corner of original James McCullough Tract; thence East to East line of SW 1/4 of NW 1/4 of Section 6, Township 9 South, Range 28 East; thence South to the Southeast corner of said forty-acre tract; thence West, along South line of said forty-acre tract to the place of beginning. Being in Putnam and St. Johns Counties, Florida, and containing about twenty acres.

AND

Beginning at a point on the Range line dividing Ranges 27 and 28 East, where the South line of A. A. Bosworth Tract, containing 5.8 acres, more or less, and formerly owned by Edith Bode, intersects the said Range line, said point being about 27 chains and 85 links South of the Northwest corner of Section 6, Township 9 South, Range 28 East, run thence North 83 degrees 30' East, along the Southerly line of said A. A. Bosworth Tract, 3 chains and 85 links; thence North 8 1/2 degrees West, 1 chain and 22 links; thence North 71 degrees East, 6 chains and 36 links; thence South 9 degrees 30' West, 6 chains and 63 links; thence North 84 degrees West, 8 chains and 80 links to a point on Range line dividing said Ranges 27 and 28 East, and continuing in said direction in a straight line, 3 chains and 27 links to road; thence Northwesterly, along said road, 3 chains and 19 links; thence North 83 degrees 30' East, 2 chains and 37 links; thence South 9 degrees East, 1 chain and 22 links; thence North 83 degrees 30' East, 1 chain and 25 links to Range line and point of beginning. The part in Putnam County, Florida, being a part of Government Lot 1 of Section 1, Township 9 South, Range 27 East, containing 1.18 acres, more or less; and the part in St. Johns County, Florida, being a part of the SW 1/4 of the NW 1/4 of Section 6, Township 9 South, Range 28 East, containing 3.72 acres, more or less.

AND

EXHIBIT A

All of the NW 1/4 of the NW 1/4 of Section 6, Township 9 South, Range 28 East, St. Johns County, Florida, except the following two parcels:

Begin at a point on the Range line dividing Ranges 27 and 28 East, 7 chains and 17 links South of the Northwest corner of said Section 6; run thence East, 1 chain and 90 links; thence South 1 degrees East, 4 chains and 16 links; thence West, 1 chain and 90 links to said Range line; thence North, along said Range line to the point of beginning.

Begin at the Northwest corner of Section 6, Township 9 South, Range 28 East; thence East, 500 feet, along North line of said Section to an iron pipe; thence due South, 200 feet to an iron pipe; thence in a straight line in a Southwesterly direction, 544.25 feet to an iron pipe in the West line of said Section; thence North, along West line of said Section, a distance of 415 feet to the Northwest corner thereof and the place of beginning.

AND

Begin at a point on the Range line dividing Ranges 27 and 28 East, where the North line of the Paine Tract, containing 4 and 90/100 acres, more or less, and formerly owned by Leo Clarence DuPont, intersects said Range line, said point being about 27 chains and 85 links South of the Northwest corner of Section 6, Township 9 South, Range 28 East; run thence North 83 degrees 30' East, along the Northerly line of said Paine Tract, 3 chains and 85 links; thence North 8 1/2 degrees West, 1 chain and 22 links; thence North 71 degrees East, along the Northerly line of said Paine Tract, 6 chains and 36 links; thence South 9 degrees 30' West, along the Easterly line of said Paine Tract, 6 chains and 63 links; thence East to the East line of the SW 1/4 of the NW 1/4 of said Section 6, Township 9 South, Range 28 East; thence Northerly, along said Easterly line of said SW 1/4 of NW 1/4 to the Northeast corner thereof; thence Westerly, along the Northerly line of said SW 1/4 of NW 1/4 to the Northwest corner thereof, being a point on said Range line; thence Southerly, along said Range line, 7 chains and 25 links, more or less, to the point of beginning. Being a part of the SW 1/4 of the NW 1/4 of Section 6, Township 9 South, Range 28 East, St. Johns County, Florida.

AND

Begin at a point on the Range line dividing Ranges 27 and 28 East, 11 chains and 33 links South of the Northeast corner of Government Lot 1 of Section 1, Township 9 South, Range 27 East, Putnam County, Florida; run thence South 89 degrees 15' West, 2 chains and 44 links; thence South 1 degrees East, 8 chains and 74 links; thence North 89 degrees 30' West, 2 chains and 48 links; thence South 9 degrees East, along road, 7 chains and 11 links; thence North 83 degrees 30' East, 2 chains and 37 links; thence South 9 degrees East, 1 chain and 22 links; thence North 83 degrees 30' East, 1 chain and 25 links to said Range line; thence North, along said Range line, 16 chains and 52 links, more or less, to the point of beginning. Being part of Government Lot 1, Section 1, Township 9 South, Range 27 East, Putnam County, Florida.

AND

Beginning at a stake at the Northwest corner of the NW 1/4 of the SW 1/4 of Section 6, Township 9 South, Range 28 East; thence South on Township line, 50 rods to a stake; thence Easterly, 80 rods to a stake in a Cypress pond; thence North, 50 rods to a stake; thence West, 80 rods to point of beginning, containing 25 acres, more or less.

AND

Lot No. 1. Commencing at a stake 50 rods from the Northwest corner of the NW 1/4 of the SW 1/4 of Section 6, Township 9 South, Range 28 East; thence 29.5 rods South to a stake marked with a cross (X); thence 27.12 rods East to a stake marked with a cross (X); thence 29.5 rods North to a stake marked with a cross (X); thence 27.12 rod West to the point of beginning, containing 5 acres, more or less.

Being part of the same land as appears in Deed Book FF, at page 409 and the same land as appears in Deed Book Number 25, at part 491 of the public records of St. Johns County, Florida, and being the same land conveyed the 1st day of March, 1946 by Sarah Brown, et al, to George Rawson by deed recorded in Deed Book 162, page 218 of the public records of St. Johns County, Florida.

Instr #2015003686 BK: 3978 PG: 581, Filed & Recorded: 1/21/2015 3:17 PM #Pgs:2
Cheryl Strickland, Clerk of the Circuit Court St. Johns County FL Recording \$18.50 Doc. D \$1,050.00

Return to: (enclose self-addressed stamped envelope)

Name: Michael Ray Styduhar

Address: P.O. Box 3376
Ponte Vedra Beach, FL 32004-3376

This instrument Prepared by: Warren Wilhite
Palatka Abstract & Title Guaranty Co., Inc.
Address: 113 North 4th Street
Palatka, FL 32177

Property Appraisers Parcel Identification (Folio) Number(s):

036970-0000

WARRANTY DEED
LONG FORM

RAMCO FORM 1

Chambers Paper & Printing Co., Inc. 1887

Less Out

SPACE ABOVE THIS LINE FOR PROCESSING DATA

SPACE ABOVE THIS LINE FOR RECORDING DATA

This Warranty Deed Made the 16th day of January A.D. 2015 by

Leonard D. Freeman and Linda K. Freeman, husband and wife

hereinafter called the grantor, to Michael Ray Styduhar and Heather C. Styduhar,
husband and wife

whose post office address is P.O. Box 3376
Ponte Vedra Beach, FL 32004-3376

hereinafter called the grantee:

(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth: That the grantor, for and in consideration of the sum of \$ 150,000.00 and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee all that certain land situate in St. Johns County, State of Florida, viz:

Beginning at a stake at the Northwest corner of the NW 1/4 of the SW 1/4 of Section 6, Township 9 South, Range 28 East, St. Johns County, Florida and thence South on Township line, 50 rods to a stake; thence Easterly, 80 rods to a stake in a Cypress pond; thence North, 50 rods to a stake; thence West, 80 rods to point of beginning, containing 25 acres, more or less.

AND

Lot No. 1. Commencing at a stake 50 rods from the Northwest corner of the NW 1/4 of the SW 1/4 of Section 6, Township 9 South, Range 28 East, St. Johns County, Florida; thence 29.5 rods South to a stake marked with a cross (X); thence 27.12 rods East to a stake marked with a cross (X); thence 29.5 rods North to a stake marked with a cross (X); thence 27.12 rods West to the point of beginning, containing 5 acres, more or less.

Being part of the same land as appears in Deed Book FF, at page 409 and the same land as appears in Deed Book Number 25, at page 491 of the public records of St. Johns County, Florida, and being the same land conveyed the 1st day of March, 1946 by Sarah Brown, et al, to George Rawson by deed recorded in Deed Book 162, page 218 of the public records of St. Johns County, Florida.

RESERVING unto the grantors, their heirs and assigns, an easement for the purpose of ingress and egress, over and across the Westerly 20 feet of the above described parcels of land.

TOGETHER WITH an easement for the purpose of ingress and egress, 20 feet in width, lying right of and adjacent to the following described line:

Beginning at the Northwest corner of the NW 1/4 of the SW 1/4 of Section 6, Township 9 South, Range 28 East, St. Johns County, Florida and run thence North 1.94 chains to the South line of the original D. L. Green tract; thence run S 89 degrees W, 5.20 chains to a road; thence run N 12 degrees 30' E, 9.64 chains to the Northwest corner of original James McCullough tract; thence run N 9 degrees W, along the West line of lands described in Deed Book 90, page 204 and Deed Book 100, page 160 of the public records of Putnam County, Florida, to the Northeast corner of the second parcel described in that deed recorded in Deed Book 132, page 245 of said public records; thence run S 82 degrees 50' W, along thence North line of said lands, 15.16 chains to the East line of the Cocifacio Grant in Section 37, Township 9 South, Range 27 East; thence continue S 82 degrees 50' W, to the Northeasterly right of way of Seminole Street and the termination of this description.

RESTRICTION: The drainage ditch located along the Northerly line of captioned property shall be maintained by the parties herein, their heirs, successors and assigns and shall continued to be used for drainage purposes.

BK: 3978 PG: 582

Together. with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

To Have and to Hold. the same in fee simple forever.

And the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land, and hereby warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to December 31, 2015.

In Witness Whereof. the said grantor has signed and sealed these presents the day and year first above written.

Signed, sealed and delivered in the presence of:

Witness Signature (as to Grantor) Warren Wilhite

Warren Wilhite

Printed Signature

Witness Signature (as to Grantor) Sue Wilhite

Sue Wilhite

Printed Signature

Witness Signature (as to Co-Grantor, if any) Warren Wilhite

Warren Wilhite

Printed Signature

Witness Signature (as to Co-Grantor, if any) Sue Wilhite

Sue Wilhite

Printed Signature

Witness Signature (as to Co-Grantor, if any) Sue Wilhite

Sue Wilhite

Printed Signature

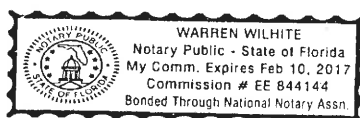
STATE OF Florida

COUNTY OF Putnam

Leonard D. Freeman and Linda K. Freeman

known to me to be the person S described in and who executed the foregoing instrument, who acknowledged before me that they executed the same, and an oath was not taken. (Check one: ☐ Said person(s) is/are personally known to me. ☒ Said person(s) provided the following type of identification: drivers license

NOTARY RUBBER STAMP SEAL



Witness my hand and official seal in the County and State last aforesaid this 16th day of January, A.D. 2015

Notary Signature

Warren Wilhite

Printed Notary Signature

Grantor Signature

Leonard D. Freeman

Printed Signature

422 River Street Palatka, FL 32177

Post Office Address

Linda K. Freeman

Co-Grantor Signature, if any

Linda K. Freeman

Printed Signature

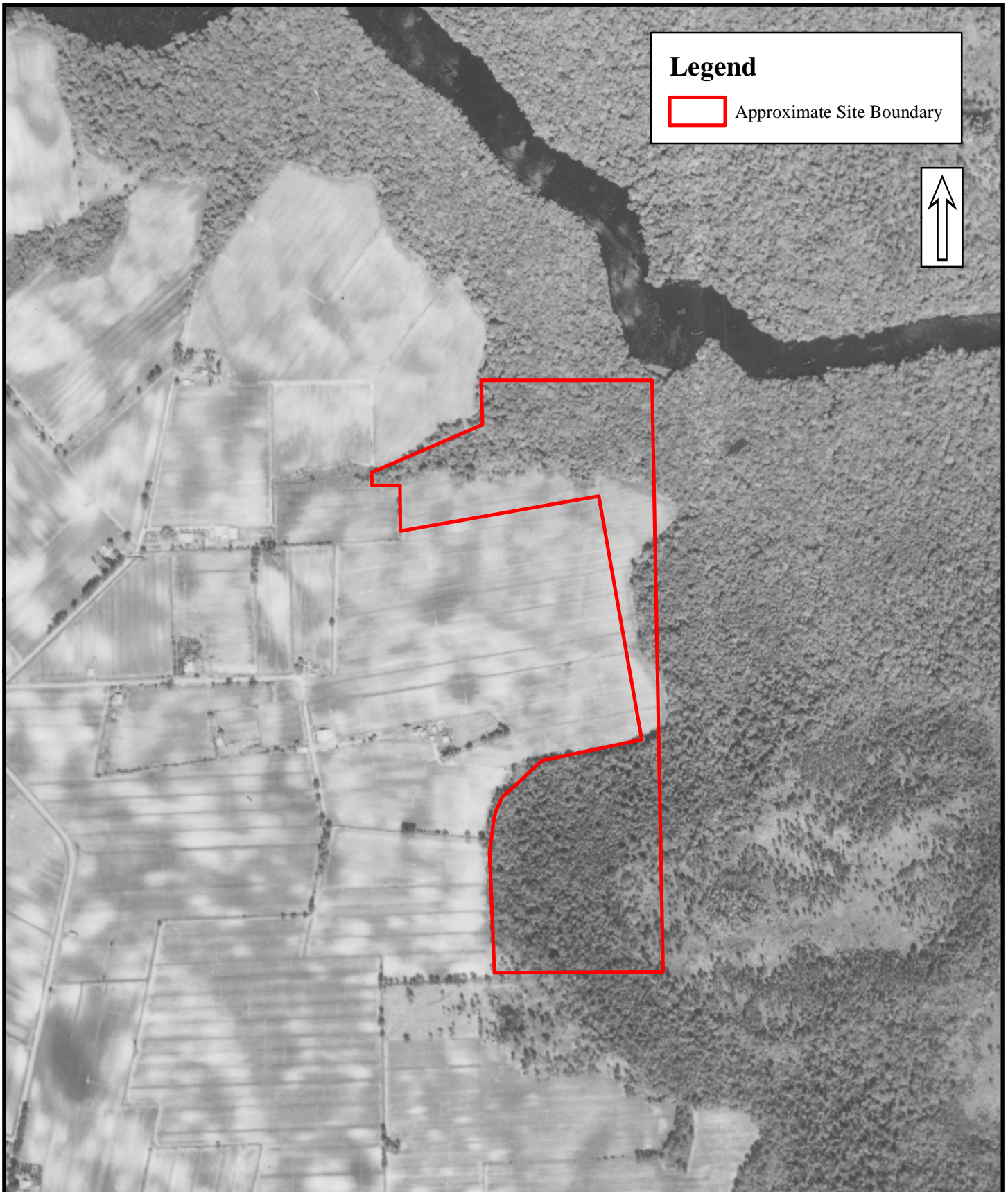
422 River Street Palatka, FL 32177

Post Office Address


I hereby Certify that on this day, before me, an officer duly authorized to administer oaths and take acknowledgments, personally appeared

