

APPENDIX 10.2.4

SECTION 10 OR 404 APPLICATIONS/PERMITS

U.S. ARMY CORPS OF ENGINEERS
Permit No: SAJ-1990-04805(SP-LCK)

DEPARTMENT OF THE ARMY PERMIT

Permittee:

Florida Power & Light (FPL)
Attn: Randall R. LaBauve
700 Universe Blvd.
Juno Beach, FL 33408

Permit No: SAJ-1990-04805(SP-LCK)

Issuing Office: U.S. Army Engineer District, Jacksonville

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the U.S. Army Corps of Engineers (Corps) having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: This permit authorizes the impact of 18.21 acres of wetlands in association with the installation and maintenance of five highly efficient simple cycle combustion turbines (CTs) to replace the existing simple cycle gas turbines (GTs) in order to increase the efficiency of FPL's peaking units and to comply with new air quality standards. The 18.21 acres of impacts include; 0.17 acres of temporary wetland impacts associated with trench installation of an underground transmission line and water pipeline, 15.79 acres of direct wetland impact and 2.25 acres of secondary wetland impact associated with the construction of the CTs, construction laydown area and storm water pond. The work described above is to be completed in accordance with the 14 pages of drawings and 2 attachments affixed at the end of this permit instrument.

Project Location: The project would affect waters of the United States associated with the discharge of fill material into waters of the U.S. The project site is located at the 392 acre FPL Lauderdale Plant at 4300 SW 42nd Ave. Dania Beach (Sections 19, 20, 25, 30, Township 50 South, Ranges 41,42 East), in Broward County, Florida.

Directions to site: (1) Take I-95 south toward Ft. Lauderdale and exit on Griffin Road, (2) Continue west on Griffin Road and turn right onto SW 42nd Ave (3) Continue on SW 42nd Ave, the FPL Lauderdale Plant is at the end of the road.

Approximate Central Coordinates:

Latitude: 26.0747°
Longitude: -80.1956°

Permit Conditions

General Conditions:

1. The time limit for completing the work authorized ends on **June 13, 2019**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature and the mailing address of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. Self-Certification: Within 60 days of completion of the authorized work or at the expiration of the construction authorization of this permit, whichever occurs first, the

PERMIT NUMBER: SAJ-1990-04805(SP-LCK)
PERMITTEE: Florida Power & Light (FPL)
PAGE 3 of 8

Permittee shall complete the attached "Self-Certification Statement of Compliance" form (Attachment A) and submit to the Corps. In the event that the completed work deviates, in any manner, from the authorized work, the Permittee shall describe, on the Self-Certification Form, the deviations between the work authorized by the permit and the work as constructed. Please note that the description of any deviations on the Self-Certification Form does not constitute approval of any deviations by the Corps.

2. Erosion Control: Prior to the initiation of any work authorized by this permit, the Permittee shall install erosion control measures along the perimeter of all work areas to prevent the displacement of fill material outside the work area. Immediately after completion of the final grading of the land surface, all slopes, land surfaces, and filled areas shall be stabilized using sod, degradable mats, barriers, or a combination of similar stabilizing materials to prevent erosion. The erosion control measures shall remain in place and be maintained until all authorized work has been completed and the site has been stabilized.

3. Mitigation Credit Purchase: Within 30 days from the date of initiating the authorized work the Permittee shall provide verification to the Corps that 12.5 federal forested mitigation bank credits have been purchased from the Everglades Mitigation Bank (SAJ-1995-00155). The required verification shall reference this project's permit number (SAJ-1990-04805).

4. Temporary Wetland Impacts: Within 30 days from the date of completing the authorized work the Permittee shall restore 0.17 acre of temporary wetland impacts to pre-existing contours, elevations, vegetation, habitat type, and hydrology.

5. Eastern Indigo Snake Protection Measures: The Permittee shall comply with U.S. Fish and Wildlife Service's "Standard Protection Measures for the Eastern Indigo Snake" dated August 24 2013 (Attachment B).

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

7. Fill Material: The Permittee shall use only clean fill material for this project. The fill material shall be free from items such as trash, debris, automotive parts, asphalt, construction materials, concrete block with exposed reinforcement bars, and soils

PERMIT NUMBER: SAJ-1990-04805(SP-LCK)
PERMITTEE: Florida Power & Light (FPL)
PAGE 4 of 8

contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act.

8. Reduction and/or elimination of turbid water conditions and the erosion of disturbed or filled areas in adjacent waterbodies and wetlands are to be achieved through the use of silt curtains or screens, between the construction area and wetlands or surface waters, during periods of fill placement. Such devices shall be properly maintained until such time as those disturbed areas become sufficiently stabilized by natural recruitment of vegetation or other measures.

9. Cultural Resources/Historic Properties:

a. No structure or work shall adversely affect impact or disturb properties listed in the National Register of Historic Places (NRHP) or those eligible for inclusion in the NRHP.

b. If during the ground disturbing activities and construction work within the permit area, there are archaeological/cultural materials encountered which were not the subject of a previous cultural resources assessment survey (and which shall include, but not be limited to: pottery, modified shell, flora, fauna, human remains, ceramics, stone tools or metal implements, dugout canoes, evidence of structures or any other physical remains that could be associated with Native American cultures or early colonial or American settlement), the Permittee shall immediately stop all work and ground-disturbing activities within a 100-meter diameter of the discovery and notify the Corps within the same business day (8 hours). The Corps shall then notify the Florida State Historic Preservation Officer (SHPO) and the appropriate Tribal Historic Preservation Officer(s) (THPO(s)) to assess the significance of the discovery and devise appropriate actions.

c. Additional cultural resources assessments may be required of the permit area in the case of unanticipated discoveries as referenced in accordance with the above Special Condition ; and if deemed necessary by the SHPO, THPO(s), or Corps, in accordance with 36 CFR 800 or 33 CFR 325, Appendix C (5). Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume on non-federal lands without written authorization from the SHPO for finds under his or her jurisdiction, and from the Corps.

d. In the unlikely event that unmarked human remains are identified on non-federal lands, they will be treated in accordance with Section 872.05 Florida Statutes. All work and ground disturbing activities within a 100-meter diameter of the unmarked human remains shall immediately cease and the Permittee shall immediately notify the medical

PERMIT NUMBER: SAJ-1990-04805(SP-LCK)
PERMITTEE: Florida Power & Light (FPL)
PAGE 5 of 8

examiner, Corps, and State Archeologist within the same business day (8-hours). The Corps shall then notify the appropriate SHPO and THPO(s). Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume without written authorization from the State Archeologist and from the Corps.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

() Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344)

() Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413)

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

PERMIT NUMBER: SAJ-1990-04805(SP-LCK)
PERMITTEE: Florida Power & Light (FPL)
PAGE 6 of 8

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision: This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions: General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

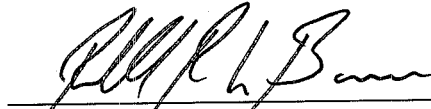
PERMIT NUMBER: SAJ-1990-04805(SP-LCK)
PERMITTEE: Florida Power & Light (FPL)
PAGE 8 of 8

***Attachments to Department of the Army
Permit Number SAJ-1990-04805(SP-LCK)***

1. PERMIT DRAWINGS: 14 pages
2. WATER QUALITY CERTIFICATION: Specific Conditions of the water quality permit/certification in accordance with General Condition number 5 on page 2 of this DA permit.
3. SELF-CERTIFICATION FORM: 1 page
4. INDIGO SNAKE PROTECTION MEASURES

PERMIT NUMBER: SAJ-1990-04805(SP-LCK)
PERMITTEE: Florida Power & Light (FPL)
PAGE 7 of 8

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.


(PERMITTEE)

6/19/14
(DATE)

RANDALL R. LABAUME
(PERMITTEE NAME-PRINTED)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

for 
(DISTRICT ENGINEER)
Alan M. Dodd,
Colonel, U.S. Army
District Commander

27 June 2014
(DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE-SIGNATURE)

(DATE)

(NAME-PRINTED)

(ADDRESS)

(CITY, STATE, AND ZIP CODE)

**JOINT APPLICATION FOR
ENVIRONMENTAL RESOURCE PERMIT**

JOINT APPLICATION FOR
ENVIRONMENTAL RESOURCE PERMIT/

AUTHORIZATION TO USE
SOVEREIGN SUBMERGED LANDS/

FEDERAL DREDGE AND FILL PERMIT

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION/
WATER MANAGEMENT DISTRICTS/
U.S. ARMY CORPS OF ENGINEERS

**INSTRUCTIONS FOR JOINT APPLICATION FOR ENVIRONMENTAL RESOURCE
PERMIT/AUTHORIZATION TO USE STATE OWNED SUBMERGED LANDS/FEDERAL DREDGE AND
FILL PERMIT**

INTRODUCTION

Attached is a joint application for:

- 1) activities regulated under Part IV of Chapter 373, F.S.;
- 2) activities which require authorization to use state owned submerged lands; and
- 3) activities which require federal dredge and fill permit.

Certain activities may qualify for an exemption. If an activity qualifies for an exemption, an application is not required, although the use of this application form is the most expeditious way for the agencies to make the determination that the activity qualifies for an exemption. Attachment 2 lists various regulated activities and the type of permit required for each activity. If you have any questions, please contact the staff of the nearest office of either the Florida Department of Environmental Protection (DEP) or a Water Management District (WMD).

PROCESSING AGENCY/DISTRICT SERVICE CENTERS

The Department of Environmental Protection ("Department" or "DEP") regulates some types of activities, and the Water Management Districts ("WMDs") regulate others. Attachment 1, DEP/WMD Permitting Responsibilities, specifies which activities are regulated by each agency. Environmental Resource Permit Applications shall be made to the appropriate District/Department office serving the area in which the activity is proposed. Attachment 4 designates the appropriate agency office for each geographic area.

COPIES/APPLICATION FEES

Submit an original signed application form plus **four** copies of the form, and **five** complete sets of all the requested drawings and other information to the appropriate DEP or WMD office. Submit the appropriate fee with your application. Application fees are listed in Attachment 3.

DISTRIBUTION TO U.S. ARMY CORPS OF ENGINEERS

When activities are proposed in, on or over wetlands or other surface waters, a portion of the application (Section A and Section C, with the associated drawings) will be forwarded to the Army Corps of Engineers (ACOE) by the reviewing agency. The ACOE will advise you of any additional information that may be required to complete your federal dredge and fill permit application. It is not necessary for the applicant to submit a separate application to the ACOE. The information requested in this application form may be more than required to make a complete application to the ACOE. However, it is useful and may be essential for subsequent evaluation. Reducing unnecessary paperwork and delays is a continuing goal of the ACOE.

DISTRIBUTION TO THE DEP FOR STATE LAND APPROVAL

If the applicant checks the box to request authorization to use sovereign submerged lands, the Department will begin processing the request for sovereign submerged lands approval. Additionally, if at any time during the processing of the application, it appears that the proposed activities may take place on sovereign submerged lands, the Department will initiate a review for the authorization to use such lands. For an explanation of sovereign submerged lands approval see Attachment 5.

NOTE: The information listed in Sections B, D, E, and F of this application package is not intended to be all-inclusive. Additional information may be requested by the reviewing agency in order to complete your application.

TABLE OF CONTENTS

FOR ERP APPLICATION FORM PACKAGE

HEADING:	SUBJECT:
Section A	Basic application form
Section B	Information for noticed general environmental resource permits
Section C	Notice of receipt of application
Section D	Information required for standard general and individual environmental resource permit applications related to a single family dwelling unit
Section E	Information requested for standard general, individual and conceptual environmental resource permit applications not related to a single family dwelling unit
Table 1	Project impact summary
Table 2	On-site mitigation summary
Table 3	Off-site mitigation summary
Table 4	Docking facility summary
Table 5	Shoreline stabilization summary
Section F	Information for mitigation banks
Section G	Application for authorization to use sovereign submerged lands
Attachment 1	DEP and WMD permitting responsibilities
Attachment 2	Summary of activities typically authorized by each permit type
Attachment 3	Permit application processing fees
Attachment 4	Mailing instructions for submitting ERP applications to DEP, with map showing the DEP district boundaries and addresses
Attachment 5	Proprietary verses regulatory authorization

“What Sections of the Application Must I Fill Out?”

Section:	Noticed General Permits	Individual Permits		
		Single- Family Residences	Others	Mitigation Banks
Section A	Yes	Yes	Yes	Yes
Section B	Yes			
Section C		Yes	Yes	Yes
Section D		Yes		
Section E			Yes	
Section F				Yes
Section G	As Needed	As Needed	As Needed	As Needed

SECTION A

FOR AGENCY USE ONLY

ACOE Application #
 Date Application Received
 Proposed Project Lat.
 Proposed Project Long.

DEP/WMD Application #
 Date Application Received
 Fee Received \$
 Fee Receipt #

PART 1:

Are any of the activities described in this application proposed to occur in, on, or over wetlands or other surface waters?

☒ yes ☐ no

Is this application being filed by or on behalf of a government entity or drainage district? ☐ yes ☒ no

PART 2:

A. Type of Environmental Resource Permit Requested (check at least one). See Attachment 2 for thresholds and descriptions.

☐ Noticed General - include information requested in Section B.

☐ Standard General (Single Family Dwelling) - include information requested in Sections C and D.

☐ Standard General (all other Standard General projects) - include information requested in Sections C and E.

☐ Individual (Single Family Dwelling) - include information requested in Sections C and D.

☒ Individual (all other Individual projects) - include information requested in Sections C and E.

☐ Conceptual - include information requested in Sections C and E.

☐ Mitigation Bank Permit (construction) - include information requested in Sections C and F.

F. (If the proposed mitigation bank involves the construction of a surface water management system requiring another permit defined above, check the appropriate box and submit the information requested by the applicable section.)

☐ Mitigation Bank (conceptual) - include information requested in Sections C and F.

B. Type of activity for which you are applying (check at least one)

☐ Construction or operation of a new system, other than a solid waste facility, including dredging or filling in, on or over wetlands and other surface waters.

☐ Construction, expansion or modification of a solid waste facility.

☐ Alteration or operation of an existing system which was not previously permitted by a WMD or DEP.

☒ Modification of a system previously permitted by a WMD or DEP.

Provide previous permit numbers:

☒ Alteration of a system

☐ Extension of permit duration

☐ Abandonment of a system

☐ Construction of additional phases of a system

☐ Removal of a system

FDEP Lauderdale Repowering Project PA 86-26G; USACE Permit # 199004805(IP-DSG)

C. Are you requesting authorization to use Sovereign Submerged Lands?

☐ yes ☒ no

(See Section G and Attachment 5 for more information before answering this question.)

D. For activities in, on, or over wetlands or other surface waters, check type of federal dredge and fill permit requested:

☒ Individual

☐ Programmatic General

☐ General

☐ Nationwide

☐ Not Applicable

E. Are you claiming to qualify for an exemption? ☐ yes ☒ no

If yes, provide rule number if known. ____

PART 3:	B. ENTITY TO RECEIVE PERMIT (IF OTHER THAN OWNER)
A. OWNER(S) OF LAND	
Name Florida Power & Light Company (FPL)	Name
Title and Company Florida Power & Light Company	Title and Company
Address 700 Universe Boulevard	Address
City, State, Zip Juno Beach, Florida 33408	City, State, Zip
Telephone and Fax 561-691-7001 (phone) 561-691-7070 (fax)	Telephone and Fax
C. AGENT AUTHORIZED TO SECURE PERMIT	D. CONSULTANT (IF DIFFERENT FROM AGENT)
Name Mr. Randall R. LaBauve	Name Karl Bullock
Title and Company Vice President, Environmental Services	Title and Company Senior Ecologist, Golder Associates Inc.
Address 700 Universe Boulevard	Address 6026 NW 1 st Place
City, State, Zip Juno Beach, Florida 33408	City, State, Zip Gainesville, FL 32607
Telephone and Fax 561-691-7001 (phone) 561-691-7070 (fax)	Telephone and Fax 352-336-5600 (phone) 352-336-6603 (fax)

PART 4: (Please provide metric equivalent for federally funded projects):

A. Name of Project, including phase if applicable: **FPL Lauderdale Combustion Turbine (CT) Peaker Project**

B. Is this application for part of a multi-phase project?
☐yes ☒no

C. Total applicant-owned area contiguous to the project?
The FPL Lauderdale Plant consists of approximately 392 ac. (159 ha.)

D. Total area served by the system: **N/A** ac.; ___ ha.

E. Impervious area for which a permit is sought: **15.79 ac.; 6.39 ha.**

F. Volume of water that the system is capable of impounding:
 ___ ac. ft.; ___ m

G. What is the total area of work in, on, or over wetlands or other surface waters?
 Permanent: 15.79 ac.; 6.39 ha. 687,812 sq. ft.; 63,900 sq. m.
 Temporary: 0.17 ac.; 0.07 ha. 7,405 sq. ft.; 688 sq. m.

H. Total volume of material to be dredged: ___ yd; ___ m

I. Number of new boat slips proposed: ___ wet slips; ___ dry slips

PART 5:

Project location (use additional sheets if needed):

County(ies) **Broward**

Section(s) 25	Township 50S	Range 41E
Section(s) 19-20	Township 50S	Range 42E
Section(s) 30	Township 50S	Range 42E

Land Grant name, if applicable:

Tax Parcel Identification Number:

Street Address Road or other location: **4300 SW 42nd Avenue**

City, Zip Code, if applicable: **Dania Beach, FL 33314**

PART 6: Describe in general terms the proposed project, system, or activity.

Florida Power & Light Company (FPL) is proposing to replace 22 gas turbines (GTs) at the existing Lauderdale Plant and an additional 12 simple cycle GTs at their nearby Port Everglades Plant with five new highly efficient simple cycle combustion turbines (CTs). The Project will reduce emissions of NO_x, as well as increase peaking unit generation efficiency. The overall purpose of the Project is to modernize FPL's peaking units by December 2016 at an existing power generation facility within the Broward County load center. An evaluation of alternate sites for the Project demonstrated that the Lauderdale Plant is the only practicable site that fulfills the overall project purpose [(see Section C(2))].

The Project will utilize previously filled areas of the Lauderdale Plant to the greatest extent practicable, in an effort to minimize wetland impacts. Associated linear facilities include overhead 230-kV and underground 138-kV transmission lines between the new CTs and the existing switchyard, as well as an underground demineralized water pipeline between the existing water treatment facility and the new CTs. No off-site transmission line improvements are required. No new construction access roads are required. A permanent construction laydown and maintenance area is required adjacent to the new CTs, as well as temporary construction areas elsewhere on the site. Approximately 0.17 acres of temporary wetland impacts associated with trench installation of the underground transmission line and water pipeline will be restored in-situ. Approximately 15.79 acres of permanent wetland impact and 2.25 acres of secondary wetland impact associated with the construction of the CTs will be mitigated through purchase of 12.5 freshwater forested wetland credits from the Everglades Mitigation Bank (EMB).

PART 7:

A. If there have been any pre-application meetings, including on-site meetings, with regulatory staff, please list the date(s), location(s), and names of key staff and project representatives.

9/17/2013 – USACE Palm Beach Gardens: Linda Knoeck (USACE), Ken Proctor (FPL), Justin Sobol (FPL), Rob Leonard (FPL), Karl Bullock (Golder)

9/25/2013 – FDEP Siting Office, Tallahassee: Cindy Mulky (FDEP), Robert Bull (FDEP), David Read (FDEP), Ken Proctor (FPL), Justin Sobol (FPL), Matthew Raffenberg (FPL), Ken Kosky (Golder), Karl Bullock (Golder)

10/23/13 – Broward County, Plantation: Jennifer Jurado (BC-NRPM), Linda Sunderland (BC-AWRP), Leonard Vialpando (BC-ELBPD), Elissa Taylor (BC-ELBPD), Ken Proctor (FPL), Justin Sobol (FPL), Peter Cocotus (FPL), Karl Bullock (Golder)

10/23/13 – FDEP SE District, West Palm Beach: Benny Luedike (FDEP), Jason Andreotta (FDEP), Ken Proctor (FPL), Justin Sobol (FPL), Karl Bullock (Golder)

3/13/2015 – FDEP SE District, West Palm Beach: Ann Seiler (FDEP), Benny Luedike (FDEP), Justin Green (FDEP), Jennifer Smith (FDEP), Paul Wierzbicki (FDEP), Ken Proctor (FPL), Jackie Kingston (FPL), Rob Leonard (FPL), Ken Kosky (Golder)

B. Please identify by number any MSSW/Wetland Resource/ERP/ACOE Permits pending, issued or denied for projects at the location, and any related enforcement actions.

Agency	Date	No./Type of Application	Action Taken
<u>SFWMD</u>	<u>06/13/1991</u>	<u>06-01444-S</u>	<u>Issued</u>
<u>FDEP</u>	<u>01/18/2013</u> <u>(modified)</u>	<u>PA 86-26G</u>	<u>Issued</u>
<u>USACE</u>	<u>6/13/2014</u>	<u>SAJ-1990-04805 (SP-LCK)</u>	<u>Issued</u>

C. Note: The following information is required for projects proposed to occur in, on or over wetlands that need a federal dredge and fill permit or an authorization to use state owned submerged lands. Please provide the names, addresses and zip codes of property, owners whose property directly adjoins the project (excluding application) and/or (for proprietary authorizations) is located within a 500 ft. radius of the applicant's land. Please attach a plan view showing the owner's names and adjoining property lines. Attach additional sheets if necessary.

1. **See Attachment A, Adjacent Property Owners** 2.

PART 8:

A. By signing this application form, I am applying, or I am applying on behalf of the applicant, for the permit and any proprietary authorizations identified above, according to the supporting data and other incidental information filed with this application. I am familiar with the information contained in this application and represent that such information is true, complete and accurate. I understand this is an application and not a permit, and that work prior to approval is a violation. I understand that this application and any permit issued or proprietary authorization issued pursuant thereto, does not relieve me of any obligation for obtaining any other required federal, state, water management district or local permit prior to commencement of construction. I agree, or I agree on behalf of the applicant, to operate and maintain the permitted system unless the permitting agency authorizes transfer of the permit to a responsible operation entity. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

Randall R. LaBauve

Typed/Printed Name of Applicant (If no Agent is used) or Agent (If one is so authorized below)

Signature of Applicant/Agent

Date

Vice President, Environmental Services

(Corporate Title if applicable)

AN AGENT MAY SIGN ABOVE ONLY IF THE APPLICANT COMPLETES THE FOLLOWING:

B. I hereby designate and authorize the agent listed above to act on my behalf, or on behalf of my corporation, as the agent in the processing of this application for the permit and/or proprietary authorization indicated above; and to furnish, on request, supplemental information in support of the application. In addition, I authorize the above-listed agent to bind me, or my corporation, to perform any requirements which may be necessary to procure the permit or authorization indicated above. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

Typed/Printed Name of Applicant

Signature of Applicant

Date

(Corporate Title if applicable)

Please note: The applicant's original signature (not a copy) is required above.

PERSON AUTHORIZING ACCESS TO THE PROPERTY MUST COMPLETE THE FOLLOWING:

C. I either own the property described in this application or I have legal authority to allow access to the property, and I consent, after receiving prior notification, to any site visit on the property by agents or personnel from the Department of Environmental Protection, the Water Management District and the U.S. Army Corps of Engineers necessary for the review and inspection of the proposed project specified in this application. I authorize these agents or personnel to enter the property as many times as may be necessary to make such review and inspection. Further, I agree to provide entry to the project site for such agents or personnel to monitor permitted work if a permit is granted.

Randall R. LaBauve

Typed/Printed Name of Applicant

Signature of Applicant

Date

Vice President, Environmental Services

(Corporate Title if applicable)

SECTION C

Environmental Resource Permit Notice of Receipt of Application

Note: this form does not need to be submitted for noticed general permits.

This information is required in addition to that required in other sections of the application. Please submit five copies of this notice of receipt of application and all attachments with the other required information. Please submit all information on 8 1/2" x 11" paper.

Project Name **FPL Lauderdale Peaking Unit Modernization Project**
County **Broward**
Owner **Florida Power and Light Company**
Applicant: **Florida Power and Light Company**
Applicant's Address: **700 Universe Boulevard, Juno Beach, Florida 33408**

1. Indicate the project boundaries on a USGS quadrangle map. Attach a location map showing the boundary of the proposed activity. The map should also contain a north arrow and a graphic scale; show Section(s), Township(s), and Range(s); and must be of sufficient detail to allow a person unfamiliar with the site to find it.

Please see Attachment B – Site Location Information, Figure 1 – Site Location (USGS).

2. Provide the names of all wetlands, or other surface waters that would be dredged, filled, impounded, diverted, drained, or would receive discharge (either directly or indirectly), or would otherwise be impacted by the proposed activity, and specify if they are in an Outstanding Florida Water or Aquatic Preserve:

No named wetlands, named surface waters, Outstanding Florida Waters, or Aquatic Preserves would be impacted by the proposed Project. Unavoidable wetland impacts associated with the Project include approximately 15.79 acres of permanent and 0.17 acres of temporary impact to mixed native and exotic wetland hardwoods [Florida Land Use, Cover, and Forms Classification System (FLUCFCS) 617/619]. Secondary impacts to undisturbed wetlands adjacent to areas of fill comprise 2.25 acres.

The forested wetlands within the impact area consist of a combination of native and nuisance exotic species, with a canopy comprised of the exotic species Australian pine (*Casuarina equisetifolia*) and melaleuca (*Melaleuca quinquenervia*), as well as the native species pond apple (*Annona glabra*) and red maple (*Acer rubrum*). The understory/shrub layer is dominated by the nuisance exotic species Brazilian pepper (*Schinus terebinthifolius*), with a variety of subdominant species including Carolina willow (*Salix caroliniana*), myrsine (*Myrsine cubana*), wax myrtle (*Myrica cerifera*), dahoon holly (*Ilex cassine*), coco plum (*Chrysobalanus icaco*), and the exotic species shoebutton ardisia (*Ardisia elliptica*). The groundcover consists of a variety of mainly native species such as swamp fern (*Blechnum serrulatum*), royal fern (*Osmunda regalis*), and sawgrass (*Cladium jamaicense*).

Wetland locations are illustrated in Attachment B – Site Location Information, Figure 2 – Wetland Map and Attachment C – Wetland and Topographic Surveys. The proposed project layout and wetland boundaries are illustrated in Attachment B – Site Location Information, Figure 3. USACE wetland datasheets, jurisdictional (Rapanos) forms, Uniform Mitigation Assessment Method (UMAM) forms, and Everglades Mitigation Bank (EMB) Wetland Assessment Technique for Environmental Review (W.A.T.E.R.) functional assessment forms are included in Attachment D.

ALTERNATIVES ANALYSIS

An evaluation of alternative sites was conducted in accordance with the requirements of Section 404(b)(1) of the Clean Water Act, 40 CFR Part 230, and 33 CFR Part 320. The purpose of the Project is defined, and an analysis is presented demonstrating that there are no practicable alternatives that would fulfill the Project purpose and result in less adverse impact on the aquatic ecosystem. FPL has evaluated sites within its service territory, and is proposing to replace 22 simple cycle GTs at their Lauderdale Plant and an additional 12 simple cycle GTs at their nearby Port Everglades Plant with five simple cycle CTs to be

installed at the Lauderdale Plant. The Lauderdale Peaking Unit Modernization Project is the only practicable alternative to accomplish the overall Project purpose.

Introduction

The existing 36 GTs located in Broward County are first generation gas turbine units from the early 1970s that are used to serve peak and emergency demands in a quick start manner. These units have low stack heights (less than 50 feet) and relatively high nitrogen oxides (NO_x) emissions rates. FPL plans to bring five new CTs into service by December 31, 2016, that would assure 1-hour NO₂ concentrations do not exceed the NAAQS.

There will be significant benefits associated with the Project. The five new CTs will be more energy efficient than the existing GTs and will provide cleaner energy to FPL's customers. For the same amount of generation hourly, from 30 to 40 percent less fuel will be used in the new CT units compared to the older GT units. For pollutants such as NO₂, the Project's total air quality impacts are predicted to be at least 40 percent lower than those predicted for the existing GTs. In addition, air emission rates for NO_x with the Project will be approximately 90 percent lower than the existing GT emission rates, resulting in significantly lower air quality impacts.

Project Purpose

The purpose of the Project is to modernize FPL's peaking units by December 2016 at an existing power generation facility within the Broward County load center.

