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SECTION 2, ATTACHMENT A – PROJECT DESCRIPTION

1.0 ERP SECTION A, PART 6 – PROJECT DESCRIPTION

Florida Power & Light (FPL) is seeking approval of the Turkey Point Units 6 & 7 Project (Project) under Florida's Electrical Power Plant Siting Act (PPSA), Chapter 403, Part II, Florida Statutes (F.S.). The Florida Public Service Commission (FPSC) is the sole forum for the determination of need for a proposed facility subject to the PPSA (Section 403.519, F.S.) The FPSC has issued an affirmative need determination order for Turkey Point Units 6 & 7. The Florida Department of Environmental Protection (FDEP) acts as the coordinator for the remainder of the site certification process with input from various state and regional agencies and local governments, along with interested citizens. Ultimate disposition of the Site Certification Application (SCA) is by the Governor and Cabinet acting as the Siting Board, or the Secretary of the FDEP. This Federal Dredge and Fill Permit application, which is submitted to the FDEP and U.S. Army Corps of Engineers, is Appendix 10.4 of the SCA, and contains, along with other information in the SCA, the requirements for a Federal Dredge and Fill Permit application.

FPL's Turkey Point plant property comprises approximately 11,000 acres in unincorporated southeast Miami-Dade County, Florida, east of Florida City and the City of Homestead, and bordered by Biscayne Bay to the east. The existing Turkey Point Plant consists of two nominal 400-megawatt (MW) natural gas/oil steam electric generating units (Units 1 & 2); two nominal 700-MW nuclear units (Units 3 and 4); and a nominal 1,150-MW natural gas-fired combined-cycle unit (Unit 5). The existing closed-loop cooling canals and industrial wastewater facility occupy approximately 5,900 acres. The location of the Turkey Point plant property is shown in Section 2, Attachment C – Site Location and Layout, Figure 1.

The Project involves adding two new nuclear generating units (Units 6 & 7) and supporting facilities at a Site within the existing Turkey Point plant property boundaries. The Project for which FPL is seeking certification includes the construction and operation of Turkey Point Units 6 & 7 on the Site to be certified (the "Site"), as well as new transmission lines and other off-Site associated linear and non-linear facilities.

1.1 Units 6 & 7 Site

The Site for Turkey Point Units 6 & 7 is south of Units 3 and 4 and occupies approximately 300-acres within the existing industrial wastewater facility. Two nuclear generating units, each with an approximate electrical output of 1,100 MW (net), including supporting buildings, facilities and equipment, will be located on the Site, along with a laydown area. Section 2, Attachment C – Site Location and Layout, Figure 2.1 presents an overall plot plan (i.e. arrangement) of the Units 6 & 7 Site. FPL has selected the Westinghouse AP1000 as the plant design for the Project, a design certified by the NRC under 10 Code of Federal Regulations (CFR) 52. In addition to the reactor units, other on-Site facilities include steam generators, steam turbines/electric generators, condensers, cooling towers, transformers, diesel generators and various buildings (e.g., containment building, turbine building, and annex building). A new electrical switchyard/substation will also be located on the Site and a laydown area will be located on the far western portion of the Site. New nuclear administration and training buildings, along with a parking area, will be located just north of the Site.

Operation of Units 6 & 7 will not utilize the existing industrial wastewater facility for cooling or wastewater disposal, except that stormwater will continue to be routed to this facility.

The surface elevation of the Site varies within 3 feet of sea level. A uniform layer of concrete fill will be used to raise the excavation elevation to approximately 16 feet (North American Vertical Datum of 1988), where the base of the reactor units are to be set. The fill required to raise the Site will ~~primarily be generated from the FPL-owned fill source~~ be obtained from regional sources.

Most of the Site is composed of sparsely-vegetated hypersaline mud flats, isolated from Biscayne Bay by the surrounding man-made cooling canals. This area is contained within the industrial wastewater facility that supports the operation of existing Turkey Point Units 1 through 5. Two remnant cooling canals are located within the mud flat area, and small channels support scattered areas of mangrove heads within the surrounding mud flats. Additional land use/land cover within the Site includes upland and wetland spoil berms, located adjacent to the remnant and active canals. Portions of the Site for staging and laydown currently consist of previously filled areas/roadways, dwarf mangroves, open water/discharge canal, and a man-made remnant canal in the northwest portion of the Site. A north-south access road is located adjacent to the western edge of the mud flat area.

1.2 Associated Non-Transmission Facilities

Proposed off-Site associated facilities include: nuclear administration building, training building and parking area; an FPL reclaimed water treatment facility and reclaimed water pipelines; radial collector wells and delivery pipelines; equipment barge unloading area; ~~an FPL owned fill source~~; access roads and bridges; and potable water pipelines. Section 2, Attachment C – Site Location and Layout, Figure 1 depicts the location and Figures 3.1 through 3.29 depicts the plan and/or cross section views of the associated non-transmission facilities.