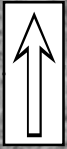
APPENDIX D

HISTORICAL REFERENCES DOCUMENTATION



Legend

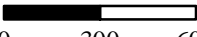
 Approximate Site Boundary

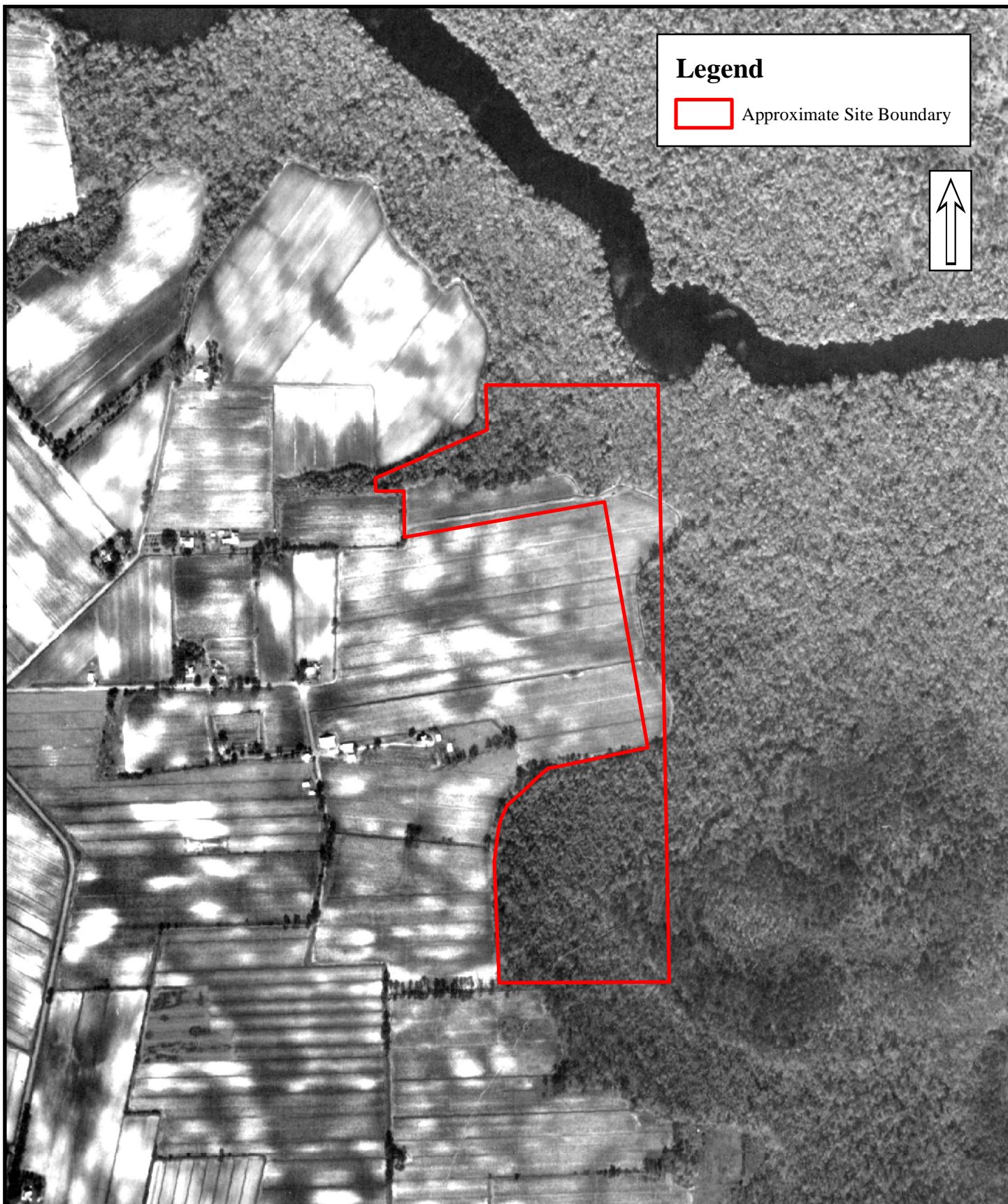


1942 AERIAL PHOTOGRAPH




FREEMAN PROPERTY
ST. JOHNS COUNTY, FLORIDA
LA 2017-029

 Feet
0 300 600
1 inch = 600 feet



Legend


 Approximate Site Boundary

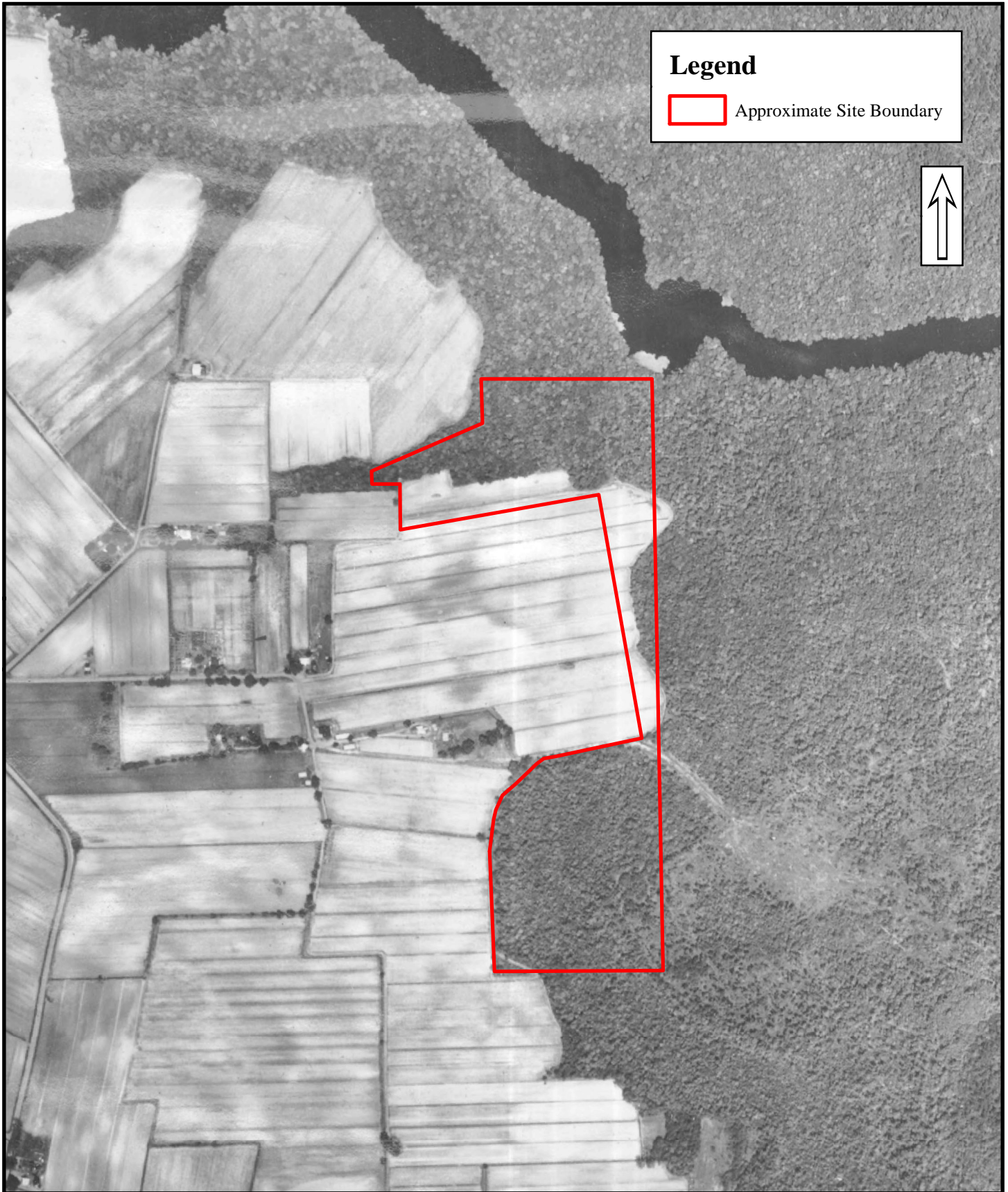


1953 AERIAL PHOTOGRAPH



FREEMAN PROPERTY
ST. JOHNS COUNTY, FLORIDA
LA 2017-029

 Feet
0 300 600
1 inch = 600 feet



1960 AERIAL PHOTOGRAPH




FREEMAN PROPERTY
ST. JOHNS COUNTY, FLORIDA
LA 2017-029

0 300 600 Feet
1 inch = 600 feet



Legend


 Approximate Site Boundary

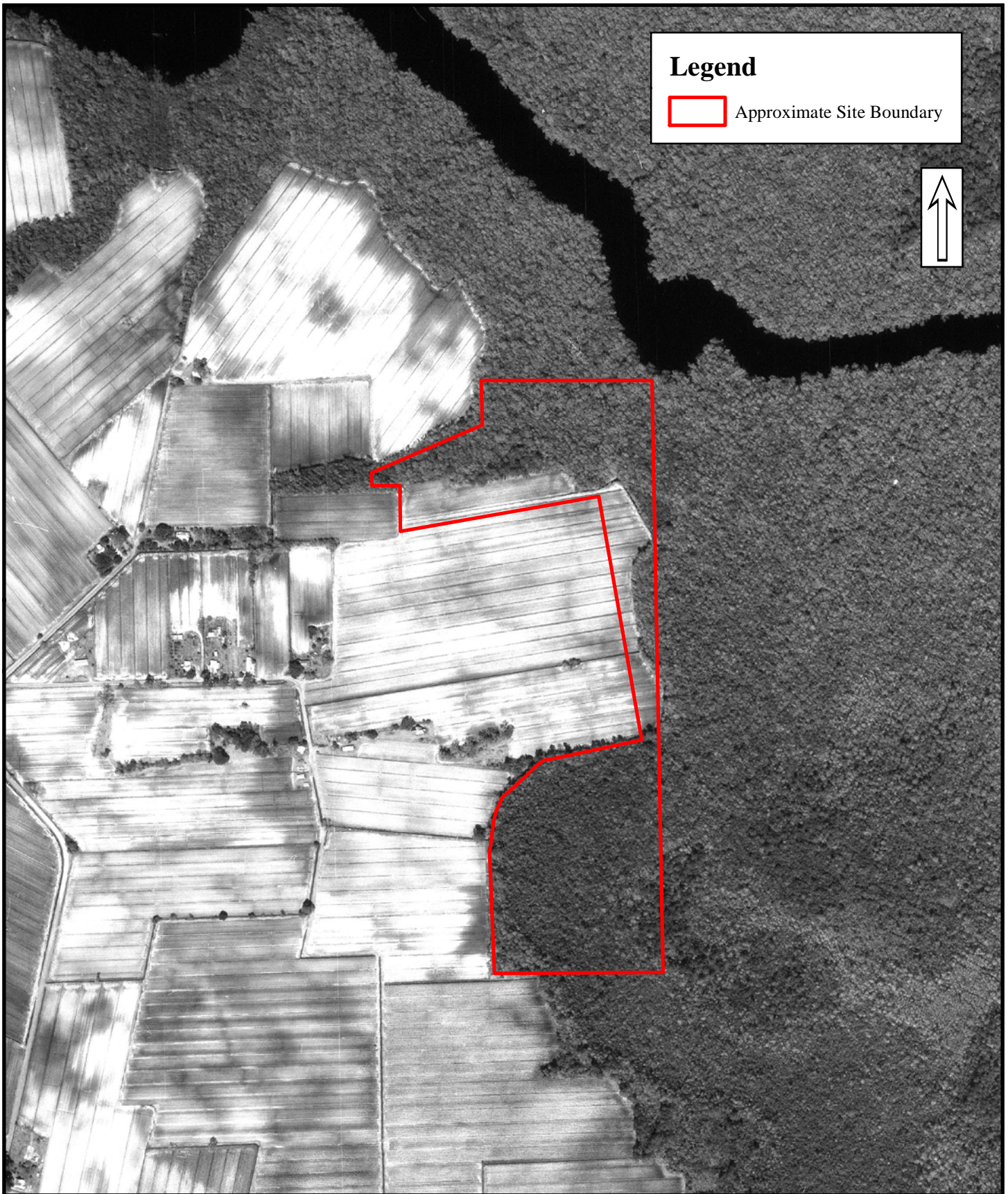


1971 AERIAL PHOTOGRAPH



FREEMAN PROPERTY
ST. JOHNS COUNTY, FLORIDA
LA 2017-029

 Feet
0 300 600
1 inch = 600 feet

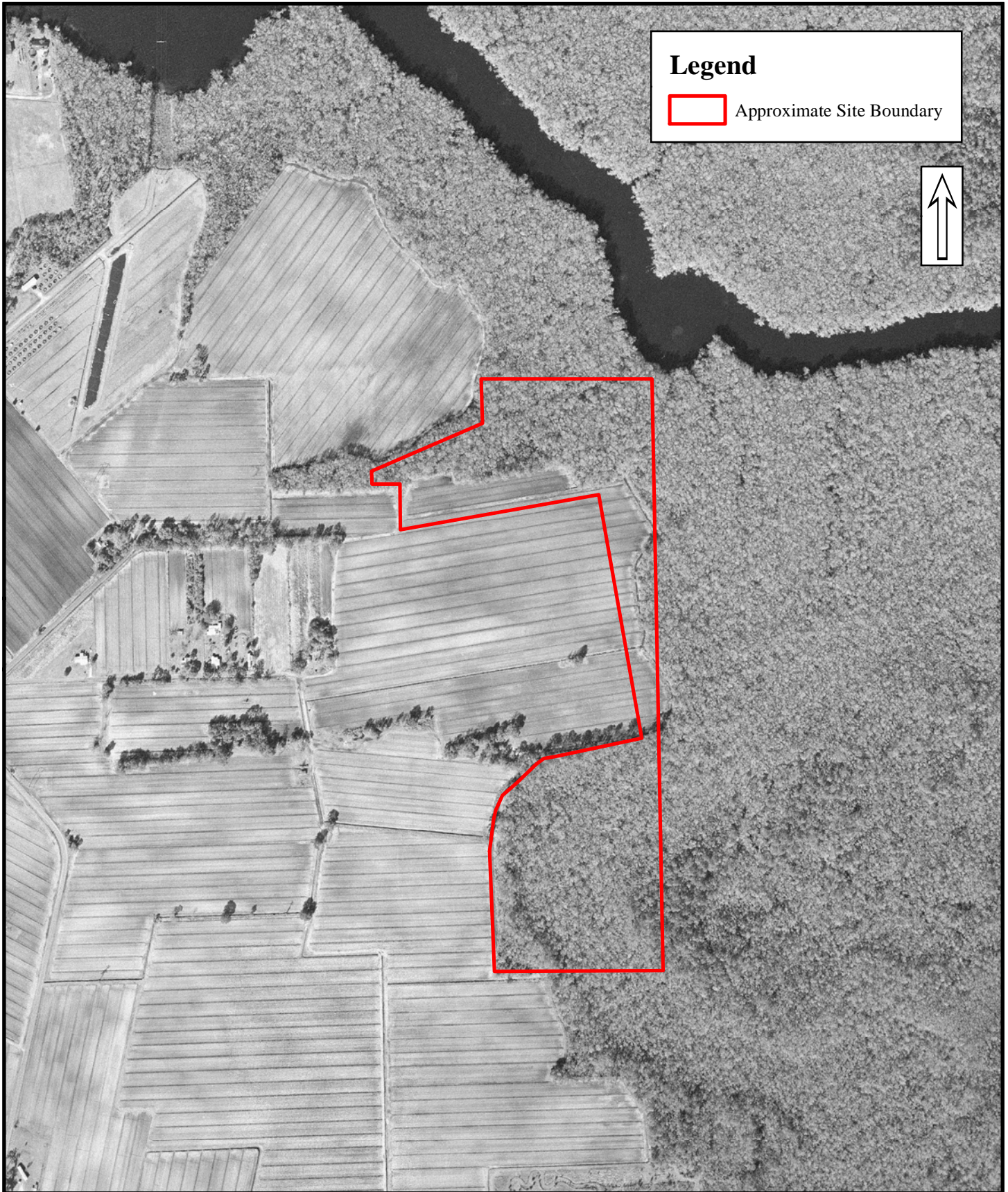


1980 AERIAL PHOTOGRAPH



FREEMAN PROPERTY
ST. JOHNS COUNTY, FLORIDA
LA 2017-029

0 300 600 Feet
1 inch = 600 feet

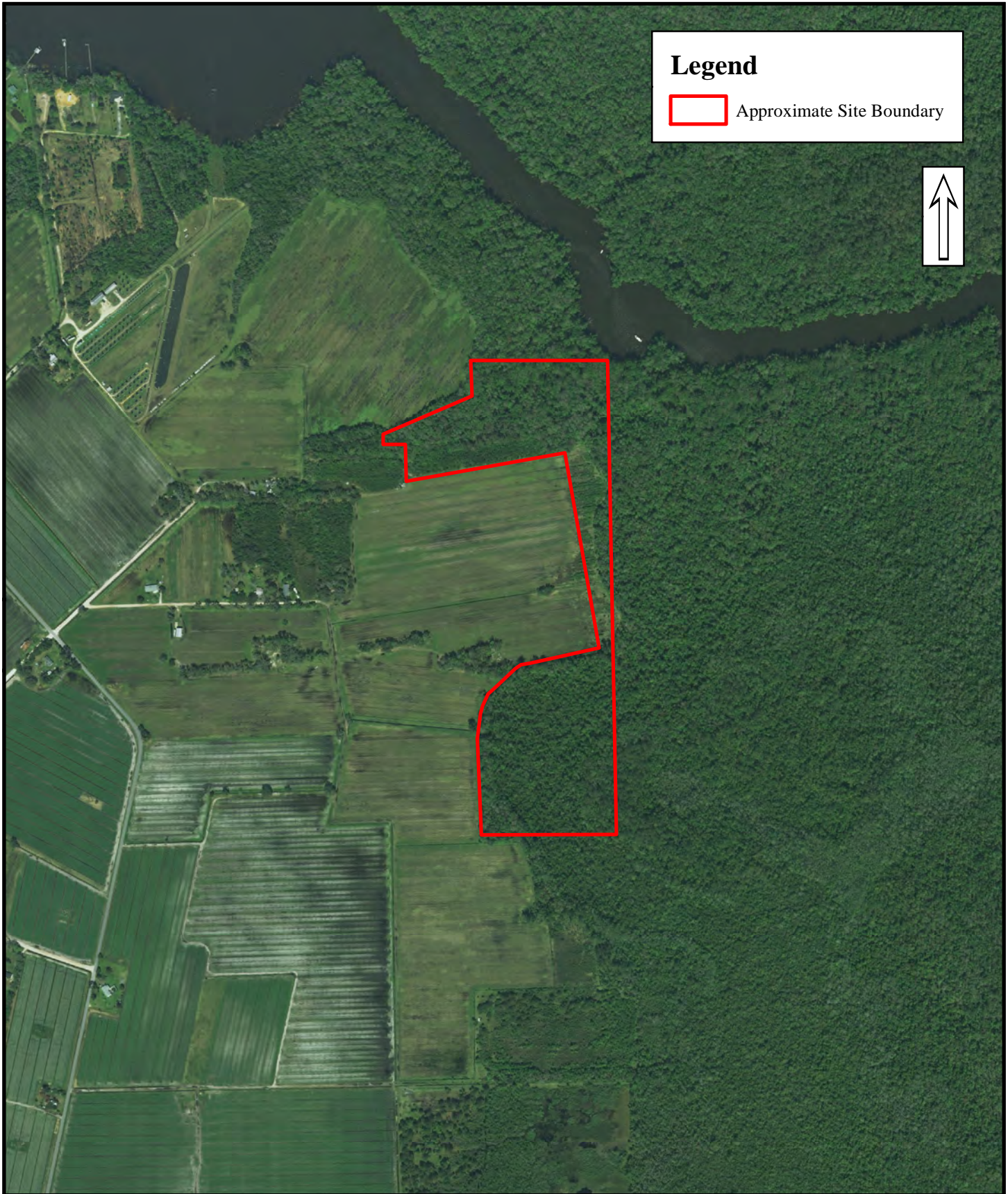


1994 AERIAL PHOTOGRAPH




FREEMAN PROPERTY
ST. JOHNS COUNTY, FLORIDA
LA 2017-029

0 300 600 Feet
1 inch = 600 feet



Legend


 Approximate Site Boundary

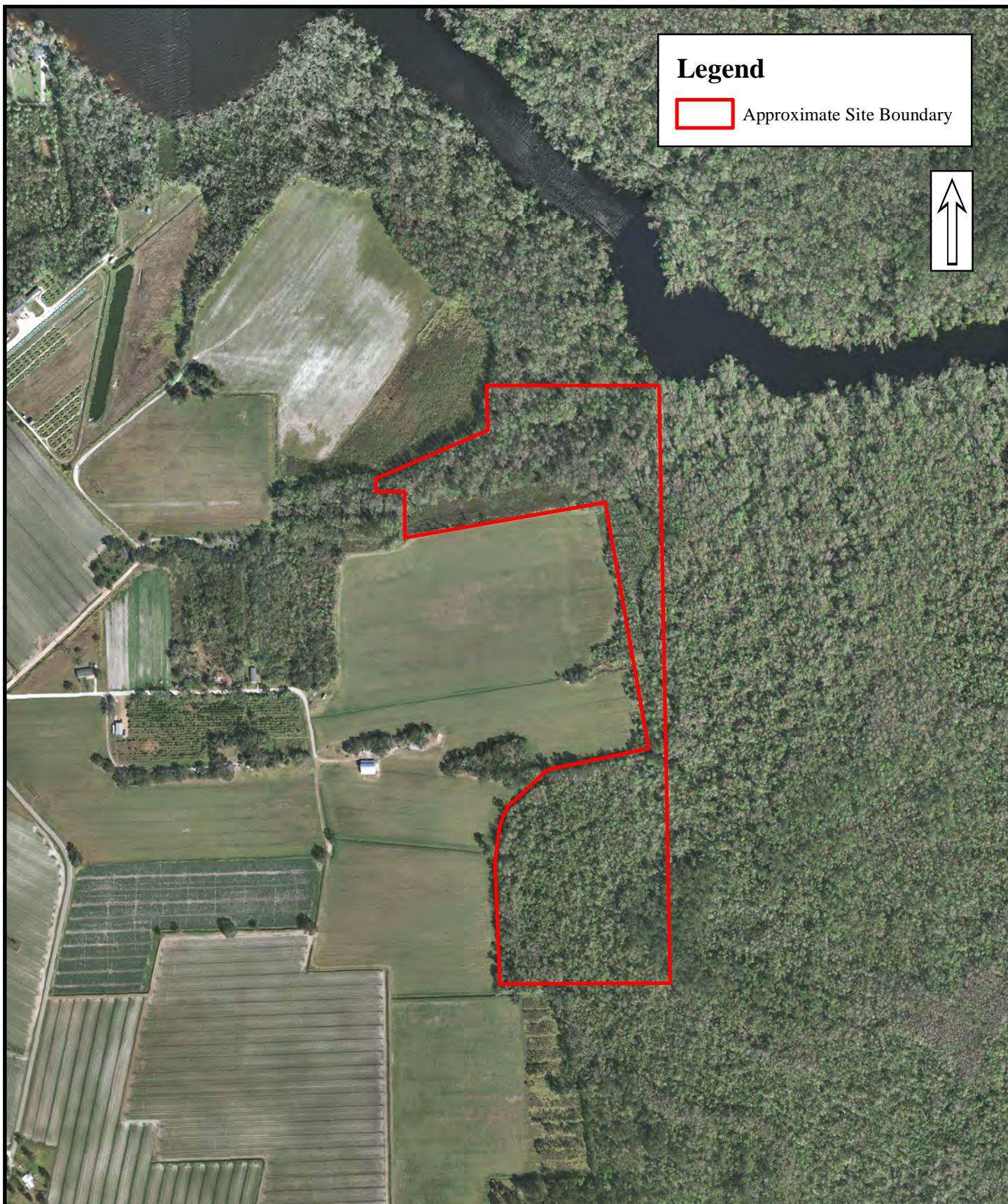


2008 AERIAL PHOTOGRAPH




FREEMAN PROPERTY
ST. JOHNS COUNTY, FLORIDA
LA 2017-029

 Feet
0 375 750
1 inch = 750 feet



Legend


 Approximate Site Boundary

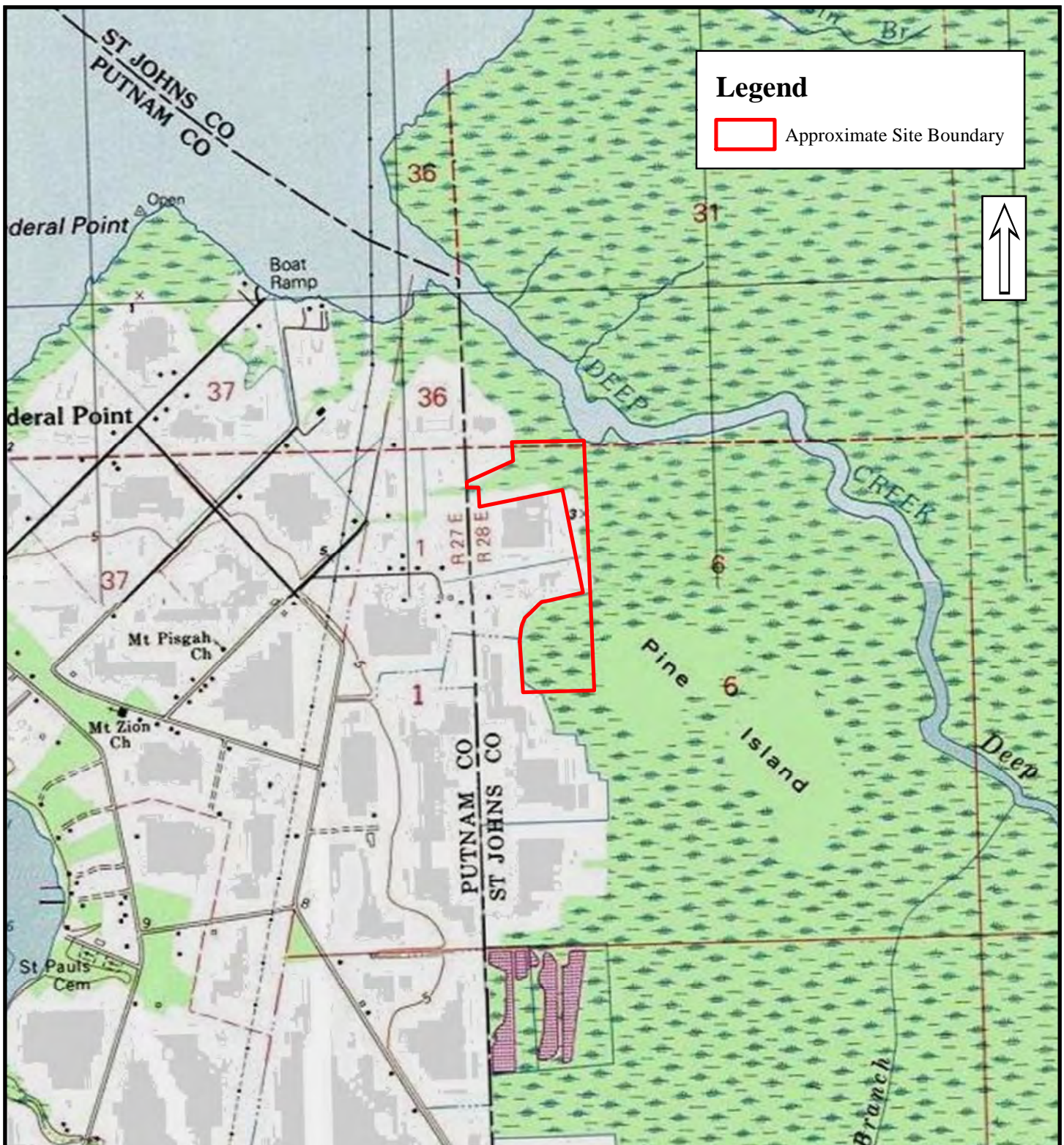


2017 AERIAL PHOTOGRAPH



FREEMAN PROPERTY
ST. JOHNS COUNTY, FLORIDA
LA 2017-029

 Feet
0 300 600
1 inch = 600 feet



QUADRANGLE: RIVERDALE/HASTINGS, FLORIDA 7.5 MINUTE SERIES
DATE: 1991/1992 (TOPOGRAPHIC)

1 inch = 1,500 feet



CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

QUADRANGLE LOCATION

TOPOGRAPHIC SITE LOCATION MAP



FREEMAN PROPERTY
ST. JOHNS COUNTY, FLORIDA
LA 2017-029

REFERENCE: MAP OF
EAST PALATKA, FLORIDA
PREPARED BY: U.S. GEOLOGICAL
SURVEY



FIRE INSURANCE MAPS

Project Property: Styduhar, Freeman, & Wedgeworth Properties
East Palatka FL
Requested By: M3010.1624.0009.02
Order No: 20190605209
Date Completed: June 06, 2019

Please note that no information was found for your site or adjacent properties.

APPENDIX E

REGULATORY DATABASE REPORT AND REGULATORY RECORDS



DATABASE REPORT

Project Property:	<i>Styduhar, Freeman, & Wedgeworth Properties</i>
Project No:	<i>East Palatka FL M3010.1624.0009.02</i>
Report Type:	<i>Database Report</i>
Order No:	<i>20190605209</i>
Requested by:	<i>Aerostar SES LLC</i>
Date Completed:	<i>June 6, 2019</i>

Environmental Risk Information Services

A division of Glacier Media Inc.

1.866.517.5204 | info@erisinfo.com | erisinfo.com

Table of Contents

Table of Contents.....	2
Executive Summary.....	3
Executive Summary: Report Summary.....	4
Executive Summary: Site Report Summary - Project Property.....	8
Executive Summary: Site Report Summary - Surrounding Properties.....	9
Executive Summary: Summary by Data Source.....	10
Map.....	11
Aerial.....	14
Topographic Map.....	15
Detail Report.....	16
Unplottable Summary.....	19
Unplottable Report.....	20
Appendix: Database Descriptions.....	21
Definitions.....	32