Alternative Sites

Two sites in Broward County were identified as potentially available for peaking unit modernization, the Lauderdale and Port Everglades plants. Properties that are not currently owned by FPL or are not located at existing power generation facilities were not considered reasonable alternatives for the Project, as peaking units require infrastructure such as fuel, staff, and transmission that are available at existing power generation facilities and not at greenfield sites. Thus, greenfield sites are not able to fulfill the overall project purpose. Similarly, the "no action" alternative would not fulfill the overall project purpose, and is therefore not considered further. An analysis was conducted to identify which of the two potential sites were considered practicable alternatives. Practicable alternatives are those that are available and capable of being completed after taking into consideration cost, existing technology, and logistics in light of the overall project purpose.

The following criteria were developed as guidelines for locating peaking unit facilities and were evaluated as part of the practicability analysis:

- Maximize opportunities to utilize existing utility infrastructure, including transmission and distribution lines, water lines, natural gas pipelines, access roads, administration/security buildings, etc., through co-location with existing power plants
- At least 24 acres of land required to construct five CTs, including construction staging areas and the surface water management system

Alternative Site	Existing Facilities					Sufficient Acreage Available for Development
	Transmission	Water Supply	Natural Gas Supply	Access Roads	Security and Administration Buildings	
Lauderdale Plant	Yes	Yes	Yes	Yes	Yes	Yes
Port Everglades Plant	Yes	Yes	Yes	Yes	Yes	No

While both alternative sites fulfill the existing power generation infrastructure requirements, insufficient acreage for construction renders the Port Everglades Plant as impracticable in light of the overall Project purpose. Historically, the Port Everglades Plant consisted of four fossil fuel-fired steam electric generators that came into service in the early to mid-1960's and 12 simple cycle GT peaking units. In 2012 FPL

received approval from the State of Florida for the Port Everglades Next Generation Clean Energy Center (PEEC), with an in-service date for the Project of June 2016. The PEEC project replaces the existing four steam electric generating units with a highly efficient 3-on-1 combined cycle unit. The existing GTs at the Port Everglades Plant cannot be dismantled until the new CT replacement generation is constructed and in operation. The simple cycle GTs serve as emergency and peaking backup for FPL's system and are required to remain in-service until the new CTs can take their place. Following construction, areas available for future development at the Port Everglades Plant will be insufficient for construction of the CTs.

The Lauderdale Plant Site is the practicable alternative for construction of the Project. Sufficient acreage is available for development, and the required water, natural gas, and security and administration infrastructure is present. Construction of the CTs at the Lauderdale Plant Site allows for maintenance of existing peaking capacity during construction, and allows for utilization of previously-disturbed areas to the greatest extent practicable.

On-site Avoidance and Minimization

Wetland avoidance and minimization efforts focused upon refinement of the Project design and overall layout within the preferred site, including maximizing utilization of previously-developed areas, roadways, and infrastructure of the Plant and limiting wetland impacts to lower quality systems colonized by exotic species of vegetation. The Project is proposed to be constructed in the northern portion of the developed Lauderdale Plant Site, incorporating the previously-filled area currently supporting 12 GTs (see Attachment B – Site Location Information, Figure 3).

The upland areas identified for temporary construction laydown (see Attachment B – Site Location Information, Figure 3) are currently a transmission line right-of-way, tree nursery, and other cleared open areas that are of insufficient acreage for construction of the CTs. However, its proposed use for construction equipment and materials laydown furthers efforts to avoid and minimize temporary wetland impacts. A permanent construction and maintenance area is required adjacent to the new CTs.

With respect to the underground 138-kV transmission connection between the CTs and the existing switchyard and the demineralized water pipeline between the existing water treatment facility and the CTs, FPL proposes to install these facilities underneath or adjacent to existing upland pathways to the greatest extent practicable. Alternate routes for the underground transmission lines were evaluated (Attachment B – Site Location Information, Figure 9), incorporating both open trench and horizontal directional drill (HDD) scenarios. FPL has selected the open trench transmission route which minimizes temporary wetland impacts by following the existing pathways identified in yellow and blue on Figure 9. This route results in approximately 0.17 acres of temporary wetland impact, which will be restored in-situ. The HDD option, while avoiding the temporary impacts of trench installation, still would require a relatively large staging area of approximately 150 feet x 50 feet at the southeast corner of the route identified in red on Figure 9 to facilitate the drilling machinery. This temporary staging area would encroach into wetlands, significantly increase the costs associated with installation of the transmission line, and not result in a significant reduction in temporary wetland impacts.

The alternative analysis demonstrates that the Project has been located and designed so as to avoid and/or minimize impacts to natural resources to the greatest extent practicable while fulfilling the overall Project purpose, and represents the least environmentally damaging practicable alternative. While the Project will result in some unavoidable impacts to the aquatic environment, FPL has proposed a comprehensive mitigation plan to offset and compensate for the impacts.

3. Attach a depiction (plan and section views), which clearly shows the works or other facilities proposed to be constructed. Use multiple sheets, if necessary. Use a scale sufficient to show the location and type of works.

Please see Attachment E - Construction Plans.

4. Briefly describe the proposed project (such as "construct dock with boat shelter", "replace two existing culverts", "construct surface water management system to serve 150 acre residential development"):

Replacement of 22 gas turbine (GT) peaking units at FPL's Lauderdale Plant and an additional 12 simple cycle GTs at their nearby Port Everglades Plant with five highly efficient combustion turbines (CTs) at the Lauderdale Plant.

5. Specify the acreage of wetlands or other surface waters, if any, that are proposed to be filled, excavated, or otherwise disturbed or impacted by the proposed activity:

Construction of the Project will result in approximately 15.79 acres of direct wetland fill impacts, 2.25 acres of secondary wetland impacts, and 0.17 acre of temporary wetland impacts.

Wetland Type	FLUCFCS Code	UMAM Score	WATER Score	Fill Impact Acreage	Secondary Impact Acreage*	Functional Loss (Credits)
Mixed Wetland Hardwoods / Exotic Wetland Hardwoods	617/619	0.70	0.74	15.79	2.25	11.8 (UMAM) 12.5 (WATER)
Total				15.79	2.25	

* 25' zone around fill, 50% loss of functional value

6. Provide a brief statement describing any proposed mitigation for impacts to wetlands and other surface waters (attach additional sheets if necessary):

FPL proposes to mitigate for unavoidable wetland impacts associated with the Project through purchase of freshwater forested mitigation credits from the EMB. The Project's unavoidable direct and secondary wetland impacts will result in a loss of 12.5 credits of functional loss, calculated in accordance with the Everglades Mitigation Bank W.A.T.E.R. functional assessment methodology.

FOR AGENCY USE ONLY

Application Name:
 Application Number:
 Office where the application can be inspected:

Note to Notice recipient: The information in this notice has been submitted by the applicant, and has not been verified by the agency. It may be incorrect, incomplete or may be subject to change.

SECTION E

INFORMATION REQUESTED FOR STANDARD GENERAL, INDIVIDUAL AND CONCEPTUAL ENVIRONMENTAL RESOURCE PERMIT APPLICATIONS NOT RELATED TO A SINGLE FAMILY DWELLING UNIT

Please provide the information requested below if the proposed project requires either a standard general, individual, or conceptual approval environmental resource permit and is not related to an individual, single family dwelling unit, duplex or quadruplex. The information listed below represents the level of information that is usually required to evaluate an application. The level of information required for a specific project will vary depending on the nature and location of the site and the activity proposed. Conceptual approvals generally do not require the same level of detail as a construction permit. However, providing a greater level of detail will reduce the need to submit additional information at a later date. If an item does not apply to your project, proceed to the next item. Please submit all information that is required by the Department on either 8 1/2 in. X 11 in. paper or 11 in. X 17 in. paper. Larger drawings may be submitted to supplement but not replace these smaller drawings.

I. Site Information

- A. Provide a map(s) of the project area and vicinity delineating USDA/SCS soil types.

Please see Attachment B – Site Location Information, Figure 4 – Soils.

- B. Provide recent aerials, legible for photo interpretation with a scale of 1" = 400 ft, or more detailed, with project boundaries delineated on the aerial.

Please see Attachment B - Site Location Information, Figure 5 – Aerial Location.

- C. Identify the seasonal high water or mean high tide elevation and normal pool or mean low tide elevation for each on site wetland or surface water, including receiving waters into which runoff will be discharged. Include dates, datum, and methods used to determine these elevations.

Seasonal high water elevations for wetlands within the Construction Area are approximately one ft NAVD88, based upon site topographic survey and jurisdictional wetland boundary lines delineated in August 2013 (Attachment C). Normal pool elevations are approximately one ft below seasonal high water elevation.

- D. Identify the wet season high water tables at the locations representative of the entire project site. Include dates, datum, and methods used to determine these elevations.

The approximate wet season high water table representative of the entire Construction Area is approximately one ft NAVD88, based an average of the seasonal high water elevations for each wetland. Please see the Geotechnical Exploration Report included in Attachment F – Storm Water Management Report.

II. Environmental Considerations

- A. Provide results of any wildlife surveys that have been conducted on the site, and provide any comments pertaining to the project from the Florida Game and Fresh Water Fish Commission and the U.S. Fish and Wildlife Service.

The probability of threatened or endangered (listed) species occurrence within the Project Area was evaluated based upon the habitat preferences of listed species known to occur within Broward County, a field assessment for the presence of suitable habitat within the Project Area, and the Florida Natural Areas Inventory (FNAI) GIS database of documented listed species occurrences. No listed flora or fauna were identified during the pedestrian and vehicular transects conducted within the Project Area on July

15 and August 15-16, 2013. No indications of nesting activity or burrows were observed within the Project Area. The potential for listed species utilization of the Project Area for foraging, roosting, or breeding is limited due to the surrounding industrial, commercial, and residential development, as well as the proximity of the Ft. Lauderdale-Hollywood International Airport and the location of the Project Area immediately within the flight path of large commercial passenger airplanes, resulting in significant and regular noise disturbance.

Although no longer classified as threatened or endangered, the proximity of bald eagle (*Haliaeetus leucocephalus*) nests to the Project Area was evaluated using the Florida Fish and Wildlife Conservation Commission (FWC) bald eagle nest database. The FWC database is current through the 2011-2012 nesting season. No documented bald eagle nests were located within 660 feet of the Project Area. The closest documented nest (BO002) is approximately 15 miles southwest of the Project Area. In addition, wading bird rookery and nest colony records were researched using the FWC wading bird rookery and nest colony locator. The closest wood stork (*Mycteria americana*) colony (unnamed) is located approximately 10.5 miles from the Project Area. The closest named colony (Colony #2B Melaleuca) is located approximately 10.9 miles from the Project Area. Due to the lack of suitable wood stork foraging habitat, no adverse impacts are expected for wood storks. The USACE wood stork effect determination key is provided as Attachment G.

A review of the FNAI GIS database of documented listed species occurrences (Attachment B - Site Location Information, Figure 6 – Threatened and Endangered Species Map) resulted in a known manatee (*Trichechus manatus*) aggregation site within South New River Canal to the southwest of the Project Site. No in-water work is proposed; therefore no potential impacts to the manatee will occur.

Several exotic wildlife species were observed within or immediately surrounding the Project Area, including green iguana (*Iguana iguana*), brown basilisk (*Basiliscus vittatus*), and Cuban brown anole (*Anolis sagrei*). Other non-listed species observed within or immediately surrounding the Project Area include green tree frog (*Hyla cinerea*), anhinga (*Anhinga anhinga*), green heron (*Butorides virescens*), mourning dove (*Zenaida macroura*), Eurasian-collared dove (*Streptopelia decaocto*), pileated woodpecker (*Dryocopus pileatus*), northern cardinal (*Cardinalis cardinalis*), northern mockingbird (*Mimus polyglottos*), chimney swift (*Chaetura pelagica*), Carolina wren (*Thryothorus ludovicianus*), starling (*Sturnus vulgaris*), and raccoon (*Procyon lotor*).

B. Provide a description of how water quantity, quality, hydroperiod, and habitat will be maintained in on-site wetlands and other surface waters that will be preserved or will remain undisturbed.

The Construction Area will be isolated from adjacent undisturbed areas through installation of staked silt fencing and/or turbidity screen to protect the surrounding area from runoff and sedimentation associated with construction.

C. Provide a narrative description of any proposed mitigation plans, including purpose, maintenance, monitoring, and construction sequence and techniques, and estimated costs.

Construction of the Project will result in approximately 15.79 acres of unavoidable direct wetland impacts, 0.17 acres of temporary wetland impacts, and 2.25 acres of secondary wetland impacts, requiring 11.8 credits of compensatory mitigation as calculated utilizing the UMAM functional assessment methodology, or 12.5 credits utilizing the W.A.T.E.R. functional assessment method (Attachment D). FPL proposes to mitigate for direct wetland impacts through the purchase of 12.5 freshwater forested wetland credits from the Everglades Mitigation Bank.

The 0.17 acre of temporary wetland impact associated with transmission line and the water pipeline installation will be mitigated through in-situ restoration of wetlands. The upper layer of the soil horizon associated with the trench excavation will be scraped and placed in a spoil bank located on adjacent uplands, segregated from the spoil resulting from the further excavation of the trench. Following installation of the transmission line/pipeline segment, the upper layer of the soil horizon will be replaced and graded to restore wetland elevations allowing natural revegetation of the temporarily impacted work area from the native seed bank.

D. Describe how boundaries of wetlands or other surface waters were determined. If there has ever been a jurisdictional declaratory statement, a formal wetland determination, a formal determination, a validated informal determination, or a revalidated jurisdictional determination, provide the identifying number.

Jurisdictional wetland boundaries were delineated in the field based on the applicable federal [US Army Corps of Engineers (USACE)] and state (FDEP) wetland criteria. Specifically, the Project Area was examined for the presence of hydrophytic vegetation, hydric soils, and hydrological indicators, by which the landward extent of wetlands was marked upon aerial photography and in the field with sequentially-numbered flagging tape for subsequent surveying. Please see Attachment B – Site Location Information, Figure 2 – Wetland Map; also see Attachment C – Wetland and Topographic Surveys.

E. Impact Summary Tables:

1. For all projects, complete Tables 1, 2 and 3 as applicable.

See attached Table 1.

2. For docking facilities or other structures constructed over wetlands or other surface waters, provide the information requested in Table 4.

N/A

3. For shoreline stabilization projects, provide the information requested in Table 5.

N/A

III. Plans

Provide clear, detailed plans for the system including specifications, plan (overhead) views, cross sections (with the locations of the cross sections shown on the corresponding plan view), and profile (longitudinal) views of the proposed project. The plans must be signed and sealed by an appropriate registered professional as required by law. Plans must include a scale and a north arrow. These plans should show the following:

A. Project Area boundary and total land area, including distances and orientation from roads or other land marks;

Please see Attachment E – Construction Plans.

B. Existing land use and land cover (acreage and percentages), and on-site natural communities, including wetlands and other surface waters, aquatic communities, and uplands. Use the Florida Land Use Cover & Classification System (FLUCFCS)(Level 3) for projects proposed in the South Florida Water Management District, the St. Johns River Water Management District, and the Suwannee River Water Management District and use the National Wetlands Inventory (NWI) for projects proposed in the Southwest Florida Water Management District. Also identify each community with a unique identification number which must be consistent in all exhibits.

Please see Attachment B - Site Location Information, Figure 6 – Habitat Classification Map. Existing land use and land cover within the Project limits is detailed below:

FLUCFCS Code	Land Use	Acreage	Percent
140	Commercial and Services	2.8	1.5
241	Tree Nurseries	4.66	2.5
320	Upland Shrub and Brushland	1.94	1.0
437	Australian Pine	3.43	1.8
512	Channelized Waterway	5.97	3.2
612	Mangrove Swamp	10.57	5.6
617	Mixed Wetland Hardwoods	22.48	12.0
619	Exotic Wetland Hardwoods	12.89	6.9
617 / 619	Mixed Wetland Hardwoods/ Exotic Wetland Hardwoods	33.93	18.0
641	Freshwater Marsh	0.11	0.1
6411	Sawgrass	8.47	4.5
743	Spoil Area	1.09	0.6
814	Roads	7.46	4.0
831	Electric Power Facilities	72.2	38.4
TOTAL		188	100.0

C. The existing topography extending at least 100 feet off the project area, and including adjacent wetlands and other surface waters. All topography shall include the location and a description of known benchmarks, referenced to NGVD. For systems waterward of the mean high water (MHW) or seasonal high water lines, show water depths, referenced to mean low water (MLW) in tidal areas or seasonal low water in non-tidal areas, and list the range between MHW and MLW. For docking facilities, indicate the distance to, location of, and depths of the nearest navigational channel and access routes to the channel.

Please see Attachment C – Wetland and Topographic Surveys; also see Attachment B - Site Location Information, Figure 1 – Site Location (USGS).

D. If the project is in the known flood plain of a stream or other water course, identify the following: 1) the flood plain boundary and approximate flooding elevations; and 2) the 100-year flood elevation and floodplain boundary of any lake, stream or other watercourse located on or adjacent to the site;

Please see Attachment B - Site Location Information, Figure 8 – Floodplain Map. The Site is contained within the 100-year floodplain boundary, with an approximately flood elevation of 8 ft NGVD29 (6.4 ft NAVD88).

E. The boundaries of wetlands and other surface waters within the project area. Distinguish those wetlands and other surface waters that have been delineated by any binding jurisdictional determination;

Please see Attachment C – Wetland and Topographic Surveys.

F. Proposed land use, land cover and natural communities (acreage and percentages), including wetlands and other surface waters, undisturbed uplands, aquatic communities, impervious surfaces, and water management areas. Use the same classification system and community identification number used in III (B) above.

FLUCFCS Code	Land Use	Acreage	Percent
140	Commercial and Services	2.8	1.5
241	Tree Nurseries	4.62	2.5
320	Upland Shrub and Brushland	1.94	1.0
437	Australian Pine	3.43	1.8
512	Channelized Waterway	5.97	3.2
612	Mangrove Swamp	10.57	5.6
617	Mixed Wetland Hardwoods	22.48	12.0
619	Exotic Wetland Hardwoods	12.89	6.9
617 / 619	Mixed Wetland Hardwoods / Exotic Wetland Hardwoods	18.15	9.7
641	Freshwater Marsh	0.1	0.1
6411	Sawgrass	8.47	4.5
814	Roads	7.28	3.9
831	Electric Power Facilities	89.3	47.5
TOTAL		188	100

G. Proposed impacts to wetlands and other surface waters, and any proposed connections/outfalls to other surface waters or wetlands;

Construction of the Project will result in approximately 15.79 acres of unavoidable direct wetland impacts, 0.17 acre of temporary wetland impacts, and 2.25 acres of secondary wetland impacts, as illustrated in Attachment E – Construction Plans, Figure 1 – Wetland Impacts. Proposed connections to other surface waters or wetlands are described and illustrated in Attachment E – Construction Plans and Attachment F – Stormwater Management Report.

H. Proposed buffer zones;

Please see Attachment E - Construction Plans which show a post-development 20-foot buffer zone adjacent to existing mitigation areas. See Drawing 180321-DS-1120 in Attachment F – Stormwater Management Report for BMP details.

I. Pre- and post-development drainage patterns and basin boundaries showing the direction of flows, including any off-site runoff being routed through or around the system; and connections between wetlands and other surface waters;

Please see Attachment F - Storm Water Management Report.

J. Location of all water management areas with details of size, side slopes, and designed water depths;

Please see Attachment E - Construction Plans and Attachment F - Storm Water Management Report.

K. Location and details of all water control structures, control elevations, any seasonal water level regulation schedules; and the location and description of benchmarks (minimum of one benchmark per structure);

Please see Attachment E - Construction Plans and Attachment F - Storm Water Management Report.

L. Location, dimensions and elevations of all proposed structures, including docks, seawalls, utility lines, roads, and buildings;

Please see Attachment E - Construction Plans.

M. Location, size, and design capacity of the internal water management facilities;

Please see Attachment E – Construction Plans and Attachment F - Storm Water Management Report.

N. Rights-of-way and easements for the system, including all on-site and off-site areas to be reserved for water management purposes, and rights-of-way and easements for the existing drainage system, if any;

N/A

O. Receiving waters or surface water management systems into which runoff from the developed site will be discharged;

The storm water dry detention pond will discharge to Wetland A. Outside slopes of Perimeter Berms will discharge to Wetland A and Wetland H. Please see Attachment E – Construction Plans and Attachment F - Storm Water Management Report.

P. Location and details of the erosion, sediment and turbidity control measures to be implemented during each phase of construction and all permanent control measures to be implemented in post-development conditions;

Erosion, sediment, and turbidity control measures consistent with BMPs will be implemented during construction to prevent any discharge of turbid waters to adjacent wetlands. Please see Attachment E - Construction Plans for Best Management Practices (BMP) Plan and Details.

Q. Location, grading, design water levels, and planting details of all mitigation areas;

N/A

R. Site grading details, including perimeter site grading;

Please see Attachment E – Construction Plans and Attachment F - Storm Water Management Report. Plans include storm water dry detention pond design, discharge structure design, control elevations, and perimeter berm design. Final detail design of internal conveyance device will be provided by the EPC Contractor.

S. Disposal site for any excavated material, including temporary and permanent disposal sites;

Vegetative material may be burned on-site pending a burn permit to be obtained by the contractor. Unsuitable excavated and unburned material will be disposed of offsite in an approved disposal site.

T. Dewatering plan details;

The contractor will be responsible for dewatering in accordance with BMPs and jurisdictional requirements. The Contractor will determine the specific means and methods of dewatering groundwater in accordance with these requirements. Dewatering of surface water that enters excavations will be performed with turbidity filtered sumps and discharged to the Storm Water Dry Detention Basin prior to discharge off site per the Construction Storm Water Management Plant Drawing 180321-DS-1102 in Attachment F. Contractor will be required to monitor dewatering discharges from both excavations and groundwater to assure the discharge does not exceed 29 NTU against background.

U. For marina facilities, locations of any sewage pumpout facilities, fueling facilities, boat repair and maintenance facilities, and fish cleaning stations;

N/A

V. Location and description of any nearby existing offsite features which might be affected by the proposed construction or development such as stormwater management ponds, buildings or other structures, wetlands or other surface waters.

N/A

W. For phased projects, provide a master development plan.

N/A

IV. Construction Schedule and Techniques

Provide a construction schedule, and a description of construction techniques, sequencing and equipment. This information should specifically include the following:

Upon receiving the required approvals and authorizations from regulatory agencies, construction will begin with installing turbidity barriers and other BMPs for erosion and sediment control, clearing and grubbing of the property, installing perimeter berms, general site fill, construction of surface water management facilities, foundation placement, installation of CTs and associated balance of plant equipment, installation of transmission and water pipeline facilities, and final site finishing including aggregate surfacing, asphalt paving of roads, and establishing grass vegetation. The Project construction is expected to be completed 18 months after Notice of Commencement.

A. Method for installing any pilings or seawall slabs;

N/A

B. Schedule of implementation of temporary or permanent erosion and turbidity control measures;

Please see Attachment E - Construction Plans for BMP Plans and Details. Prior to initiation of any land clearing, the Construction Area will be surrounded with silt fencing along the perimeter of the Construction Area adjacent to wetlands to prevent any erosion/turbidity impacts to adjacent wetlands.

C. For projects that involve dredging or excavation in wetlands or other surface waters, describe the method of excavation, and the type of material to be excavated;

Initially a perimeter berm will be established inside the wetland impact boundary per Attachment F - Drawing 180321-DS-1120. The soft compressible organic materials (muck) may be removed down to suitable subgrade material prior to the installation of the perimeter berms, except in the Construction Laydown/Maintenance area, where only the top 18 inches of existing material will be removed. Once the perimeter berm has been established, further muck removal operations and dewatering will take place inside the perimeter berm. All unsuitable material will be the responsibility of the contractor performing the excavation to dispose to offsite disposal facilities in accordance with local jurisdictional requirements.

D. For projects that involve fill in wetlands or other surface waters, describe the source and type of fill material to be used. For shoreline stabilization projects that involve the installation of riprap, state how these materials are to be placed, (i.e., individually or with heavy equipment) and whether the rocks will be underlain with filter cloth;

Clean fill material will be used to elevate and grade the construction site. The source of fill material is proposed to be from off-site commercial sources. The Contractor will be required to assure the imported fill material is free of contamination, defined as having a constituent concentration less than the lowest "Soil Cleanup Target Level" for that constituent listed in FDEP, Chapter 62-777 (8/5/1999), Contaminant Cleanup Target Levels, Table II - Soil Cleanup Target Levels.

E. If dewatering is required, detail the dewatering proposal including the methods that are proposed to contain the discharge, methods of isolating dewatering areas, and indicate the period dewatering structures will be in place (Note: a consumptive use or water use permit may be required);

The Construction Area is to be raised to allow a finished top of concrete elevation of 10.5 NAVD 88 (12.1 NGVD29). The vast majority of permanent structures will not extend into the groundwater. The main intent of the dewatering is to lower the groundwater sufficiently to allow the placement and compaction of fill material. During the initial stages of the muck removal operation, the groundwater will be pumped away from the localized excavations into unoccupied construction areas located with the limits of the

established perimeter berm. The perimeter berm and adjacent turbidity barrier will prevent sediments from passing into the wetland area. Near the completion of the muck removal phase of construction, the groundwater will be pumped to the storm water dry detention pond. The Contractor will be required to temporarily block off the bleed down orifices on the storm water dry detention pond during muck removal operations. It is assumed the pond in this configuration will provide an adequate amount of treatment through settling time that any discharge from the pond will have turbidity levels below 29 NTU compared to background. In the event turbidity levels begin to approach 29 NTU the Contractor will be required to modify BMPs to decrease the turbidity levels. Dewatering of surface waters that enter excavations will be performed with turbidity filtered sumps and discharged to the Storm Water Dry Detention Basin prior to discharge off site per the Construction Storm Water Management Plan (Attachment F). Further specific dewatering means and methods will be determined by the Contractor.

F. Methods for transporting equipment and materials to and from the work site. If barges are required for access, provide the low water depths and draft of the fully loaded barge;

Equipment and materials will be transported via truck, utilizing existing Lauderdale Plant access roads.

G. Demolition plan for any existing structures to be removed; and

Please see Attachment E - Construction Plans for the location of existing structures to be removed.

H. Identify the schedule and party responsible for completing monitoring, record drawings, and as-built certifications for the project when completed.

The Project is proposed to be completed in 2016. FPL will remain the party responsible for completing monitoring, and recording drawings and as-built certifications upon completion.

V. Drainage Information

A. Provide pre-development and post-development drainage calculations, signed and sealed by an appropriate registered professional, as follows:

1. Runoff characteristics, including area, runoff curve number or runoff coefficient, and time of concentration for each drainage basin;

Please see Attachment F – Storm Water Management Report for pre-developed and post-developed drainage basin plans, calculations, and supporting information.

2. Water table elevations (normal and seasonal high) including aerial extent and magnitude of any proposed water table draw down;

Please see Attachment F – Storm Water Management Report for seasonal high water table (SHWT) estimates. No permanent water table drawdown is proposed.

3. Receiving water elevations (normal, wet season, design storm);
Wetland A is the receiving water for the storm water dry detention pond. The normal water elevation of Wetland A has a mean high elevation of 0.0 NAVD88 determined from the subsurface investigation. This is also the average existing grade elevation of Wetland A. The seasonal high water elevation is determined to be 1.0 NAVD88 based on field observations and a review of the Topographic Survey against the jurisdictional wetland boundaries. For the purpose of the design calculations, the maximum tailwater elevation for the design storm event is conservatively set at elevation 2.0 NAVD88.

4. Design storms used including rainfall depth, duration, frequency, and distribution;

The design storm events utilized for this project area as below and the depths have been determined from the South Water Management District ERP Applicant's Handbook Volume II:

5 Year - 24 Hour - Minimum Road Crown Elevation – 7.4 inches

**25 Year – 72 Hour – Allowable Offsite Discharge Rates – 14.3 inches
100 Year – 72 Hour – Minimum Finished Floor Elevation – 17.5 inches**

Calculations are based on the SCS Unit Hydrograph with a peaking factor of 484, and a South Florida Water Management District 72 hour storm was used for rainfall distribution.

5. Runoff hydrograph(s) for each drainage basin, for all required design storm event(s);

Storm water runoff hydrographs were routed through the storm water detention system utilizing HydroCAD analysis software. Both the pre-development and post-development drainage calculations utilized the SCS Unit Hydrograph with a peaking factor of 484.