The nuclear administration and training buildings and parking area will be located immediately north of the Site in an area of the existing Turkey Point plant surrounded by previously filled roadways and paved parking areas.

~~FPL proposes to obtain fill required for the Project from a fill source on FPL owned property located northwest of the Site and from other regional sources. The FPL owned fill source would result in a water management feature that will be designed to complement and enhance regional wetland rehydration projects.~~

The primary source of cooling water makeup for Units 6 & 7 will be reclaimed water from the Miami-Dade County Water and Sewer Department (MDWASD) South District Wastewater Treatment Plant (SDWWTP), with potable water also from MDWASD. The Project will include an off-Site FPL reclaimed water treatment facility and associated pipelines. This reclaimed water use is a beneficial and cost-effective means of increasing the use of reclaimed water from Miami-Dade County and helps the County meet its reclaimed water compliance requirements. In the absence of reuse opportunities, this treated domestic wastewater would likely continue to be discharged to the ocean or deep injection wells. Miami-Dade County is required to eliminate ocean outfalls and increase the amount of water that is reclaimed for environmental benefit and other beneficial uses. Units 6 & 7 will use reclaimed water 24 hrs per day, 365 days per year when operating and water is available in sufficient quantity and quality. Units 6 & 7 will efficiently use a recycled resource to produce safe, clean and reliable power. This use of reclaimed water will enable the County to meet approximately half of its wastewater reuse goals and will provide environmental benefits by reducing the volume of wastewater discharged by the County.

A reclaimed water delivery pipeline will be installed between the SDWWTP and an FPL reclaimed water treatment facility for final treatment prior to delivery to Units 6 & 7. The reclaimed water

pipeline will be co-located with existing linear facilities, including roadways, transmission line rights-of-way, and canals, to minimize impacts. The FPL reclaimed water treatment facility will be located adjacent to the existing Turkey Point plant primary access road. When reclaimed water is not available in sufficient quantity, the secondary makeup water source will come from radial collector wells, substratum collectors of saltwater that will recharge from Biscayne Bay. The radial collector wells are to be located upon upland areas of the Turkey Point peninsula; the associated delivery pipeline will be co-located with existing access roads and berms. Wastewater disposal will be on-Site deep injection wells. The potable water pipeline corridor will connect the Site to the MDWASD potable supply.

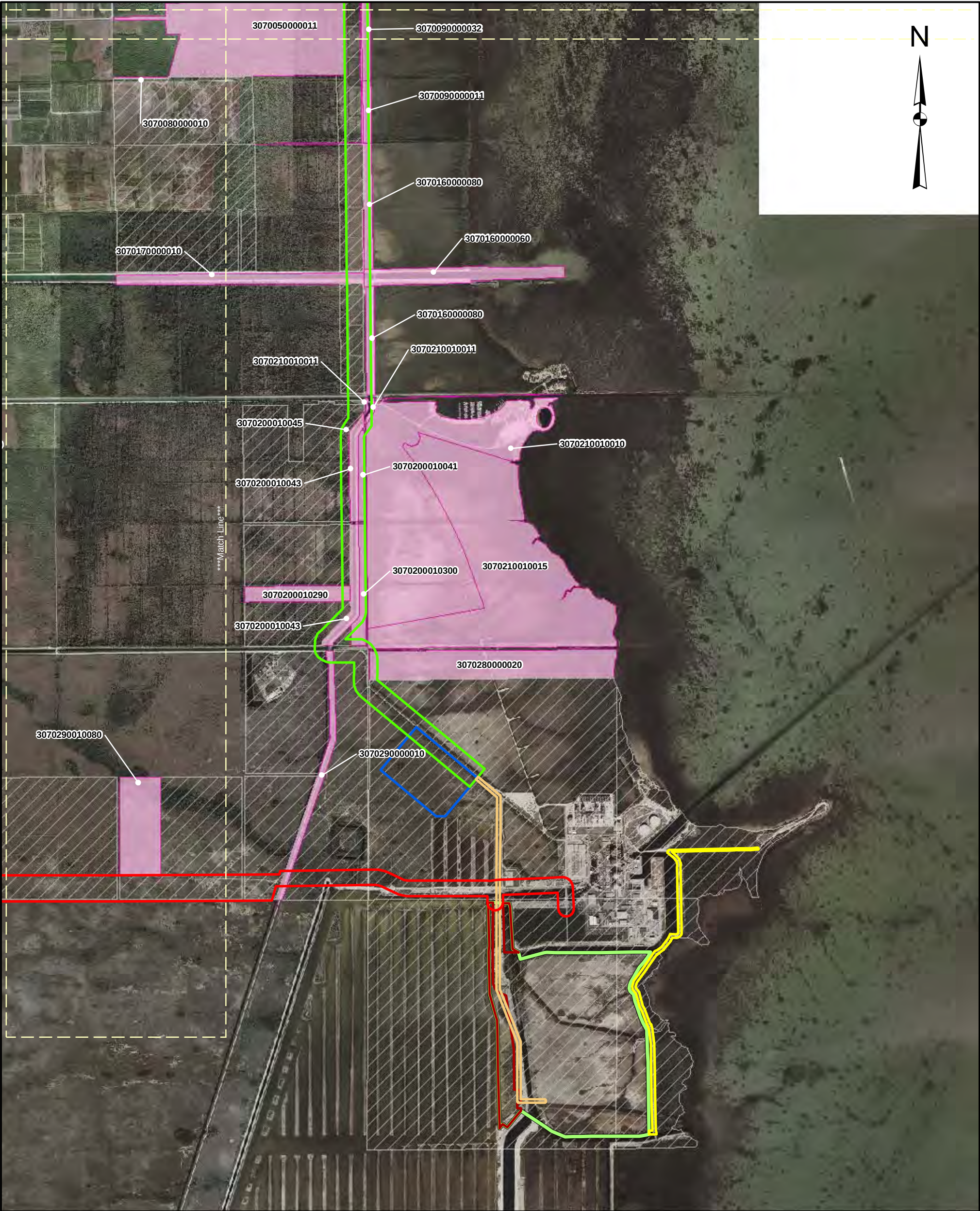
Access to the Site for construction and operation will be via existing and/or improved roads and new bridges in roadway improvement corridors. The roadway improvements are uniquely required to support the safe and efficient construction of the facility.