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Reliance on information in Report: This report DOES NOT replace a full Phase I Environmental Site Assessment but is solely intended to be used as database review of environmental records.

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Executive Summary

Property Information:

Project Property: *Styduhar, Freeman, & Wedgeworth Properties
East Palatka FL*

Project No: *M3010.1624.0009.02*

Coordinates:

Latitude: *29.747467*
Longitude: *-81.522359*
UTM Northing: *3,290,917.51*
UTM Easting: *449,494.27*
UTM Zone: *UTM Zone 17R*

Elevation: *4 FT*

Order Information:

Order No: *20190605209*
Date Requested: *June 5, 2019*
Requested by: *Aerostar SES LLC*
Report Type: *Database Report*

Historicals/Products:

City Directory Search *CD - 2 Street Search*
ERIS Xplorer [*ERIS Xplorer*](#)
Excel Add-On *Excel Add-On*
Fire Insurance Maps *US Fire Insurance Maps*
Physical Setting Report (PSR) *PSR*

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
<u>Standard Environmental Records</u>								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	.5	0	0	0	0	-	0
SEMS	Y	.5	0	0	0	0	-	0
ODI	Y	.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	.5	0	0	0	0	-	0
CERCLIS	Y	.5	0	0	0	0	-	0
IODI	Y	.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	.5	0	0	0	0	-	0
RCRA LQG	Y	.25	0	0	0	-	-	0
RCRA SQG	Y	.25	0	0	0	-	-	0
RCRA CESQG	Y	.25	0	0	0	-	-	0
RCRA NON GEN	Y	.25	0	0	0	-	-	0
FED ENG	Y	.5	0	0	0	0	-	0
FED INST	Y	.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	.5	0	0	0	0	-	0
FEMA UST	Y	.25	0	0	0	-	-	0
REFN	Y	.25	0	0	0	-	-	0
BULK TERMINAL	Y	.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
State								
SHWS	Y	1	0	0	0	0	0	0
DSHW	Y	1	0	0	0	0	0	0
WCRPS	Y	1	0	0	0	0	0	0
DELISTED WCRPS	Y	1	0	0	0	0	0	0
SWF/LF	Y	.5	0	0	1	0	-	1
LST	Y	.5	0	0	0	0	-	0
DELISTED LST	Y	.5	0	0	0	0	-	0
UST	Y	.25	0	0	0	-	-	0
AST	Y	.25	0	0	1	-	-	1
DEL UST AST TANK	Y	.25	0	0	0	-	-	0
DEL STORAGE TANK	Y	.25	0	0	0	-	-	0
FF TANKS	Y	.25	0	0	0	-	-	0
STCS	Y	.5	0	0	1	0	-	1
INST	Y	.5	0	0	0	0	-	0
ENG	Y	.5	0	0	0	0	-	0
VCP	Y	.5	0	0	0	0	-	0
BROWNFIELDS	Y	.5	0	0	0	0	-	0
BROWNFIELD AREA	Y	.5	0	0	0	0	-	0
Tribal								
INDIAN LUST	Y	.5	0	0	0	0	-	0
INDIAN UST	Y	.25	0	0	0	-	-	0
DELISTED ILST	Y	.5	0	0	0	0	-	0
DELISTED IUST	Y	.25	0	0	0	-	-	0
County								
BROWARD AST	Y	.25	0	0	0	-	-	0
BROWARD CONTAM	Y	.5	0	0	0	0	-	0
UST BROWARD	Y	.25	0	0	0	-	-	0
HILLS SWF/LF	Y	.5	0	0	0	0	-	0
MIAMI CONT	Y	.5	0	0	0	0	-	0
MIAMI TANKS	Y	.25	0	0	0	-	-	0
PALM SWF/LF	Y	.5	0	0	0	0	-	0
<u>Additional Environmental Records</u>								
Federal								
TRIS	Y	PO	0	-	-	-	-	0
HMIRS	Y	.125	0	0	-	-	-	0
NCDL	Y	.125	0	0	-	-	-	0
TSCA	Y	.125	0	0	-	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
HIST TSCA	Y	.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	.25	0	0	0	-	-	0
DELISTED FED DRY	Y	.25	0	0	0	-	-	0
FUDS	Y	1	0	0	0	0	0	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	.25	0	0	0	-	-	0
ALT FUELS	Y	.25	0	0	0	-	-	0
SSTS	Y	.25	0	0	0	-	-	0
PCB	Y	.5	0	0	0	0	-	0

State

PRIORITYCLEAN	Y	.5	0	0	0	0	-	0
DRYCLEANERS	Y	.25	0	0	0	-	-	0
DELISTED DRYCLEANERS	Y	.25	0	0	0	-	-	0
DWM CONTAM	Y	.5	0	0	0	0	-	0
DEL CONTAM SITE	Y	.5	0	0	0	0	-	0
UIC	Y	PO	0	-	-	-	-	0
WELL SURVEILLANCE	Y	.25	0	0	0	-	-	0
TIER 2	Y	.125	0	0	-	-	-	0

Tribal

No Tribal additional environmental record sources available for this State.