The HydroCAD model generates storage and discharge hydrographs, including peak stages and peak discharge amounts using the previously developed SCS runoff hydrographs. The HydroCAD data includes nodes and links, stage-storage tabulation for the nodes, initial stage elevations, and a description of the system's links.

Please see Attachment F – Storm Water Management Report for engineering methodology details and calculations.

6. Stage-storage computations for any area such as a reservoir, close basin, detention area, or channel, used in storage routing;

Stage-storage relationships for the post-developed drainage model were based the established storm water dry detention pond size. Please see Attachment F – Storm Water Management Report for the calculations detailing the stage-storage relationships.

7. Stage-discharge computations for any storage areas at a selected control point, such as control structure or natural restriction;

Please see Attachment F – Storm Water Management Report for the HydroCAD model outputs for stage discharge relationships.

8. Flood routings through on-site conveyance and storage areas;

The storm water detention system was designed to provide treatment for the greater of 1.0 inches of runoff over the Construction Area, or 2.5 inches of the impervious area. 2.5 inches of the impervious area was determined to be the governing design case for the Project. The storm water system was also designed to attenuate the 25-year/72-hour storm event, within a maximum allowable detention volume discharge within 24 hours. Storm water runoff hydrographs were routed through the storm water detention system utilizing HydroCAD analysis software.

The HydroCAD model generates storage and discharge hydrographs, including peak stages and peak discharge amounts using the previously developed SCS runoff hydrographs. A schematic of the basin system includes nodes and links, stage-storage tabulation for the nodes, initial stage elevations, and a description of the system's links.

Please see Attachment F - Storm Water Management Report for engineering methodology details and calculations.

9. Water surface profiles in the primary drainage system for each required design storm event(s);

Please see the Post Development Calculations located in Attachment F – Storm Water Management Report.

10. Runoff peak rates and volumes discharged from the system for each required design storm event(s);

Please see the Post Development Calculations located in Attachment F – Storm Water Management Report.

11. Tail water history and justification (time and elevation); and

Wetland A is the receiving waters for the storm water dry detention pond. The normal water elevation of Wetland A has an elevation of 0.0 NAVD88 determined from the subsurface investigation. This is also the average existing grade elevation of Wetland A. The seasonal high water elevation is determined to be 1.0 NAVD88 based on field observations and a review of the Topographic Survey against the jurisdictional wetland boundary. For the purpose of the design calculations, the maximum tailwater elevation for the design storm event is conservatively set at elevation 2.0 NAVD88. The maximum tailwater elevation was set at time zero, and held constant throughout the storm event, and is considered conservative.

12. Pump specifications and operating curves for range of possible operating conditions (if used in system).

N/A

- B. Provide the results of any percolation tests, where appropriate, and soil borings that are representative of the actual site conditions;

Double Ring Infiltrometer tests were performed for this Project and it was determined that use of percolation for the storm water pond is not suitable. Please see the Ardaman & Associated Subsurface Exploration Report included in Attachment F - Storm Water Management Report for Double Ring Infiltrometer, In-Situ Permeability, and Soil Boring test data within the Project Area.

- C. Provide the acreage, and percentages of the total project, of the following:

1. Impervious surfaces, excluding wetlands;

Construction Area Pre-Development:

5.36 acres (22%) impervious of which 1.95 is contained within secondary containment areas

Construction Area Post-Development:

14.07 acres (59%) impervious, including buildings (0.07 acres), water surface areas (2.14 acres) and Impervious – other (11.86 acres)

2. Pervious surfaces (green areas, not including wetlands);

Construction Area Pre-Development: 1.39 acres (5.8%), not including wetlands

Construction Area Post-Development: 9.94 acres (41%), not including wetlands

3. Lakes, canals, retention areas, other open water areas; and

Construction Area Pre-Development: 1.95 acres (8.1%) of Fuel Oil Secondary Containment area.

Construction Area Post-Development: 2.14 acres (8.9%) of Storm Water Detention areas.

4. Wetlands.

Construction Area Pre-Development: 15.79 acres (65.8%)

Construction Area Post-Development: 0 acres (0%)

Entire Project Site Pre-Development: 94.42 acres (50.2%)

Entire Project Site Post-Development: 78.63 (41.8%)

- D. Provide an engineering analysis of floodplain storage and conveyance (if applicable), including:

N/A. The Project is located within the Southeast Florida Coast drainage basin (03090202), which connects to the Atlantic Ocean.

1. Hydraulic calculations for all proposed traversing works;
 2. Backwater water surface profiles showing upstream impact of traversing works;
 3. Location and volume of encroachment within regulated floodplain(s); and
 4. Plan for compensating floodplain storage, if necessary, and calculations required for determining minimum building and road flood elevations.
- E. Provide an analysis of the water quality treatment system including:
1. A description of the proposed stormwater treatment methodology that addresses the type of treatment, pollution abatement volumes, and recovery analysis; and

Storm water treatment is provided for the Construction Area. The Construction Area will be treated utilizing dry detention treatment methodology prior to final discharge to the surrounding wetlands. The storm water detention system was designed to provide water quality treatment for the greater of 1.0 inches of runoff over the Construction Area, or 2.5 inches of the impervious area. 2.5 inches of the impervious area was determined to be the governing design case for the Project. The storm water system was also designed to attenuate the 25-year/72-hour storm event, within a maximum allowable detention volume discharge within 24 hours.

There are no planned changes to the surfacing and grades of the underground transmission and pipeline corridors outside of the Project Area, therefore operational management of the storm water in these areas will remain unchanged.

2. Construction plans and calculations that address stage-storage and design elevations, which demonstrate compliance with the appropriate water quality treatment criteria.

Please see Attachment E - Construction Plans, as well as the Water Quality Treatment Calculations included in Attachment F - Storm Water Management Report and Pre and Post-Development calculations.

- F. Provide a description of the engineering methodology, assumptions and references for the parameters listed above, and a copy of all such computations, engineering plans, and specifications used to analyze the system. If a computer program is used for the analysis, provide the name of the program, a description of the program, input and output data, two diskette copies, if available, and justification for model selection.

Please see Attachment F Storm Water Management Report and Pre-and Post-Development Calculations.

VI. Operation and Maintenance and Legal Documentation

- A. Describe the overall maintenance and operation schedule for the proposed system.

FPL will be responsible for the upkeep and maintenance of the proposed stormwater management system. The removal of debris and clearing will occur when needed.

- B. Identify the entity that will be responsible for operating and maintaining the system in perpetuity if different than the permittee, a draft document enumerating the enforceable affirmative obligations on the entity to properly operate and maintain the system for its expected life, and documentation of the entity's financial responsibility for long-term maintenance. If the proposed operation and maintenance entity is not a property owner's association, provide proof of the existence of an entity, or the future acceptance of the system by an entity which will operate and maintain the system. If a property owner's association is the proposed operation and maintenance entity, provide copies of the articles of incorporation for the association and copies of the declaration, restrictive covenants, deed restrictions, or other

operational documents that assign responsibility for the operation and maintenance of the system. Provide information ensuring the continued adequate access to the system for maintenance purposes. Before transfer of the system to the operating entity will be approved, the permittee must document that the transferee will be bound by all terms and conditions of the permit.

FPL will remain the entity responsible for operation and maintenance of the system in perpetuity.

C. Provide copies of all proposed conservation easements, storm water management system easements, property owner's association documents, and plats for the property containing the proposed system.

N/A

D. Provide indication of how water and waste water service will be supplied. Letters of commitment from off-site suppliers must be included.

N/A

E. Provide a copy of the boundary survey and/or legal description and acreage of the total land area of contiguous property owned/controlled by the applicant.

Please see Attachment C - Wetland and Topographic Surveys. A legal description of the Lauderdale Plant is included on Sheet 1 of the Wetland Survey.

VII. Water Use

A. Will the surface water system be used for water supply, including landscape irrigation, or recreation.

No

B. If a Consumptive Use or Water Use permit has been issued for the project, state the permit number

N/A

C. If no Consumptive Use or Water Use permit has been issued for the project, indicate if such a permit will be required and when the application for a permit will be submitted.

No consumptive use or water use permit will be required for the Project.

D. Indicate how any existing wells located within the project site will be utilized or abandoned.

N/A

TABLE 1
 Project Impact Summary

WL & SW ID	WL & SW TYPE (FLUCFCS)	WL & SW SIZE (ac.) ON SITE	WL & SW ACRES NOT IMPACTED	PERMANENT IMPACTS TO WL & SW		TEMPORARY IMPACTS TO WL & SW		MITIGATION ID
				IMPACT SIZE (acres)	IMPACT CODE	IMPACT SIZE (acres)	IMPACT CODE	
A	617/619	58.09	42.30	15.79	Fill	-	-	Mitigation Bank
B	619	0.54	0.54	-	-	-	-	N/A
C	619	2.64	2.64	-	-	-	-	N/A
D	612/510	10.57	10.57	-	-	-	-	N/A
E	617/619	8.62	8.62	-	-	-	-	N/A
F	617/619	1.09	1.09	-	-	-	-	N/A
G	617/619	0.33	0.33	-	-	-	-	N/A
H	617/619	1.49	1.37	-	-	0.12	Excavation	In-situ Restoration
I	617/619	0.75	0.70	-	-	0.05	Excavation	In-situ Restoration
J	641	0.11	0.11	-	-	-	-	N/A
TOTAL		84.23	68.27	15.79		0.17		

ATTACHMENT A

Adjacent Property Owners



LEGEND

- Project Area
- Property Boundary (Approximate)
- Adjacent Parcels*

0 400 800 1,600

Feet

NOTE(S)

*SEE ATTACHED TABLE FOR OWNERSHIP INFORMATION

REFERENCE(S)

PROPERTY BOUNDARY (APPROXIMATE), BROWARD COUNTY PROPERTY APPRAISER, 2013
PROJECT AREA, FPL / GOLDER ASSOCIATES INC., 2013

CLIENT

FPL

PROJECT

LAUDERDALE PLANT

TITLE

ADJACENT PROPERTY OWNERSHIP

CONSULTANT	YYYY-MM-DD	2015-03-20
DESIGNED	NRL	
PREPARED	NRL	
REVIEWED	KAB	
APPROVED	KAB	

PROJECT NO.
1520938

CONTROL
C010

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ATTACHMENT
A

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

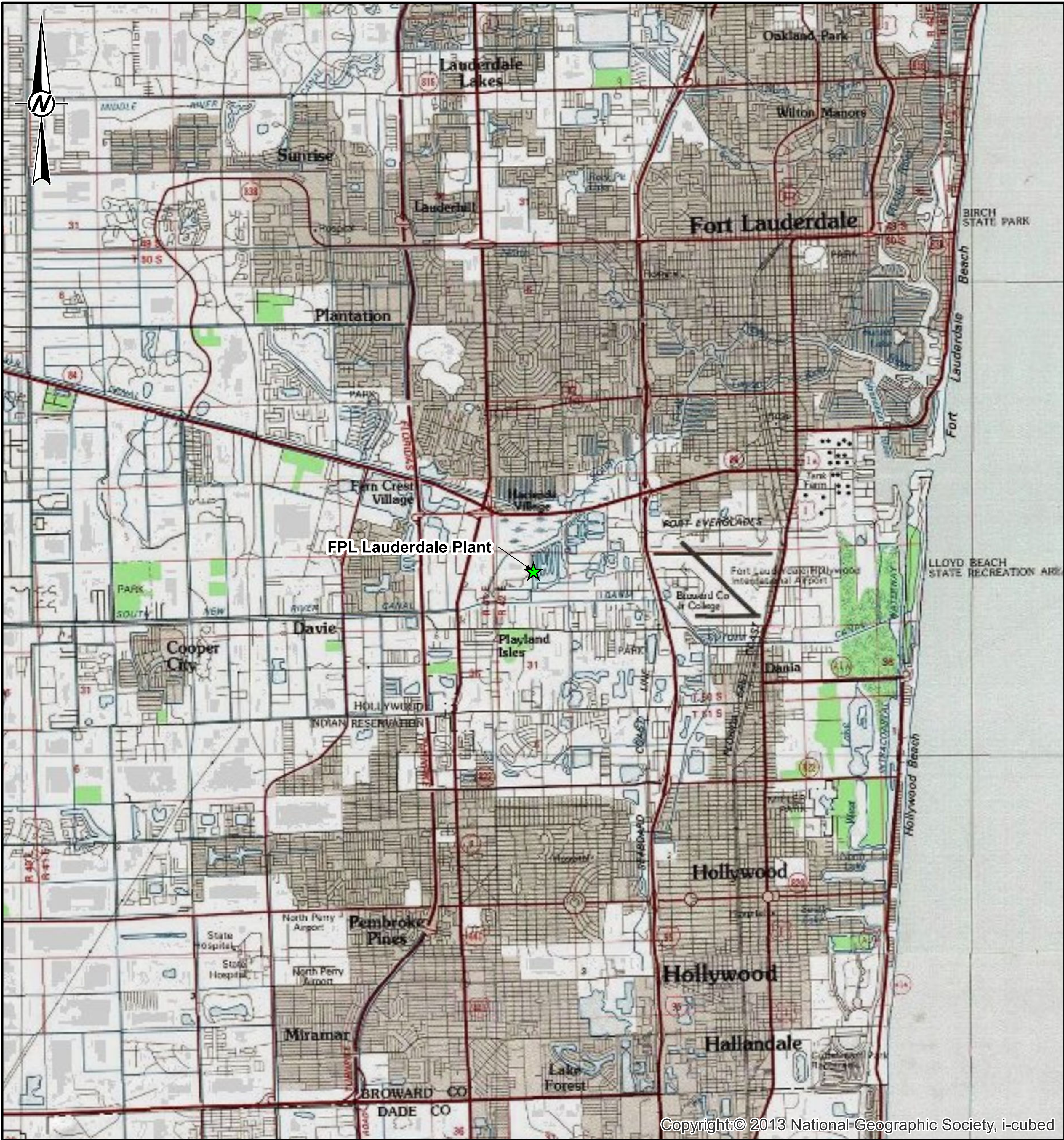
ATTACHMENT A

ADJACENT PROPERTY OWNERSHIP

Map ID	PARCEL ID	OWNER NAME	OWNER ADDRESS
1	504230070230	Barnick,Michael Tr	64 FOUNDERS WAY MILFORD CT 06460
2	504230040800	Bierer,Thomas E & Margaret	4409 SW 35 AVE DANIA BEACH FL 33312-5426
3	504230040260	Botton,Danny	4408 SW 34 TER FORT LAUDERDALE FL 33312-5421
4	504125010255	Broward County	115 S ANDREWS AVE FORT LAUDERDALE FL 33301-1801
5	504125200010	Broward County	115 S ANDREWS AVE FORT LAUDERDALE FL 33301-1801
6	504125200020	Broward County	115 S ANDREWS AVE FORT LAUDERDALE FL 33301-1801
7	504125200021	Broward County	115 S ANDREWS AVE FORT LAUDERDALE FL 33301-1801
8	504125200030	Broward County	115 S ANDREWS AVE FORT LAUDERDALE FL 33301-1801
9	504219000120	Broward County	115 S ANDREWS AVE FORT LAUDERDALE FL 33301-1801
10	504219000130	Broward County	115 S ANDREWS AVE FORT LAUDERDALE FL 33301-1801
11	504219000140	Broward County	115 S ANDREWS AVE FORT LAUDERDALE FL 33301-1801
12	504230000030	Broward County	115 S ANDREWS AVE FORT LAUDERDALE FL 33301-1801
13	504230000052	Broward County	115 S ANDREWS AVE FORT LAUDERDALE FL 33301-1801
14	504230000270	Broward County	115 S ANDREWS AVE FORT LAUDERDALE FL 33301-1801
15	504125160010	City Of Fort Lauderdale	100 N ANDREWS AVE FORT LAUDERDALE FL 33301
16	504125160020	City Of Fort Lauderdale	100 N ANDREWS AVE FORT LAUDERDALE FL 33301
17	504230040780	Dehnert,Stephen	4485 SW 26 AVE DANIA BEACH FL 33312
18	504229400092	Distribution Funding Iii Inc	200 E LAS OLAS BLVD STE 1400 FORT LAUDERDALE FL 33319
19	504125010250	Fla Power & Light Co	PO BOX 14000 JUNO BEACH FL 33408-0420
20	504230040760	Flanigan,Rick	4408 SW 35 AVE DANIA BEACH FL 33312
21	504229400096	Florida Power & Light Co	PO BOX 14000 JUNO BCH FL 33408- 0420
22	504230000250	Florida Power & Light Co	PO BOX 14000 JUNO BEACH FL 33408-0420
23	504230040250	Hodgson,Paula D 1/2 Int Ea	4410 SW 34 TER DANIA BEACH FL 33312-5421
24	504230060230	Jaspan,Salomao & Fania	4407 SW 38 TER DANIA BEACH FL 33312
25	504230060241	Jaspan,Salomao & Fania	2751 S OCEAN DR #1608N HOLLYWOOD FL 33019
26	504230040790	Jeffers,Mansel W & Jami	1501 PERRY DR N W CANTON OH 44708
27	504230070210	Kane,Michael	4407 SW 37 AVE DANIA BEACH FL 33312-5401
28	504230040240	Lemieux,Diane	1438 GARFIELD ST HOLLYWOOD FL 33020
29	504230040280	Mcdonald,Yolanda V 1/2 Int	4409 SW 34 TER DANIA BEACH FL 33312
30	504230070220	Mcnally,Jeffrey A & Phyllis A	4400 SW 37 AVE DANIA BEACH FL 33312-5402
31	504230040770	Ross,Mark A & Sue A	4406 SW 35 AVE DANIA BEACH FL 33312-5427
32	504229400090	Security Capital Ind Trust	200 E LAS OLAS BLVD STE 1400 FORT LAUDERDALE FL 33301-2273
33	504230060240	Tole,Wesley W Iii	4406 SW 38 TER DANIA BEACH FL 33312-5408

ATTACHMENT B

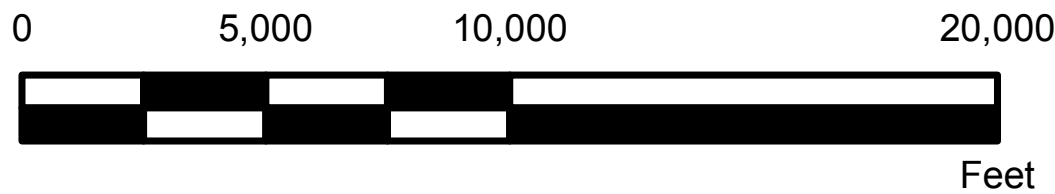
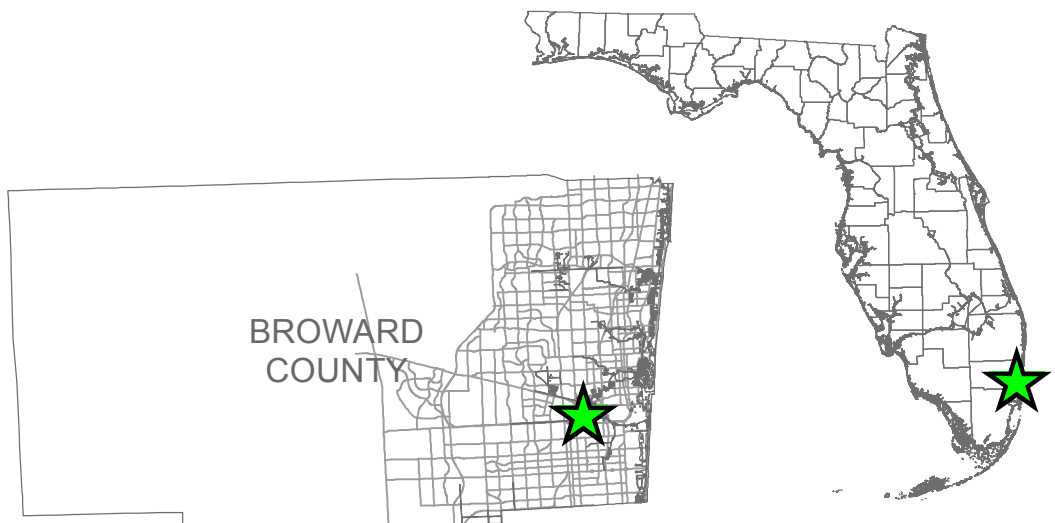
Site Location Information



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LEGEND

★ Project Location



REFERENCE(S)
LAUDERDALE PLANT LOCATION, FPL, 2015

CLIENT
FPL

PROJECT
LAUDERDALE PLANT

TITLE
LOCATION MAP

CONSULTANT



YYYY-MM-DD 2015-03-20

DESIGNED NRL

PREPARED NRL

REVIEWED KFK

APPROVED KFK

PROJECT NO.
1520938

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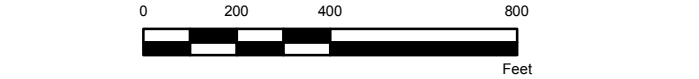
FIGURE
1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A



LEGEND

- Wetland Line Surveyed
- Wetland Line Interpolated
- Wetland Area
- Project Area
- Property Boundary (Approximate)



REFERENCE(S)
WETLAND LINE SURVEYED, AVIROM & ASSOCIATES, INC., 2011
WETLAND BOUNDARY INTERPOLATED, GOLDER ASSOCIATES INC., 2013
PROPERTY BOUNDARY (APPROXIMATE), BROWARD COUNTY PROPERTY APPRAISER, 2013

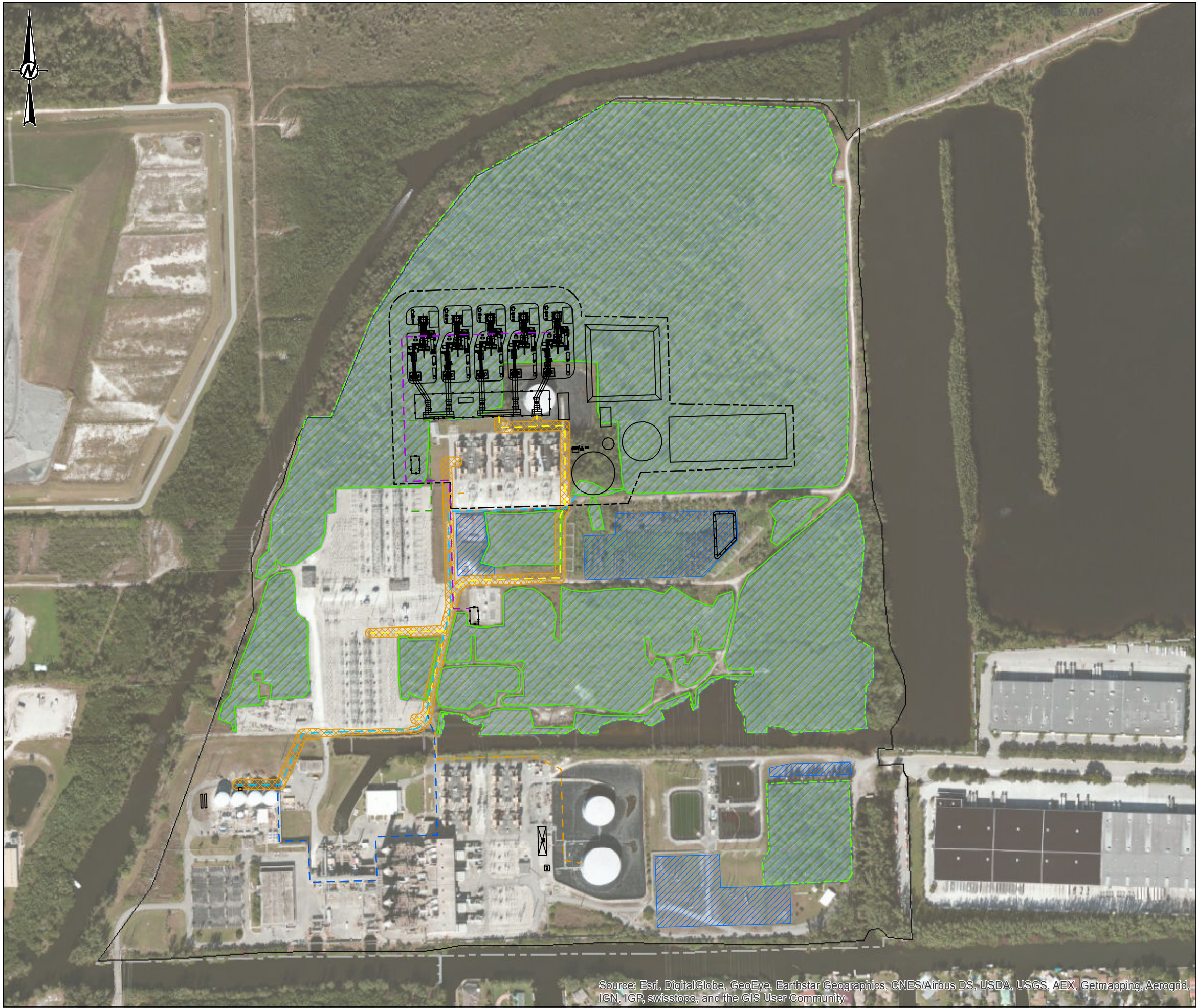
CLIENT
FPL

PROJECT
LAUDERDALE PLANT

TITLE
WETLAND MAP

	CONSULTANT	YYYY-MM-DD	2015-03-20
	DESIGNED	NRL	
	PREPARED	NRL	
	REVIEWED	KAB	
	APPROVED	KAB	

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



LEGEND

- Project Area
- Property Boundary (Approximate)
- Temporary Construction Laydown Areas
- Potential Underground Route (Width Varies)
- Wetland Area
- Wetland Line (Interpolated)
- Wetland Line (Surveyed)
- Construction Area
- Proposed Facility Layout
- 230kV Overhead Transmission Line Route
- Demin Water Line Alternate Route
- Demin Water Line Proposed Route
- Fuel Oil
- Natural Gas
- Underground Transmission

0 200 400 800
Feet

REFERENCE(S)

PROPERTY BOUNDARY (APPROXIMATE), BROWARD COUNTY PROPERTY APPRAISER, 2013.
CONSTRUCTION AREA, TEMPORARY CONSTRUCTION LAYDOWN AREAS, LINEAR FACILITIES, FACILITY LAYOUT, FPL, 2015
SURVEYED WETLAND LINES, AVIROM & ASSOCIATES, INC., 2013
INTERPOLATED WETLAND LINES, GOLDER ASSOCIATES INC., 2013

CLIENT
FPL

PROJECT
LAUDERDALE PLANT

TITLE
**CONCEPTUAL LAYOUT WITH
WETLAND BOUNDARIES**

CONSULTANT	YYYY-MM-DD	2015-03-20
DESIGNED	NRL	
PREPARED	NRL	
REVIEWED	KFK	
APPROVED	KFK	



PROJECT NO.
1520938

CONTROL
C003

REV.
0

FIGURE
3

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



KEY MAP

LEGEND

- Property Boundary (Approximate)
- Project Area
- Soils
 - 3 - Arents, Organic Substratum
 - 18 - Lauderhill
 - 21 - Okeelanta
 - 33 - Sanibel
 - 36 - Udorthents
 - 38 - Udorthents, Shaped
 - 40 - Urban Land
 - 99 - Water

0 200 400 800

Feet

REFERENCE(S)

PROPERTY BOUNDARY (APPROXIMATE), BROWARD COUNTY PROPERTY APPRAISER, 2013.

SOILS, NRCS, 2012

CLIENT

FPL

PROJECT

LAUDERDALE PLANT

TITLE

SOILS MAP

CONSULTANT	YYYY-MM-DD	2015-03-20
	DESIGNED	NRL
	PREPARED	NRL
	REVIEWED	KFK
	APPROVED	KFK

PROJECT NO.

1520938

CONTROL

C004

REV.

0

FIGURE

4

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



KEY MAP

LEGEND

Property Boundary (Approximate)

Project Area

0 200 400 800

Feet

REFERENCE(S)

PROPERTY BOUNDARY (APPROXIMATE), BROWARD COUNTY PROPERTY APPRAISER, 2013.