Expansion of the barge unloading area will involve excavation of previously-filled uplands and approximately 0.1 acre of dredging within the existing turning basin.

1.3 Wetland Impacts and Mitigation

The proposed Project will result in approximately ~~762~~710 acres of permanent wetland impacts, 48 acres of temporary wetland impacts, and 48 acres of secondary wetland impacts. The loss of wetland functions associated with unavoidable wetland impacts will require approximately ~~502~~528 credits of mitigation as calculated via the FDEP Uniform Mitigation Assessment Method (UMAM). Compensatory mitigation to offset the loss of wetland acreage will be accomplished through a combination of wetland restoration, enhancement, and preservation consistent with the regional restoration goals of the Comprehensive Everglades Restoration Plan within the Biscayne Bay Coastal Wetlands study area and Model Lands Basin, as well as purchase of mitigation credits from the nearby Everglades Mitigation Bank and Hole in the Donut Mitigation Bank. The Project mitigation plan is provided in Section 2, Attachment E.

The project description of the proposed transmission line corridors is located in Section 3, Attachment A.

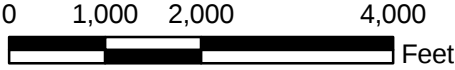


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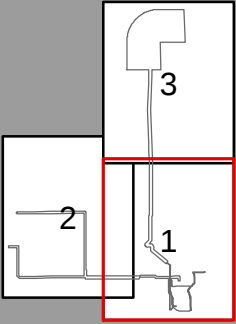
- Turkey Point Units 6 & 7 Site
- FPL Properties
- Non-FPL Owned Properties
- FPL Reclaimed Water Treatment Facility
- Radial Collector Well Area
- Radial Collector Well Delivery Pipelines
- Reclaimed Water Pipeline Corridor
- Roadway Improvement Corridor
- Treated Reclaimed Water Delivery Pipelines
- Western Laydown Area