County

ALACHUA RF	Y	PO	0	-	-	-	-	0
BROWARD HAZ MAT	Y	.25	0	0	0	-	-	0
BROWARD NOV	Y	.25	0	0	0	-	-	0
MIAMI AP	Y	PO	0	-	-	-	-	0
MIAMI ENFORCE	Y	PO	0	-	-	-	-	0
MIAMI SPILLS	Y	.125	0	0	-	-	-	0
MIAMI GREASE	Y	PO	0	-	-	-	-	0
MIAMI IND WASTE	Y	PO	0	-	-	-	-	0
MIAMI WASTE GEN	Y	PO	0	-	-	-	-	0
MIAMI MOP	Y	PO	0	-	-	-	-	0
MIAMI MRE	Y	PO	0	-	-	-	-	0
MIAMI SEPTIC	Y	.25	0	0	0	-	-	0
DELISTED COUNTY	Y	.25	0	0	0	-	-	0

<i>Database</i>	<i>Searched</i>	<i>Search Radius</i>	<i>Project Property</i>	<i>Within 0.12mi</i>	<i>.125mi to 0.25mi</i>	<i>0.25mi to 0.50mi</i>	<i>0.50mi to 1.00mi</i>	<i>Total</i>
<hr/>								
	<i>Total:</i>		0	0	3	0	0	3

** PO – Property Only*

** 'Property and adjoining properties' database search radii are set at 0.25 miles.*

Executive Summary: Site Report Summary - Project Property

<i>Map Key</i>	<i>DB</i>	<i>Company/Site Name</i>	<i>Address</i>	<i>Direction</i>	<i>Distance (mi/ft)</i>	<i>Elev Diff (ft)</i>	<i>Page Number</i>
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No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	AST	SATURIWA SPRINGS LLC DBA ANGUILLA FISH FARM	181 SCHOOL RD FEDERAL PT EAST PALATKA FL 32131	NW	0.21 / 1,133.87	-2	16
Facility ID / Facility Status: 9805186 OPEN Tank Status / Status Date: U - In Service 9/1/2002							
1	STCS	SATURIWA SPRINGS LLC DBA ANGUILLA FISH FARM	181 SCHOOL RD FEDERAL PT EAST PALATKA FL 32131	NW	0.21 / 1,133.87	-2	17
Facility ID / Facility Status: 9805186 OPEN							
1	SWF/LF	ANGUILLA FISH FARMS	181 SCHOOL ROAD EAST PALATKA FL 32121	NW	0.21 / 1,133.87	-2	17

Executive Summary: Summary by Data Source

Standard

State

SWF/LF - Solid Waste Facilities and Landfills

A search of the SWF/LF database, dated Jan 15, 2019 has found that there are 1 SWF/LF site(s) within approximately 0.50 miles of the project property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
ANGUILLA FISH FARMS	181 SCHOOL ROAD EAST PALATKA FL 32121	NW	0.21 / 1,133.87	<u>1</u>

AST - Aboveground Storage Tanks

A search of the AST database, dated Apr 4, 2019 has found that there are 1 AST site(s) within approximately 0.25 miles of the project property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
SATURIWA SPRINGS LLC DBA ANGUILLA FISH FARM	181 SCHOOL RD FEDERAL PT EAST PALATKA FL 32131	NW	0.21 / 1,133.87	<u>1</u>

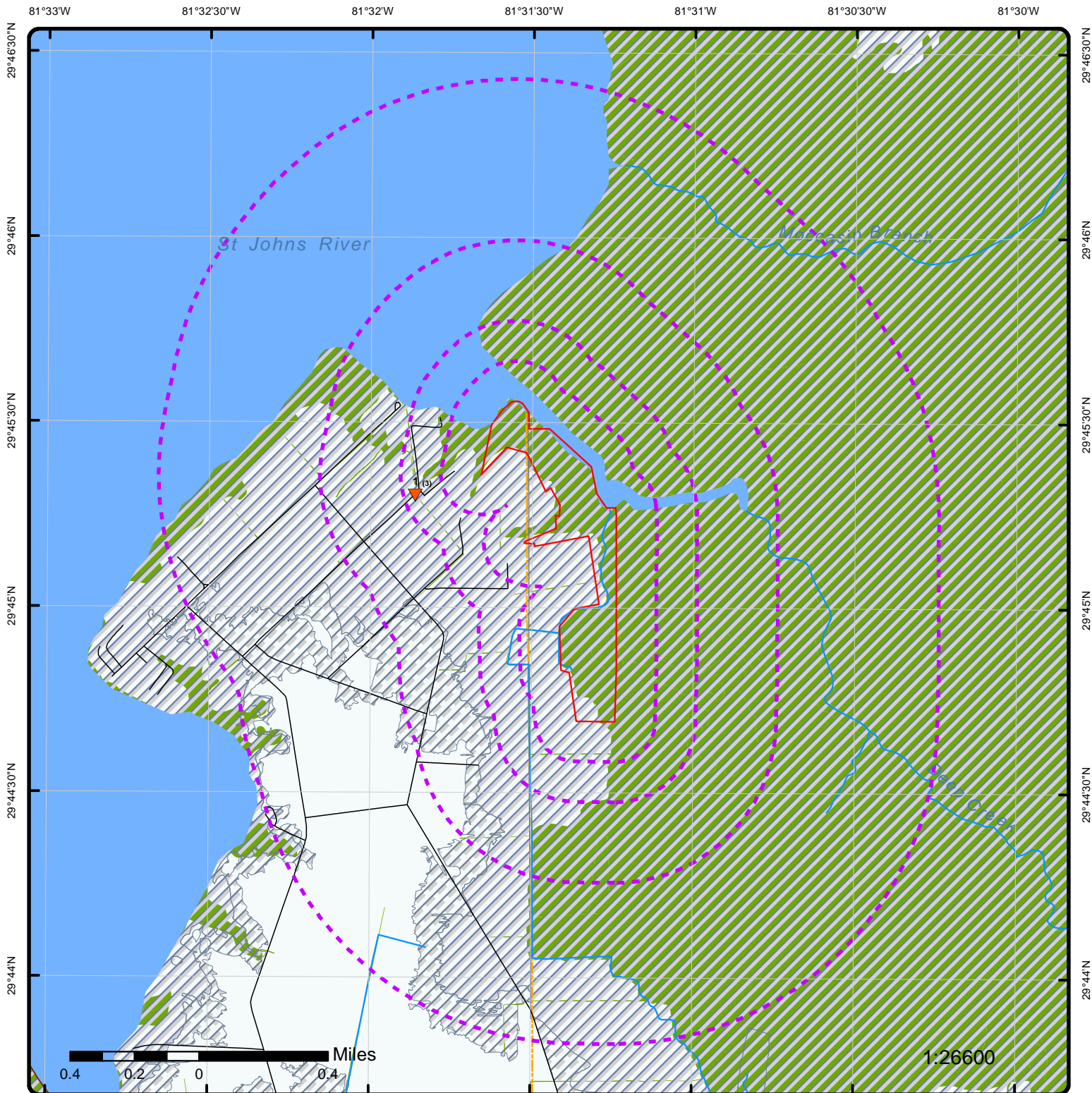
Facility ID | Facility Status: 9805186 | OPEN
Tank Status | Status Date: U - In Service | 9/1/2002

STCS - Storage Tank/Contaminated Facility Search

A search of the STCS database, dated Feb 27, 2019 has found that there are 1 STCS site(s) within approximately 0.50 miles of the project property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
SATURIWA SPRINGS LLC DBA ANGUILLA FISH FARM	181 SCHOOL RD FEDERAL PT EAST PALATKA FL 32131	NW	0.21 / 1,133.87	<u>1</u>

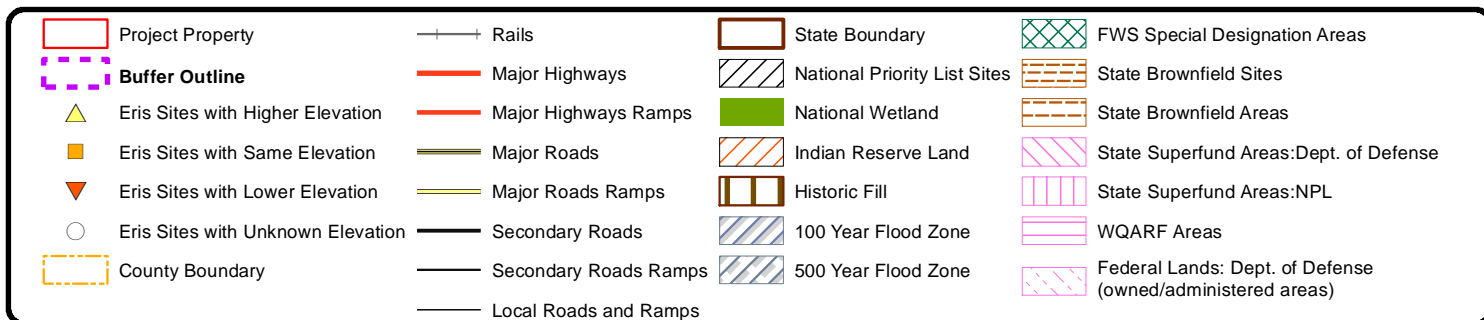
Facility ID | Facility Status: 9805186 | OPEN