CLIENT

FPL

PROJECT

LAUDERDALE PLANT

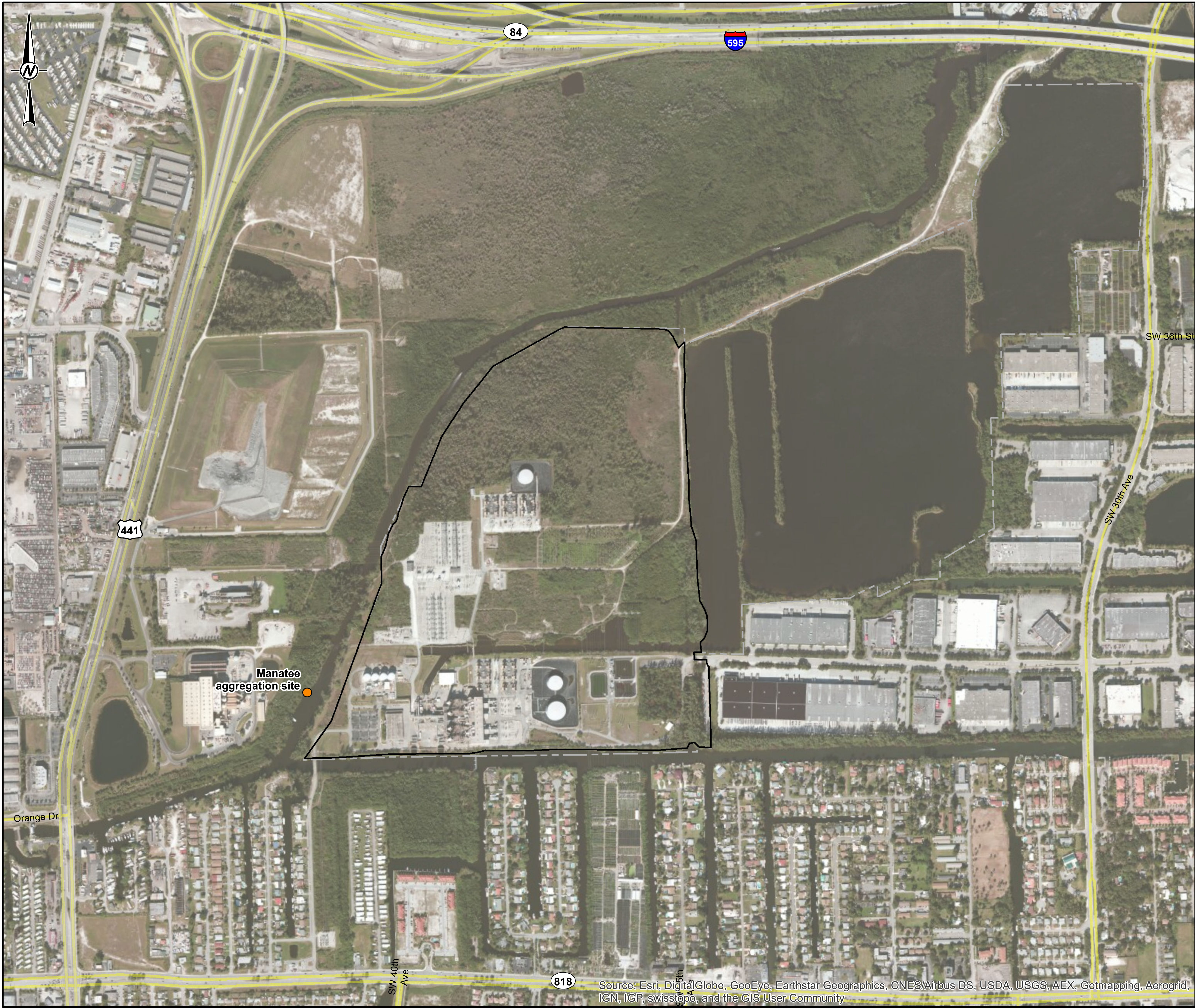
TITLE

AERIAL MAP

CONSULTANT	YYYY-MM-DD	2015-03-20
	DESIGNED	NRL
	PREPARED	NRL
	REVIEWED	KFK
	APPROVED	KFK

PROJECT NO.	CONTROL	REV.	FIGURE
1520938	C005	0	5

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



LEGEND

- Project Area
- Property Boundary (Approximate)

Element Occurrences

- Other

0 400 800 1,600

Feet

REFERENCE(S)

PROPERTY BOUNDARY (APPROXIMATE), BROWARD COUNTY PROPERTY APPRAISER, 2013

PROJECT AREA, FPL/GOLDER ASSOCIATES INC., 2013

ELEMENT OCCURRENCES, FNAI, 2007

CLIENT

FPL

PROJECT

LAUDERDALE PLANT

TITLE

THREATENED AND ENDANGERED SPECIES

MAP

CONSULTANT	YYYY-MM-DD	2015-03-20
	DESIGNED	NRL
	PREPARED	NRL
	REVIEWED	KAB
	APPROVED	KAB

PROJECT NO.	CONTROL	REV.	FIGURE
1520938	C006	0	6

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B 11



LEGEND

Project Area

Plant Boundary (Approximate)

Land Use

140 - Commercial and Services

241 - Tree Nurseries

320 - Upland Shrub and Brushland

437 - Australian Pine

512 - Channelized Waterway

612 - Mangrove Swamp

617 - Mixed Wetland Hardwoods

617 / 619 - Mixed Wetland Hardwoods / Exotic Wetland Hardwoods

619 - Exotic Wetland Hardwoods

6411 - Sawgrass

743 - Spoil Area

814 - Roads

831 - Electric Power Facilities

REFERENCE(S)

LAND USE, PROJECT AREA (APPROXIMATE), GOLDER ASSOCIATES INC., 2013

PROPERTY BOUNDARY (APPROXIMATE), BROWARD COUNTY PROPERTY APPRAISER, 2013

CLIENT

FPL

PROJECT

LAUDERDALE PLANT

TITLE

LAND USE MAP

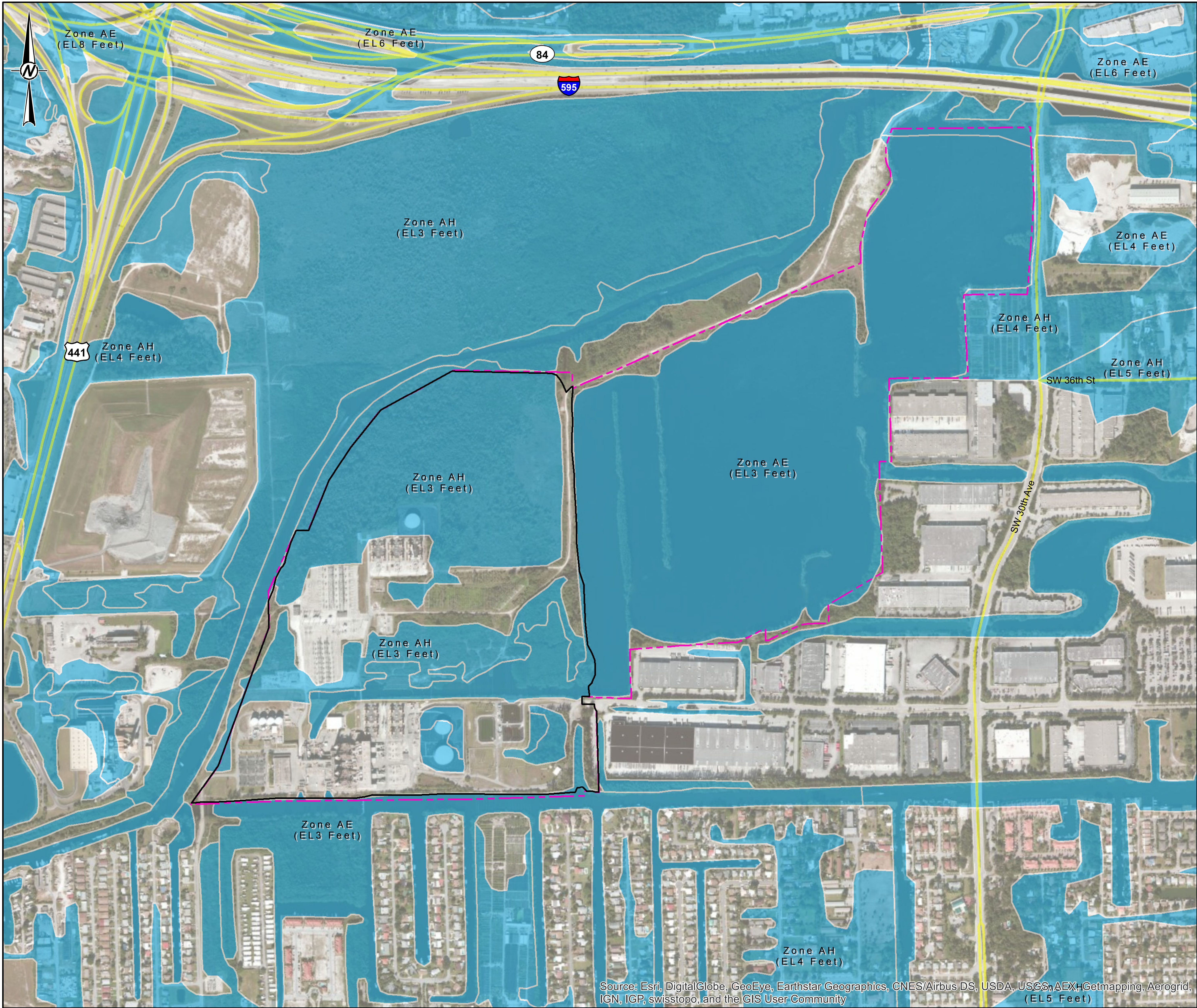
CONSULTANT

YYYY-MM-DD	2015-03-20
DESIGNED	NRL
PREPARED	NRL
REVIEWED	KAB
APPROVED	KAB

PROJECT NO. 1520938	CONTROL C007	REV. 0	FIGURE 7
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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



LEGEND

Project Area

Property Boundary (Approximate)

100-Year Flood Zone

In

0 400 800 1,600

Feet

REFERENCE(S)

PROJECT BOUNDARY, PROPERTY BOUNDARY, GOLDER ASSOCIATES INC., 2014

FLOOD HAZARD ZONES, ZONE TYPES, FEMA, 2014

CLIENT

FPL

PROJECT

LAUDERDALE PLANT

TITLE

FEMA

FLOODPLAIN MAP

CONSULTANT	YYYY-MM-DD	2015-03-20
	DESIGNED	NRL
	PREPARED	NRL
	REVIEWED	KFK
	APPROVED	KFK

PROJECT NO.

1520938

CONTROL

C008

REV.

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FIGURE

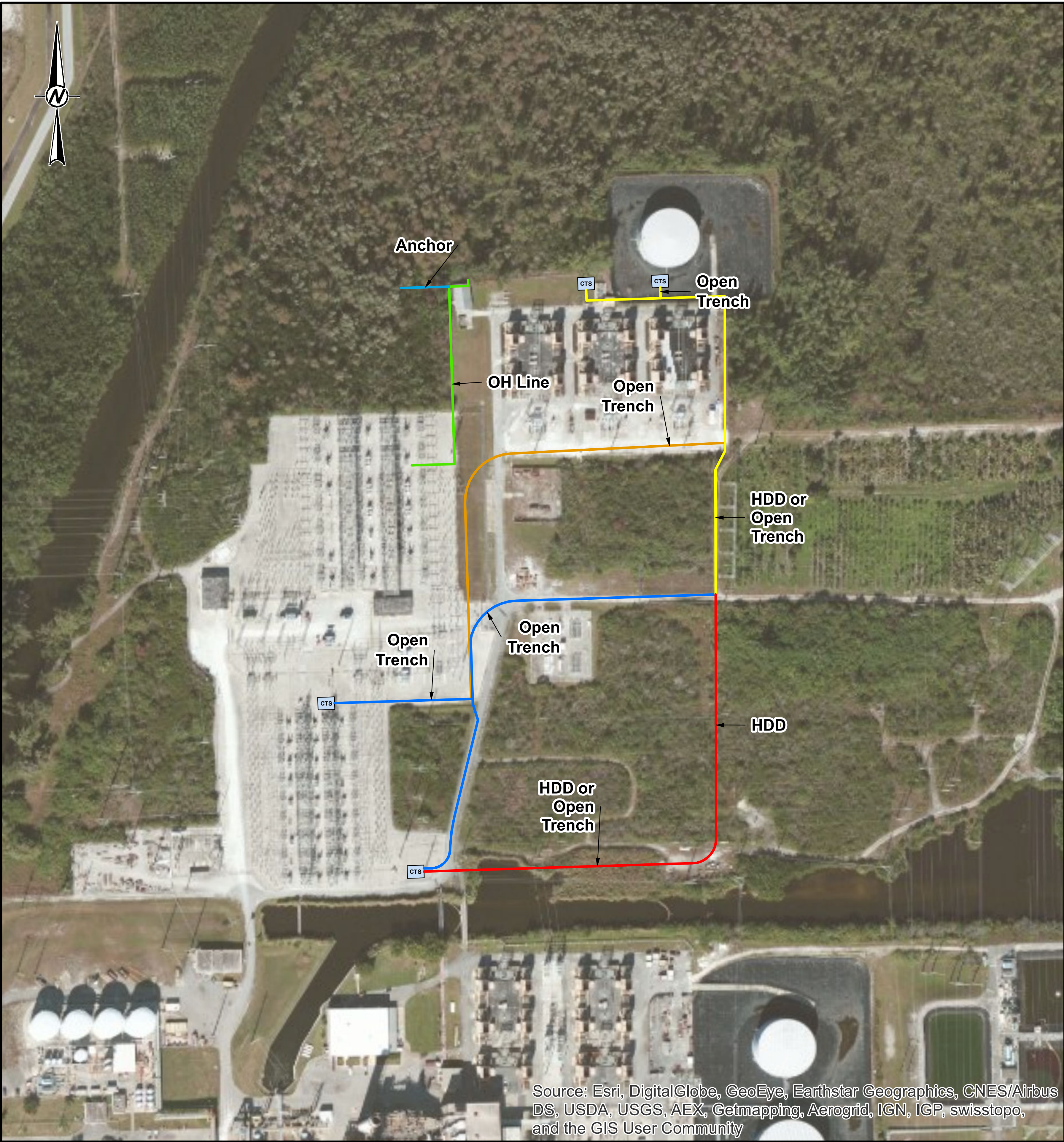
8

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

1 in

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

C:\PROJECTS\FPL\For_Lauderdale\1520938_FSD_Air_Permi_AppA_Report\Figures\1520938_A001_FEMA100FloodZones.mxd



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

LEGEND

— Alternate Transmission Line Routes

CLIENT
FPL

PROJECT
LAUDERDALE PLANT

TITLE
**ALTERNATE
TRANSMISSION LINE ROUTES**

CONSULTANT

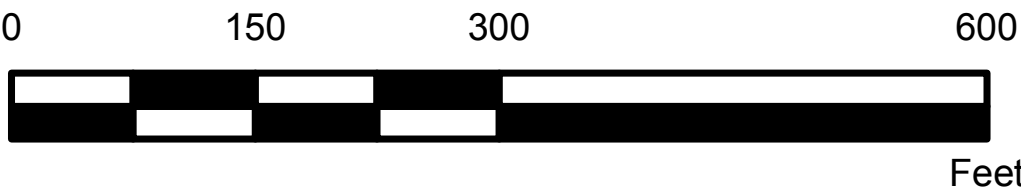
YYYY-MM-DD 2015-03-20

DESIGNED NRL

PREPARED NRL

REVIEWED KAB

APPROVED KAB



REFERENCE(S)
ALTERNATE TRANSMISSION LINE ROUTES, FPL / GOLDER ASSOCIATES INC., 2013



PROJECT NO.
1520938

CONTROL
C018

REV.
0

FIGURE
9

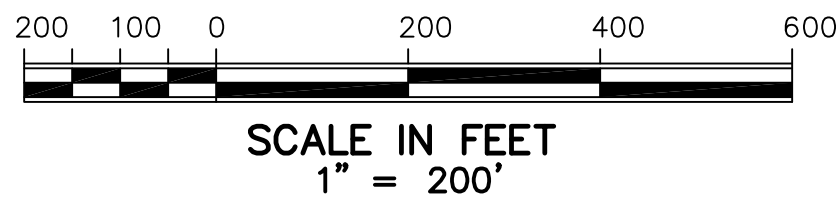
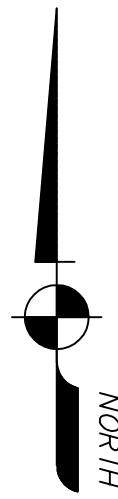
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A

ATTACHMENT C

Wetland and Topographic Surveys

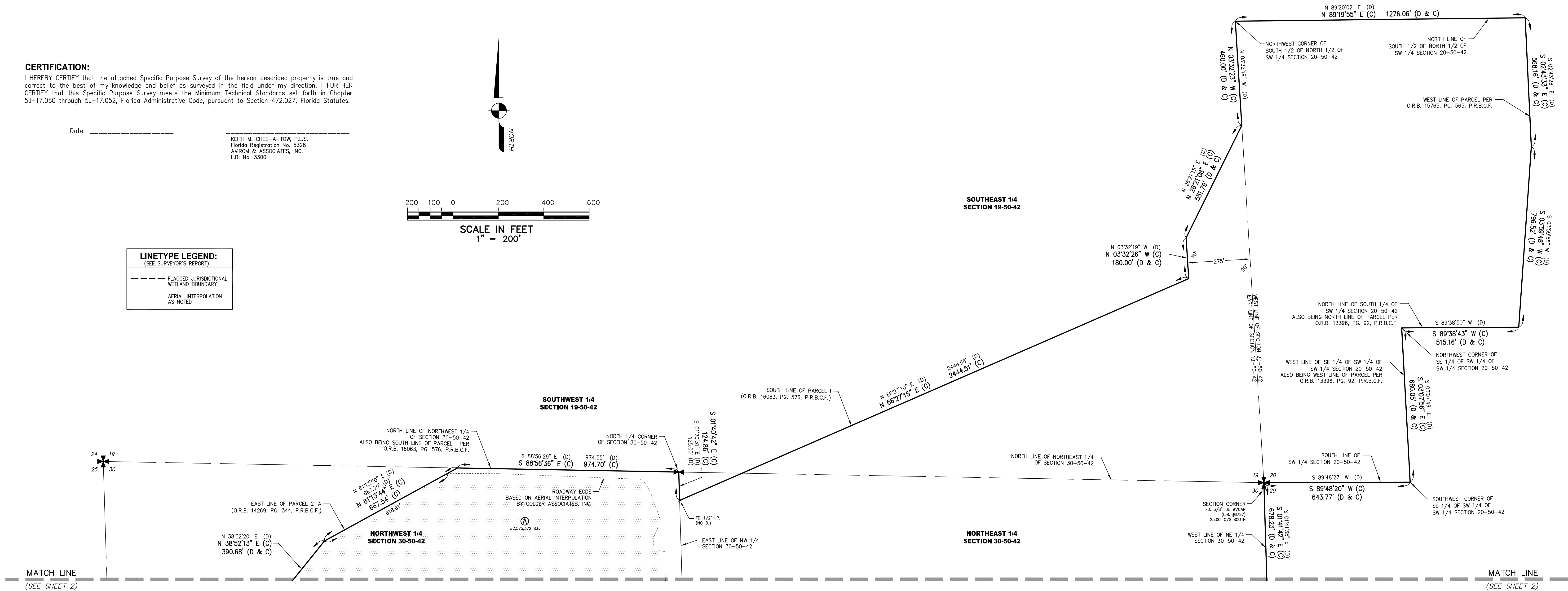
HEREBY CERTIFY that the attached Specific Purpose Survey of the hereon described property is true and correct to the best of my knowledge and belief as surveyed in the field under my direction. I FURTHER CERTIFY that this Specific Purpose Survey meets the Minimum Technical Standards set forth in Chapter 5J-17.050 through 5J-17.052, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes.

KEITH M. CHEE-A-TOW, P.L.S.
Florida Registration No. 5328
AVIROM & ASSOCIATES, INC.
L.B. No. 3300



LINETYPE LEGEND:
(SEE SURVEYOR'S REPORT)

— — — — —	FLAGGED JURISDICTIONAL WETLAND BOUNDARY
- - - - -	AERIAL INTERPOLATION AS NOTED



A PORTION OF SECTION 25, TOWNSHIP 50 SOUTH, RANGE 41 EAST AND A PORTION OF SECTIONS 19, 20 AND 30 TOWNSHIP 50 SOUTH, RANGE 42 EAST OF BROWARD COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE CENTER OF SAID SECTION 30-50-42, THENCE S 01°41'18" E, ALONG EAST LINE OF THE SW ¼ OF SAID SECTION 30, FOR 814.58 FEET TO THE APPROXIMATE CENTERLINE OF DANIA CUT-OFF CANAL, BEING THE POINT OF BEGINNING OF HEREINAFTER DESCRIBED BOUNDARY:

FROM SAID POINT OF BEGINNING; THENCE S 88°44'30" W, ALONG SAID APPROXIMATE CENTERLINE, FOR 3247.52 FEET TO THE INTERSECTION WITH THE EASTERLY RIGHT-OF-WAY LINE OF THE SOUTH NEW RIVER CANAL (C-11, 260' WIDE R/W), AS SHOWN ON ROUTE 441 RESOURCE RECOVERY SITE PLAT RECORDED IN PLAT BOOK 132 AT PAGE 41 P.R.B.C.F.; THENCE N 35°44'42" E, ALONG SAID EASTERLY

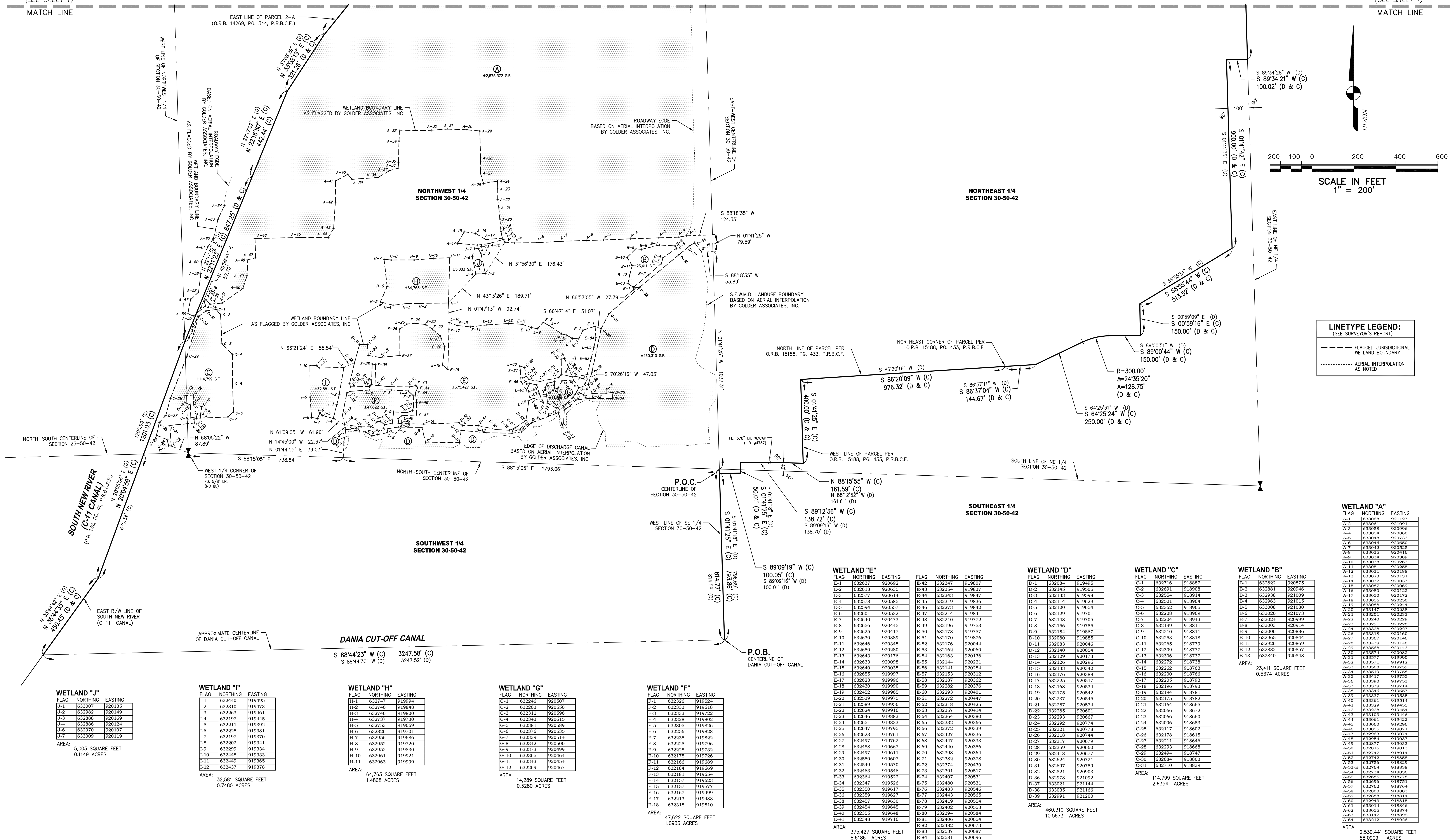
25-41' OF WAY LINE, FOR 450.45 FEET; THENCE S 20°05'06" E, CONTINUING ALONG SAID EASTERLY RIGHT-OF-WAY LINE, FOR 1200.99 FEET TO A POINT ON THE COMMON SECTION LINE BETWEEN SECTIONS 19-50-41 AND SECTION 30-50-42; THENCE N 22°11'30" E FOR 847.25 FEET; THENCE N 22°17'02" E, ALONG EASTERLY LINE OF PARCEL 2-A, AS DESCRIBED IN O.R.B. 14269 AT PAGE 344 P.R.B.C.F.; THENCE N 33°08'26" E, CONTINUING ALONG EASTERLY LINE OF SAID PARCEL 2-A, FOR 321.26 FEET; THENCE N 38°52'20" E, ALONG LAST DESCRIBED LINE, FOR 390.68 FEET; THENCE N 61° 13' 50" E, CONTINUING ALONG EASTERLY LINE OF SAID PARCEL 2-A, FOR 667.79 FEET TO A POINT ON THE NORTH LINE OF THE NW ¼ OF SECTION 30-50-42; THENCE S 88°56'29" E, ALONG SAID NORTH LINE, ALSO BEING THE SOUTH LINE OF PARCEL 1, AS DESCRIBED IN O.R.B. 16063 AT PAGE 576 P.R.B.C.F., FOR 974.55 FEET TO THE NORTH ¼ CORNER; THENCE S 01°20'31" E, ALONG THE EAST LINE OF THE NW ¼ OF SECTION 30-50-42, FOR 125.00 FEET; THENCE N 66°27'10" E, CONTINUING ALONG THE SOUTHERLY LINE OF LAST DESCRIBED PARCEL 1, FOR 2444.55 FEET; THENCE N 03°32'19" W, ALONG A LINE 275 FEET WEST OF SECTION 20-50-42 AND PARALLEL TO THE EAST LINE OF SECTION 19-50-42, FOR 180.00 FEET; THENCE N 26°21'51" E FOR 551.19 FEET TO A POINT ON THE COMMON SECTION LINE BETWEEN SECTION 19-50-42 AND SECTION 20-50-42; THENCE N 03°32'19" W ALONG WEST LINE OF SAID SECTION 20, FOR 460.00 FEET TO THE NORTHWEST CORNER OF THE SOUTH ½ OF THE NORTH ½ OF THE SW ¼ OF SAID SECTION 20; THENCE N 89°20'02" E, ALONG NORTH LINE OF SAID SOUTH ½ OF NORTH ½ OF SW ¼ OF SECTION 20, FOR 1276.06 FEET; THENCE S 02°43'26" E, ALONG THE WEST LINE OF PARCEL DESCRIBED IN O.R.B. 15765 AT PAGE 565 P.R.B.C.F. FOR 568.15 FEET; THENCE S 03°59'55" W, CONTINUING ALONG LAST DESCRIBED DEED LINE, FOR 796.52 FEET TO A POINT ON THE NORTH LINE OF THE SOUTH ½ OF THE SW ¼ OF SAID SECTION 20; THENCE S 89°38'50" W, ALONG THE NORTH LINE OF LAST DESCRIBED SOUTH ½, ALSO BEING THE NORTH LINE OF PARCEL DESCRIBED IN O.R.B. 13396 AT PAGE 92 P.R.B.C.F., FOR 515.16 FEET TO THE NORTHWEST CORNER OF THE SE ¼ OF THE SW ¼ OF THE SW ¼ OF SAID SECTION 20; THENCE S 03°07'49" E, ALONG THE WEST LINE OF THE SE ¼, OF SW ¼, OF SW ¼, OF SECTION 20, ALSO BEING THE WEST LINE OF LAST DESCRIBED RECORDED PARCEL, FOR 680.05 FEET TO THE SOUTHWEST CORNER OF SAID SE ¼, SW ¼, SW ¼; THENCE S 89°48'27" W, ALONG THE SOUTH LINE OF THE SW ¼ OF SECTION 20; THENCE N 64°37.77 FEET TO THE SECTION CORNER COMMON TO SECTIONS 19, 20, 29 AND 30; THENCE S 01°41'35" E ALONG THE EAST LINE OF THE NE ¼ OF SAID SECTION 30-50-42, FOR 678.23 FEET; THENCE S 89°34'28" W FOR 100.02 FEET; THENCE S 01°41'35" E, ALONG A LINE 100 FEET WEST OF AND PARALLEL TO THE EAST LINE OF SAID NE ¼, FOR 900 FEET; THENCE S 58°55'51" W FOR 515.32 FEET; THENCE S 00°59'09" E FOR 150.00 FEET; THENCE S 89°00'51" W FOR 150.00 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE TO THE LEFT; THENCE WESTERLY AND SOUTHWESTERLY ALONG THE ARC OF SAID CURVE TO THE LEFT, HAVING FOR ITS ELEMENTS, A CENTRAL ANGLE OF 24°35'20", A RADIUS OF 300.00 FEET, FOR AN ARC DISTANCE OF 128.75 FEET TO THE POINT OF TANGENT; THENCE S 64°25'31" W FOR 250.00 FEET; THENCE S 86°37'11" W FOR 144.67 FEET TO THE NORTHEAST CORNER OF PARCEL DESCRIBED IN O.R.B. 15188 AT PAGE 433 P.R.B.C.F.; THENCE S 86°20'16" W, ALONG THE NORTH LINE OF LAST DESCRIBED RECORDED PARCEL, FOR 976.32 FEET; THENCE S 01°41'18" E, ALONG THE WEST LINE OF LAST DESCRIBED RECORDED PARCEL, FOR 400.00 FEET; THENCE N 88°02'52" W, ALONG A LINE 40 FEET NORTH OF AND PARALLEL TO THE SOUTH LINE OF THE NE ¼ OF SAID SECTION 30, FOR 161.61 FEET; THENCE S 89°09'16" W FOR 138.70 FEET; THENCE S 01°41'18" E FOR 50.15 FEET; THENCE S 89°09'16" W FOR 100.01 FEET TO A POINT ON THE WEST LINE OF THE SE ¼ OF SAID SECTION 30; THENCE S 01°41'18" E, ALONG THE WEST LINE OF SAID SE ¼, FOR 793.69 FEET TO THE POINT OF BEGINNING; LESS THAT PORTION OF THE DANIA CUT-OFF CANAL WHICH LIES BELOW THE MEAN HIGH WATER LINE.