REFERENCES

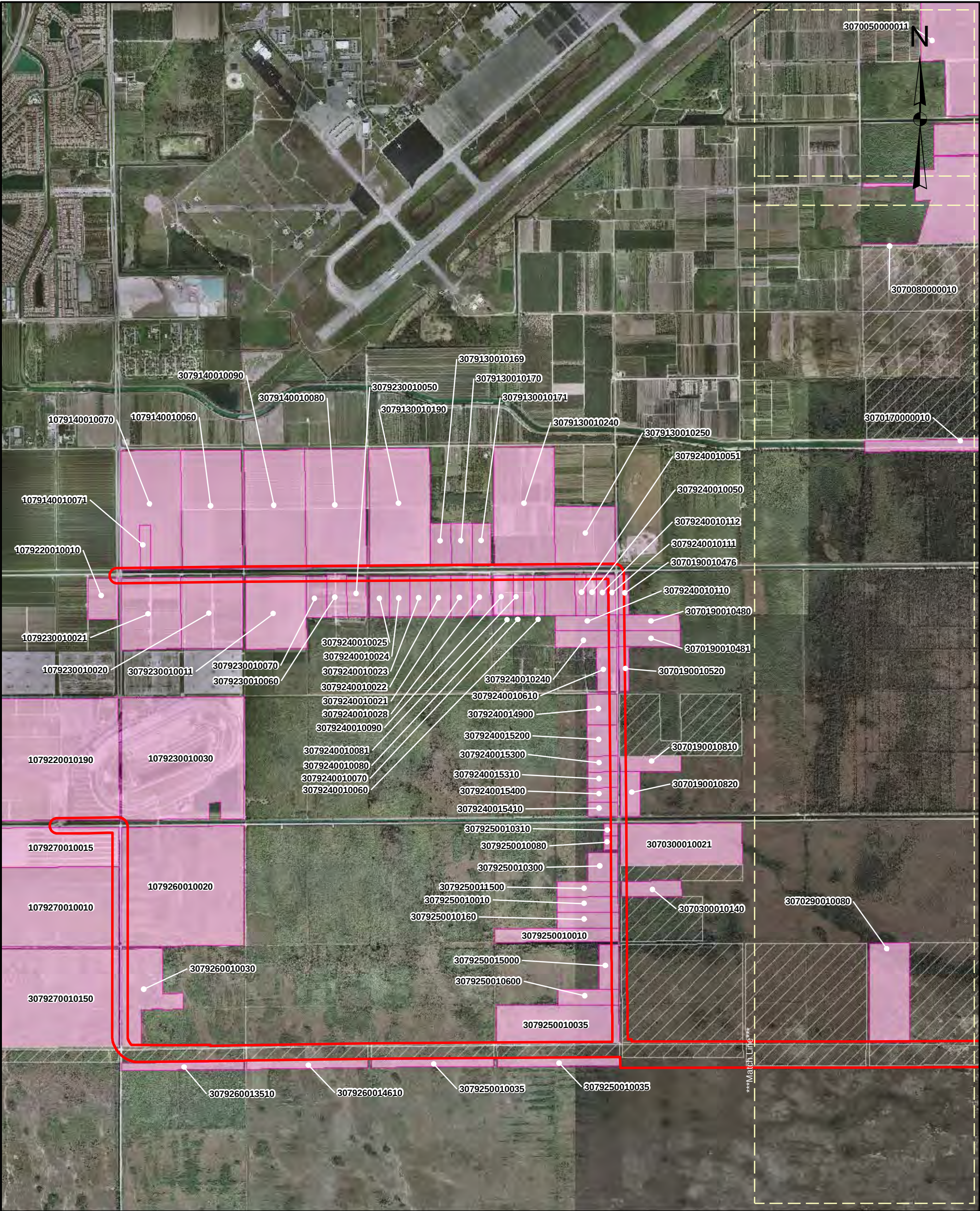
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- Parcels, Miami-Dade County, 2009.



SITE KEY



ATTACHMENT B	FILE NO. 08387584J001	TITLE	PROJECT	
	REV. 1	PLANT AND NON-TRANSMISSION FACILITIES ADJACENT PROPERTY OWNERS	TURKEY POINT UNITS 6 & 7 PROJECT	
	PLOT DATE 6/12/2009	Sheet 1 of 3		

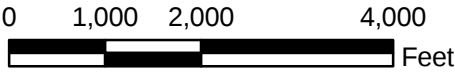


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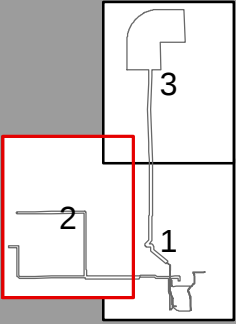
- Turkey Point Units 6 & 7 Site
-
- FPL Properties

REFERENCES

1. Imagery, Miami-Dade County, 2007.
2. Parcels, Miami-Dade County, 2009.



SITE KEY



ATTACHMENT B	FILE NO. 0838/584J001	TITLE	PROJECT	
	REV. 1	PLANT AND NON-TRANSMISSION FACILITIES ADJACENT PROPERTY OWNERS	TURKEY POINT UNITS 6 & 7 PROJECT	
	PLOT DATE 6/12/2009	Sheet 2 of 3		