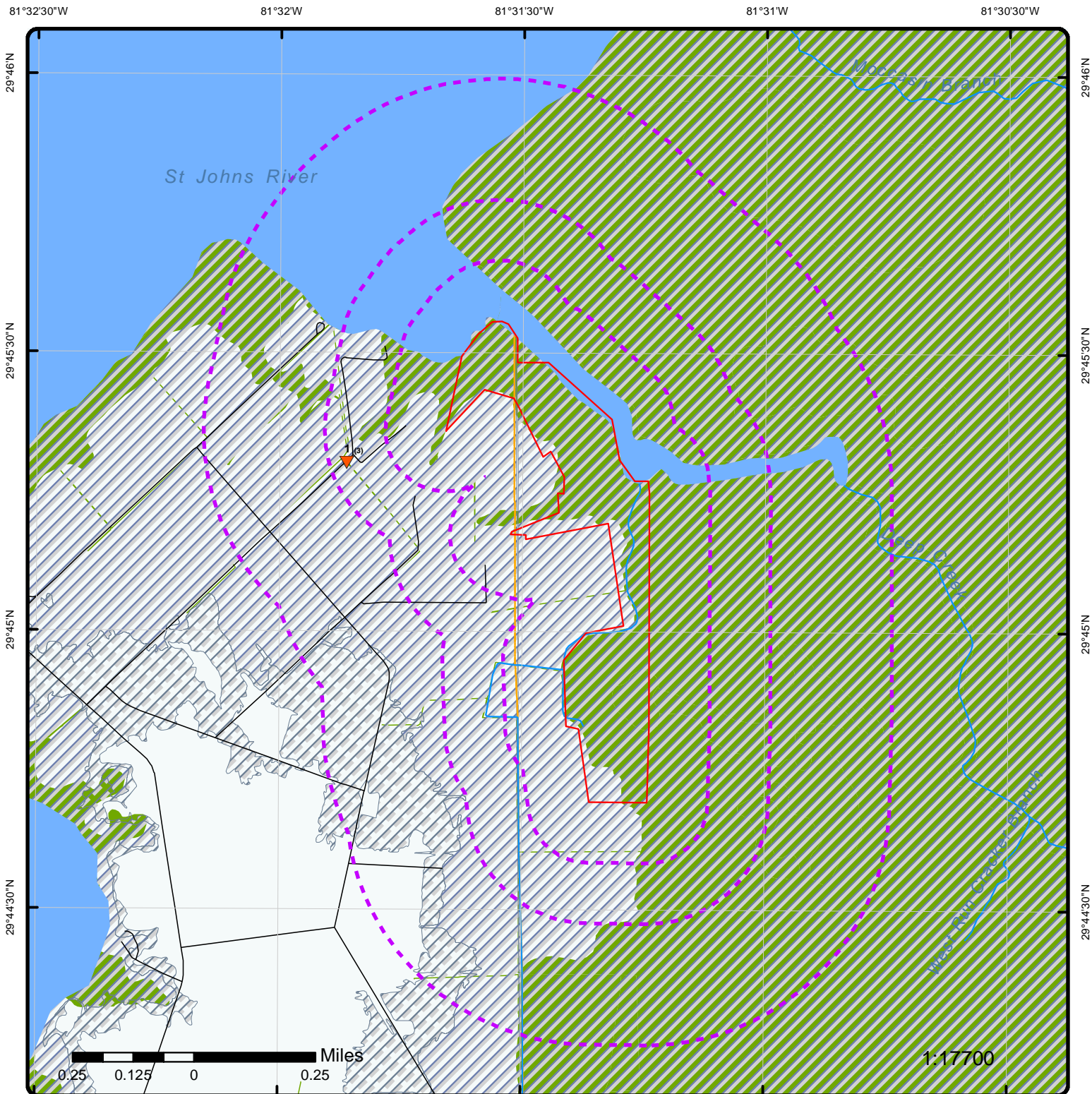


Map : 1 Mile Radius

Order No: 20190605209

Address: , East Palatka, FL





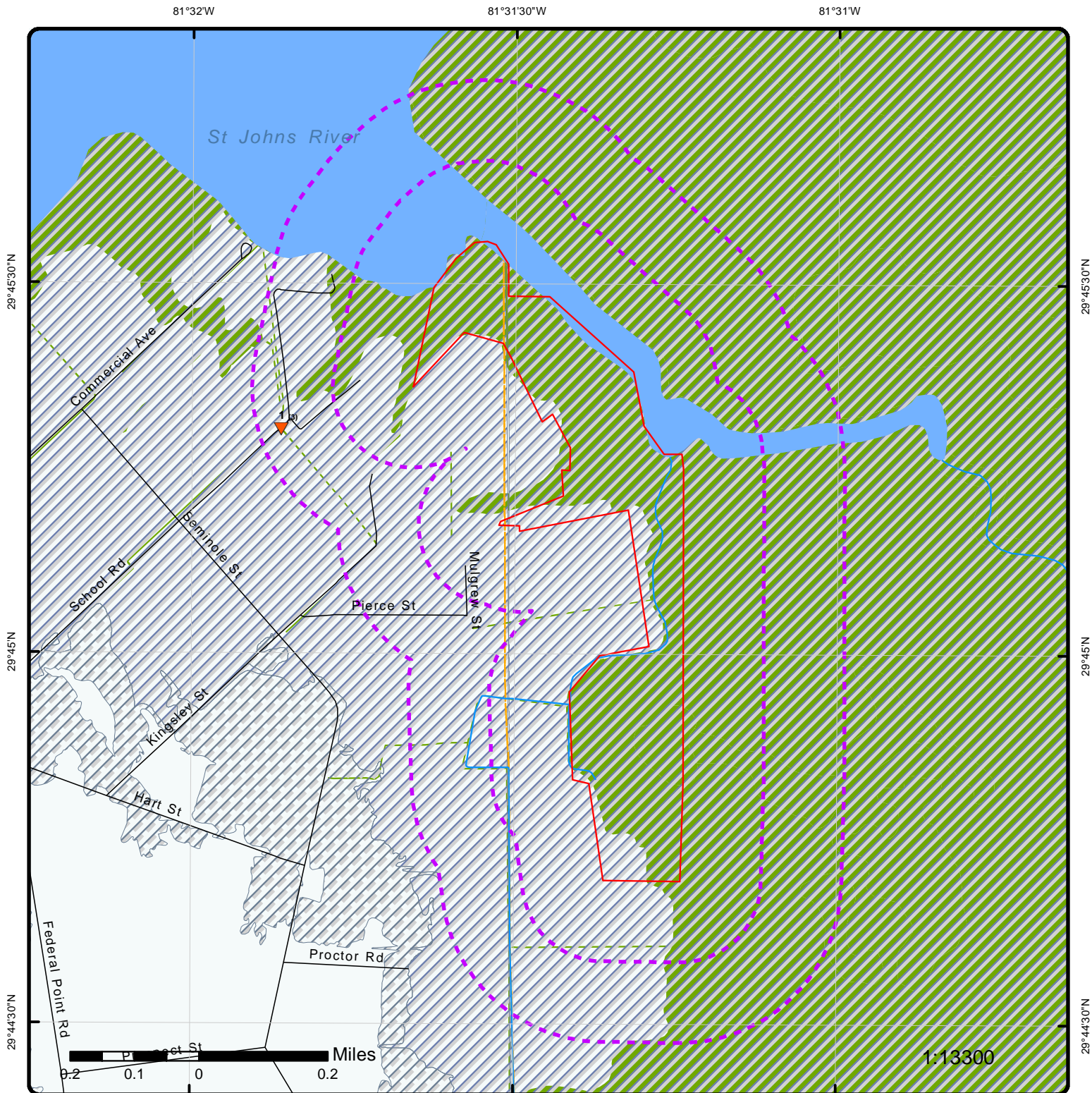
Map : 0.5 Mile Radius

Order No: 20190605209

Address: , East Palatka, FL



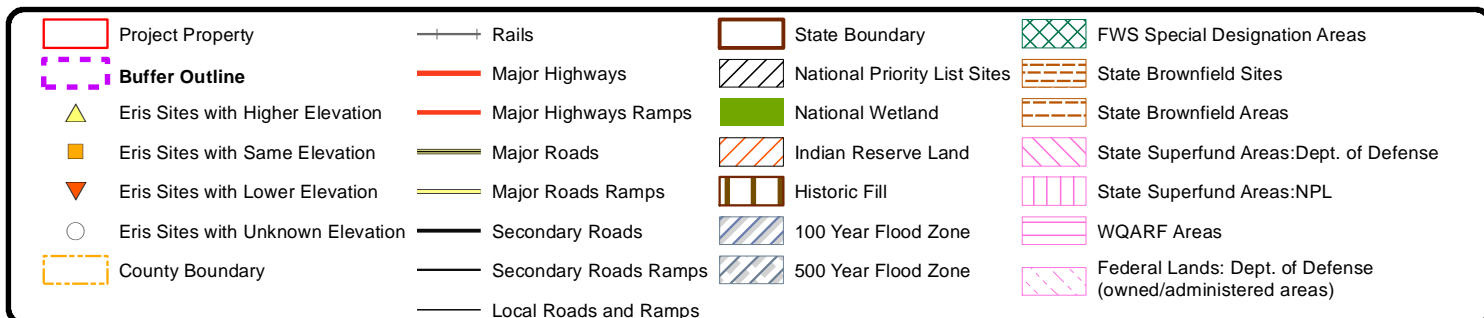
Project Property	Rails	State Boundary	FWS Special Designation Areas
Buffer Outline	Major Highways	National Priority List Sites	State Brownfield Sites
Eris Sites with Higher Elevation	Major Highways Ramps	National Wetland	State Brownfield Areas
Eris Sites with Same Elevation	Major Roads	Indian Reserve Land	State Superfund Areas:Dept. of Defense
Eris Sites with Lower Elevation	Major Roads Ramps	Historic Fill	State Superfund Areas:NPL
Eris Sites with Unknown Elevation	Secondary Roads	100 Year Flood Zone	WQARF Areas
County Boundary	Secondary Roads Ramps	500 Year Flood Zone	Federal Lands: Dept. of Defense (owned/administered areas)
	Local Roads and Ramps		



Map : 0.25 Mile Radius

Order No: 20190605209

Address: , East Palatka, FL



81°31'30"W

81°31'W

29°45'30"N

29°45'30"N

29°45'N

29°45'N

0.1 0.05 0 0.1 Miles

1:8200

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Aerial (2017)

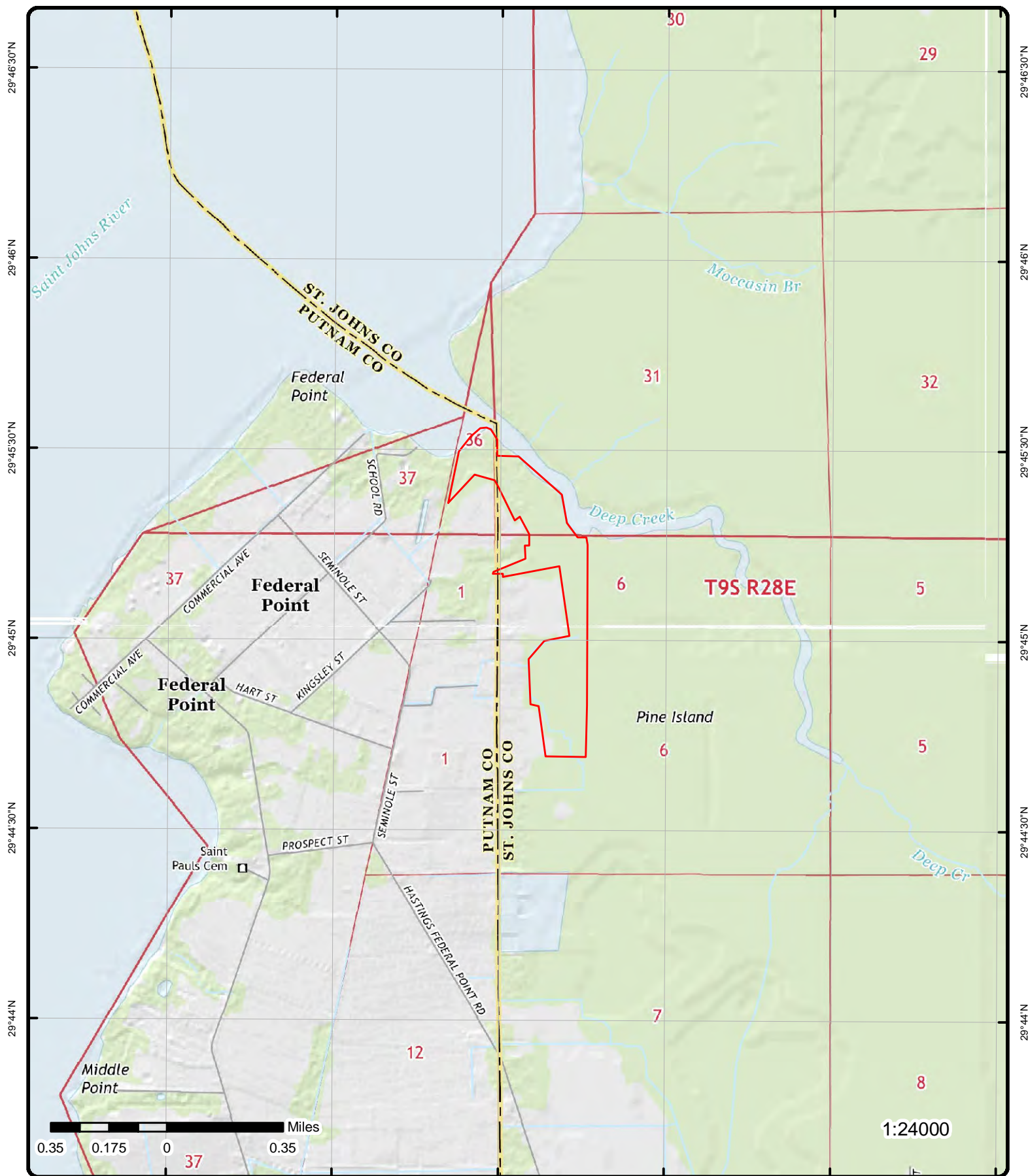
Address: , East Palatka, FL

Source: ESRI World Imagery

Order No: 20190605209



© ERIS Information Inc.



Topographic Map (2015)

Address: , East Palatka, FL

Quadrangle(s): Spuds, FL; Riverdale, FL; Hastings, FL; Elkton, FL;

Source: USGS Topographic Map

Order No: 20190605209



© ERIS Information Inc.

Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 3	NW	0.21 / 1,133.87	1.81 / -2	SATURIWA SPRINGS LLC DBA ANGUILLA FISH FARM 181 SCHOOL RD FEDERAL PT EAST PALATKA FL 32131	AST
<div> <div> Facility ID: 9805186 Facility Status: OPEN ASTS: 1 USTS: 0 Tanks: 1 Facility Type: M Contact: JAMES JACOBY Facility Phone: 9046921050 Owner ID: 77077 Owner Phone: 7703999930 Owner: SATURIWA SPRINGS, LLC Owner Address1: 8200 ROBERTS DRIVE, SUITE 200 Owner Address2: Owner City: ATLANTA Owner State: GA Owner Zip 5: 30350 Owner Zip 4: Type Desc: Agricultural Oculus Docs Inventory URL: https://depdms.dep.state.fl.us/Oculus/servlet/hitlist?action=hitlist&Property=Facility-Site+ID&type=any&catalog=11&searchByType=Property&_PARAM_Facility-Site+ID=9805186 Information Portal Facility URL: http://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?pagination=true&facility.id=9805186 Information Portal Doc URL: http://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9805186/facility!search </div> <div> Lat DD: Lat MM: Lat SS: Long DD: Long MM: Long SS: Lat/Long Method: Bad Addr Indicator: County: PUTNAM Dep Co: C </div> </div>						
Tank Information						
<div> <div> Tank ID: 1 Tank Status: U - In Service Status Date: 9/1/2002 Installation Date: 9/1/2002 Substance: G - Emerg Generator Diesel </div> <div> Determination: Double Walled Gallons: 2000 Placement: ABOVEGROUND Tank Vessel Indic: TANK </div> </div>						
Piping						
<div> <div> Tank ID: 1 </div> <div> Piping Description: B-Steel/galvanized metal </div> </div>						
<div> <div> Tank ID: 1 </div> <div> Piping Description: I-Suction piping system </div> </div>						
<div> <div> Tank ID: 1 </div> <div> Piping Description: A-Abv, no soil contact </div> </div>						
Monitoring						
<div> Monitoring Desc: V-Suction pump check valve </div>						
<div> Monitoring Desc: Q-Visual inspection of ASTs </div>						
<div> Monitoring Desc: 6-External piping monitoring </div>						
<div> Monitoring Desc: F-Monitor dbl wall tank space </div>						

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	2 of 3	NW	0.21 / 1,133.87	1.81 / -2	SATURIWA SPRINGS LLC DBA ANGUILLA FISH FARM 181 SCHOOL RD FEDERAL PT EAST PALATKA FL 32131	STCS

Facility ID: 9805186
Name (STCM): Saturiwa Springs Llc DbA Anguilla Fish Farm
 181 School Rd Federal Pt
 East Palatka, FL 32131
Facility Status: OPEN
Facility Type: M - Agricultural
Fac Cleanup Status:
Cleanup Stat Eff Dt:
Address (Open Data): 181 SCHOOL RD FEDERAL PT
City (Open Data): EAST PALATKA
Zip (Open Data): 32131
County (Open Data): PUTNAM
District:
Status (Open Data): REVIEWED
Direct:
Documents: <http://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9805186/gis-facility!search>
Note: Additional Facility and Tank information is from individual facility search results retrieved Feb 27, 2019.

Additional Facility Info (STCM Monitoring Search)

Status: Open
Contact: Dugan Whiteside
Phone: 904-692-1050
Account Owner: Saturiwa Springs, Llc
District: NED
Latitude: 29:45:15.0720
Longitude: 81:31:48.4425
LL Method: DGPS - Autonomous GPS

Tank Info (STCM Monitoring Search)

Tank #: 1
Size: 2000
Content: Emerg Generator Diesel
Construction: C - Steel
 I - Double Wall
 M - Spill Containment Bucket
Piping: A - Abv, No Soil Contact
 B - Steel/Galvanized Metal
 I - Suction Piping System
Monitoring: 6 - External Piping Monitoring
 F - Monitor Dbl Wall Tank Space
 Q - Visual Inspection Of Asts
 V - Suction Pump Check Valve
Tank Status: In Service
Installed: 09/01/2002
Placement: ABOVE

1	3 of 3	NW	0.21 / 1,133.87	1.81 / -2	ANGUILLA FISH FARMS 181 SCHOOL ROAD EAST PALATKA FL 32121	SWF/LF
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Facility ID: 103168
Resp Authority:
RA Address:
RA City:
RA State:
RA Zip:
RA Phone No.:
RA Email :
Site Supervisor:
SS Address:
SS City:
SS State:
SS Zip:
SS Phone No.:
SS Email:
LO Phone No.:
Fac Type (Geodata): Solid Waste
Fac Status (Geodata): Not Yet Determined
Status Dt (Geodata): 2016-11-09T00:00:00.000Z
Ownership (Geodata): Private
City (Geodata): East Palatka
Zip4 (Geodata):
Zip5 (Geodata): 32121
District (Geodata): NED
Office (Geodata): Northeast District
County ID (Geodata): 54
County (Geodata): Putnam
County: PUTNAM
District: NED
Section:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
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Land Owner:					Township:	
LO Address:					Range:	
LO City:					Latitude:	29:45:14.8027
LO State:					Longitude:	81:31:46.8131
LO Zip:						
Facility Name (Geodata):		ANGUILLA FISH FARMS				
Address (Geodata):		181 SCHOOL ROAD				
Documents (Geodata):		http://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/103168/gis-facility!search				
Reports (Geodata):		https://fldeploc.dep.state.fl.us/WWW_WACS/Reports/SW_Facility_Inventory_res2.asp?wacsid=103168				
Information Portal Facility URL:		http://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?pagination=true&facility.id=103168				
Oculus Docs Inventory URL:		https://depedms.dep.state.fl.us/Oculus/servlet/hitlist?action=hitlist&Property=Facility-Site+ID&type=any&catalog=8&searchByType=Property&_PARA_Facility-Site+ID=103168				
Data Source:		Solid Waste Facility Inventory Report; Florida DEP Geospatial Open Data				

Class details

Class Type:	595
Class:	UNAUTHORIZED DISPOSAL/PROCESSING-COMPLAINT
Class Status:	NOT YET DETERMINED (D)

Solid Waste Facility Inventory Geospatial Open Data

Object ID:	9121	Coord Method ID:	Digital Aerial Photography
Object of Interest:	Facility	Accuracy Level:	3
Class Status:		Accuracy:	1.1 - 10 meters
Lat DD:	29	QA Status:	Reviewed
Lat MM:	45	Collector User Name:	HORNICK_N
Lat SS:	14.8027	Collect Date:	2016-11-09T00:00:00.000Z
Long DD:	81	Verify Method ID:	DPHO
Long MM:	31	Verifier User Name:	HORNICK_N
Long SS:	46.8131	Verification Date:	2016-11-09T00:00:00.000Z
Datum ID:	NAD83		
Class:			
Proximity:	Approximate feature location		

Unplottable Summary

Total: 0 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
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No unplottable records were found that may be relevant for the search criteria.

Unplottable Report

No unplottable records were found that may be relevant for the search criteria.

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List:

NPL

National Priorities List (Superfund)-NPL: EPA's (United States Environmental Protection Agency) list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action.

Government Publication Date: Apr 11, 2019

National Priority List - Proposed:

PROPOSED NPL

Includes sites proposed (by the EPA, the state, or concerned citizens) for addition to the NPL due to contamination by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.

Government Publication Date: Apr 11, 2019

Deleted NPL:

DELETED NPL

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.

Government Publication Date: Apr 11, 2019

SEMS List 8R Active Site Inventory:

SEMS

The Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted.

Government Publication Date: Apr 11, 2019

Inventory of Open Dumps, June 1985:

ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

SEMS List 8R Archive Sites:

SEMS ARCHIVE

The Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.

Government Publication Date: Apr 11, 2019

Comprehensive Environmental Response, Compensation and Liability Information System -

CERCLIS

CERCLIS:

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands:

IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned:

CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means 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 this site on the National Priorities List (NPL). This 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 a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens:

CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action:

RCRA CORRACTS

RCRA Info 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. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Mar 4, 2019

RCRA non-CORRACTS TSD Facilities:

RCRA TSD

RCRA Info 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. This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Government Publication Date: Mar 4, 2019

RCRA Generator List:

RCRA LQG

RCRA Info 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. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Mar 4, 2019

RCRA Small Quantity Generators List:

RCRA SQG

RCRA Info is the 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. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Mar 4, 2019

RCRA Conditionally Exempt Small Quantity Generators List:[RCRA CESQG](#)

RCRA Info is the 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. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Conditionally Exempt Small Quantity Generators (CESQG) generate 100 kilograms or less per month of hazardous waste or one kilogram or less per month of acutely hazardous waste.