SAID LANDS LYING AND SITUATE IN BROWARD COUNTY, FLORIDA, CONTAINING 17,034,696 SQUARE FEET (391.0628 ACRES), MORE OR LESS.

[illegible]

1. Reproductions of this Sketch are not valid without the signature and the original raised seal of a Florida licensed surveyor and mapper.
2. No Title Opinion or Abstract to the subject property has been provided. It is possible that there are Deeds, Easements, or other instruments (recorded or unrecorded) which may affect the subject property. No search of the Public Records has been made by the Surveyor.
3. The land description shown hereon is in based on a survey by A.R. Toussaint & Associates, Inc., dated June 1989.
4. No underground improvements were located.
5. Coordinates shown hereon are referenced to Grid North, based on the 1990 adjustment of the North American Datum of 1983 (NAD 83/90), of the Florida State Plane Coordinate System (Transverse Mercator Projection), East Zone.
6. Bearings and coordinates shown hereon were established by a GPS Virtual Reference Station (VRS) network which is certified to a 2 centimeter local accuracy (as defined in the FDCC Geospatial Positioning Accuracy Standards, part 2: National Standard for Spatial Data Accuracy), relative to the nearest control point within the National Geodetic Survey's (NGS) Geodetic Control Network.
7. Equipment Used: Trimble R8 GNSS Dual Frequency Receiver (Serial No. 4627118155)
8. Processing Software: Trimble Geomatics Office, Version 1.63
9. This map is intended to be displayed at a scale of 1:2400 (1"=200').
10. This is a Specific Purpose Survey. The purpose of this survey is to locate the jurisdictional wetlands flags as set by other agents and to delineate the wetland polygons relative to the boundary.
11. The flag identification numbers correspond to the individual wetland flags of the jurisdictional wetland figures as established by other agents.
12. The wetland flags and S.F.W.M.D. landuse line were established by: Golder Associates, Inc.
6026 NW 1st Place, Gainesville, FL 32607
Telephone: (352) 336-5600
13. The jurisdictional wetlands lines are subject to review and/or revisions by: South Florida Water Management District and/or Florida Department of Environmental Protection.
14. Data shown hereon was compiled from instrument(s) of record and does not constitute a Boundary Survey.
15. No interior improvements were located.
16. The survey depicted hereon does NOT qualify as a Mean High Water Survey per Chapter 177, Part II Florida Statutes.
17. Abbreviation Legend: A = Arc Length; C = Calculated; Δ = Central Angle; D = Per Deed; FD. = Found; I.R. = Iron Rod; L.B. = Licensed Business; Ms = Measured; NAD = North American Datum; O.R.B. = Official Records Book; O/S = Offset; P.B. = Plat Book; PG. = Page; P.L.S. = Professional Land Surveyor; P.O.B. = Point of Beginning; P.O.C. = Point of Commencement; P.R.B.C.F. = Public Records of Broward County Florida; R = Radius; R/W = Right-of-Way; S.F. = Square Feet; S.F.W.M.D. = South Florida Water Management District; W/CAP = With Surveyors Cap;

JOB NO.		4143-7	
SCALE	1" = 200'		
DATE	08/26/2013		
BY	S.A.M.		
CK'D.	K.M.C.		
F.B.	1650	PG.	05-10
SHEET	1	OF	2



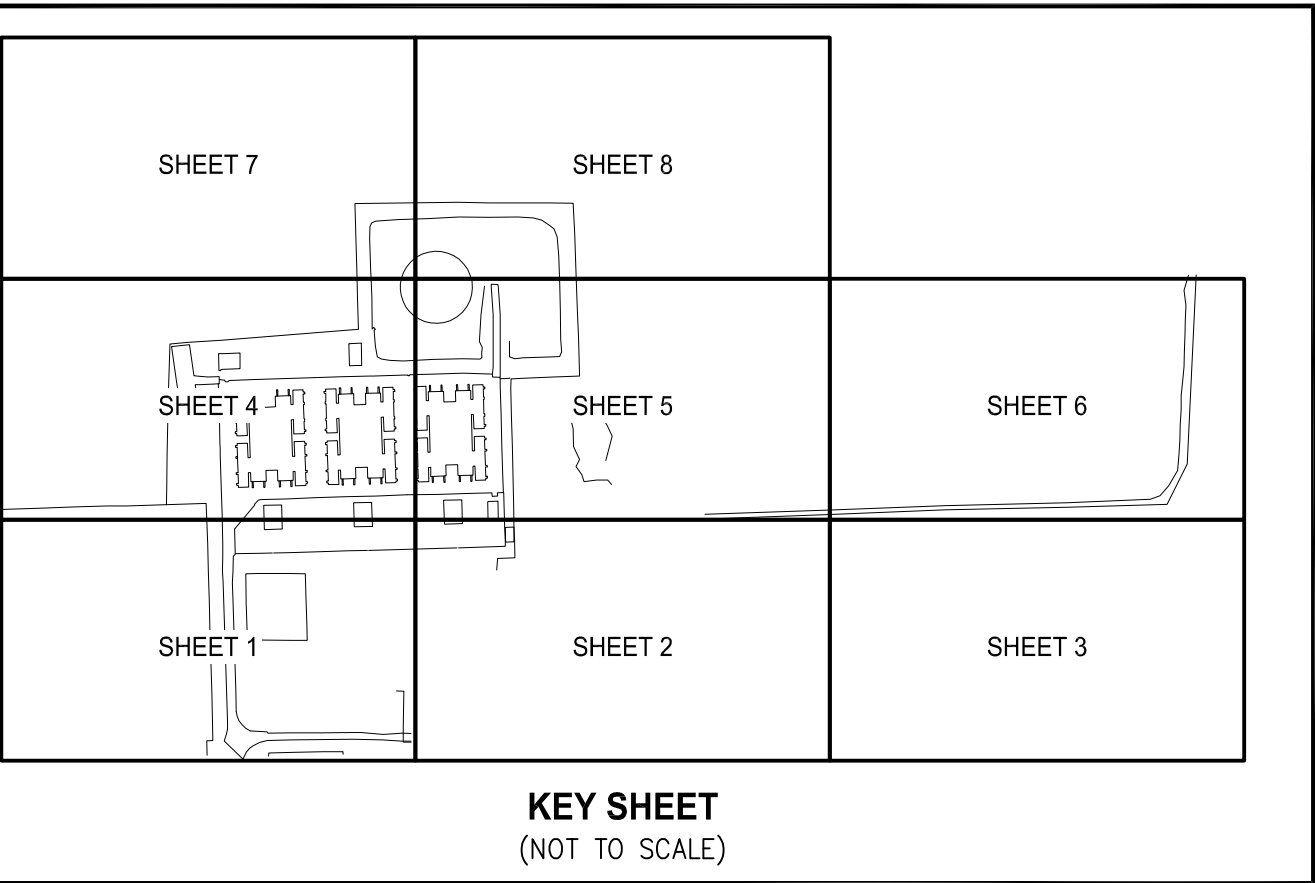
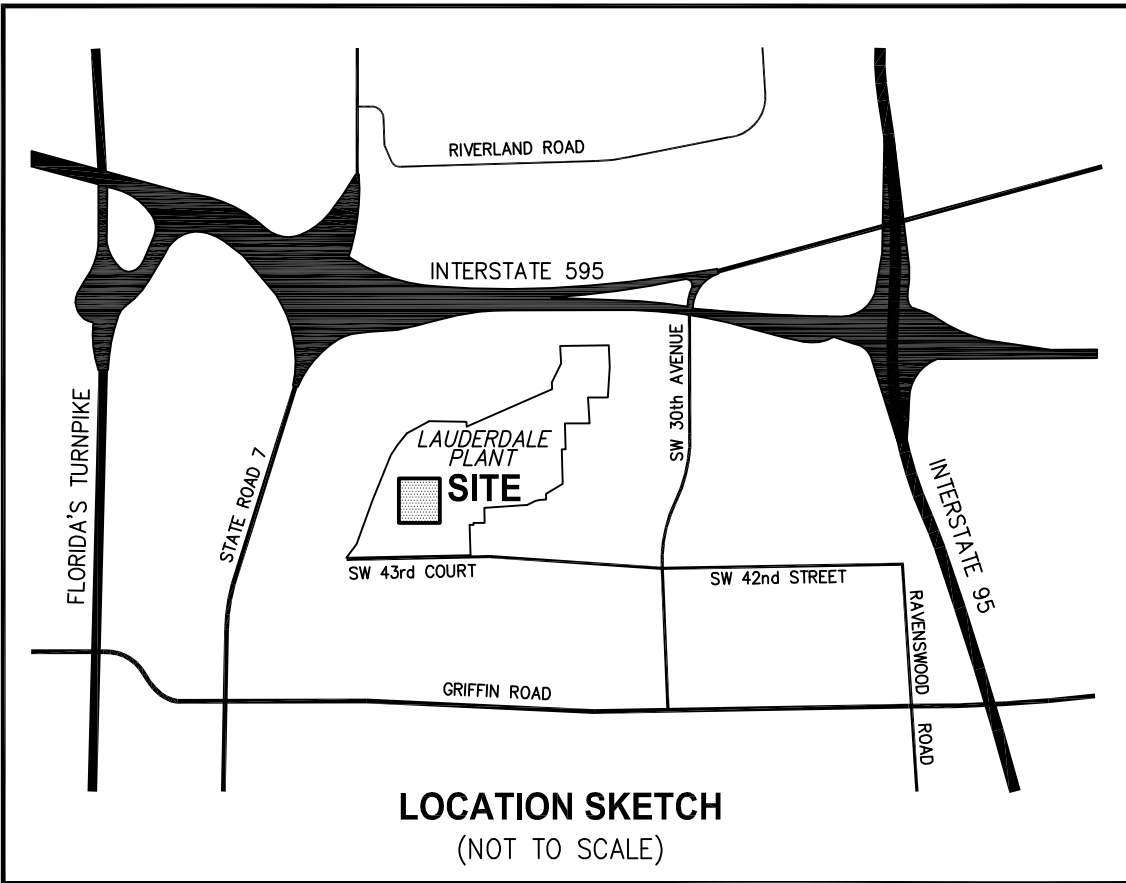
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[illegible]

JURISDICTIONAL WETLAND SURVEY
A PORTION OF F.P.L. LAUDERDALE PLANT
 Portion of Sections 25-50-41; 19, 20, & 30-50-42

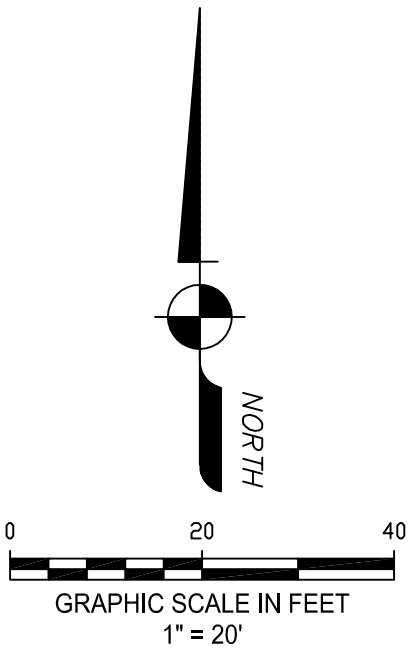
CITY OF FORT LAUDERDALE
BROWARD COUNTY, FLORIDA

JOB NO.	4143-7		
SCALE	1" = 200'		
DATE	08/26/2013		
BY	S.A.M.		
CK'D.	K.M.C.		
F.B.	1650	PG.	05-10
SHEET	2	OF	2



SYMBOL LEGEND:

	BENCHMARK
	BOLLARD
	CATCH BASIN (GRADED)
	CONCRETE LIGHT POLE
	CONCRETE UTILITY POLE
	ELECTRIC MANHOLE (NON-GRADED)
	ELECTRIC SERVICE BOX
	ELECTRIC LINE MARKER
	EXISTING ELEVATION
	FIRE HYDRANT
	GAS LINE MARKER
	GUY ANCHOR
	METAL UTILITY POLE
	MONITORING WELL (NON-GRADED)
	OVERHEAD WIRES
	PALM TREE
	SANITARY CLEANOUT
	SANITARY MANHOLE (NON-GRADED)
	SPIGOT
	TELEPHONE RISER
	UNKNOWN MANHOLE (NON-GRADED)
	VAULT
	VALVE
	WOOD UTILITY POLE



NAVD 1988
ELEVATIONS

SURVEYOR'S REPORT:

- Reproductions of this Sketch are not valid without the signature and the original raised seal of a Florida licensed surveyor and mapper.
- No Title Opinion or Abstract to the subject property has been provided. It is possible that there are Deeds, Easements, or other instruments (recorded or unrecorded) which may affect the subject property. No search of the Public Records has been made by the Surveyor.
- No underground improvements were located.
- Coordinates shown hereon are referenced to Grid North, based on the 1990 adjustment of the North American Datum of 1983 (NAD 83/90), of the Florida State Plane Coordinate System (Transverse Mercator Projection), East Zone.
- Coordinates shown hereon were established by a GPS Virtual Reference Station (VRS) network which is certified to a 2 centimeter local accuracy (as defined in the FDGC Geospatial Positioning Accuracy Standards, part 2: National Standard for Spatial Data Accuracy), relative to the nearest control point within the National Geodetic Survey's (NGS) Geodetic Control Network.
- Equipment Used: Trimble R8 GNSS Dual Frequency Receiver (Serial No. 4627118155)
- Processing Software: Trimble Geomatics Office, Version 1.63
- Elevations shown hereon are in feet and based on the National Geodetic Vertical Datum of 1929 (NGVD 1929). Elevations were obtained using the National Geodetic Vertical Datum of 1929 (NGVD 1929) and converted to the North American Vertical Datum of 1988 (NAVD 1988) utilizing the U.S. Army Corps of Engineers Program Corpscon for Windows, Version 5.11.08. The model value of (-) 1.60 was added algebraically to the NGVD 1929 height.
- Benchmark Description: Broward County Engineering Division Benchmark No. 1479. Elevation = 6.961 feet (NGVD 1929).
- This map is intended to be displayed at a scale of 1:240 (1"=20').
- Data shown hereon was compiled from instrument(s) of record and does not constitute a Boundary Survey.
- Symbols shown hereon and in the legend may have been enlarged for clarity. These symbols have been plotted at the center of the field location and may not represent the actual shape or size of the feature.
- The species of trees as shown hereon were identified to the best of knowledge and ability of the surveyor, without the benefit of an arborist or biologist. It is the responsibility of the end user to verify the identity of the species.
- Units of measurement are in U.S. Survey Feet and decimal parts thereof. Well identified features in this survey were field measured to a horizontal positional accuracy of 0.10'. The elevations on impervious surfaces were field measured to 0.03' and on ground surfaces to 0.1'.
- Abbreviation Legend: ASPH. = Asphalt; B.M. = Benchmark; CMP= Corrugated Metal Pipe; CONC. = Concrete; DIP = Ductile Iron Pipe; E = Easting; EL. = Elevation; F.B. = Field Book; F.F. = Finished Floor; ID. = Identification; INV = Invert; I.R. = Iron Rod; L.B. = Licensed Business; N = Northing; NAD = North American Datum; NGVD = National Geodetic Vertical Datum; PG. = Page; P.L.S. = Professional Land Surveyor; PT. = Point; PVC = Polyvinyl-Chloride Pipe; T.O.P. = Top of Pipe; W/CAP = With Surveyors Cap;

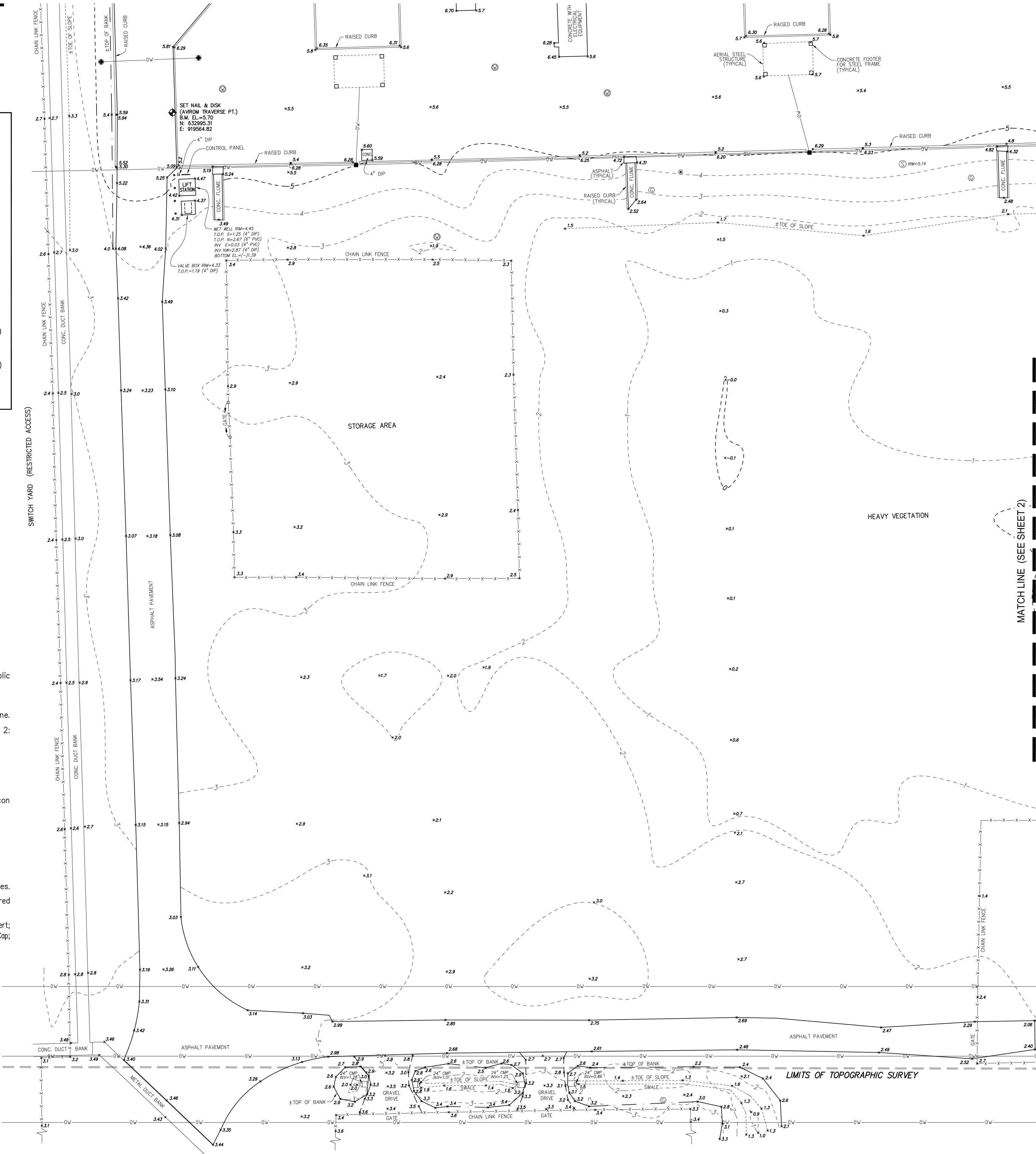
CERTIFICATION:

I HEREBY CERTIFY that the attached Topographic Survey of the hereon described property is true and correct to the best of my knowledge and belief as surveyed in the field under my direction. I FURTHER CERTIFY that this Topographic Survey meets the Minimum Technical Standards set forth in Chapter 5J-17.050 through 5J-17.052, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes.

Date: _____

KEITH M. CHEE-A-TOW, P.L.S.
Florida Registration No. 5328
AVIROM & ASSOCIATES, INC.
L.B. No. 3300

MATCH LINE (SEE SHEET 4)



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REVISIONS

DATE F.B. / PG. BY CK'D

REVISIONS

DATE F.B. / PG. BY CK'D

**TOPOGRAPHIC SURVEY
A PORTION OF F.P.L. LAUDERDALE PLANT**
Portion of Sections 25-50-41; 19, 20, & 30-50-42

CITY OF FORT LAUDERDALE
BROWARD COUNTY, FLORIDA

JOB NO. 4143-8

SCALE 1" = 20'

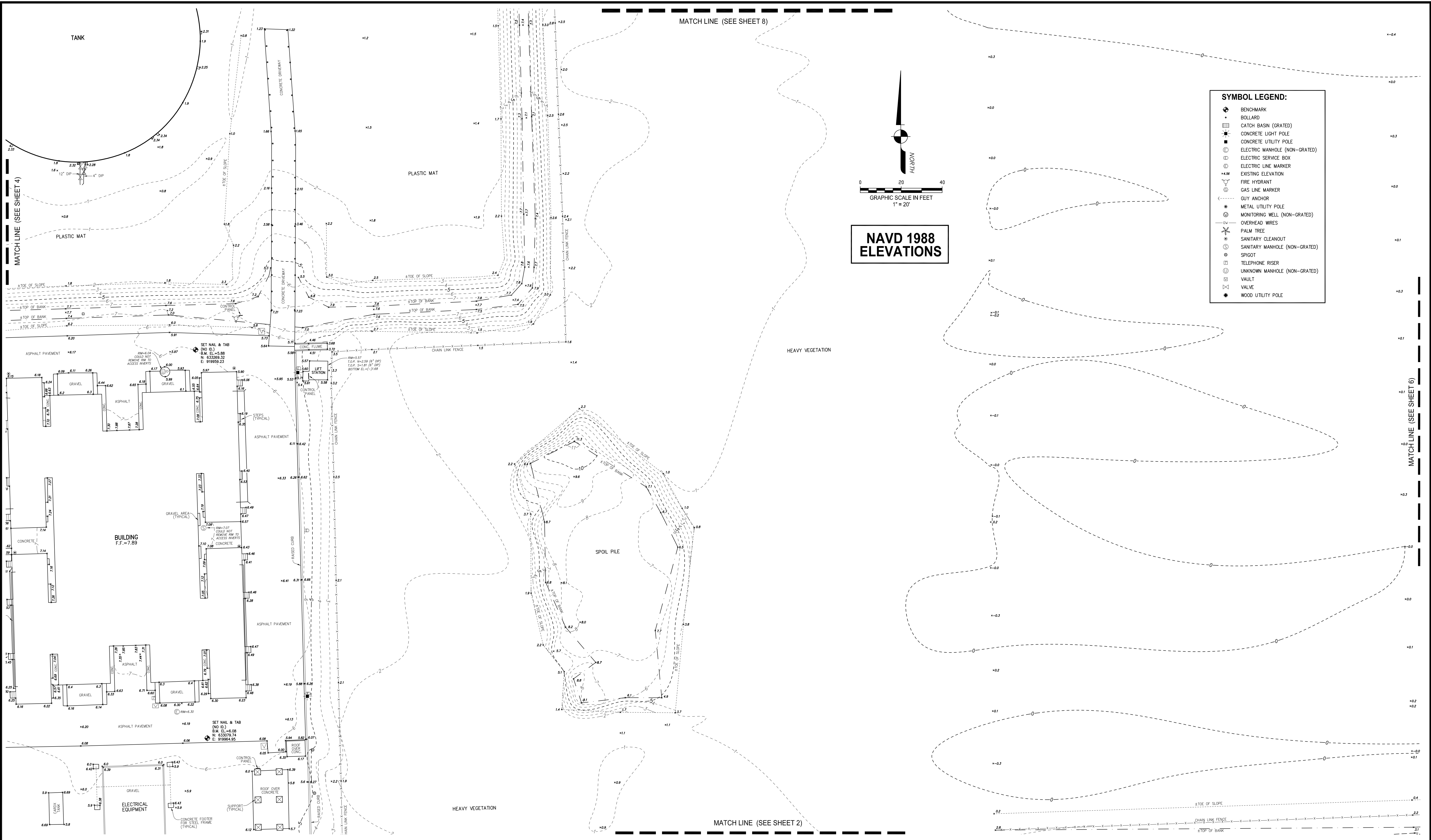
DATE 10/11/2013

BY S.A.M.

CK'D. K.M.C.