**ATTACHMENT B
PLANT AND NON-TRANSMISSION ADJACENT PROPERTY OWNERS**

PARCEL ID NUMBER	NAME	ADDRESS	CITY	STATE	ZIP CODE
1079140010060	RICHARD T ALGERS	PO BOX 1253	HOMESTEAD	FL	330901253
1079140010070	RICHARD T ALGER	PO BOX 1253	HOMESTEAD	FL	33130
1079140010071	RICHARD T ALGER	990 NW 8 ST	HOMESTEAD	FL	330304131
1079220010010	JOHN L ALGER ETAL	PO BOX 1253	HOMESTEAD	FL	33090
1079220010190	CITY OF HOMESTEAD	790 NO HOMESTEAD BLVD	HOMESTEAD	FL	330306212
1079230010020	JOHN L ALGER	PO BOX 1253	HOMESTEAD	FL	33090
1079230010021	JOHN L ALGER TR ET AL	PO BOX 1253	HOMESTEAD	FL	33033
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1079260010020	CITY OF HOMESTEAD	790 NO HOMESTEAD BLVD	HOMESTEAD	FL	330306212
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3060200000010	RADEGUNDE FERNANDEZ &W ELSA L &	18905 SW 177 AVE	MIAMI	FL	331872015
3060200000013	AMERICAN ENVIRONMENTAL RECYCLING	14241 SW 143 CT	MIAMI	FL	331865695
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3060200000240	LEWIS W PETERS TR	956 RIOMAR DRIVE	VERO BEACH	FL	32963
3060200000245	FLORIDA INLAND NAVIGATION DIST	1314 MARCINSKI RD	JUPITER	FL	33477
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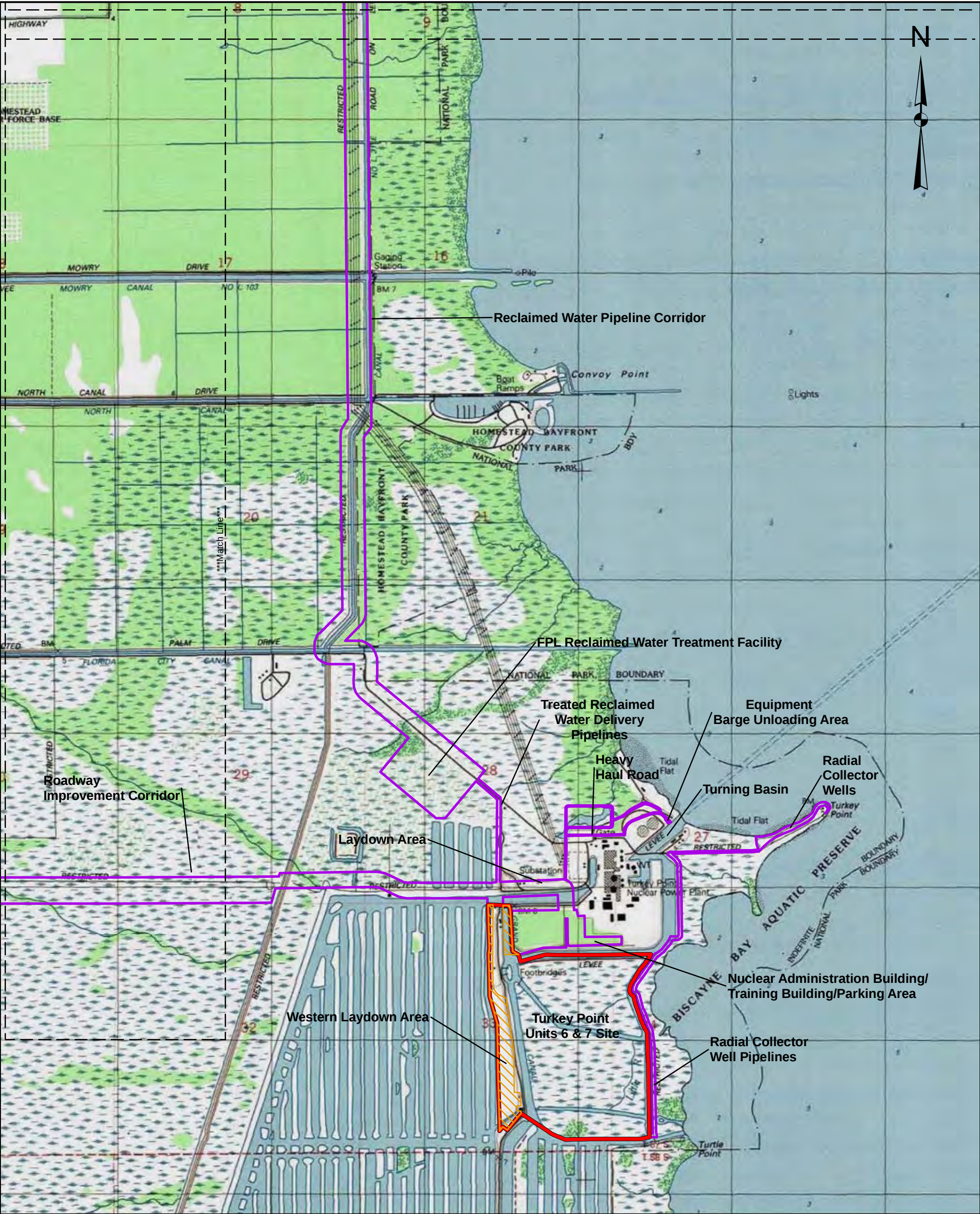
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PLANT AND NON-TRANSMISSION ADJACENT PROPERTY OWNERS**