Government Publication Date: Mar 4, 2019

RCRA Non-Generators:[RCRA NON GEN](#)

RCRA Info 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. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Mar 4, 2019

Federal Engineering Controls-ECs:[FED ENG](#)

Engineering controls (ECs) encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Sep 20, 2018

Federal Institutional Controls- ICs:[FED INST](#)

Institutional controls are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's (United States Environmental Protection Agency) expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site.

Government Publication Date: Sep 20, 2018

Emergency Response Notification System:[ERNS 1982 TO 1986](#)

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System:[ERNS 1987 TO 1989](#)

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System:[ERNS](#)

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Mar 21, 2019

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database:[FED BROWNFIELDS](#)

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 protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 11, 2019

FEMA Underground Storage Tank Listing:[FEMA UST](#)

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Petroleum Refineries:

REFN

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Jul 17, 2018

Petroleum Product and Crude Oil Rail Terminals:

BULK TERMINAL

List of petroleum product and crude oil rail terminals made available by the U.S. Energy Information Administration (EIA). Includes operable bulk petroleum product terminals located in the 50 States and the District of Columbia with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil that were active between 2017 and 2018. Petroleum product terminals comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings. Survey locations adjusted using public data.

Government Publication Date: Jan 18, 2019

LIEN on Property:

SEMS LIEN

The EPA Superfund Enterprise Management System (SEMS) provides LIEN information on properties under the EPA Superfund Program.

Government Publication Date: Apr 11, 2019

Superfund Decision Documents:

SUPERFUND ROD

This database contains a listing of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD), along with other associated memos and files. This information is maintained and made available by the US EPA (Environmental Protection Agency).

Government Publication Date: Apr 11, 2019

State**Superfund Waste Cleanup & State-Funded Action Sites:**

SHWS

List of hazardous waste cleanup sites participating in various federal and state funded cleanup programs. Florida's State-Funded Action Sites and Superfund Waste Cleanup Sites lists are maintained and made available by the Florida Department of Environmental Protection (FDEP). This database is state equivalent CERCLIS.

Government Publication Date: Mar 4, 2019

Delisted State-Funded Action Sites:

DSHW

This database contains a list of closed hazardous waste sites of various federal and state funded cleanup programs that were removed from the Florida Department of Environmental Protection (FDEP).

Government Publication Date: Mar 4, 2019

Waste Cleanup Responsible Party Sites:

WCRPS

List of Open, Closed, and Inactive Waste Cleanup Responsible Party sites made available by the Florida Department of Environmental Protection.

Government Publication Date: Jan 31, 2019

Delisted Waste Cleanup Responsible Party Sites:

DELISTED WCRPS

List of sites which once appeared on - and have since been removed from - the list of Waste Cleanup Responsible Party Sites made available by the Florida Department of Environmental Protection.

Government Publication Date: Jan 31, 2019

Solid Waste Facilities and Landfills:

SWF/LF

The Solid Waste Facility Inventory Report made available by the Florida Department of Environmental Protection (FDEP) includes all types of authorized and unauthorized facilities: municipal solid waste, landfills, dumps, construction and demolition disposal, recycling facilities, and more.

Government Publication Date: Jan 15, 2019

Leaking Tanks:

LST

The Storage Tank Regulation Section is part of the Petroleum Restoration Program in the Florida Department of Environmental Protection (FDEP)'s Division of Waste Management. In 1983, Florida was one of the first states in the union to pass legislation and adopt rules for underground and aboveground storage tank systems. Since then, over 28,000 facilities have reported discharges of petroleum products from storage tank systems. Florida relies on groundwater for about 92 percent of its drinking water needs, and has some of the most stringent rules in the country.

Delisted Leaking Tanks:

[DELISTED LST](#)

Whereas Leaking Tanks (LST) includes only facilities which currently have contamination as recorded by the Florida Department of Environmental Protection, this list contains facilities which were once included in LST data but no longer appear on the list made available by FDEP. Facilities may be removed from the current LST list because the discharge has been cleaned up, or the discharge is not required for 62-770.

Government Publication Date: Apr 12, 2019

Underground Storage Tanks:

[UST](#)

List of underground storage tank locations made available by the Florida Department of Environmental Protection (FDEP). In an effort to minimize the occurrence and environmental risks of releases and discharges, FDEP administers standards pertaining to the construction, installation, operation, maintenance, repair, closure, and disposal of underground storage tank systems that store regulated substances.

Government Publication Date: Apr 4, 2019

Aboveground Storage Tanks:

[AST](#)

The Florida Department of Environmental Protection (FDEP) provides standards for aboveground storage tanks (ASTs) that have individual storage tank capacities greater than 550 gallons. The state also regulates the registration, construction, installation, operation, maintenance, repair, closure, and disposal of storage tank systems that store regulated substances. The listing of regulated aboveground storage tank facilities is maintained by FDEP.

Government Publication Date: Apr 4, 2019

Delisted AST UST Storage Tanks:

[DEL UST AST TANK](#)

This database contains a list of closed UST and AST storage tank sites that were removed from the Florida Department of Environmental Protection (FDEP) storage tank database.

Government Publication Date: Jul 2, 2015

Delisted Storage Tanks:

[DEL STORAGE TANK](#)

This database contains a list of closed storage tank sites that were removed from the Florida Department of Environmental Protection (FDEP) storage tank database.

Government Publication Date: Apr 4, 2019

Federal Facilities Listing:

[FF TANKS](#)

The Florida Department of Environmental Protection (FDEP) Storage Tank Program registers facilities and storage tanks where aboveground or underground storage tanks store pollutants, hazardous substances, and/or mineral acid substances regulated by Chapter 62-761, Florida Administrative Code, or when aboveground storage tanks or compression vessels store a hazardous substance which requires registration according to Chapter 376, Florida Statutes.

Government Publication Date: Feb 20, 2019

Storage Tank/Contaminated Facility Search:

[STCS](#)

List of facilities and tanks in the Florida Department of Environmental Protection (FDEP) Bureau of Petroleum Storage Systems Storage Tank/Contaminated Facility Search which do not currently have active, regulated underground or aboveground storage tanks (USTs or ASTs) containing petroleum. Note that tank details do not appear for facilities for which all tanks have been removed.

Government Publication Date: Feb 27, 2019

Institutional Controls Registry:

[INST](#)

The Institutional Controls registry is maintained by the Florida Department of Environmental Protection (FDEP). The registry aims to help preserve adequate protection of contaminated soil regions and help to minimize any chances of exposure.

Government Publication Date: Dec 9, 2018

Engineering Controls:

[ENG](#)

A listing of all engineering controls that are in place to eliminate or reduce the potential for contaminant migration and exposure to contaminants. These controls may include caps, barriers, guards or fences. The list is maintained by the Florida Department of Environmental Protection (FDEP).

Government Publication Date: Dec 9, 2018

Voluntary Cleanup Sites:

[VCP](#)

A listing of active and closed voluntary cleanup sites registered by the Florida Department of Environmental Protection (FDEP).

Government Publication Date: Mar 19, 2019

Brownfield Sites:

BROWNFIELDS

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. This is a list of sites within designated Brownfield Areas within Florida where Brownfield Site Rehabilitation Agreement (BSRA)s have been executed between FDEP and a responsible party.
Government Publication Date: Apr 2, 2019

Brownfield Areas:

BROWNFIELD AREA

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. This is a list of Brownfield Areas, defined by the FDEP as contiguous areas of one or more brownfield sites, some of which may not be contaminated, that have 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. Because a variety of sources and methods were used to derive information for this data, locations are approximate.
Government Publication Date: Apr 2, 2019

Tribal**Leaking Underground Storage Tanks (LUSTs) on Indian Land:**

INDIAN LUST

Leaking Underground Storage Tanks (LUSTs) on Tribal/Indian Lands in EPA Region 4, which includes Florida.
Government Publication Date: Oct 14, 2017

Underground Storage Tanks (USTs) on Indian Lands:

INDIAN UST

Listing of underground storage tanks (USTs) on Tribal/Indian Lands in EPA Region 4, which includes Florida.
Government Publication Date: Oct 14, 2017

Delisted Tribal Leaking Storage Tanks:

DELISTED ILST

Leaking Underground Storage Tank facilities which have been removed from the Regional Tribal LUST lists made available by the EPA.
Government Publication Date: Oct 14, 2017

Delisted Tribal Underground Storage Tanks:

DELISTED IUST

Underground Storage Tank facilities which have been removed from the Regional Tribal UST lists made available by the EPA.
Government Publication Date: Oct 14, 2017

County**Broward County Aboveground Storage Tanks:**

BROWARD AST

List of known regulated aboveground storage tanks within Broward County, including those tanks that have been closed. The list is maintained by Broward County Government.
Government Publication Date: Dec 11, 2018

Broward County Inventory Report on Contaminated Locations:

BROWARD CONTAM

The Inventory Report of Contaminated Locations has been prepared by the Broward County Environmental Protection and Growth Management Department to monitor known contaminated locations within Broward County, Florida. This report includes sites listed by the United States Environmental Protection Agency (USEPA), the Florida Department of Environmental Protection (FDEP), and sites licensed for contamination assessment and cleanup by the Pollution Prevention, Remediation and Air Quality Division of the Department.
Government Publication Date: Dec 5, 2018

Broward County Underground Storage Tanks:

UST BROWARD

List of all known regulated underground storage tanks within Broward County, including those tanks that have been closed. The list is maintained by Broward County Government.
Government Publication Date: Dec 11, 2018

Hillsborough County Landfills:

HILLS SWF/LF

List of Landfill sites in Hillsborough County regulated by Hillsborough County Government in Florida. Landfills or solid waste disposal units are classified according to the amount and types of waste received. Rule 62-701.340(3), F.A.C. classifies landfills in Florida as Class I, Class II, Class I and Class II, and Class III. Class I landfills are those which receive an average of 20 tons or more of solid waste per day. Class II landfills are those which receive an average of less than 20 tons of solid waste per day. Class I and Class II landfills receive general, non-hazardous household, commercial, industrial, and agricultural wastes, subject to the restrictions of Rules 62-701.300 and 62-701.520, F.A.C.

Government Publication Date: Mar 5, 2018

Miami-Dade County Contaminated Sites:

[MIAMI CONT](#)

The Department of Environmental Resources Management (DERM) maintains a list of Contaminated Sites in Miami-Dade County.

Government Publication Date: May 6, 2019

Miami-Dade County Storage Tanks:

[MIAMI TANKS](#)

A listing of Underground and Aboveground Storage Tank sites in Miami-Dade County, as recorded by the Department of Environmental Resources Management (DERM) Storage Tanks Program. The program conducts annual inspections to verify that facility owners are complying with the necessary requirements that have been set up to prevent any discharges into the groundwater of Miami-Dade County. In addition to compliance inspections, the Storage Tanks program oversees removal and installation of new underground and aboveground storage systems to verify that these are conducted in accordance with applicable state and local regulations.

Government Publication Date: Feb 6, 2019

Palm Beach County Solid Waste Facilities:

[PALM SWF/LF](#)

Inventory of solid waste facility sites in Palm Beach County. A solid waste site is defined as any parcel of land upon which or in which solid waste has either been processed, transferred, or placed for disposal. These sites include dumps, landfills, solid waste management facilities, waste transfer stations, selected hazardous waste spill or burial sites, and wastewater sludge land application sites. The inventory is maintained by Solid Waste Authority Palm Beach County.

Government Publication Date: Apr 1, 2016

Additional Environmental Record Sources

Federal

Toxics Release Inventory (TRI) Program:

[TRIS](#)

The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment.

Government Publication Date: Dec 31, 2017

Hazardous Materials Information Reporting System:

[HMIRS](#)

US DOT - Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Incidents Reports Database taken from Hazmat Intelligence Portal, U.S. Department of Transportation.

Government Publication Date: Jan 8, 2019

National Clandestine Drug Labs:

[NCDL](#)

The U.S. Department of Justice ("the Department") provides this data 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.

Government Publication Date: Jul 18, 2018

Toxic Substances Control Act:

[TSCA](#)

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI).

Government Publication Date: Jun 30, 2017

Hist TSCA:

HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing:

FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing:

FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List:

PRP

Early in the cleanup process, the Environmental Protection Agency (EPA) conducts a search to find the potentially responsible parties (PRPs). EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site.

Government Publication Date: Dec 20, 2018

State Coalition for Remediation of Drycleaners Listing:

SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS):

ICIS

The Integrated Compliance Information System (ICIS) is a system that provides information for the Federal Enforcement and Compliance (FE&C) and the National Pollutant Discharge Elimination System (NPDES) programs. The FE&C component supports the Environmental Protection Agency's (EPA) Civil Enforcement and Compliance program activities. These activities include Compliance Assistance, Compliance Monitoring and Enforcement. The NPDES program supports tracking of NPDES permits, limits, discharge monitoring data and other program reports.

Government Publication Date: Nov 18, 2016

Drycleaner Facilities:

FED DRYCLEANERS

A list of drycleaner facilities from the Integrated Compliance Information System (ICIS). The Environmental Protection Agency (EPA) tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: May 29, 2018

Delisted Drycleaner Facilities:

DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: May 29, 2018

Formerly Used Defense Sites:

FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DoD) is responsible for an environmental restoration. This list is published by the U.S. Army Corps of Engineers.

Government Publication Date: Oct 23, 2018

Material Licensing Tracking System (MLTS):[MLTS](#)

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: Nov 1, 2018

Historic Material Licensing Tracking System (MLTS) sites:[HIST MLTS](#)

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File:[MINES](#)

The Master Index File (MIF) contains mine identification numbers issued by the Department of Labor Mine Safety and Health Administration (MSHA) for mines active or opened since 1971. Note that addresses may or may not correspond with the physical location of the mine itself.

Government Publication Date: Nov 30, 2018

Alternative Fueling Stations:[ALT FUELS](#)

List of alternative fueling stations made available by the US Department of Energy's Office of Energy Efficiency & Renewable Energy. Includes Biodiesel stations, Ethanol (E85) stations, Liquefied Petroleum Gas (Propane) stations, Ethanol (E85) stations, Natural Gas stations, Hydrogen stations, and Electric Vehicle Supply Equipment (EVSE). The National Renewable Energy Laboratory (NREL) obtains information about new stations from trade media, Clean Cities coordinators, a Submit New Station form on the Station Locator website, and through collaborating with infrastructure equipment and fuel providers, original equipment manufacturers (OEMs), and industry groups.

Government Publication Date: Apr 8, 2019

Registered Pesticide Establishments:[SSTS](#)

List of active EPA-registered foreign and domestic pesticide-producing and device-producing establishments based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that facilities producing pesticides, active ingredients, or devices be registered. The list of establishments is made available by the EPA.

Government Publication Date: Sep 1, 2018

Polychlorinated Biphenyl (PCB) Notifiers:[PCB](#)

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Mar 20, 2019

State**Priority Ranking List:**[PRIORITYCLEAN](#)

The Florida Legislature has established a state-funded program to cleanup properties that are contaminated as a result of the operations of a drycleaning facility or wholesale supply facility (Chapter 376, Florida Statutes). The program is administered by the Florida Department of Environmental Protection (FDEP). The statute was sponsored by the drycleaning industry to address environmental, economic, and liability issues resulting from drycleaning solvent contamination. The program provides limited liability protection to the owner, operator and real property owner of drycleaning or wholesale supply facilities for cleanup of drycleaning solvent contamination if the parties meet the eligibility conditions stated in the law.

Government Publication Date: Apr 3, 2019

Dry Cleaning Facilities:[DRYCLEANERS](#)

A listing of dry cleaning facilities registered with the Florida Department of Environmental Protection (FDEP). The information contains facility identification number, site location information, related party (owner) information, and facility type and status. Data is taken from the Storage Tank & Contamination Monitoring database, the registration repository of dry cleaner facility data.

Government Publication Date: Feb 21, 2019

Delisted Dry Cleaning Facilities:[DELISTED DRYCLEANERS](#)

List of sites removed from the drycleaners database made available by the Florida Department of Environmental Conservation (DEC).