F.B. 1650 PG. 05-56

SHEET 1 OF 8



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REVISIONS

REVISIONS	DATE	F.B. / PG.	BY	CK'D

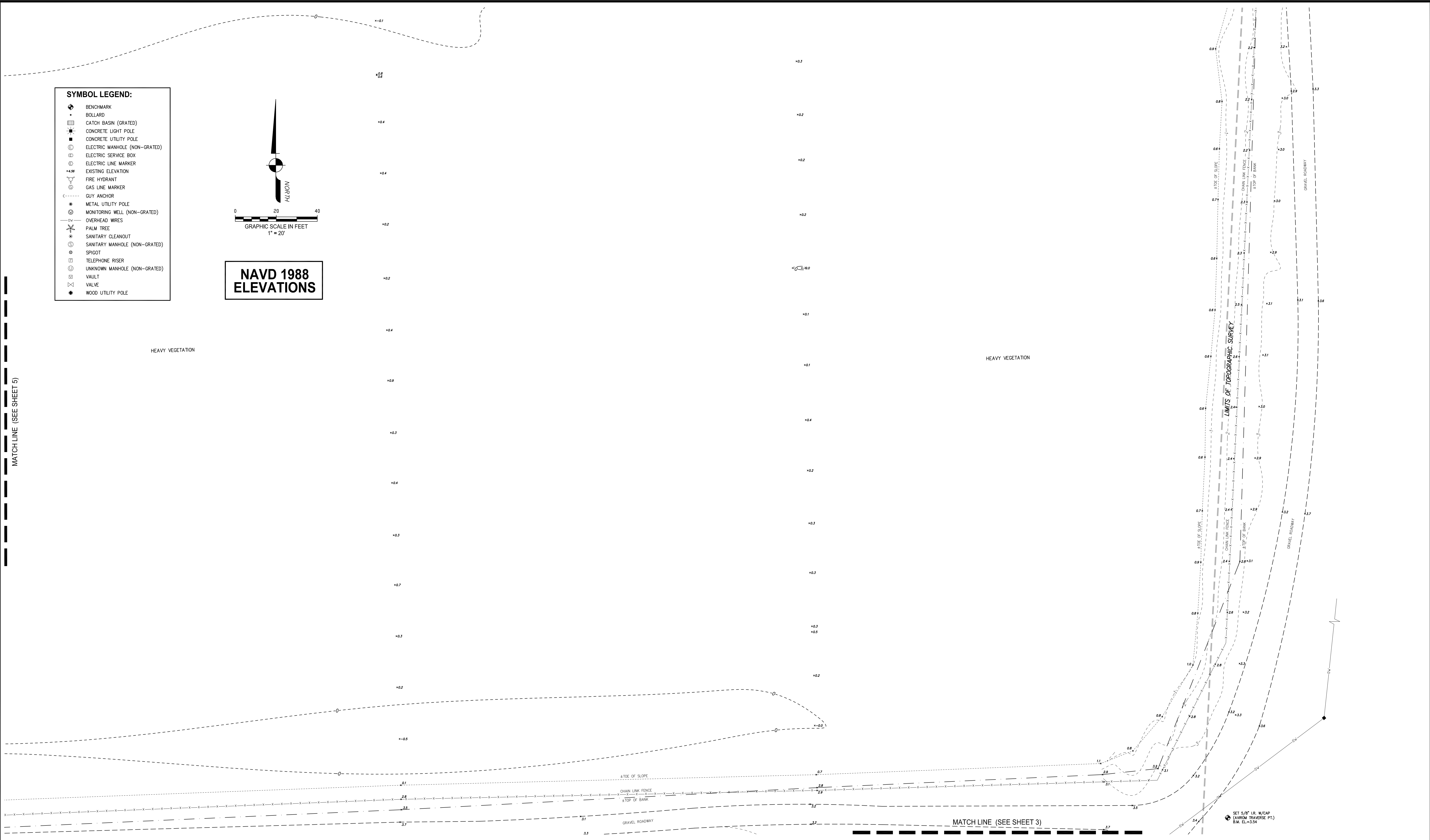
REVISIONS

REVISIONS	DATE	F.B. / PG.	BY	CK'D

TOPOGRAPHIC SURVEY
A PORTION OF F.P.L. LAUDERDALE PLANT
Portion of Sections 25-50-41; 19, 20, & 30-50-42

CITY OF FORT LAUDERDALE
BROWARD COUNTY, FLORIDA

JOB NO.	4143-8
SCALE	1" = 20'
DATE	10/11/2013
BY	S.A.M.
CK'D.	K.M.C.
F.B.	1650
PG.	05-56
SHEET	5 OF 8



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- ## SYMBOL LEGEND:
- | | |
|---|-------------------------------|
|  | BENCHMARK |
|  | BOLLARD |
|  | CATCH BASIN (GRATED) |
|  | CONCRETE LIGHT POLE |
|  | CONCRETE UTILITY POLE |
|  | ELECTRIC MANHOLE (NON-GRATED) |
|  | ELECTRIC SERVICE BOX |
|  | ELECTRIC LINE MARKER |
|  | EXISTING ELEVATION |
|  | FIRE HYDRANT |
|  | GAS LINE MARKER |
|  | GUY ANCHOR |
|  | METAL UTILITY POLE |
|  | MONITORING WELL (NON-GRATED) |
|  | OVERHEAD WIRES |
|  | PALM TREE |
|  | SANITARY CLEANOUT |
|  | SANITARY MANHOLE (NON-GRATED) |
|  | SPIGOT |
|  | TELEPHONE RISER |
|  | UNKNOWN MANHOLE (NON-GRATED) |
|  | VAULT |
|  | VALVE |
|  | WOOD UTILITY POLE |



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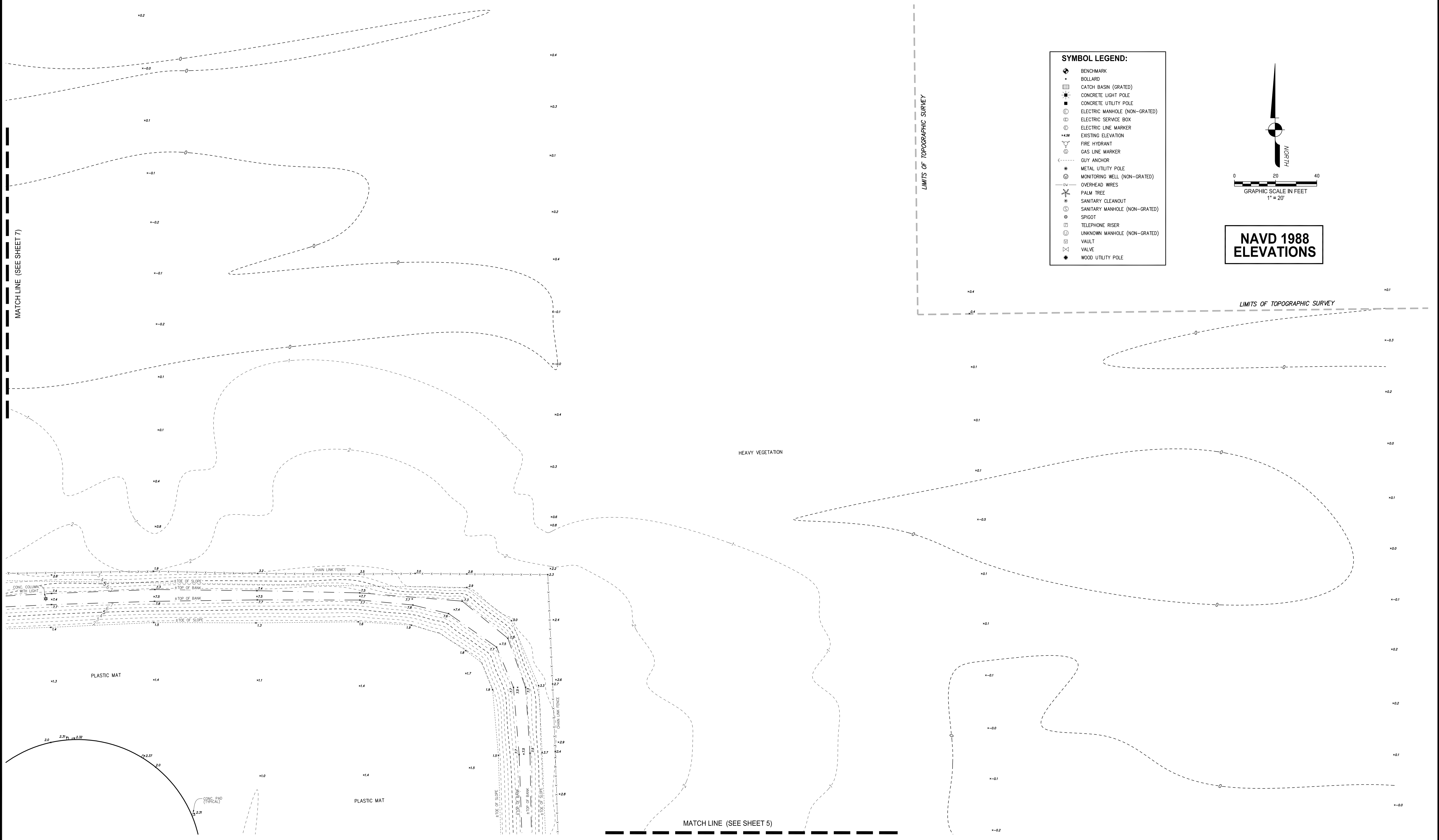
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[illegible]

TOPOGRAPHIC SURVEY
A PORTION OF F.P.L. LAUDERDALE PLANT
 Portion of Sections 25-50-41; 19, 20, & 30-50-42

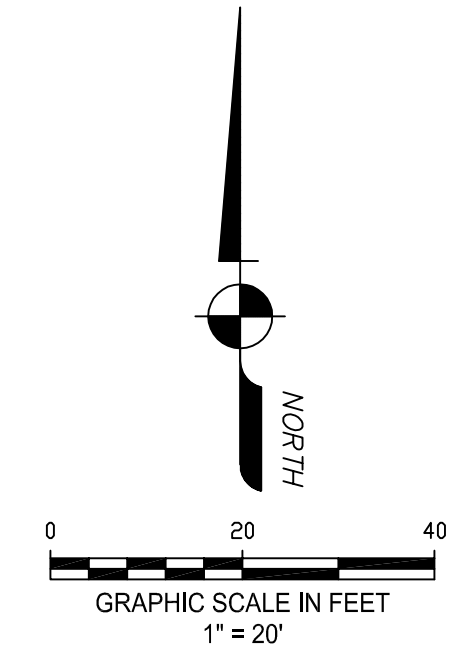
CITY OF FORT LAUDERDALE
BROWARD COUNTY, FLORIDA

JOB NO.	4143-8		
SCALE	1" = 20'		
DATE	10/11/2013		
BY	S.A.M.		
CK'D.	K.M.C.		
F.B.	1650	PG.	05-56
SHEET	7	OF	8



SYMBOL LEGEND:

- BENCHMARK
- BOLLARD
- CATCH BASIN (GRADED)
- CONCRETE LIGHT POLE
- CONCRETE UTILITY POLE
- ELECTRIC MANHOLE (NON-GRADED)
- ELECTRIC SERVICE BOX
- ELECTRIC LINE MARKER
- EXISTING ELEVATION
- FIRE HYDRANT
- GAS LINE MARKER
- GUY ANCHOR
- METAL UTILITY POLE
- MONITORING WELL (NON-GRADED)
- OVERHEAD WIRES
- PALM TREE
- SANITARY CLEANOUT
- SANITARY MANHOLE (NON-GRADED)
- SPIGOT
- TELEPHONE RISER
- UNKNOWN MANHOLE (NON-GRADED)
- VAULT
- VALVE
- WOOD UTILITY POLE



**NAVD 1988
ELEVATIONS**

MATCH LINE (SEE SHEET 7)

LIMITS OF TOPOGRAPHIC SURVEY

LIMITS OF TOPOGRAPHIC SURVEY

MATCH LINE (SEE SHEET 5)



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REVISIONS					DATE	F.B. / PG.	BY	CK'D	REVISIONS					DATE	F.B. / PG.	BY	CK'D

TOPOGRAPHIC SURVEY
A PORTION OF F.P.L. LAUDERDALE PLANT
Portion of Sections 25-50-41; 19, 20, & 30-50-42

CITY OF FORT LAUDERDALE
BROWARD COUNTY, FLORIDA

JOB NO. 4143-8	
SCALE	1" = 20'
DATE	10/11/2013
BY	S.A.M.
CK'D.	K.M.C.
F.B.	1650
PG.	05-56
SHEET	8 OF 8

ATTACHMENT D

**USACE Datasheets, Jurisdictional Determination Forms, UMAM Functional
Assessment Forms, and W.A.T.E.R. Functional Assessment Forms**

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

Project Site: <u>FPL Lauderdale Plant Combustion Turbine Project</u>	Date: <u>August 2013</u>
Applicant/Owner: <u>Florida Power and Light Co.</u>	County: <u>Broward</u>
Investigator: <u>Arrants / Bullock</u>	State: <u>Florida</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland A</u>
Is the site significantly disturbed (Atypical Situation)? ☐ Yes ☒ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Chrysobalanus icaco</i>	Shrub	FACW	8		
2 <i>Myrsine guianensis</i>	Shrub	FAC	9		
3 <i>Ardisia escallonioides</i>	Shrub	FAC	10		
4 <i>Osmunda Regalis</i>	H	OBL	11		
5 <i>Melaleuca quinquenervia</i>	C	FAC	12		
6 <i>Annona glabra</i>	SC	OBL	13		
7 <i>Cladium jamaicense</i>	H	OBL	14		

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

Remarks: _____

HYDROLOGY

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

SOILS

Map Unit Name (Series and Phase): <u>Okeelanta Muck</u>	Drainage Class: <u>Very poorly drained</u> Circle				
Taxonomy (Subgroup): <u>Hyperthermic Terric Haplosaprists</u>	Field Observations Confirm Mapped Type? Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-8"	Oap	N-2			Rubbed Sapric material muck
8-31	Oa	5YR 2/2	10YR 3/2		
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☒ Aquic Moisture Regime ☒ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☐ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

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

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

Project Site: <u>FPL Lauderdale Plant Combustion Turbine Project</u>	Date: <u>August 2013</u>
Applicant/Owner: <u>Florida Power and Light Co.</u>	County: <u>Broward</u>
Investigator: <u>Arrants / Bullock</u>	State: <u>Florida</u>
Do Normal Circumstances exist on the site? ☐ Yes ☐ No	Community ID: <u>Wetland B</u>
Is the site significantly disturbed (Atypical Situation)? ☐ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☐ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Casuarina equisetifolia</i>	C	FACU	8 <i>Acrostichum danaeifolium</i>	H	OBL
2 <i>Osmunda regalis</i>	H	OBL	9		
3 <i>Salix caroliniana</i>	Shrub	OBL	10		
4 <i>Cladium jamaicense</i>	H	OBL	11		
5 <i>Ardisia escallonioides</i>	Shrub	FAC	12		
6 <i>Annona glabra</i>	C	OBL	13		
7 <i>Colocasia antiquorum</i>	H	OBL	14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 88%

Remarks: _____

HYDROLOGY

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

SOILS

Map Unit Name (Series and Phase): <u>Okeelanta Muck</u>	Drainage Class: <u>Very poorly drained</u> Circle				
Taxonomy (Subgroup): <u>Hyperthermic Terric Haplosaprists</u>	Field Observations Confirm Mapped Type? Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-8"	Oap	N/2			Sapric material muck
8-31"	Oa	5YR 2/2	10YR 3/2		Sapric material muck
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☒ Aquic Moisture Regime ☒ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☐ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

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

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

Project Site: <u>FPL Lauderdale Plant Combustion Turbine Project</u>	Date: <u>August 2013</u>
Applicant/Owner: <u>Florida Power and Light Co.</u>	County: <u>Broward</u>
Investigator: <u>Arrants / Bullock</u>	State: <u>Florida</u>
Do Normal Circumstances exist on the site? ☐ Yes ☐ No	Community ID: <u>Wetland C</u>
Is the site significantly disturbed (Atypical Situation)? ☐ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☐ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Annona glabra</i>	Shrub	OBL	8		
2 <i>Schinus terebinthifolius</i>	Shrub	FAC	9		
3 <i>Chrysobalanus icaco</i>	Shrub	FACW	10		
4 <i>Myrsine guianensis</i>	Shrub	FAC	11		
5 <i>Hyptis alata</i>	H	OBL	12		
6 <i>Sagittaria lancifolia</i>	H	OBL	13		
7 <i>Pontederia cordata</i>	H	OBL	14		

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

Remarks: _____

HYDROLOGY

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

SOILS

Map Unit Name (Series and Phase): <u>Arents, Organic Substratum-Urban Land Complex</u>	Drainage Class: <u>Very poorly drained</u> Circle				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-8	A-1	10YR 4/2			Gravelly sand

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

Remarks: _____

WETLAND DETERMINATION

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

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

Project Site: <u>FPL Lauderdale Plant Combustion Turbine Project</u>	Date: <u>August 2013</u>
Applicant/Owner: <u>Florida Power and Light Co.</u>	County: <u>Broward</u>
Investigator: <u>Arrants / Bullock</u>	State: <u>Florida</u>
Do Normal Circumstances exist on the site? ☒ Yes ☐ No	Community ID: <u>Wetland D</u>
Is the site significantly disturbed (Atypical Situation)? ☒ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☒ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Pennisetum purpureum</i>	H	FAC	8		
2 <i>Annona glabra</i>	Shrub	OBL	9		
3 <i>Fimbristylis spathacea</i>	H	FACW	10		
4 <i>Schinus terebinthifolius</i>	Shrub	FAC	11		
5 <i>Baccharis angustifolia</i>	Shrub	FACW	12		
6 <i>Laguncularia racemosa</i>	C	OBL	13		
7 <i>Casuarina equisetifolia</i>	C	FACU	14		

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

Remarks:
Cooling
canal

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☒ Aerial Photographs ☐ Other ☐ No recorded data available Field Observations: Depth of Surface Water: <u>72+</u> (In.) Depth to Free Water in Pit: _____ (In.) Depth to Saturated Soil: <u>0</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☒ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☒ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☒ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks:	

SOILS

Map Unit Name (Series and Phase): <u>Arents, Organic Sub-Urban Land Complex/ Okeelanta</u>	Drainage Class: <u>Very poorly drained</u> Circle				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-8"	A				Gravely sand
0-10"	Oa	N-5			Muck
Hydric Soil Indicators: ☐ Histosol ☒ Reducing Conditions ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Histic Epipedon ☒ Gleyed or Low-Chroma Colors ☐ Listed on National Hydric Soils List ☐ Sulfidic Odor ☐ Concretions ☐ Listed on Local Hydric Soils List ☒ Aquic Moisture Regime ☐ Organic Streaking in Sandy Soils ☐ Other (explain in remarks)					
Remarks:					

WETLAND DETERMINATION

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

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

Project Site: <u>FPL Lauderdale Plant Combustion Turbine Project</u>	Date: <u>August 2013</u>
Applicant/Owner: <u>Florida Power and Light Co.</u>	County: <u>Broward</u>
Investigator: <u>Arrants / Bullock</u>	State: <u>Florida</u>
Do Normal Circumstances exist on the site? ☐ Yes ☐ No	
Is the site significantly disturbed (Atypical Situation)? ☐ Yes ☐ No	
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☐ No	
Community ID: <u>Wetland E</u>	
Transect ID: _____	
Plot ID: _____	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Schinus terebinthifolius</i>	Shrub	FAC	8		
2 <i>Annona glabra</i>	Shrub	OBL	9		
3 <i>Chrysobalanus icaco</i>	Shrub	FACW	10		
4 <i>Myrsine guianensis</i>	Shrub	FAC	11		
5 <i>Arisaema dracontium</i>	H	FACW	12		
6 <i>Salix caroliniana</i>	Shrub	OBL	13		
7 <i>Cladium jamaicense</i>	H	OBL	14		

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

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☒ Aerial Photographs ☐ Other ☐ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☒ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☒ Oxidized Root Channels in Upper 12" ☒ Water-Stained Leaves ☒ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>0-8"</u> (In.) Depth to Free Water in Pit: _____ (In.) Depth to Saturated Soil: <u>0"</u> (In.)	
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Arents, Organic Substratum-Urban Land Complex</u>	Drainage Class: Poorly Drained Circle				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-8"	A-1	10 YR 4/2			Gravelly sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☒ Aquic Moisture Regime ☒ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☐ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

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

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

Project Site: <u>FPL Lauderdale Plant Combustion Turbine Project</u>	Date: <u>August 2013</u>
Applicant/Owner: <u>Florida Power and Light Co.</u>	County: <u>Broward</u>
Investigator: <u>Arrants / Bullock</u>	State: <u>Florida</u>
Do Normal Circumstances exist on the site? ☐ Yes ☐ No	Community ID: <u>Wetland F</u>
Is the site significantly disturbed (Atypical Situation)? ☐ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☐ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Annona glabra</i>	Shrub	OBL	8		
2 <i>Schinus terebinthifolius</i>	Shrub	FAC	9		
3 <i>Saururus cernuus</i>	H	OBL	10		
4 <i>Chrysobalanus icaco</i>	Shrub	FACW	11		
5 <i>Acrostichum danaeifolium</i>	H	OBL	12		
6 <i>Ardisia escallonioides</i>	Shrub	FAC	13		
7 <i>Typha sp</i>	H	OBL	14		

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

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☒ Aerial Photographs ☐ Other ☐ No recorded data available	Wetland Hydrology Indicators: Primary Indicators: ☒ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns in Wetlands
Field Observations: Depth of Surface Water: <u>0-6"</u> (In.) Depth to Free Water in Pit: _____ (In.) Depth to Saturated Soil: <u>0</u> (In.)	Secondary Indicators (2 or more required): ☒ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☒ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Arents, Organic Substratum-Urban Land Complex</u>	Drainage Class: Poorly drained Circle				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-8"	A-1	10YR 4/2			Gravelly sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfid Odor ☐ Aquic Moisture Regime ☒ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☐ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

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

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

Project Site: <u>FPL Lauderdale Plant Combustion Turbine Project</u>	Date: <u>August 2013</u>
Applicant/Owner: <u>Florida Power and Light Co.</u>	County: <u>Broward</u>
Investigator: <u>Arrants / Bullock</u>	State: <u>Florida</u>
Do Normal Circumstances exist on the site? ☐ Yes ☐ No	Community ID: <u>Wetland G</u>
Is the site significantly disturbed (Atypical Situation)? ☐ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☐ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Chrysobalanus icaco</i>	Shrub	FACW	8 <i>Typha spp.</i>	H	OBL
2 <i>Annona glabra</i>	Shrub	OBL	9		
3 <i>Eupatorium serotinum</i>	H	FAC	10		
4 <i>Salix caroliniana</i>	Shrub	OBL	11		
5 <i>Pennisetum purpureum</i>	H	FAC	12		
6 <i>Acrostichum danaeifolium</i>	H	OBL	13		
7 <i>Hyptis alata</i>	H	OBL	14		

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

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☒ Aerial Photographs ☐ Other ☐ No recorded data available Field Observations: Depth of Surface Water: <u>0-6</u> (In.) Depth to Free Water in Pit: _____ (In.) Depth to Saturated Soil: <u>0</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☒ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☒ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☒ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Arents, Organic Substratum-Urban Land Complex</u>	Drainage Class: Poorly drained Circle				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-8	A-1	10YR 4/2			Gravelly sand

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

Remarks: _____

WETLAND DETERMINATION

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

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

Project Site: <u>FPL Lauderdale Plant Combustion Turbine Project</u>	Date: <u>August 2013</u>
Applicant/Owner: <u>Florida Power and Light Co.</u>	County: <u>Broward</u>
Investigator: <u>Arrants / Bullock</u>	State: <u>Florida</u>
Do Normal Circumstances exist on the site? ☐ Yes ☐ No	Community ID: <u>Wetland H</u>
Is the site significantly disturbed (Atypical Situation)? ☐ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☐ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Schinus terebinthifolius</i>	Shrub	FAC	8		
2 <i>Annona glabra</i>	Shrub	OBL	9		
3 <i>Arditsia escallonioides</i>	Shrub	FAC	10		
4 <i>Sagittaria lancifolia</i>	H	OBL	11		
5 <i>Pennisetum purpureum</i>	H	FAC	12		
6 <i>Hyptis alata</i>	H	OBL	13		
7 <i>Osmunda regalis</i>	H	OBL	14		

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

Remarks: _____

HYDROLOGY

☐ Recorded Data (describe in Remarks) ☐ Stream, Lake, or Tide Gauge ☒ Aerial Photographs ☐ Other ☐ No recorded data available Field Observations: Depth of Surface Water: <u>0-6</u> (In.) Depth to Free Water in Pit: _____ (In.) Depth to Saturated Soil: <u>0</u> (In.)	Wetland Hydrology Indicators: Primary Indicators: ☒ Inundated ☒ Saturated in Upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands Secondary Indicators (2 or more required): ☒ Oxidized Root Channels in Upper 12" ☐ Water-Stained Leaves ☒ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other (explain in remarks)
Remarks: _____	

SOILS

Map Unit Name (Series and Phase): <u>Arents, Organic Substratum-Urban Land Complex</u>	Drainage Class: Poorly drained Circle				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-8	A	10YR 4/2			Gravelly sand

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

Remarks: _____

WETLAND DETERMINATION

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

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

Project Site: <u>FPL Lauderdale Plant Combustion Turbine Project</u>	Date: <u>August 2013</u>
Applicant/Owner: <u>Florida Power and Light Co.</u>	County: <u>Broward</u>
Investigator: <u>Arrants / Bullock</u>	State: <u>Florida</u>
Do Normal Circumstances exist on the site? ☐ Yes ☐ No	Community ID: <u>Wetland I</u>
Is the site significantly disturbed (Atypical Situation)? ☐ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☐ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Hyptis alata</i>	H	OBL	8		
2 <i>Pontederia cordata</i>	H	OBL	9		
3 <i>Annona glabras</i>	Shrub	OBL	10		
4 <i>Panicum repens</i>	H	FACW	11		
5 <i>Sagittaria lancifolia</i>	H	OBL	12		
6 <i>Chrysobalanus icaco</i>	Shrub	FACW	13		
7 <i>Mikania scandens</i>	Vine	OBL	14		

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

Remarks: _____

HYDROLOGY

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

SOILS

Map Unit Name (Series and Phase): <u>Arents, Organic Substratum-Urban Land Complex</u>	Drainage Class: Poorly drained Circle				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-8	A-1	10YR 4/2			Gravelly sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☒ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☐ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

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

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

Project Site: <u>FPL Lauderdale Plant Combustion Turbine Project</u>	Date: <u>August 2013</u>
Applicant/Owner: <u>Florida Power and Light Co.</u>	County: <u>Broward</u>
Investigator: <u>Arrants / Bullock</u>	State: <u>Florida</u>
Do Normal Circumstances exist on the site? ☐ Yes ☐ No	Community ID: <u>Wetland J</u>
Is the site significantly disturbed (Atypical Situation)? ☐ Yes ☐ No	Transect ID: _____
Is Area a Potential Problem Area? (if needed, explain on reverse) ☐ Yes ☐ No	Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <i>Sagittaria lancifolia</i>	H	OBL	8		
2 <i>Ludwigia repens</i>	H	OBL	9		
3 <i>Annona glabra</i>	Scrub	OBL	10		
4 <i>Mikania scandens</i>	Vine	OBL	11		
5 <i>Ludwigia leptocarpa</i>	H	FACW	12		
6 <i>Polygonum spp.</i>	H	FACW	13		
7			14		

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

Remarks: _____

HYDROLOGY

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

SOILS

Map Unit Name (Series and Phase): <u>Arents, Organic Substratum-Urban Land Complex</u>	Drainage Class: Poorly drained Circle				
Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? Yes No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-8	A-1	10YR 4/2			Gravelly sand
Hydric Soil Indicators: ☐ Histosol ☐ Histic Epipedon ☐ Sulfidic Odor ☐ Aquic Moisture Regime ☒ Reducing Conditions ☒ Gleyed or Low-Chroma Colors ☐ Concretions ☐ Organic Streaking in Sandy Soils ☐ High Organic Content in Surface Layer in Sandy Soils ☐ Listed on National Hydric Soils List ☐ Listed on Local Hydric Soils List ☐ Other (explain in remarks)					
Remarks: _____					

WETLAND DETERMINATION

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

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

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

SECTION I: BACKGROUND INFORMATION

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

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: **Florida** County/parish/borough: **Broward** City: **Dania Beach**
Center coordinates of site (lat/long in degree decimal format): Lat. **26.073825° N**, Long. **-80.196958° W**.
Universal Transverse Mercator:

Name of nearest waterbody: **Atlantic Ocean**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **South New River Canal; Dania Cut-off Canal**

Name of watershed or Hydrologic Unit Code (HUC): **Southeast Florida Coast drainage basin/03090202**

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

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

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

☒ Office (Desk) Determination. Date: **July 15, 2013**.

☒ Field Determination. Date(s): **August 15-16, 2013**.

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

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

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

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are and are not** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

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

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

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

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

Wetlands: **84.23 acres**

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

Elevation of established OHWM (if known): .

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

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

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

³ Supporting documentation is presented in Section III.F.

- ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain:

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW: **South New River Canal; Dania Cut-off Canal** .

Summarize rationale supporting determination: **Both canals are TNWs that directly connect to the Atlantic Ocean.**

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”: **Wetlands within the assessment area abut and are hydrologically connected to the South New River Canal and Dania Cut-off Canal.**

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: _ acres
Drainage area: _ acres
Average annual rainfall: _ inches
Average annual snowfall: _ inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

- ☐ Tributary flows directly into TNW.
☐ Tributary flows through _ tributaries before entering TNW.
Project waters are _ river miles from TNW.
Project waters are _ river miles from RPW.
Project waters are _ aerial (straight) miles from TNW.
Project waters are _ aerial (straight) miles from RPW.

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

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

Identify flow route to TNW⁵:

Tributary stream order, if known:

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

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

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

Average width: feet

Average depth: feet

Average side slopes:

Primary tributary substrate composition (check all that apply):

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

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

Presence of run/riffle/pool complexes. Explain:

Tributary geometry:

Tributary gradient (approximate average slope):

(c) **Flow:**

Tributary provides for:

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

Describe flow regime:

Other information on duration and volume:

Surface flow is:. Characteristics:

Subsurface flow:. Explain findings:

☐ Dye (or other) test performed:

Tributary has (check all that apply):

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

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

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

(iii) Chemical Characteristics:

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

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

⁷ Ibid.