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3070190010476	JON WEISBERG	13800 SW 8 ST #107	MIAMI	FL	331843032
3070190010480	ANAND & SUNIL & LAJU NANDWANI	ERRAZURIZ 853 PISO 3 OFICINA C	CASILLA 339 PUNTA ARENAS	CHILE	00000
3070190010481	ANAND & SUNIL NANDWANI & LAJU NANDWANI	ERRAZURIZ #853 PISO 3 OFICINA C	CASILLA 339 PUNTA ARENAS	CHILE	00000
3070190010520	JAVANTI DEV	11729 SW 118 TERR	MIAMI	FL	331863985
3070190010810	VIVIAN M MORALES	20520 SW 115 RD	MIAMI	FL	33189
3070190010820	ANAND & SUNIL NANDWANI &	ERRAZURIZ #853 PISO 3 OFICINA C	CASILLA 339 PUNTA ARENA	CHILE	99999
3070200010041	MIAMI-DADE COUNTY	111 NW 1 ST STE 1610	MIAMI	FL	331281924
3070200010043	SOUTH FLA WATER MANAGEMENT DIST	P O BOX 24680	WEST PALM BEACH	FL	334160000
3070200010043	SOUTH FLA WATER MANAGEMENT DIST	P O BOX 24680	WEST PALM BEACH	FL	334160000
3070200010045	MIAMI-DADE COUNTY	111 NW 1 ST STE 2460	MIAMI	FL	331281929
3070200010290	ARVED BORTZ & ALEXANDRA BORTZ	42329 WUPPERTAL 11	W	FL	99999
3070200010300	MIAMI-DADE COUNTY	111 NW 1 ST STE 2460	MIAMI	FL	331281929
3070210010010	MIAMI-DADE COUNTY	275 NW 2 ST 4FL	MIAMI	FL	331281794
3070210010011	SOUTH FLORIDA MNGM DISTRICT	P O BOX 24680	WEST PALM BEACH	FL	334160000
3070210010011	SOUTH FLORIDA MNGM DISTRICT	P O BOX 24680	WEST PALM BEACH	FL	334160000
3070210010015	U S A	2900 S HORSESHOE DR STE 100	NAPLES	FL	33942
3070280000020	U S A	2900 S HORSESHOE DR STE 100	NAPLES	FL	33942
3070290000010	SOUTH FLORIDA WATER MNGM DISTRICT	P O BOX 24680	WEST PALM BEACH	FL	334160000
3070290010080	TIITF/STATE OF FLORIDA	3900 COMMONWEALTH BLVD	TALLAHASSEE	FL	32399
3070300010021	MIAMI DADE COUNTY	33 SW 2 AVE PH-2	MIAMI	FL	331301501
3070300010140	MIAMI DADE COUNTY	33 SW 2 AVE STE PH-2	MIAMI	FL	331301501
3079130010169	EDWARD GEORGE SMITH &W SANDRA L	21075 NE 34 AVE APT 201	AVENTURA	FL	331803538
3079130010170	SALAZARS TWO SISTERS NURSERY INC	7752 SW 2 ST	MIAMI	FL	331442306
3079130010171	HOMES FOR LESS CORP	281 NW 127 AVE	MIAMI	FL	331821115
3079130010190	RICHARD & JOHN ALGER	950 NW 8 ST	HOMESTEAD	FL	330304131
3079130010240	JAENSCH INC	25210 SW 147 AVE	HOMESTEAD	FL	330325325
3079130010250	COX ENTERP PARTNERSHIP LTD	46 OLD OAK DR S	PALM COAST	FL	321374324
3079140010080	RICHARD & JOHN ALGER	950 NW 8 ST	HOMESTEAD	FL	330304131
3079140010090	JOHN T ALGER TR	17971 SW 284 ST	HOMESTEAD	FL	330301867
3079230010011	JOHN L ALGER TR	P O BOX 1253	HOMESTEAD	FL	330901253
3079230010050	NICHOLAS J FALCONE &W ROSE MARIE	14700 SW 248 ST	PRINCETON	FL	330325202
3079230010060	NICHOLAS J FALCONE &W ROSE MARIE	14700 SW 248 ST	PRINCETON	FL	330325202
3079230010070	NICHOLAS J FALCONE &W ROSE MARIE	14700 SW 248 ST	PRINCETON	FL	330325202
3079240010021	PALMTECH FARM INC	17201 SW 248 ST	HOMESTEAD	FL	330311928
3079240010022	PALMTECH FARM INC	17201 SW 248 ST	HOMESTEAD	FL	330311928
3079240010023	PALMTECH FARM INC	17201 SW 248 ST	HOMESTEAD	FL	330311928
3079240010024	PALMTECH FARM INC	17201 SW 248 ST	HOMESTEAD	FL	330311928
3079240010025	PALMTECH FARM INC	17201 SW 248 ST	HOMESTEAD	FL	330311928
3079240010028	GUADALUPE BREIJO	4391 SW 5 TERR	MIAMI	FL	331341950
3079240010050	DAVID OKRASINSKI	11790 SW 328 ST	HOMESTEAD	FL	330335633
3079240010051	DAVID OKRASINSKI	11790 SW 328 ST	HOMESTEAD	FL	330335633
3079240010060	JOSE FLORES &W RITA	12031 SW 78 TERR	MIAMI	FL	331833765
3079240010070	BEATRIZ HELENA RESTREPO	7066 NW 50 ST	MIAMI	FL	331665634
3079240010080	EAST GLADE HOLDINGS INC	PO BOX 160328	MIAMI	FL	331160328
3079240010081	EAST GLADE HOLDINGS INC	PO BOX 160328	MIAMI	FL	331160328
3079240010090	EAST GLADE HOLDINGS INC	PO BOX 160328	MIAMI	FL	331160328
3079240010110	RENE LACAYO &W MIRIAM C ORTEGA	SAN JOSE 1000	COSTA	RICA	
3079240010111	PEDRO MARTINEZ	8520 NW 30 RD	MIAMI	FL	331474024
3079240010112	PEDRO MARTINEZ	8520 NW 30 RD	MIAMI	FL	33147
3079240010240	GEWAN & NANAK HARDIT-SINGH	449 WEST 1 AVE	ROSELLE NEW	NJ	07203
3079240010610	ROYAL PALM NURSERY INC	25 SE 2 AVE #410	MIAMI	FL	331311510
3079240014900	F & S INVESTMENTS GROUP INC	PO BOX 2172	PRINCETON	FL	33032
3079240015200	F & S INVESTMENTS GROUP INC	PO BOX 2172	PRINCETON	FL	33032
3079240015300	MARIO TACHER & CHARLES BORDON	479 NW 27 AVE	MIAMI	FL	331253041
3079240015310	ANAND & SUNIL NANDWANI &	3130 SW 194 TERR	MIRAMAR	FL	33029