Government Publication Date: Feb 21, 2019

Contaminated Sites:[DWM CONTAM](#)

Florida Department of Environmental Protection (FDEP) Division of Waste Management (DWM) listing of active or known sites that include sites requiring cleanup but are not actively being worked on due to the agency's lack of funding (primarily petroleum and drycleaning).

Government Publication Date: Jan 28, 2019

Delisted Contaminated Sites:[DEL CONTAM SITE](#)

List of sites which were once included on the Florida Department of Environmental Protection (FDEP) Division of Waste Management (DWM)'s Contaminated Sites list. As sites on the Contaminated Sites (CS) list are cleaned up or closed under risk based corrective action, they are removed from the CS list.

Government Publication Date: Sep 30, 2015

Underground Injection Control Wells:[UIC](#)

Class I Underground Injection Control (UIC) wells that are currently or were previously active, as well as proposed sites, regulated by the Florida Department of Environmental Protection (FDEP). Class I UIC wells are used to inject nonhazardous waste, hazardous waste (new hazardous waste wells were banned in 1983), or municipal waste below the lowermost underground source of drinking water.

Government Publication Date: Mar 4, 2019

Well Surveillance Program Facilities:[WELL SURVEILLANCE](#)

List of facilities made available by the Florida Health Well Surveillance group. The Well Surveillance group manages several programs to identify and monitor areas in Florida where contaminated drinking water is suspected and may pose a threat to public health. The section coordinates with the County Health Departments (CHDs) to locate potable wells and conduct water sampling for contaminants of concern. The Well Surveillance Section is composed of the State Underground Petroleum Environmental Response Act (SUPER Act), Drinking Water Toxics Program (Toxics), Drycleaner Solvent Cleanup Program (DSCP). Includes locations of known cattle dipping vats.

Government Publication Date: Apr 4, 2019

Tier 2 Report:[TIER 2](#)

A list of Tier 2 facilities in the state of Florida. The list tracks the inventory of chemicals within a particular facility. This list is provided by the Florida Division of Emergency Management.

Government Publication Date: Aug 27, 2018

Tribal

No Tribal additional environmental record sources available for this State.

County**Alachua County Regulated Facility List:**[ALACHUA RF](#)

List of facilities regulated by the Environmental Protection Department under the Alachua County Hazardous Materials Management Code (HMMC). The HMMC regulates the management of hazardous materials to prevent discharges to the environment and provide uniform standards for the proper storage, handling and monitoring hazardous materials in the county.

Government Publication Date: Apr 12, 2019

Broward County Hazardous Material Sites:[BROWARD HAZ MAT](#)

The Pollution Prevention Division of Broward County tracks sites that store hazardous materials.

Government Publication Date: Dec 10, 2018

Broward County Notice of Violation Sites:[BROWARD NOV](#)

A list of Notice of Violation Sites issued by the Community Code Compliance Section of the Planning and Redevelopment Division of Broward County.

Government Publication Date: Dec 11, 2018

Miami-Dade County Air Permit Sites:[MIAMI AP](#)

List of facilities which have applied for a Miami-Dade County Air Operating Permit. Permits are required for any air pollution source subsequent to construction or modification of the facility, and after demonstrating compliance with the terms and condition of the county air construction permit. Facilities with the potential to emit the following air pollutants may require a County operating permit: Particulate Matter (PM), Sulfur Dioxide (SO₂), Nitrogen Oxides (NO_x), Carbon Monoxide (CO), Volatile organic compounds (VOCs), Lead, and Hazardous Air pollutants (HAPs). Depending on the type of facility and the amount of air emissions, the State of Florida may require a facility permit.

Government Publication Date: May 7, 2019

Miami-Dade County Enforcement Case Tracking System Sites:

[MIAMI ENFORCE](#)

Enforcement cases supervised by the Department of Environmental Resources Management in Miami-Dade County.

Government Publication Date: May 14, 2019

Miami-Dade County Fuel Spill Cases:

[MIAMI SPILLS](#)

The Miami-Dade County Department of Environmental Resources Management (DERM) documents fuel spill sites that are not administered by a state program.

Government Publication Date: May 6, 2019

Miami-Dade County Grease Trap Permit Sites:

[MIAMI GREASE](#)

Any non-residential facilities that prepare or process food, discharge or have the potential to discharge oil and grease to the public sanitary sewer system, require a Grease Discharge Operating (GDO) Permit. These permits are granted by the Division of Environmental Resources Management (DERM) of Miami-Dade's Department of Regulatory and Economic Resources.

Government Publication Date: May 7, 2019

Miami-Dade County Industrial Waste Permit Sites:

[MIAMI IND WASTE](#)

List of permits used to regulate facilities that store, handle, use or generate hazardous materials or hazardous waste throughout Miami-Dade County. The permit provides operating conditions and requirements as well as guidance for the operators.

Government Publication Date: May 7, 2019

Miami-Dade County Industrial Facilities (IW5) Small Quantity Generators:

[MIAMI WASTE GEN](#)

List of sites with Industrial Facilities (IW5) permits, made available by the Miami-Dade Department of Environmental Resources Management (DERM). The Industrial Facilities (IW5) permit is used to regulate facilities that use or store small quantity hazardous materials or waste.

Government Publication Date: May 7, 2019

Miami-Dade County Marine Facilities Operating Permit:

[MIAMI MOP](#)

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 the Miami-Dade County Department of Environment Resources Management: recreational boat docking facilities with 10 or more boat slips, moorings, davit spaces, and vessel tie-up spaces; boat storage facilities contiguous to tidal waters in Miami-Dade County with 10 or more dry storage spaces (including boatyards and boat manufacturing facilities); and commercial boat docking facilities, regardless of the number of slips - this includes the Port of Miami, Terminal Island and shipping terminals on the Miami River. Miami-Dade County is governed by the Public Records Act Chapter 119, Florida Statutes. These records made available by the Regulatory and Economic Resources Department.

Government Publication Date: May 7, 2019

Miami-Dade County River Enforcement:

[MIAMI MRE](#)

List of enforcement cases for sites on or near the Miami River regulated by the Miami-Dade County Government, Florida. The list has all environmental information on said property coordinated and compiled by the Enforcement Section.

Government Publication Date: Nov 19, 2013

Miami-Dade Industrial Facilities (IW6) Permits in Wellfield Protection Areas:

[MIAMI SEPTIC](#)

List of sites with Industrial Facilities (IW6) permits, made available by the Miami-Dade Department of Environmental Resources Management (DERM). The Industrial Facilities (IW6) permit is used to regulate facilities within several environmentally-sensitive Wellfield Protection areas. The permit provides operating conditions and requirements as well as guidance for the operator. It is necessary to protect both the public and the environment from the consequences of improper storage, generations, disposal or handling of hazardous material and hazardous waste.

Government Publication Date: May 7, 2019

Delisted County Records:

[DELISTED COUNTY](#)

Records removed from county databases. Records may be removed from the county lists made available by the respective county departments because they are inactive, or because they have been deemed to be below reportable thresholds.

Government Publication Date: May 6, 2019

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

APPENDIX F

SUPPORTING DOCUMENTATION

X3. USER QUESTIONNAIRE

FREEMAN PROPERTY, ST. JOHNS COUNTY (LA 2017-029)

Introduction:

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the “*Brownfields Amendments*”), the *user* must provide the following information (if available) to the *environmental professional*. Failure to provide this information could result in a determination that “all appropriate inquiry” is not complete.

1. Did a search of recorded land title records (or judicial records where appropriate) identify any environmental liens filed or recorded against the property under federal, tribal, state or local law?

50 year chain of title with a lien search will be provided to Aerostar.

2. Did a search of recorded land title records (or judicial records where appropriate) identify any Activity Use Limitations (AULs), such as engineering controls, land use restrictions, or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state or local law?

50 year chain of title with a lien search will be provided to Aerostar.

3. Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants or the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

No

4. Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

Yes

5. Are you aware of commonly known or reasonably ascertainable information about the property that would help Aerostar SES, LLC to identify conditions indicative of releases or threatened releases? **No**

For example:

- a. Do you know the past uses of the property?
- b. Do you know of specific chemicals that are present or once were present at the property?
- c. Do you know of spills or other chemical releases that have taken place at the property?
- d. Do you know of any environmental cleanups that have taken place at the property?

6. Based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of releases at the property? **No**

7. Why is the Phase I ESA being performed?

Due diligence for land acquisition.

Completed by: Carol Brown, P.E.

Date: June 6, 2019



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

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

Custom Soil Resource Report for **St. Johns County, Florida**



June 6, 2019

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
St. Johns County, Florida.....	13
18—Floridana fine sand, 0 to 2 percent slopes, frequently flooded.....	13
21—Wabasso fine sand, 0 to 2 percent slopes.....	14
36—Riviera fine sand, frequently flooded.....	16
58—EauGallie fine sand.....	18
62—Floridana fine sand, 0 to 2 percent slopes.....	20
66—Terra Ceia muck, 0 to 1 percent slopes, frequently flooded.....	22
References	25

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

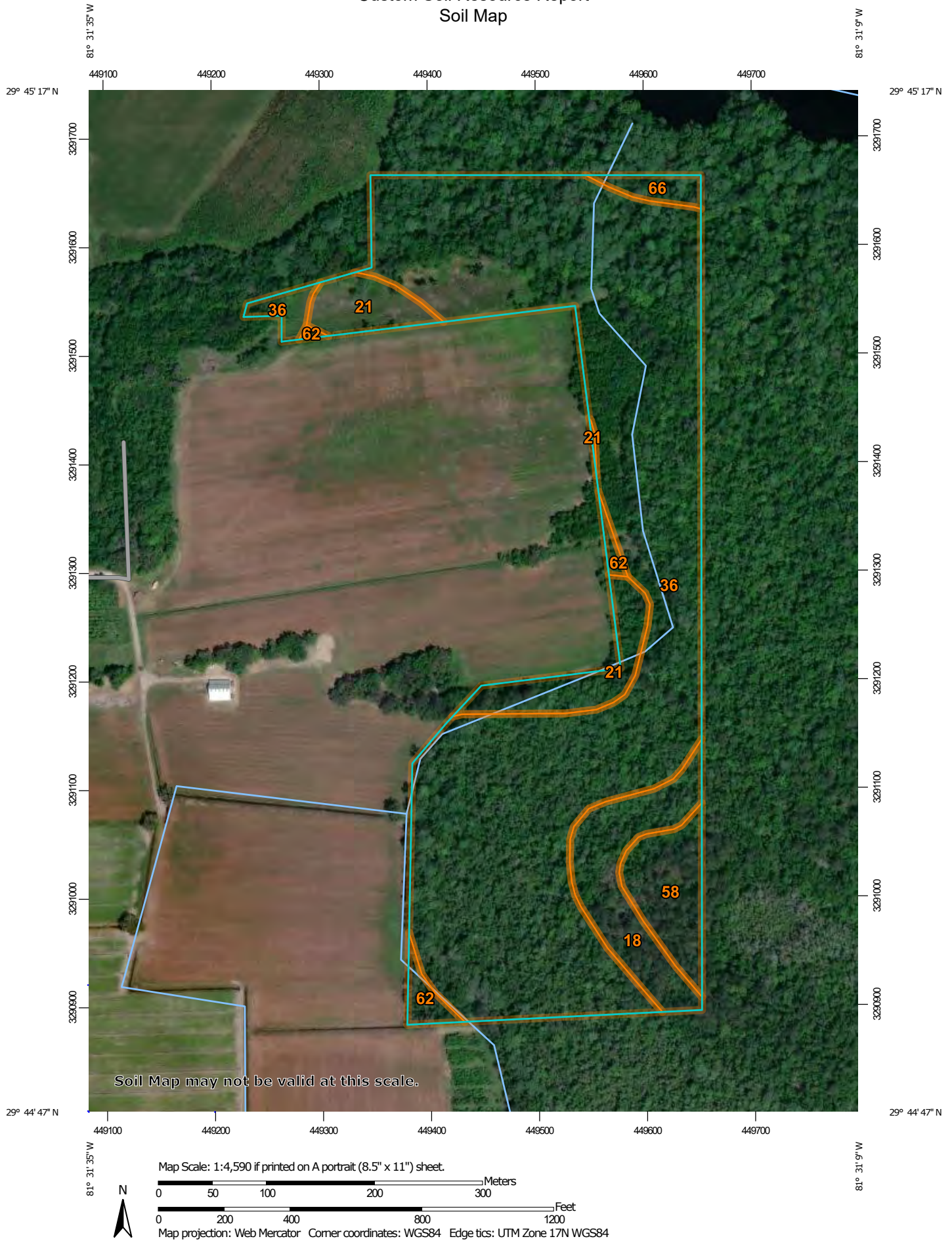
Custom Soil Resource Report

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

Soil Map

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.


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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

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

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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: St. Johns County, Florida
Survey Area Data: Version 17, Sep 11, 2018

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

Date(s) aerial images were photographed: Dec 31, 2009—Sep 13, 2017

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
18	Floridana fine sand, 0 to 2 percent slopes, frequently flooded	3.1	7.9%
21	Wabasso fine sand, 0 to 2 percent slopes	2.9	7.5%
36	Riviera fine sand, frequently flooded	30.1	76.8%
58	EauGallie fine sand	2.0	5.0%
62	Floridana fine sand, 0 to 2 percent slopes	0.6	1.6%
66	Terra Ceia muck, 0 to 1 percent slopes, frequently flooded	0.5	1.3%
Totals for Area of Interest		39.2	100.0%

Map Unit Descriptions

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

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

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

was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

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

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

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

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

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

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

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

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

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

St. Johns County, Florida

18—Floridana fine sand, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2sm5g
Elevation: 0 to 50 feet
Mean annual precipitation: 45 to 62 inches
Mean annual air temperature: 66 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Floridana and similar soils: 86 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Floridana

Setting

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

Typical profile

A - 0 to 13 inches: fine sand
E - 13 to 28 inches: fine sand
Btg - 28 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum in profile: 14 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Forage suitability group: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Minor Components

Riviera

Percent of map unit: 6 percent

Landform: Depressions on marine terraces

Landform position (three-dimensional): Tread, dip

Down-slope shape: Concave

Across-slope shape: Concave

Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL)

Hydric soil rating: Yes

Holopaw

Percent of map unit: 6 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Tread, dip

Down-slope shape: Linear

Across-slope shape: Linear, concave

Other vegetative classification: Slough (R155XY011FL)

Hydric soil rating: Yes

Gator

Percent of map unit: 2 percent

Landform: Depressions on marine terraces

Landform position (three-dimensional): Tread, dip

Down-slope shape: Concave

Across-slope shape: Concave

Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL)

Hydric soil rating: Yes

21—Wabasso fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2svzg

Elevation: 0 to 130 feet

Mean annual precipitation: 38 to 64 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

Wabasso and similar soils: 85 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, tal

Down-slope shape: Convex, linear

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Across-slope shape: Linear

Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 4 inches: fine sand

E - 4 to 16 inches: fine sand

Bh - 16 to 28 inches: fine sand

E' - 28 to 32 inches: fine sand

Btg - 32 to 48 inches: fine sandy loam

Ckg - 48 to 80 inches: loamy fine sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 5 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Moderate (about 7.1 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: South Florida Flatwoods (R155XY003FL)

Hydric soil rating: No

Minor Components

Riviera

Percent of map unit: 4 percent

Landform: Drainageways on marine terraces, flats on marine terraces

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

Down-slope shape: Linear

Across-slope shape: Concave, linear

Ecological site: Slough (R155XY011FL)

Other vegetative classification: Slough (R155XY011FL)

Hydric soil rating: Yes

Myakka

Percent of map unit: 4 percent

Landform: Drainageways on flatwoods on marine terraces

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

Down-slope shape: Linear

Across-slope shape: Linear, concave

Other vegetative classification: South Florida Flatwoods (R155XY003FL)

Hydric soil rating: No

Basinger

Percent of map unit: 3 percent
Landform: Drainageways on flats, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear, convex, concave
Across-slope shape: Concave, linear
Other vegetative classification: Slough (R155XY011FL)
Hydric soil rating: Yes

Malabar

Percent of map unit: 2 percent
Landform: — error in exists on —
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Other vegetative classification: Slough (R155XY011FL)
Hydric soil rating: Yes

Felda

Percent of map unit: 1 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: Slough (R155XY011FL)
Other vegetative classification: Slough (R155XY011FL)
Hydric soil rating: Yes

Pinellas

Percent of map unit: 1 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Cabbage Palm Flatwoods (R155XY005FL)
Hydric soil rating: No