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

Explain:

Identify specific pollutants, if known:

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

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

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

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size:

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: Explain:

Surface flow is:

Characteristics:

Subsurface flow: Explain findings:

☐ Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

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

(d) Proximity (Relationship) to TNW

Project wetlands are river miles from TNW.

Project waters are aerial (straight) miles from TNW.

Flow is from:

Estimate approximate location of wetland as within the floodplain.

(ii) Chemical Characteristics:

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

Identify specific pollutants, if known:

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

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

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

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

Approximately are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:.

Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

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

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

- ☐ TNWs: linear feet width (ft), Or, acres.
☒ Wetlands adjacent to TNWs: **84.23** acres.

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

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

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

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

Identify type(s) of waters:

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

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

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

☐ Tributary waters: linear feet width (ft).

☐ Other non-wetland waters: acres.

Identify type(s) of waters:

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

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

Provide acreage estimates for jurisdictional wetlands in the review area:

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

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

Provide acreage estimates for jurisdictional wetlands in the review area:

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

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

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

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

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

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

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

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

Identify water body and summarize rationale supporting determination: .

⁸See Footnote # 3.

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

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

Project: **FPL Lauderdale Plant Combustion Turbine Project**
Assessment Area: **Wetlands A-J**

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

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

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

- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - ☐ Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).

- ☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:.
- ☐ Other: (explain, if not covered above): .

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

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

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

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

SECTION IV: DATA SOURCES.

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

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - ☐ Office concurs with data sheets/delineation report.
 - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters' study: .
- ☒ U.S. Geological Survey Hydrologic Atlas: USGS 2006; www.fgdl.org.
 - ☐ USGS NHD data.
 - ☒ USGS 8 and 12 digit HUC maps.
- ☐ U.S. Geological Survey map(s). Cite scale & quad name:.
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
- ☐ National wetlands inventory map(s). Cite name: USFWS, HRC 2008; www.fgdl.org.
- ☐ State/Local wetland inventory map(s): .
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): Google Earth, 2013.
or ☐ Other (Name & Date): .
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .
- ☒ Other information (please specify): South Florida Water Management District land use/land cover data, 2004.

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

**PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)**

Site/Project Name FPL Lauderdale Plant Combustion Turbine Project		Application Number		Assessment Area Name or Number Wetland A, E, F, G, H, I	
FLUCCs code 617 / 619		Further classification (optional) Mixed Wetland Hardwoods/Exotic Wetland Hardwoods		Impact or Mitigation Site? Existing Condition	
				Assessment Area Size Wetland A = 58.09 ac.; E = 8.62 ac.; F = 1.09 ac.; G = 0.33 ac.; H = 1.49 ac.; I = 0.75 ac.	
Basin/Watershed Name/Number		Affected Waterbody (Class) III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) none	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands The native and exotic wetland hardwoods are connected to other wetlands including freshwater marsh mitigation areas. The assessment area is bounded by the South New River Canal to the north and west and the Lauderdale Plant cooling pond to the east. Pond Apple Slough Park is located to the north of the assessment area, on the northern bank of the South New River Canal.					
Assessment area description The assessment area is comprised of native and exotic wetland hardwoods, some (Wetland A) contiguous with freshwater marsh mitigation areas occurring outside of the assessment area along the northern portion of the FPL Lauderdale plant property. The canopy is comprised of a mixture of exotic and native species, including the exotics Australian pine (<i>Casuarina equisetifolia</i>), Brazilian pepper (<i>Schinus terebinthifolius</i>), and punk tree (<i>Melaleuca quinquenervia</i>), as well as native species pond apple (<i>Annona glabra</i>), swamp bay (<i>Persea palustris</i>), red maple (<i>Acer rubrum</i>), myrsine (<i>Myrsine cubana</i>), and dahoon holly (<i>Ilex cassine</i>). A variety of understory species are present, including wild coffee tree (<i>Psychotria nervosa</i>), Carolina willow (<i>Salix caroliniana</i>), cocoplum (<i>Chrysobalanus icaco</i>), leather fern (<i>Acrostichum danaeifolium</i>), Peruvian primrosewillow (<i>Ludwigia peruviana</i>), royal palm (<i>Roystonea regia</i>), sawgrass (<i>Cladium jamaicense</i>), lance-leaved arrowhead (<i>Sagittaria lancifolia</i>), and pickerelweed (<i>Pontederia cordata</i>).					
Significant nearby features Industrial, commercial, and residential development - power plant, roads, transmission lines			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique		
Functions Water storage, wildlife habitat, flood attenuation			Mitigation for previous permit/other historic use Portions outside of assessment area are existing mitigation areas		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Iguana, raccoon, opossum,armadillo, forage fish, limited access for wading birds			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Potential limited use by wading birds such as white ibis (<i>Eudocimus albus</i>) (SSC) little blue heron (<i>Egretta caerulea</i>) (SSC).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Iguana, raccoon, opossum, brown basilisk, and armadillo were observed at the time of the site visit.					
Additional relevant factors:					
Assessment conducted by: M. Arrants/K. Bullock			Assessment date(s): August-13		

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name FPL Lauderdale Plant Combustion Turbine Project	Application Number	Assessment Area Name or Number Wetland A
Impact or Mitigation Impact	Assessment conducted by: Arrants / Bullock	Assessment date: Aug-13

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support w/o pres or current with 6 0	Location and landscape support variable is slightly decreased due to proximity of commercial, industrial, and residential development. Please see the following page for the individual parameter scores.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 8 0	The hydrology is altered due to New South River Canal and associated spoil piles, as well as adjacent industrial developments. However, wetland hydroperiod is maintained and typical of mixed wetland hardwood wetlands. Please see the following page for the individual parameter scores.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 7 0	The canopy is comprised of a mixture of native and exotic species. Significant infestation by Australian pine, Brazilian pepper, and melaleuca is evident. Please see the following page for the individual parameter scores.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.70	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 15.79 acres x 0.70 = 11.05

Delta = [with-current]
-0.70

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

Uniform Mitigation Assessment Method - Individual Parameter Scores

SITE: FPL Lauderdale Plant Combustion Turbine Project

WETLAND ID: A
FLUCFCS 617/619

OVERALL UMAM SCORE
0.70

	Location Landscape Support	10	7	4	0	PARAMETER SCORE
a	Quality of habitats outside area for wildlife	fulfill optimal life history requirements of wildlife	fulfill most but not all requirements	habitat availability outside area fair but excludes some wildlife	no habitats available outside site to support wildlife	6
b	Invasive exotics and other exotics	Not present	some invasive exotics in plant community	many invasive exotics and other exotics in community	plant community consists mainly of invasive exotics	6
c	Wildlife access to and from assessment area and other areas	unobstructed	partially limited	substantially limited	access completely blocked	7
d	Areas downstream of assessment area	beneficial and unobstructed	benefits partially limited by either distance or obstructions	benefits substantially limited by either distance or obstructions	no benefits to downstream areas	7
e	Effects of land use outside of area on wildlife	no ill effects	minimal impacts	substantial impacts	severe impacts	5
f	Hydrologically connected areas downstream of area	not limited by hydrological flow restrictions	partially limited	substantially limited	no benefits to downstream areas	7
g	Dependency of downstream areas on assessment area	Downstream areas critically dependant and would suffer from alterations to hydrology	Downstream areas significantly dependent on assessment area	minimal benefits from assessment area	little or no benefit to downstream areas	6
h	For upland areas, location in relation to benefit and protection of wetland	upland provides optimal protection	upland provides some protection	upland provides little protection	upland provides no protection of wetland	N/A
LOCATION/LANDSCAPE SCORE						6

	Water Environment	10	7	4	0	PARAMETER SCORE
a	Water levels and flow	appropriate water levels considering season, tidal cycle, and weather	water level slightly higher or lower than appropriate	water levels and flow are moderately higher or lower than appropriate	water levels or flow exhibit an extreme degree of deviation	8
b	Water level indicators in relation to type of system being evaluated	distinct water level indicators	indicators not as distinct, but still consistent with expected	indicators not distinct, and not consistent with expected	indicators not present or are greatly inconsistent with expected	8
c	Soil moisture for system type	appropriate soil type and moisture	soil oxidation or subsidence is minimal, soils drier than expected	soil moisture has deviated from appropriate for system and season	strong evidence of substantial soil desiccation, oxidation, or subsidence	8
d	Soil erosion or deposition patterns	typical, not indicative of altered flow rates	patterns indicate minor alterations in flow rates	patterns strongly atypical and indicate alterations in flow rates	patterns greatly atypical indicating alterations in flow rates	8
e	Evidence of fire history	typical for frequency and severity	indicative that frequency or severity may be greater than expected	indicative of much greater frequency and severity	great deviation from typical	6
f	Vegetation or benthic community zonation of all strata	appropriate for the type of system being evaluated	zonation in some strata inappropriate for system type	zonation in most strata inappropriate for system type	all strata inappropriate for system type	8
g	Signs of hydrologic stress on vegetation	no signs of stress on vegetation	slightly greater mortality of vegetation, signs of stress	strong evidence of greater than normal mortality	vegetation has strong evidence of much greater than normal mortality	8
h	Evidence of use by animals with specific hydrological requirements	expected for site hydrology	less than expected evidence of animals	greatly reduced evidence of animals with specific requirements	lacking those species with specific requirements	7
i	Composition of wetland plants with respect to tolerance	plant community not characterized by species tolerant to quality degradation	some of community consists of tolerant species	most of community composed of tolerant species	community predominantly consists of tolerant species	7
j	Direct observation of standing water with respect to discoloration, turbidity, or oil sheen	no indicators of water quality degradation	slight indication of water quality degradation	moderate water quality degradation such as discoloration, turbidity, or oil sheen	significant water quality degradation	8
k	Existing water quality data indicates conditions supporting ecological value	water quality indicates optimal conditions for community type	slight deviation from what is normal	moderate deviation from the normal	severe deviation from the normal	N/A
l	Water depth, wave energy, currents, and light penetration	optimal for community type	generally sufficient for type of community	not well suited for the type of community	inappropriate for community type	7
WATER ENVIRONMENT SCORE						8

	Vegetation Community Structure	10	7	4	0	PARAMETER SCORE
a	Plant cover - desirable species in canopy, shrub, or ground stratum	all or nearly all plant cover is appropriate	majority of plant cover is appropriate	majority of plant cover is inappropriate	no appropriate or desirable species	7
b	Presence of invasive exotics or other exotics	no invasives present	minimal invasives present	majority of plant cover is invasive exotic or exotic	high presence of cover by invasives	6
c	Evidence of regeneration or recruitment	strong evidence of regeneration and or recruitment	near normal evidence of regeneration or recruitment	minimal evidence of regeneration or recruitment	no evidence of regeneration or recruitment	7
d	Age and size distribution	typical of the system	slightly atypical age and size distribution	atypical distribution and indicative of permanent deviation	high percentage of dead or dying vegetation	7
e	Density and quality of coarse woody debris, snags, den and cavities	optimal structural habitat for system type	adequate structural habitat for system type	either not present or greater than normal because of poor plant community health	either not present or greater than normal because of dead or dying plant community	7
f	Plant condition- evidence of chlorotic or spindly growth or insect damage	good plant condition no evidence of abnormalities	generally good plant condition with little evidence stress	generally poor plant condition with evidence of stress	very poor plant condition	7
g	Land management practices for long-term viability of plant community	optimal	generally appropriate, but there may be some fire suppression or water control	partial removal or alteration of natural structures or introduction of artificial features	removal or alteration of natural structure intro of ditches or furrows	7
h	Topographic features, such as refugia ponds, creek channels, flats or hummocks	all present and normal for area being assessed	slightly less than optimal for area being assessed	reduction in extent substantial	lack of features being assessed	7
i	Submerged aquatic plant communities are present, any evidence of siltation or algal growth	no evidence of siltation or algal growth	minor degree of siltation or algal growth	moderate degree of siltation or algal growth	high degree of siltation or algal growth	N/A
j	If upland mitigation area, life history support for fish and wildlife	plant community provides optimal level of habitat	plant community provides adequate level of habitat	plant community provides moderate level of habitat	little or no habitat	N/A
VEGETATION SCORE						7

**PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)**

Site/Project Name FPL Lauderdale Plant Combustion Turbine Project		Application Number		Assessment Area Name or Number Wetlands B and C	
FLUCCs code 619		Further classification (optional) Exotic wetland hardwoods		Impact or Mitigation Site? Existing Condition	
				Assessment Area Size 3.18 acres	
Basin/Watershed Name/Number		Affected Waterbody (Class)		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands The exotic wetland hardwoods found along the Site are connected to other wetlands including ditches, wet prairies, and freshwater marshes.					
Assessment area description Exotic wetland hardwoods within the Project area are dominated by the exotic species Australian pine (<i>Casuarina equisetifolia</i>) and Brazilian pepper (<i>Schinus terebinthifolius</i>), with subdominant species including pond apple (<i>Annona glabra</i>), cocoplum (<i>Chrysobalanus icaco</i>), napier grass (<i>Pennisetum purpureum</i>), sawgrass (<i>Cladium jamaicense</i>), royal fern (<i>Osmunda regalis</i>), and wild taro (<i>Colocasia esculenta</i>).					
Significant nearby features Power plant, substation, transmission lines, residential, commercial, industrial land uses, tree nursery		Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique			
Functions Nutrient/pollution control and removal, flood attenuation, drainage		Mitigation for previous permit/other historic use N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Amphibians, small reptiles (i.e. snakes, anoles), passerine birds, raptors, small to medium-sized mammals (i.e. rats, raccoon)		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Areas might have occasional use by wading birds such as white ibis (<i>Eudocimus albus</i>) (SSC) and little blue heron (<i>Egretta caerulea</i>) (SSC).			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Direct observation: mourning dove, mockingbird, boat-tailed grackle, cuban brown anole, iguana, brown basilisk, little blue heron, great blue heron. Indirect observation: raccoon (tracks), armadillo (rooting)					
Additional relevant factors: None					
Assessment conducted by: Arrants / Bullock		Assessment date(s): August-13			

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name FPL Lauderdale Plant Combustion Turbine Project	Application Number	Assessment Area Name or Number Wetlands B and C (FLUCFCS 619)
Impact or Mitigation Existing Condition	Assessment conducted by: Arrants / Bullock	Assessment date: Aug-13

Scoring Guidance The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support w/o pres or current with 6	Location and landscape support variable is slightly decreased due to surrounding industrial, commercial, and residential development, proximity of roads, existing power plant facilities, as well as invasive species. Please see the following page for the individual parameter scores.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 7	The water environment of the exotic wetland hardwoods is less than optimal due to surrounding hydrologic alterations and landuses. Please see the following page for the individual parameter scores.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 5	Wetlands are dominated by exotic/invasive species with native species present. Please see the following page for the individual parameter scores.

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
0.60	

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
N/A - no impact proposed

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

Uniform Mitigation Assessment Method - Individual Parameter Scores

SITE: FPL Lauderdale Plant Combustion Turbine Project

WETLAND ID: B, C
Exotic wetland hardwoods (FLUCFCS 619)

OVERALL UMAM SCORE
0.60

	Location Landscape Support	10	7	4	0	PARAMETER SCORE
a	Quality of habitats outside area for wildlife	fulfill optimal life history requirements of wildlife	fulfill most but not all requirements	habitat availability outside area fair but excludes some wildlife	no habitats available outside site to support wildlife	7
b	Invasive exotics and other exotics	Not present	some invasive exotics in plant community	many invasive exotics and other exotics in community	plant community consists mainly of invasive exotics	3
c	Wildlife access to and from assessment area and other areas	unobstructed	partially limited	substantially limited	access completely blocked	7
d	Areas downstream of assessment area	beneficial and unobstructed	benefits partially limited by either distance or obstructions	benefits substantially limited by either distance or obstructions	no benefits to downstream areas	7
e	Effects of land use outside of area on wildlife	no ill effects	minimal impacts	substantial impacts	severe impacts	6
f	Hydrologically connected areas downstream of area	not limited by hydrological flow restrictions	partially limited	substantially limited	no benefits to downstream areas	7
g	Dependency of downstream areas on assessment area	Downstream areas critically dependant and would suffer from alterations to hydrology	Downstream areas significantly dependent on assessment area	minimal benefits from assessment area	little or no benefit to downstream areas	7
h	For upland areas, location in relation to benefit and protection of wetland	upland provides optimal protection	upland provides some protection	upland provides little protection	upland provides no protection of wetland	N/A

LOCATION/LANDSCAPE SCORE
6

	Water Environment	10	7	4	0	PARAMETER SCORE
a	Water levels and flow	appropriate water levels considering season, tidal cycle, and weather	water level slightly higher or lower than appropriate	water levels and flow are moderately higher or lower than appropriate	water levels or flow exhibit an extreme degree of deviation	7
b	Water level indicators in relation to type of system being evaluated	distinct water level indicators	indicators not as distinct, but still consistent with expected	indicators not distinct, and not consistent with expected	indicators not present or are greatly inconsistent with expected	6
c	Soil moisture for system type	appropriate soil type and moisture	soil oxidation or subsidence is minimal, soils drier than expected	soil moisture has deviated from appropriate for system and season	strong evidence of substantial soil desiccation, oxidation, or subsidence	7
d	Soil erosion or deposition patterns	typical, not indicative of altered flow rates	patterns indicate minor alterations in flow rates	patterns strongly atypical and indicate alterations in flow rates	patterns greatly atypical indicating alterations in flow rates	6
e	Evidence of fire history	typical for frequency and severity	indicative that frequency or severity may be greater than expected	indicative of much greater frequency and severity	great deviation from typical	N/A
f	Vegetation or benthic community zonation of all strata	appropriate for the type of system being evaluated	zonation in some strata inappropriate for system type	zonation in most strata inappropriate for system type	all strata inappropriate for system type	5
g	Signs of hydrologic stress on vegetation	no signs of stress on vegetation	slightly greater mortality of vegetation, signs of stress	strong evidence of greater than normal mortality	vegetation has strong evidence of much greater than normal mortality	4
h	Evidence of use by animals with specific hydrological requirements	expected for site hydrology	less than expected evidence of animals	greatly reduced evidence of animals with specific requirements	lacking those species with specific requirements	7
i	Composition of wetland plants with respect to tolerance	plant community not characterized by species tolerant to quality degradation	some of community consists of tolerant species	most of community composed of tolerant species	community predominantly consists of tolerant species	6
j	Direct observation of standing water with respect to discoloration, turbidity, or oil sheen	no indicators of water quality degradation	slight indication of water quality degradation	moderate water quality degradation such as discoloration, turbidity, or oil sheen	significant water quality degradation	7
k	Existing water quality data indicates conditions supporting ecological value	water quality indicates optimal conditions for community type	slight deviation from what is normal	moderate deviation from the normal	severe deviation from the normal	N/A
l	Water depth, wave energy, currents, and light penetration	optimal for community type	generally sufficient for type of community	not well suited for the type of community	inappropriate for community type	6

WATER ENVIRONMENT SCORE
7

	Vegetation Community Structure	10	7	4	0	PARAMETER SCORE
a	Plant cover - desirable species in canopy, shrub, or ground stratum	all or nearly all plant cover is appropriate	majority of plant cover is appropriate	majority of plant cover is inappropriate	no appropriate or desirable species	4
b	Presence of invasive exotics or other exotics	no invasives present	minimal invasives present	majority of plant cover is invasive exotic or exotic	high presence of cover by invasives	4
c	Evidence of regeneration or recruitment	strong evidence of regeneration and or recruitment	near normal evidence of regeneration or recruitment	minimal evidence of regeneration or recruitment	no evidence of regeneration or recruitment	5
d	Age and size distribution	typical of the system	slightly atypical age and size distribution	atypical distribution and indicative of permanent deviation	high percentage of dead or dying vegetation	5
e	Density and quality of coarse woody debris, snags, den and cavities	optimal structural habitat for system type	adequate structural habitat for system type	either not present or greater than normal because of poor plant community health	either not present or greater than normal because of dead or dying plant community	N/A
f	Plant condition- evidence of chlorotic or spindly growth or insect damage	good plant condition no evidence of abnormalities	generally good plant condition with little evidence stress	generally poor plant condition with evidence of stress	very poor plant condition	4
g	Land management practices for long-term viability of plant community	optimal	generally appropriate, but there may be some fire suppression or water control	partial removal or alteration of natural structures or introduction of artificial features	removal or alteration of natural structure intro of ditches or furrows	N/A
h	Topographic features, such as refugia ponds, creek channels, flats or hummocks	all present and normal for area being assessed	slightly less than optimal for area being assessed	reduction in extent substantial	lack of features being assessed	N/A
i	Submerged aquatic plant communities are present, any evidence of siltation or algal growth	no evidence of siltation or algal growth	minor degree of siltation or algal growth	moderate degree of siltation or algal growth	high degree of siltation or algal growth	7
j	If upland mitigation area, life history support for fish and wildlife	plant community provides optimal level of habitat	plant community provides adequate level of habitat	plant community provides moderate level of habitat	little or no habitat	N/A

VEGETATION SCORE
5

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name FPL Lauderdale Plant Combustion Turbine Project		Application Number		Assessment Area Name or Number Wetland D	
FLUCCs code 612		Further classification (optional)		Impact or Mitigation Site? Existing Condition	Assessment Area Size 10.57 acres
Basin/Watershed Name/Number	Affected Waterbody (Class) III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) none		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland D is connected to the Lauderdale Plant's discharge canal and cooling pond, which is connected to the South New River Canal. Pond Apple Slough Park is located to the north of the assessment area, on the northern bank of the South New River Canal.					
Assessment area description Wetland D is dominated by white mangrove (<i>Laguncularia racemosa</i>) and scattered pond apple (<i>Annona glabra</i>), although the exotic species Australian pine (<i>Casuarina equisetifolia</i>), Brazilian pepper (<i>Schinus terebinthifolius</i>), and shoebutton ardisia (<i>Ardisia elliptica</i>) are present.					
Significant nearby features Industrial, commercial, and residential development - power plant, roads, transmission lines			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique		
Functions Water storage, wildlife habitat, flood attenuation			Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Iguana, raccoon, opossum,armadillo, forage fish, limited access for wading birds			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Potential limited use by wading birds such as white ibis (<i>Eudocimus albus</i>) (SSC) little blue heron (<i>Egretta caerulea</i>) (SSC).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Iguana, brown basalisk, mourning dove, raccoon					
Additional relevant factors:					
Assessment conducted by: Arrants / Bullock			Assessment date(s): August-13		

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name FPL Lauderdale Plant Combustion Turbine Project	Application Number	Assessment Area Name or Number Wetland D (FLUCFCS 612)
Impact or Mitigation Existing Condition	Assessment conducted by: Arrants / Bullock	Assessment date: Aug-13

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support w/o pres or current 6 with	Location and landscape support variable is slightly decreased due to proximity of commercial, industrial, and residential development. Please see the following page for the individual parameter scores.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 8 with	The water environment of the mangrove swamp exhibits mostly typical conditions. The hydrology is somewhat altered due to New South River Canal and associated spoil piles, as well as adjacent industrial developments. Please see the following page for the individual parameter scores.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 8 with	The canopy is comprised of primarily native species, although exotic/invasive species are present. Please see the following page for the individual parameter scores.

Score = sum of above scores/30 (if uplands, divide by 20)
current
or w/o pres
0.73
with

Delta = [with-current]
N/A - no impact proposed

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

If mitigation
Time lag (t-factor) =
Risk factor =

For impact assessment areas
FL = delta x acres =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

Uniform Mitigation Assessment Method - Individual Parameter Scores

SITE: FPL Lauderdale Plant Combustion Turbine Project

WETLAND ID: D
Mangrove Swamps (FLUCFCS 612)

OVERALL UMAM SCORE
0.73

	Location Landscape Support	10	7	4	0	PARAMETER SCORE
a	Quality of habitats outside area for wildlife	fulfill optimal life history requirements of wildlife	fulfill most but not all requirements	habitat availability outside area fair but excludes some wildlife	no habitats available outside site to support wildlife	4
b	Invasive exotics and other exotics	Not present	some invasive exotics in plant community	many invasive exotics and other exotics in community	plant community consists mainly of invasive exotics	7
c	Wildlife access to and from assessment area and other areas	unobstructed	partially limited	substantially limited	access completely blocked	7
d	Areas downstream of assessment area	beneficial and unobstructed	benefits partially limited by either distance or obstructions	benefits substantially limited by either distance or obstructions	no benefits to downstream areas	7
e	Effects of land use outside of area on wildlife	no ill effects	minimal impacts	substantial impacts	severe impacts	4
f	Hydrologically connected areas downstream of area	not limited by hydrological flow restrictions	partially limited	substantially limited	no benefits to downstream areas	7
g	Dependency of downstream areas on assessment area	Downstream areas critically dependant and would suffer from alterations to hydrology	Downstream areas significantly dependent on assessment area	minimal benefits from assessment area	little or no benefit to downstream areas	4
h	For upland areas, location in relation to benefit and protection of wetland	upland provides optimal protection	upland provides some protection	upland provides little protection	upland provides no protection of wetland	N/A

LOCATION/LANDSCAPE SCORE
6

	Water Environment	10	7	4	0	PARAMETER SCORE
a	Water levels and flow	appropriate water levels considering season, tidal cycle, and weather	water level slightly higher or lower than appropriate	water levels and flow are moderately higher or lower than appropriate	water levels or flow exhibit an extreme degree of deviation	7
b	Water level indicators in relation to type of system being evaluated	distinct water level indicators	indicators not as distinct, but still consistent with expected	indicators not distinct, and not consistent with expected	indicators not present or are greatly inconsistent with expected	8
c	Soil moisture for system type	appropriate soil type and moisture	soil oxidation or subsidence is minimal, soils drier than expected	soil moisture has deviated from appropriate for system and season	strong evidence of substantial soil desiccation, oxidation, or subsidence	8
d	Soil erosion or deposition patterns	typical, not indicative of altered flow rates	patterns indicate minor alterations in flow rates	patterns strongly atypical and indicate alterations in flow rates	patterns greatly atypical indicating alterations in flow rates	8
e	Evidence of fire history	typical for frequency and severity	indicative that frequency or severity may be greater than expected	indicative of much greater frequency and severity	great deviation from typical	9
f	Vegetation or benthic community zonation of all strata	appropriate for the type of system being evaluated	zonation in some strata inappropriate for system type	zonation in most strata inappropriate for system type	all strata inappropriate for system type	8
g	Signs of hydrologic stress on vegetation	no signs of stress on vegetation	slightly greater mortality of vegetation, signs of stress	strong evidence of greater than normal mortality	vegetation has strong evidence of much greater than normal mortality	7
h	Evidence of use by animals with specific hydrological requirements	expected for site hydrology	less than expected evidence of animals	greatly reduced evidence of animals with specific requirements	lacking those species with specific requirements	6
i	Composition of wetland plants with respect to tolerance	plant community not characterized by species tolerant to quality degradation	some of community consists of tolerant species	most of community composed of tolerant species	community predominantly consists of tolerant species	8
j	Direct observation of standing water with respect to discoloration, turbidity, or oil sheen	no indicators of water quality degradation	slight indication of water quality degradation	moderate water quality degradation such as discoloration, turbidity, or oil sheen	significant water quality degradation	8
k	Existing water quality data indicates conditions supporting ecological value	water quality indicates optimal conditions for community type	slight deviation from what is normal	moderate deviation from the normal	severe deviation from the normal	N/A
l	Water depth, wave energy, currents, and light penetration	optimal for community type	generally sufficient for type of community	not well suited for the type of community	inappropriate for community type	6