**ATTACHMENT B
PLANT AND NON-TRANSMISSION ADJACENT PROPERTY OWNERS**

PARCEL ID NUMBER	NAME	ADDRESS	CITY	STATE	ZIP CODE
3079240015400	EDWIN CHO	6720 N AUGUSTA DR	MIAMI	FL	330152116
3079240015410	HORACIO J & LUIS E HERRERA JTRS	6920 SW 44 ST #207	MIAMI	FL	331554773
3079250010010	F R S HOLDINGS INC	9350 S DIXIE HWY SUITE 1250	MIAMI	FL	331562951
3079250010010	F R S HOLDINGS INC	9350 S DIXIE HWY SUITE 1250	MIAMI	FL	331562951
3079250010035	HOMESTEAD PROPERTIES	970 LAWRENCE AVE WEST #300	TORONTO ONT MGA3B6	CANADA	99999
3079250010035	HOMESTEAD PROPERTIES	970 LAWRENCE AVE WEST #300	TORONTO ONT MGA3B6	CANADA	99999
3079250010035	HOMESTEAD PROPERTIES	970 LAWRENCE AVE WEST #300	TORONTO ONT MGA3B6	CANADA	99999
3079250010080	ARMANDO MENDEZ &W MARIA	19700 SW 184 ST	MIAMI	FL	331871505
3079250010160	MIAMI DADE COUNTY	33 SW 2 AVE	MIAMI	FL	331301501
3079250010300	MIAMI DADE COUNTY	33 SW 2 AVE	MIAMI	FL	331301501
3079250010310	J A MARROQUIN & R LOYOLA &	ALVARO OBREGON 315-206 LEON	GUANAJUATO	MEXICO	99999
3079250010600	MIAMI DADE COUNTY	33 SW 2 AVE STE PH-2	MIAMI	FL	331301501
3079250011500	MIAMI DADE COUNTY	33 SW 2 AVE STE PH-2	MIAMI	FL	331301501
3079250015000	MIAMI DADE COUNTY	33 SW 2 AVE	MIAMI	FL	331301501
3079260010030	FLORIDA ROCK & SAND CO IN	9350 S DIXIE HWY SUITE 1250	MIAMI	FL	331562951
3079260013510	HOMESTEAD PROPERTIES	970 LAWRENCE AVE WEST #300	TORONTO	CANADA	99999
3079260014610	HOMESTEAD PROPERTIES	970 LAWRENCE AVE WEST #300	TORONTO	CANADA	99999
3079270010150	CEMEX CONST MATERIALS FLA LLC	1501 BELVEDERE RD	WEST PALM BEACH	FL	33406

NOTE: Parcel and Address information based on data from Miami Dade County in 2009