36—Riviera fine sand, frequently flooded

Map Unit Setting

National map unit symbol: 1hqjc
Elevation: 10 to 60 feet
Mean annual precipitation: 49 to 57 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 282 to 312 days
Farmland classification: Not prime farmland

Map Unit Composition

Riviera, frequently flooded, and similar soils: 85 percent
Minor components: 15 percent

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

Description of Riviera, Frequently Flooded

Setting

Landform: Flood plains on marine terraces, drainageways on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 10 inches: fine sand

E - 10 to 23 inches: fine sand

E and Bt - 23 to 28 inches: fine sandy loam

B/Cg - 28 to 71 inches: fine sandy loam

2Cg - 71 to 80 inches: loamy fine sand

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: Frequent

Frequency of ponding: None

Calcium carbonate, maximum in profile: 5 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Moderate (about 6.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: C/D

Forage suitability group: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)

Hydric soil rating: Yes

Minor Components

Holopaw, frequently flooded

Percent of map unit: 3 percent

Landform: Drainageways on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Concave

Hydric soil rating: Yes

Manatee

Percent of map unit: 3 percent

Landform: Flood plains on marine terraces, drainageways on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

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Across-slope shape: Linear

Hydric soil rating: Yes

Winder, frequently flooded

Percent of map unit: 3 percent

Landform: Flood plains on marine terraces, drainageways on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: Yes

Floridana, frequently flooded

Percent of map unit: 3 percent

Landform: Flood plains on marine terraces, drainageways on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: Yes

Bluff

Percent of map unit: 3 percent

Landform: Flood plains on marine terraces, drainageways on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: Yes

58—EauGallie fine sand

Map Unit Setting

National map unit symbol: 1hqk0

Mean annual precipitation: 49 to 57 inches

Mean annual air temperature: 66 to 73 degrees F

Frost-free period: 282 to 312 days

Farmland classification: Not prime farmland

Map Unit Composition

Eaugallie, nonhydric, and similar soils: 70 percent

Eaugallie, hydric, and similar soils: 15 percent

Minor components: 15 percent

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

Description of Eaugallie, Nonhydric

Setting

Landform: Rises on marine terraces, knolls on marine terraces

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 17 inches: fine sand
Bh - 17 to 23 inches: fine sand
B/E - 23 to 53 inches: fine sand
Btg - 53 to 58 inches: fine sandy loam
Cg - 58 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.06 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

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

Description of Eaugallie, Hydric

Setting

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

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 17 inches: fine sand
Bh - 17 to 23 inches: fine sand
B/E - 23 to 53 inches: fine sand
Btg - 53 to 58 inches: fine sandy loam
Cg - 58 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.06 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches

Custom Soil Resource Report

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: A/D

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

Hydric soil rating: Yes

Minor Components

Myakka, nonhydric

Percent of map unit: 5 percent

Landform: Flatwoods on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

Wabasso

Percent of map unit: 5 percent

Landform: Flatwoods on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Riviera, hydric

Percent of map unit: 5 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: Yes

62—Floridana fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2sm50

Elevation: 0 to 100 feet

Mean annual precipitation: 44 to 60 inches

Mean annual air temperature: 70 to 77 degrees F

Frost-free period: 350 to 365 days

Farmland classification: Farmland of unique importance

Map Unit Composition

Floridana and similar soils: 92 percent

Minor components: 8 percent

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

Description of Floridana

Setting

Landform: Depressions on marine terraces, 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

Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 15 inches: fine sand

E - 15 to 32 inches: fine sand

Btg - 32 to 65 inches: fine sandy loam

Cg - 65 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural 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 to 6 inches

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)

Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL)

Hydric soil rating: Yes

Minor Components

Felda

Percent of map unit: 4 percent

Landform: Flatwoods on marine terraces, drainageways on marine terraces

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

Down-slope shape: Linear

Across-slope shape: Linear, concave

Ecological site: Slough (R155XY011FL)

Other vegetative classification: Slough (R155XY011FL)

Hydric soil rating: Yes

Samsula

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Wabasso

Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

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

Map Unit Setting

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

Map Unit Composition

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

Description of Terra Ceia

Setting

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

Typical profile

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

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained

Custom Soil Resource Report

Runoff class: High

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

Depth to water table: About 0 to 6 inches

Frequency of flooding: Frequent

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Very high (about 23.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7w

Hydrologic Soil Group: A/D

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

Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL)

Hydric soil rating: Yes

Minor Components

Gator

Percent of map unit: 3 percent

Landform: Depressions on flood plains on marine terraces

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

Down-slope shape: Linear, concave

Across-slope shape: Linear, concave

Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL)

Hydric soil rating: Yes

Riviera

Percent of map unit: 2 percent

Landform: Flats on marine terraces, drainageways on marine terraces

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

Down-slope shape: Linear

Across-slope shape: Concave, linear

Ecological site: Slough (R155XY011FL)

Other vegetative classification: Slough (R155XY011FL)

Hydric soil rating: Yes

Samsula

Percent of map unit: 2 percent

Landform: Depressions on marine terraces

Landform position (three-dimensional): Tread, dip

Down-slope shape: Concave

Across-slope shape: Concave

Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL)

Hydric soil rating: Yes

Okeelanta

Percent of map unit: 1 percent

Landform: Depressions on marine terraces

Landform position (three-dimensional): Tread, dip

Down-slope shape: Concave

Across-slope shape: Concave

Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL)

Custom Soil Resource Report

Hydric soil rating: Yes

Bluff

Percent of map unit: 1 percent

Landform: Flood plains on drainageways on marine terraces

Landform position (three-dimensional): Tread, talf

Down-slope shape: Linear

Across-slope shape: Concave

Other vegetative classification: Freshwater Marshes and Ponds (R154XY010FL)

Hydric soil rating: Yes

Favoretta

Percent of map unit: 1 percent

Landform: Flood plains on drainageways on marine terraces

Landform position (three-dimensional): Tread, talf

Down-slope shape: Linear

Across-slope shape: Concave

Hydric soil rating: Yes

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- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelpdb1043084>

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APPENDIX G

QUALIFICATIONS OF ASSESSORS

Years with Current Firm

1 Year

Total Years Experience

1 Year

Employee Title

Geologist

Office

Orlando, FL

Academic BackgroundB.S., Geology, University of Florida
2017Graduate Certificate, Geographic
Information Systems for Urban and
Regional Planners, University of Florida
2018**Professional Training**OSHA 40-Hour Hazardous Waste
Operations and Emergency Response
(HAZWOPER) Training
Certified CPR
Certified First Aid**Professional Affiliations**

Geologic Society of America

Mr. Hammer's experience in environmental consulting includes his participation in Phase I Environmental Site Assessments (ESAs), site assessment and remediation through the Florida Department of Environmental Protection (FDEP) Petroleum Restoration Program, underground storage tank (UST) abandonment, aboveground storage tank (AST) installation, and lead abatement. Through these experiences and his training as a geologist, he has developed the following skills: soil and groundwater sampling, monitor well installation, drilling oversight, heavy machinery operation, lithologic description and stratigraphic nomenclature, elevation surveying, field data collection, data compilation and analysis, GIS, technical report preparation, and comprehensive safety practices.

Project Experience

- Phase I ESA, Commercial Facility, Winter Park, Florida – Geologist for a Phase I ESA of a commercial facility. Project experience includes on-site and off-site inspections, historical records search, regulatory database review, interviews, and technical report preparation.
- West Palm Beach Country Club, FDEP Petroleum Restoration Program, West Palm Beach, Florida – Geologist for a site mobilization to collect groundwater assessment data. Calibrated field instruments, collected and prepared groundwater samples for shipping and laboratory analysis, surveyed top of casing elevations, and measured depth-to-water in on-site wells.
- Southside Incinerator Source Removal, Jacksonville, Florida – Geologist for soil excavation and remediation at a former municipal waste incinerator's ash disposal sites. Aerostar excavated and disposed of metal and ash impacted soils and solid waste from an approximately 10-acre area. The site was backfilled with clean fill and topsoil, and then revegetated. Prepared and handled non-hazardous waste manifests, conducted elevation surveys, collected soil samples, maintained silt fences and drainage ditches, operated heavy machinery, and participated in various excavation, backfilling, and revegetation activities.
- Heating Oil Tanks, Fort Bragg, Fayetteville, North Carolina – Geologist for aboveground heating oil tank installation and underground heating oil tank abandonment at various facilities within Fort Bragg. Constructed rebar-reinforced concrete pads, installed sumps on an existing tank systems to meet compliance standards, plumbed fuel lines from ASTs to boiler rooms and generators, transferred fuel, transported and set ASTs, oversaw UST abandonment, and assisted with tank cleaning procedures.
- Wood Recycling, Fort Bragg, Fayetteville, North Carolina – Geologist for the recycling of 1,800 tons of debris material and waste pallets at Fort Bragg. Oversight of subcontractors and participated in processing material, weighing machinery, recording tonnage of processed material, and assisted with heavy machinery operation, maintenance, and repair.
- FDEP Petroleum Restoration Program, Multiple Sites, Florida – Geologist for the assessment of various petroleum-impacted facilities. Performed assessment activities including soil and groundwater sample collection, field screening, lithologic description, and monitor well installation. Contributed to technical reports by analyzing and preparing data, figures, tables, and writing.
- Lead Abatement, Private Shooting Range, Jacksonville, Florida – Geologist for the abatement of lead dust from within an active indoor shooting range. Cleanup was accomplished using high-efficiency particulate air (HEPA) vacuums and appropriate chemical solutions. Practiced the use of Level C personal protective equipment, properly handled and stored hazardous and non-hazardous wastes, practiced thorough decontamination procedures, and worked harmoniously with the site owner and representatives to minimize loss of business.

Years with Current Firm

8 Years

Total Years Experience

12 Years

Employee Title

Senior Project Manager

Office

Orlando, FL

Academic Background

B.S., Biology/Geology, Magna cum Laude, University of South Florida 2008

Professional Registrations

State of Florida, Professional Geologist License No. PG2995

Certified Hazardous Materials Manager

Professional Training

OSHA 40-Hour Hazardous Waste Operations and Emergency Response (HAZWOPER) Training

OSHA 8-Hour HAZWOPER Supervisor

Professional Affiliations

CREW Orlando

ASHE Central Florida

WTS Central Florida

Ms. Riffe has over 12 years of experience in the fields of environmental consulting and biological research. She has managed and actively participated in a wide range of environmental applications, including Phase I/II Environmental Site Assessments (ESAs), site assessment in accordance with State of Florida regulations, underground storage tank closures, emergency responses, permitting applications, compliance sampling, and remediation of contaminated soils and groundwater. Ms. Riffe also has specific experiences with field work including ground and surface water data acquisition and sampling, monitor well installation, soil screening and sampling, drilling oversight, vertical surveying, field data collection, field quality control and safety, and sampling equipment operation and calibration.

Ms. Riffe also corresponds with clients, property owners, and the Florida Department of Environmental Protection (FDEP) to coordinate and manage assessment and remedial efforts. She has experience in supervising and scheduling assessment activities, supervising on-site subcontractors, and collecting, analyzing, and compiling field data. She has prepared a wide range of technical reports that include Phase I/II ESA reports, Underground Storage Tank Closure Assessment reports, General and Template Site Assessment reports, Source Removal reports, Natural Attenuation Monitoring reports, and Generic Permit for Discharge Application reports.

Project Experience

- Environmental Assessment of District's Lands, St. Johns River Water Management District, Florida – Senior Project Manager for various due diligence, environmental assessment, and remedial activities for the St. Johns Water Management District (SJRWMD) continuing services contract. Project experience includes Phase I ESAs of up to 5,000-acres in size, Phase II ESAs including soil and groundwater sampling, various assessments including sediment and wastewater sampling, and source removal activities including excavation.
- Professional Auto Body, FDEP Petroleum Restoration Program, High Springs, FL – Senior Project Manager for site assessment of this former gas station facility. Directed the assessment activities including soil and groundwater sampling by sonic drilling technology. Coordinated with site occupants to minimize disruption to the active business at the site and maximize the safety of the crew. Worked with the FDEP to maximize mobilization events and reduce unnecessary costs.
- Former Industrial Manufacturing Facility, Private Client, Fort Myers, FL – Senior Project Manager for the Phase I, Phase II, and Additional Soil and Groundwater Sampling activities conducted at this former industrial manufacturing facility. Performed an extensive regulatory and historical file review and site inspection. Directed multiple assessment events involving waste characterization, direct push drilling indoors, collection and analysis of soil and groundwater samples, data analysis, and reporting.
- High Springs One, LLC, FDEP Petroleum Restoration Program, High Springs, Florida – Project Manager for site assessment of this gas station facility. Coordinated and performed the assessment activities including lithologic characterization and sampling, monitor well installation by hollow stem and sonic drilling technologies, and groundwater sampling. Worked with site occupants to minimize disruption to the active business at the site and maximize the safety of the crew.
- Palmdale Oil Co., FDEP Petroleum Restoration Program, Fort Myers, Florida – Project Manager for site assessment of this oil and fuel distribution facility. Coordinated permitting with the City of Fort Myers and Lee County for assessment activities performed within city right-of-way. Coordinated and performed the assessment

activities including lithologic characterization and sampling, monitor well installation, and groundwater sampling.

- Downey Park Source Removal, Orange County, Orlando, Florida – Project Scientist for the aboveground storage tank closure assessment and source removal at this county park. Coordinated and performed the excavation and disposal of approximately 50 tons of petroleum impacted soils, performed assessment activities to delineate and remove all contamination during the excavation, discussed remedial alternatives with the client during the excavation process to reduce unnecessary costs, and prepared the Source Removal Report.
- Freedom Park, U.S. General Services Administration, Lakeland, Florida – Project Scientist for the Site Assessment and Interim Source Removal of this metals impacted facility presently developed as a city park. Performed soil assessment and data analysis, discussed remediation alternatives suited to the client's budget, coordinated and performed the interim source removal of over 600 tons of contaminated soils, installed permanent monitor wells, developed a Natural Attenuation Monitoring Plan, and produced the technical reports.
- St. Marks Lighthouse, U.S. Coastguard, St. Marks, Florida – Project Scientist for the source removal of lead impacted soils at this historic lighthouse facility. Prepared and coordinated the Site Assessment and Limited Scope Remedial Action Plan report, conducted the source removal, and coordinated the treatment and disposal of the hazardous soils.
- Former Hendricks and Lakeland Army Airfields, U.S. Army Corps of Engineers (USACE), Sebring and Lakeland, Florida – Project Scientist for the injection of Oxygen Releasing Compound (ORC) at these petroleum impacted facilities. Prepared the Work Plans and addressed the comments for approval by the USACE, performed the injections of ORC, conducted quarterly groundwater monitoring of the facilities, and prepared the associated reports for submittal to the FDEP.
- Clark Bay Addition, Saint Johns River Water Management District, Volusia County, Florida – Project Manager for a Phase I ESA of approximately 312 acres of primarily wooded land along an approximate 5-mile corridor. Performed the historical records review (historical aerial photographs, city directories, and topographic map), site reconnaissance, applicable interviews with state and local government personnel, file review of regulated facilities in the site vicinity, and prepared the Phase I ESA report.
- Cattle Ranch, Private Client, Odessa, Florida – Project Manager for the Phase I and II ESAs of approximately 533-acres of partially wooded pastureland. Performed the historical records review (historical aerial photographs, city directories, and topographic map), site reconnaissance, applicable interviews with state and local government personnel, file review of regulated facilities in the site vicinity, and prepared the Phase I ESA report. Discussed assessment alternatives suited to the client's budget and performed soil and groundwater sampling to address on-site concerns identified in the Phase I ESA.
- Best Dry Cleaners, Orlando, Florida – Project Scientist for Site Assessment of this chlorinated solvent contaminated facility. Analyzed the data and prepared the Site Assessment Report in accordance with Chapter 62-780 Florida Administrative Code (FAC) guidelines.
- Endangered Bat Survey, USACE Louisville District, Fort Campbell, Kentucky – Project Scientist for habitat and bat survey to determine presence and distribution of the endangered Indiana bat (*Myotis sodalis*) on Fort Campbell. Used mist nets to survey 18 sites located within active military training ranges. Surveys consisted of setting customized net-sets across flight corridors and field data collection.
- Project Scientist for Phase I ESAs on residential, commercial, industrial, and undeveloped properties ranging in size from less than one to up to 5,000 acres.
- Project Scientist for Phase II ESAs activities including: soil boring completion, soil screening using an organic vapor analyzer, soil sampling, groundwater well installation, groundwater monitoring, groundwater sampling, sediment sampling, data analysis, vertical surveying, and technical reporting.