WATER ENVIRONMENT SCORE
8

	Vegetation Community Structure	10	7	4	0	PARAMETER SCORE
a	Plant cover - desirable species in canopy, shrub, or ground stratum	all or nearly all plant cover is appropriate	majority of plant cover is appropriate	majority of plant cover is inappropriate	no appropriate or desirable species	9
b	Presence of invasive exotics or other exotics	no invasives present	minimal invasives present	majority of plant cover is invasive exotic or exotic	high presence of cover by invasives	7
c	Evidence of regeneration or recruitment	strong evidence of regeneration and or recruitment	near normal evidence of regeneration or recruitment	minimal evidence of regeneration or recruitment	no evidence of regeneration or recruitment	8
d	Age and size distribution	typical of the system	slightly atypical age and size distribution	atypical distribution and indicative of permanent deviation	high percentage of dead or dying vegetation	8
e	Density and quality of coarse woody debris, snags, den and cavities	optimal structural habitat for system type	adequate structural habitat for system type	either not present or greater than normal because of poor plant community health	either not present or greater than normal because of dead or dying plant community	7
f	Plant condition- evidence of chlorotic or spindly growth or insect damage	good plant condition no evidence of abnormalities	generally good plant condition with little evidence stress	generally poor plant condition with evidence of stress	very poor plant condition	8
g	Land management practices for long-term viability of plant community	optimal	generally appropriate, but there may be some fire suppression or water control	partial removal or alteration of natural structures or introduction of artificial features	removal or alteration of natural structure intro of ditches or furrows	7
h	Topographic features, such as refugia ponds, creek channels, flats or hummocks	all present and normal for area being assessed	slightly less than optimal for area being assessed	reduction in extent substantial	lack of features being assessed	7
i	Submerged aquatic plant communities are present, any evidence of siltation or algal growth	no evidence of siltation or algal growth	minor degree of siltation or algal growth	moderate degree of siltation or algal growth	high degree of siltation or algal growth	8
j	If upland mitigation area, life history support for fish and wildlife	plant community provides optimal level of habitat	plant community provides adequate level of habitat	plant community provides moderate level of habitat	little or no habitat	N/A

VEGETATION SCORE
8

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name FPL Lauderdale Plant Combustion Turbine Project		Application Number		Assessment Area Name or Number Wetland J	
FLUCCs code 641		Further classification (optional)		Impact or Mitigation Site? Existing Condition	Assessment Area Size 0.11 acres
Basin/Watershed Name/Number		Affected Waterbody (Class) III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) none	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Connects to Wetland A via culvert					
Assessment area description Wetland J is a small freshwater marsh within a surrounding tree nursery dominated by lance-leaved arrowhead (<i>Sagittaria lancifolia</i>), creeping ludwigia (<i>Ludwigia repens</i>), primrose willow (<i>Ludwigia leptocarpa</i>), and creeping ox-eye (<i>Wedelia triloba</i>).					
Significant nearby features Industrial, commercial, and residential development - power plant, roads, transmission lines			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique		
Functions Water storage, wildlife habitat, flood attenuation			Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Iguana, raccoon, opossum,armadillo, passerine birds			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Potential limited use by wading birds such as white ibis (<i>Eudocimus albus</i>) (SSC) little blue heron (<i>Egretta caerulea</i>) (SSC).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None, although iguana, raccoon, opossum, armadillo were observed in adjacent areas of the Project site at the time of the site visit.					
Additional relevant factors:					
Assessment conducted by: M. Arrants / Bullock			Assessment date(s): August-13		

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name FPL Lauderdale Plant Combustion Turbine Project	Application Number	Assessment Area Name or Number Wetland J
Impact or Mitigation Existing Condition	Assessment conducted by: Arrants / Bullock	Assessment date: Aug-13

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support w/o pres or current 6 with	Location and landscape support variable is slightly decreased due to proximity of commercial, industrial, and residential development. Please see the following page for the individual parameter scores.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current 6 with	The hydrology is altered due to the surrounding tree nursery, excavated ditch connection to Wetland A, New South River Canal and associated spoil piles, as well as adjacent industrial developments. Please see the following page for the individual parameter scores.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current 6 with	Wetlands are dominated by a mixture of native and exotic/invasive species surrounded by tree nurseries. Please see the following page for the individual parameter scores.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres 0.60 with

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
N/A - no impact proposed

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

Uniform Mitigation Assessment Method - Individual Parameter Scores

SITE: FPL Lauderdale Plant Combustion Turbine Project

WETLAND ID: J
FLUCFCS 641

OVERALL UMAM SCORE
0.60

	Location Landscape Support	10	7	4	0	PARAMETER SCORE
a	Quality of habitats outside area for wildlife	fulfill optimal life history requirements of wildlife	fulfill most but not all requirements	habitat availability outside area fair but excludes some wildlife	no habitats available outside site to support wildlife	6
b	Invasive exotics and other exotics	Not present	some invasive exotics in plant community	many invasive exotics and other exotics in community	plant community consists mainly of invasive exotics	6
c	Wildlife access to and from assessment area and other areas	unobstructed	partially limited	substantially limited	access completely blocked	7
d	Areas downstream of assessment area	beneficial and unobstructed	benefits partially limited by either distance or obstructions	benefits substantially limited by either distance or obstructions	no benefits to downstream areas	7
e	Effects of land use outside of area on wildlife	no ill effects	minimal impacts	substantial impacts	severe impacts	5
f	Hydrologically connected areas downstream of area	not limited by hydrological flow restrictions	partially limited	substantially limited	no benefits to downstream areas	7
g	Dependency of downstream areas on assessment area	Downstream areas critically dependant and would suffer from alterations to hydrology	Downstream areas significantly dependent on assessment area	minimal benefits from assessment area	little or no benefit to downstream areas	6
h	For upland areas, location in relation to benefit and protection of wetland	upland provides optimal protection	upland provides some protection	upland provides little protection	upland provides no protection of wetland	N/A

LOCATION/LANDSCAPE SCORE
6

	Water Environment	10	7	4	0	PARAMETER SCORE
a	Water levels and flow	appropriate water levels considering season, tidal cycle, and weather	water level slightly higher or lower than appropriate	water levels and flow are moderately higher or lower than appropriate	water levels or flow exhibit an extreme degree of deviation	5
b	Water level indicators in relation to type of system being evaluated	distinct water level indicators	indicators not as distinct, but still consistent with expected	indicators not distinct, and not consistent with expected	indicators not present or are greatly inconsistent with expected	5
c	Soil moisture for system type	appropriate soil type and moisture	soil oxidation or subsidence is minimal, soils drier than expected	soil moisture has deviated from appropriate for system and season	strong evidence of substantial soil desiccation, oxidation, or subsidence	6
d	Soil erosion or deposition patterns	typical, not indicative of altered flow rates	patterns indicate minor alterations in flow rates	patterns strongly atypical and indicate alterations in flow rates	patterns greatly atypical indicating alterations in flow rates	6
e	Evidence of fire history	typical for frequency and severity	indicative that frequency or severity may be greater than expected	indicative of much greater frequency and severity	great deviation from typical	5
f	Vegetation or benthic community zonation of all strata	appropriate for the type of system being evaluated	zonation in some strata inappropriate for system type	zonation in most strata inappropriate for system type	all strata inappropriate for system type	7
g	Signs of hydrologic stress on vegetation	no signs of stress on vegetation	slightly greater mortality of vegetation, signs of stress	strong evidence of greater than normal mortality	vegetation has strong evidence of much greater than normal mortality	7
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j	Direct observation of standing water with respect to discoloration, turbidity, or oil sheen	no indicators of water quality degradation	slight indication of water quality degradation	moderate water quality degradation such as discoloration, turbidity, or oil sheen	significant water quality degradation	7
k	Existing water quality data indicates conditions supporting ecological value	water quality indicates optimal conditions for community type	slight deviation from what is normal	moderate deviation from the normal	severe deviation from the normal	N/A
l	Water depth, wave energy, currents, and light penetration	optimal for community type	generally sufficient for type of community	not well suited for the type of community	inappropriate for community type	5

WATER ENVIRONMENT SCORE
6

	Vegetation Community Structure	10	7	4	0	PARAMETER SCORE
a	Plant cover - desirable species in canopy, shrub, or ground stratum	all or nearly all plant cover is appropriate	majority of plant cover is appropriate	majority of plant cover is inappropriate	no appropriate or desirable species	6
b	Presence of invasive exotics or other exotics	no invasives present	minimal invasives present	majority of plant cover is invasive exotic or exotic	high presence of cover by invasives	6
c	Evidence of regeneration or recruitment	strong evidence of regeneration and or recruitment	near normal evidence of regeneration or recruitment	minimal evidence of regeneration or recruitment	no evidence of regeneration or recruitment	5
d	Age and size distribution	typical of the system	slightly atypical age and size distribution	atypical distribution and indicative of permanent deviation	high percentage of dead or dying vegetation	5
e	Density and quality of coarse woody debris, snags, den and cavities	optimal structural habitat for system type	adequate structural habitat for system type	either not present or greater than normal because of poor plant community health	either not present or greater than normal because of dead or dying plant community	N/A
f	Plant condition- evidence of chlorotic or spindly growth or insect damage	good plant condition no evidence of abnormalities	generally good plant condition with little evidence stress	generally poor plant condition with evidence of stress	very poor plant condition	7
g	Land management practices for long-term viability of plant community	optimal	generally appropriate, but there may be some fire suppression or water control	partial removal or alteration of natural structures or introduction of artificial features	removal or alteration of natural structure intro of ditches or furrows	6
h	Topographic features, such as refugia ponds, creek channels, flats or hummocks	all present and normal for area being assessed	slightly less than optimal for area being assessed	reduction in extent substantial	lack of features being assessed	5
i	Submerged aquatic plant communities are present, any evidence of siltation or algal growth	no evidence of siltation or algal growth	minor degree of siltation or algal growth	moderate degree of siltation or algal growth	high degree of siltation or algal growth	N/A
j	If upland mitigation area, life history support for fish and wildlife	plant community provides optimal level of habitat	plant community provides adequate level of habitat	plant community provides moderate level of habitat	little or no habitat	N/A

VEGETATION SCORE
6

Mitigation Bank Wetland Function -- Evaluation Matrix

Scoring conducted by: Karl Bullock

W.A.T.E.R. - Wetland Assessment Technique for Environmental Reviews

Project: FPL Lauderdale Plant CT Project

Based on WBI, WQI, WRAP, HGM and 4th Priority Project List (PPL) with technical advise from EPA, FDEP, ACOE, NMFS, USF & W, SFWMD & Dade County (W.A.T.E.R. created by: Bill L. Maus)

Parameter/ Function	Scoring Criteria	Ratings	Wetlands A, E, F, G, H, I		Wetlands B and C	Wetland D	Wetland J
			Native & Exotic Mixed Wetland Hardwoods (FLUCFCS 617/619) - Pre	Native & Exotic Mixed Wetland Hardwoods (FLUCFCS 617/619) - Post	Exotic Wetland Hardwoods (FLUCFCS 619) - Existing Condition	Mangrove (FLUCFCS 612) - Existing Condition	Freshwater Marsh (FLUCFCS 641) - Existing Condition
1. Fish & Wildlife Functions Apply to freshwater, saltwater, brackish and mitigation systems							
a. Waterfowl, wading birds, wetland dependent, or aquatic birds of prey. (Mit. Bank - High species count w/ low pop. #'s score 1	7 or more species commonly observed	3	2	0	2	2.5	2
	3-6 species commonly observed	2					
	1-2 species commonly observed	1					
	0 species commonly observed	0					
b. Fish (Mit. Bank - High species count w/ low pop. #'s score 1 Restoration that causes 12% pop. Increases-higher score)	7 or more species commonly observed	3	2	0	1	2	1
	3-6 species commonly observed	2					
	1-2 species commonly observed	1					
	0 species commonly observed	0					
c. Mammals (Mit. Bank - High species count w/ low pop. #'s score 1 Restoration that causes 12% pop. Increases-higher score)	Top predator (carnivore) &/or large mammals	3	2	0	1	2	1
	Medium sized mammals , (adult weight > 6 lbs.)	2					
	Small animals (rodents, etc.) , (adult weight < 6 lbs.)	1					
	0 species present	0					
d. Aquatic macroinvertebrates, amphibians (Mit. Bank - High species count w/ low pop. #'s score 1 Restoration that causes 12% pop. Increases-higher score)	7 or more species commonly observed	3	3	0	2	3	2
	3-6 species commonly observed	2					
	1-2 species commonly observed	1					
	0 species commonly observed	0					
e. Aquatic reptiles (Mit. Bank - High species count w/ low pop. #'s score 1 Restoration that causes 12% pop. Increases-higher score)	Large species observed	3	2	0	1	2	1
	Aquatic turtles	2					
	Snakes & lizards	1					
	No evidence of species present	0					

Mitigation Bank Wetland Function -- Evaluation Matrix

Scoring conducted by: Karl Bullock

W.A.T.E.R. - Wetland Assessment Technique for Environmental Reviews

Project: FPL Lauderdale Plant CT Project

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Parameter/ Function	Scoring Criteria	Ratings	Wetlands A, E, F, G, H, I		Wetlands B and C	Wetland D	Wetland J
			Native & Exotic Mixed Wetland Hardwoods (FLUCFCS 617/619) - Pre	Native & Exotic Mixed Wetland Hardwoods (FLUCFCS 617/619) - Post	Exotic Wetland Hardwoods (FLUCFS 619) - Existing Condition	Mangrove (FLUCFS 612) - Existing Condition	Freshwater Marsh (FLUCFS 641) - Existing Condition
2. Vegetative Functions Apply to freshwater, saltwater, brackish and mitigation systems							
a. Overstory/shrub canopy	Desirable trees/shrub healthy & providing appropriate habitat (seedlings present) & no inappropriate species	3	2	0	1	3	1
	Desirable trees/shrubs exhibit signs of stress (no seedlings) few inappropriate species present	2					
	Inappropriate trees/shrubs shading or overcoming desirable tree/shrubs	1					
	Very little or no desirable tree/shrubs present (evidence suggests there should be)	0					
b. Vegetative ground cover	Assessment area exhibits <2% inappropriate herbaceous ground cover for specific wetland systems and groundcover is present	3	2.5	0	2	2.5	2
	Assessment area contains >2% but <30% inappropriate herbaceous groundcover, or lack of groundcover >2% but < 30%	2					
	Assessment area contains >30% to <70% inappropriate herbaceous groundcover, or lack of ground cover >30% to <70%	1					
	Assessment area >70% inappropriate herbaceous groundcover or lack of groundcover >70%	0					
c. Periphyton mat coverage	Periphyton (Blue-green algae) present with average mat thickness >1 1/4 in. (measure active & dead layer)	3	2	0	1	2	1
	Periphyton (Blue-green algae) present with average mat thickness between 3/4 in. to 1 1/4 in. (active & dead layer)	2					
	Periphyton (Blue-green algae) present with average mat thickness between 1/4 in. to 3/4 in. (active & dead layer)	1					
	Periphyton (Blue-green algae) not present or if present with average thickness of 0.0 to 1/4 in. (active & dead layer)	0					
d. Category 1 and Category 2 exotic plants or (non-native) species	< (or = to) 1 % exotic plant cover	3	1.5	0	1	2	1.5
	>1 % to 10 % exotic plant cover	2					
	>10 % to 65 % exotic plant cover	1					
	> 65 % exotic plant cover	0					
e. Habitat diversity (vegetative) (within assessment area)	>3 native species communities on site within assessment area	3	2	0	2	2	2
	2 or 3 native species communities on site within assessment area	2					
	1 native species community with 75 % to 90 % coverage within assessment area	1					
	1 native species community has > 90 % coverage within assessment area	0					
f. Biological diversity within 3000 feet (approximately 1/2 mile from edge of assessment area)	> 3 alternative habitats available (including upland)	3	3	0	3	3	3
	2 to 3 alternative habitats	2					
	1 alternative habitat	1					
	Same habitat type, or inappropriate / impacted	0					

Mitigation Bank Wetland Function -- Evaluation Matrix

Scoring conducted by: Karl Bullock

W.A.T.E.R. - Wetland Assessment Technique for Environmental Reviews

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Based on WBI, WQI, WRAP, HGM and 4th Priority Project List (PPL) with technical advise from EPA, FDEP, ACOE, NMFS, USF & W, SFWMD & Dade County (W.A.T.E.R. created by: Bill L. Maus)

Parameter/ Function	Scoring Criteria	Ratings	Wetlands A, E, F, G, H, I		Wetlands B and C	Wetland D	Wetland J
			Native & Exotic Mixed Wetland Hardwoods (FLUCFCS 617/619) - Pre	Native & Exotic Mixed Wetland Hardwoods (FLUCFCS 617/619) - Post	Exotic Wetland Hardwoods (FLUCFS 619) - Existing Condition	Mangrove (FLUCFS 612) - Existing Condition	Freshwater Marsh (FLUCFS 641) - Existing Condition
3. Hydrologic Functions							
a. Surface water hydrology / sheet flow Apply to freshwater, saltwater, brackish and mitigation systems	Major connection (Flowing water/ river or floodplain/ uniform flow through natural systems)	3	2	0	2	2	2
	Moderate connection (Natural restriction of flow or Flowing water due to hydrologic engineering)	2					
	Minor connection (Runoff collection point, or uneven flow due to berms, ditches, roadways etc.)	1					
	Hydrologically isolated, no net lateral movement	0					
b. Hydroperiod (normal year) fresh systems	> 8 months inundated with no reversals & every year drydown	3	2	0	2	2	1
	>5 months < 8 months or >5 years continuous inundation (look for strong water stains on persistent vegetation)	2					
	>1 month < 5 months, with possible reversals (look for soft or less distinct water stains on persistent vegetation)	1					
	< 4 weeks cumulative annual inundation or < 2 weeks continuous inundation	0					
b-1 Alternate to b. for Short Hydroperiod (normal year) fresh systems:	>10 weeks of continuous inundation including soil saturation	3					
	> 6 weeks but <10 weeks of continuous inundation including soil saturation	2					
	>2 weeks but <6 weeks of inudation, including soil saturation	1					
	<2 weeks of continuos inundation	0					
b-2 Alternate to b. for Saltwater, brackish (tidal) systems	Inundated by >90% high tides						
	Inundated by "spring" high tides (bi-monthly)	2					
	Inundated by "extreme high" tides only (biannually)	1					
	Inundated by storm surges only	0					
b-3 Alternate to b. for High Marsh (Juncus-Distichlis)	Inundated by high "spring" tides (monthly) and flushed by fresh water sheetflow every 10 days average	3					
	Inundated by high "spring" tides (monthly) and flushed by fresh water sheetflow every 30 days on the average	2					
	Inundated by high "spring" tides (monthly)and exposed to rain only	1					
	Inundated by >50% high tides and exposed to rain only	0					
b-4 Alternate to b. for Riverine systems	Inundated by high tides (daily) and/or recieves and maintains fresh water at least into first half of dry season	3					
	Inundated by high tides (daily) and/or recieves and maintains fresh water during rainy season only	2					
	Inundated by high tides (daily) and/or recieves fresh water but does not maintain (reversal) during rainy season	1					
	Inundated by spring tides (bi-monthly) and/or experiences frequent reversals of fresh water (flashy)	0					

Mitigation Bank Wetland Function -- Evaluation Matrix

Scoring conducted by: Karl Bullock

W.A.T.E.R. - Wetland Assessment Technique for Environmental Reviews

Based on WBI, WQI, WRAP, HGM and 4th Priority Project List (PPL) with technical advise from EPA, FDEP, ACOE, NMFS, USF & W, SFWMD & Dade County (W.A.T.E.R. created by: Bill L. Maus)

Project: FPL Lauderdale Plant CT Project

Parameter/ Function	Scoring Criteria	Ratings	Wetlands A, E, F, G, H, I		Wetlands B and C	Wetland D	Wetland J
			Native & Exotic Mixed Wetland Hardwoods (FLUCFCS 617/619) - Pre	Native & Exotic Mixed Wetland Hardwoods (FLUCFCS 617/619) - Post	Exotic Wetland Hardwoods (FLUCFCS 619) - Existing Condition	Mangrove (FLUCFCS 612) - Existing Condition	Freshwater Marsh (FLUCFCS 641) - Existing Condition
3. Hydrologic Functions continued							
c. Hydropattern (fresh system)	>1 ft. water depth for at least 2.5 months and <6 in. for >1 month (measure water mark/ lichen line), or water depth ideal for specific wetland system.	3	2	0	2	2	1
	>6 in to 1 ft. for at least 2.5 months (measure water mark/ lichen line) or water depth borderline over or under for specific wetland system	2					
	<6 in. for at least 2.5 months (measure water mark/ lichen line) or water depth incorrect for specific wetland system	1					
	<6 in. in association with either canals, ditches, swales, culverts, pumps, and/or wellfields, or these factors cause water depth to be too deep for specific system.	0					
c-1 Alternate to c. for Saltwater, brackish (tidal) systems	>1 ft. water depth <2 ft. on 90% high tides	3		0			
	> 6 in. water depth <1 ft. on >50% high tides	2					
	< 6 in. water depth , but > than saturated	1					
	Saturated by saline water table only	0					
c-2 Alternate to c. for High Marsh (Juncus-Distichlis)	>10 in. water depth <2 ft. on regular basis during growing season	3					
	>5 in. to 10in. water depth on regular basis during growing season	2					
	>1 in. to 5 in. water depth on regular basis during growing season	1					
	>0.0 in. to 1 in. water depth sporadically during growing season	0					
c-3 Alternate to c. for Riverine systems	>2 ft. water depth (main channel) <6 ft. for 8 months	3					
	>2 ft. water depth (main channel) <4 ft. for 6 months	2					
	>1 ft. water depth (main channel) <2.5 ft. for 4 months	1					
	<1 ft. water depth, but dry for >4 weeks (dry season)	0					

Mitigation Bank Wetland Function -- Evaluation Matrix

Scoring conducted by: Karl Bullock

W.A.T.E.R. - Wetland Assessment Technique for Environmental Reviews

Project: FPL Lauderdale Plant CT Project

Based on WBI, WQI, WRAP, HGM and 4th Priority Project List (PPL) with technical advise from
EPA, FDEP, ACOE, NMFS, USF & W, SFWMD & Dade County (W.A.T.E.R. created by: Bill L. Maus)

Parameter/ Function	Scoring Criteria	Ratings	Wetlands A, E, F, G, H, I		Wetlands B and C	Wetland D	Wetland J
			Native & Exotic Mixed Wetland Hardwoods (FLUCFCS 617/619) - Pre	Native & Exotic Mixed Wetland Hardwoods (FLUCFCS 617/619) - Post	Exotic Wetland Hardwoods (FLUCFS 619) - Existing Condition	Mangrove (FLUCFS 612) - Existing Condition	Freshwater Marsh (FLUCFS 641) - Existing Condition
3. Hydrologic Functions continued							
d. Water Quality	No indication of poor water quality (lab testing required, all values within acceptable range)	3	2.5	0	2.5	2.5	2.5
	No visual indicators of poor water quality observed (1 value just over or under acceptable range)	2					
	Visual indicators of poor water quality questionable (2 values over or under acceptable range)	1					
	Visual indicators of poor water quality observed or lab verified (values are out of acceptable range)	0					
e. Intactness of historic topography (soil disturbance)	Unaltered	3	2.5	0	2	2.5	1
	Slightly altered soil disturbance, < 10% of assessment area	2					
	Moderately altered soil disturbance, < 25% of assessment area	1					
	Extremely altered soil disturbance, may exceed 50% of assessment area	0					
f. Soils, organic (fresh systems)	Organic soil classified hydric soil >12 in. or any thickness over bedrock/caprock with perched water table and either condition covering >90% of surface area	3	3	0	3	3	2
	Organic soil classified hydric soil >6 in. but <12 in. and covering >90% of surface area	2					
	Organic soil classified hydric soil >1 in. but <6 in. and covering >50% but <90% of surface area	1					
	Organic soil classified non-hydric soil <1 in. for >50% of surface area	0					
f-1 Alternate to f. for Freshwater, saltwater systems	Sandy soil classified hydric soil with distinct mottling and concretions present in greater than 40% of horizon.	3					
	Sandy soil classified hydric soil with mottling and concretions present in > 20% but < 40% of horizon.	2					
	Sandy soil classified hydric soil with light or sparse mottling and concretions < 2 mm diameter or < 20% of horizon.	1					
	Sandy soil exhibits strong evidence of disturbance or mechanical manipulations or is fill material.	0					
f-2 Alternate to f. for Freshwater, saltwater, brackish (tidal) systems	Calcareous loam >12 in. and >90 % of surface area	3					
	Calcareous loam >6 in. to <12 in. and >90% of surface area	2					
	Calcareous loam >1 in. to <6 in. and covering >50% but <90% of surface area	1					
	Calcareous loam <1 in. for >50% of surface area	0					

Mitigation Bank Wetland Function -- Evaluation Matrix

Scoring conducted by: Karl Bullock

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4. Salinity Parameters Apply to freshwater, saltwater, brackish, hypersaline and mitigation systems - Choose 1							
a. Optimum salinity for fresh systems during growing season based on mean high salinity for a normal year. Apply to freshwater systems within 5 miles of the coast	<2 parts per thousand (ppt)	3	2	0	2	2	
	2 to 3 parts per thousand (ppt)	2					
	4 to 5 parts per thousand (ppt)	1					
	>5 parts per thousand (ppt)	0					
a-1. Alternate to a. Optimum salinity for brackish systems during growing season based on mean high salinity for a normal year. Apply to brackish (tidal) systems only	6 to 8 parts per thousand (ppt)	3					
	9 to 13 parts per thousand (ppt)	2					
	14 to 16 parts per thousand (ppt)	1					
	>16 parts per thousand (ppt)	0					
a-2. Alternate to a. Optimum salinity for saline systems during growing season based on mean high salinity for a normal year. Apply to saline marsh (tidal) systems only	17 to 19 parts per thousand (ppt)	3					
	20 to 22 parts per thousand (ppt)	2					
	23 to 25 parts per thousand (ppt)	1					
	>25 parts per thousand (ppt)	0					
a-3. Alternate to a. Optimum salinity for hypersaline systems during growing season based on mean high salinity for a normal year. Apply to hypersaline (tidal) systems only	26 to 41 parts per thousand (ppt)	3					
	42 to 46 parts per thousand (ppt)	2					
	47 to 51 parts per thousand (ppt)	1					
	>51 parts per thousand (ppt)	0					
a-4 Alternate to a. Optimum salinity for riverine/tidal creek system during growing season based on mean high slainity for a normal year. Apply to riverine systems only	bottom (lower) third between 12 to 25 ppt	3					
	middle third between 5 to 11 ppt.						
	upper (top) third between 0 to 4 ppt.						
	bottom (lower) third between 25 to 32 ppt	2					
	middle third between 6 to 24 ppt.						
	upper (top) third between 0 to 5 ppt.						
	bottom (lower) third between 30 to 40 ppt	1					
	middle third between 8 to 29 ppt.						
upper (top) third between 0 to 7 ppt.							
bottom (lower) third between 35 to 50 ppt	0						
middle third between 10 to 34 ppt.							
upper (top) third between 0 to 9 ppt.							
Cumulative Score (SC)			40.0	0.0	32.5	42.0	29.0
Maximum Possible Score (MPS)			54.00	54.00	54.00	54.00	54.00
W.A.T.E.R. = Cumulative Score/Maximum Possible Score			0.74	0.00	0.60	0.78	0.54

W.A.T.E.R. created by: Bill L. Maus

11/1/1995

ATTACHMENT E

Construction Plans



LEGEND

- Property Boundary (Approximate)
- Project Area
- Tempoorary Construction Laydown Area
- Construction Area
- Proposed Facility Layout
- 230kV Overhead Transmission Line Route
- Demin Water Line Alternate Route
- Demin Water Line Proposed Route
- Fuel Oil
- Natural Gas
- Underground Transmission
- Wetland Line Surveyed
- Wetland Line Interpolated
- Wetland Area
- Potential Underground Route (Width Varies)
- Temporary Wetland Impacts
- Permanent Wetland Impacts
- Secondary Wetland Impacts

0 200 400 800
Feet

REFERENCE(S)
WETLAND LINE SURVEYED, AVIROM & ASSOCIATES, INC., 2013
WETLAND BOUNDARY INTERPOLATED, GOLDER ASSOCIATES INC., 2013
PROPERTY BOUNDARY (APPROXIMATE), BROWARD COUNTY PROPERTY APPRAISER, 2013
CONSTRUCTION AREA, TEMPORARY CONSTRUCTION LAYDOWN AREAS, POTENTIAL UNDERGROUND ROUTE, FPL / GOLDER ASSOCIATES INC., 2013

CLIENT
FPL

PROJECT
LAUDERDALE PLANT

TITLE
WETLAND IMPACTS

CONSULTANT	YYYY-MM-DD	2015-03-20
DESIGNED	NRL	
PREPARED	NRL	
REVIEWED	KAB	
APPROVED	KAB	



Golder Associates

PROJECT NO.
1520938

CONTROL
C011

REV.
0

FIGURE
1

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