LEGEND

- Turkey Point Units 6 & 7 Site
- Plant and Non-Transmission Facilities

REFERENCES

1. Topographic Map, USGS Quadrangles: Goulds, Perrine, Homestead, Arsenicker Keys, 1994.



SITE KEY

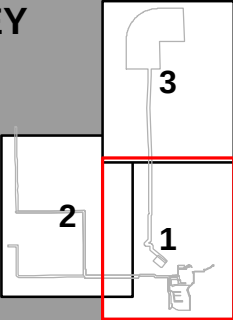
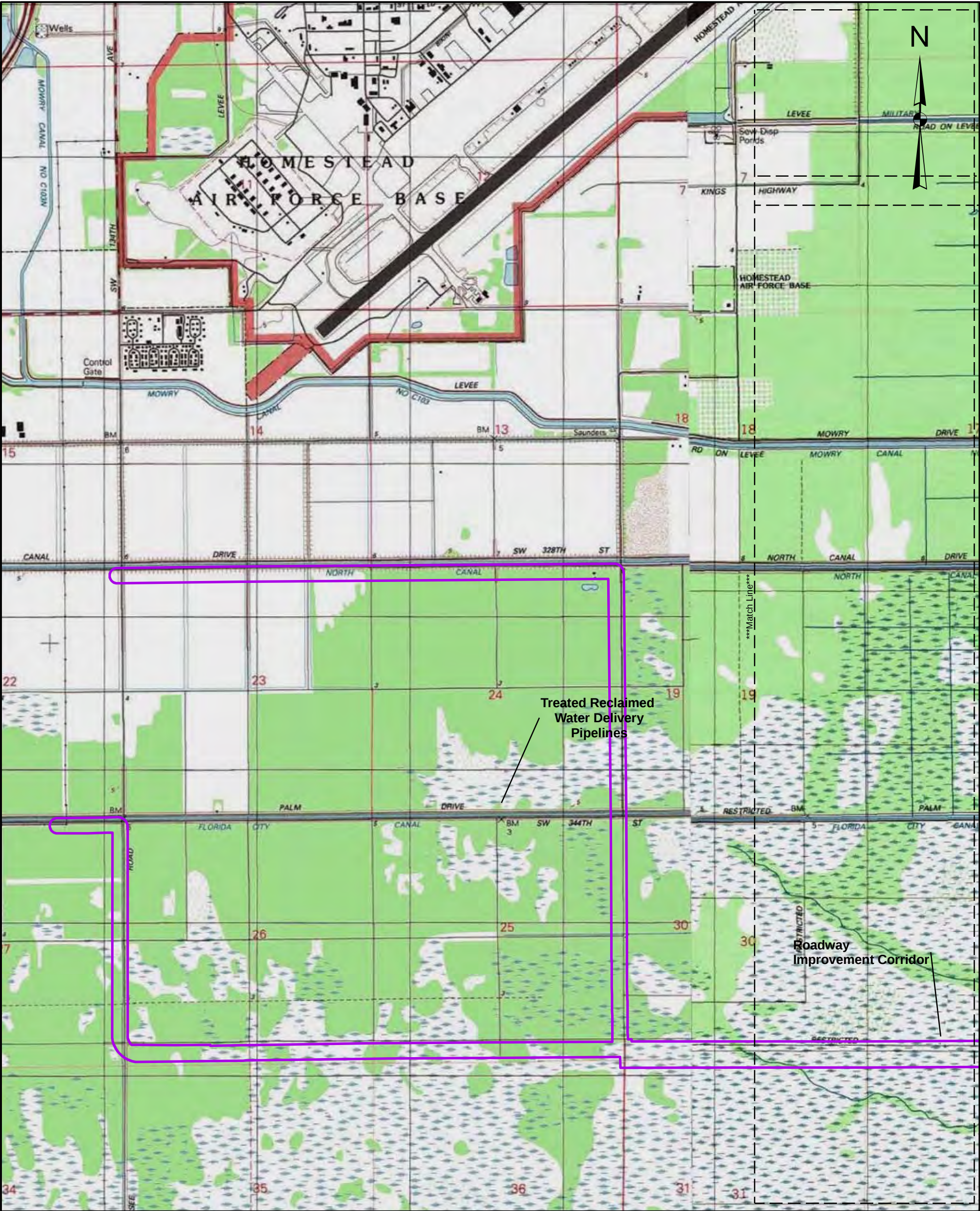


FIGURE 1	PLOT DATE 6/12/2009 REV. 1 FILE NO. 08387594J003	TITLE PLANT AND NON-TRANSMISSION FACILITIES USGS TOPOGRAPHIC MAP Sheet 1 of 3	PROJECT TURKEY POINT UNITS 6 & 7 PROJECT	
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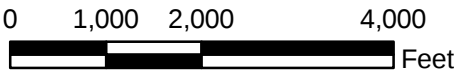


LEGEND

- Turkey Point Units 6 & 7 Site
- Plant and Non-Transmission Facilities

REFERENCES

1. Topographic Map, USGS Quadrangles: Goulds, Perrine, Homestead, Arsenicker Keys, 1994.



SITE KEY

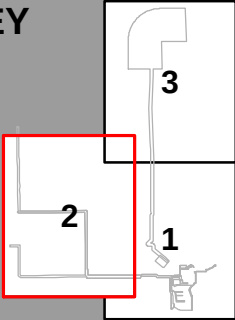
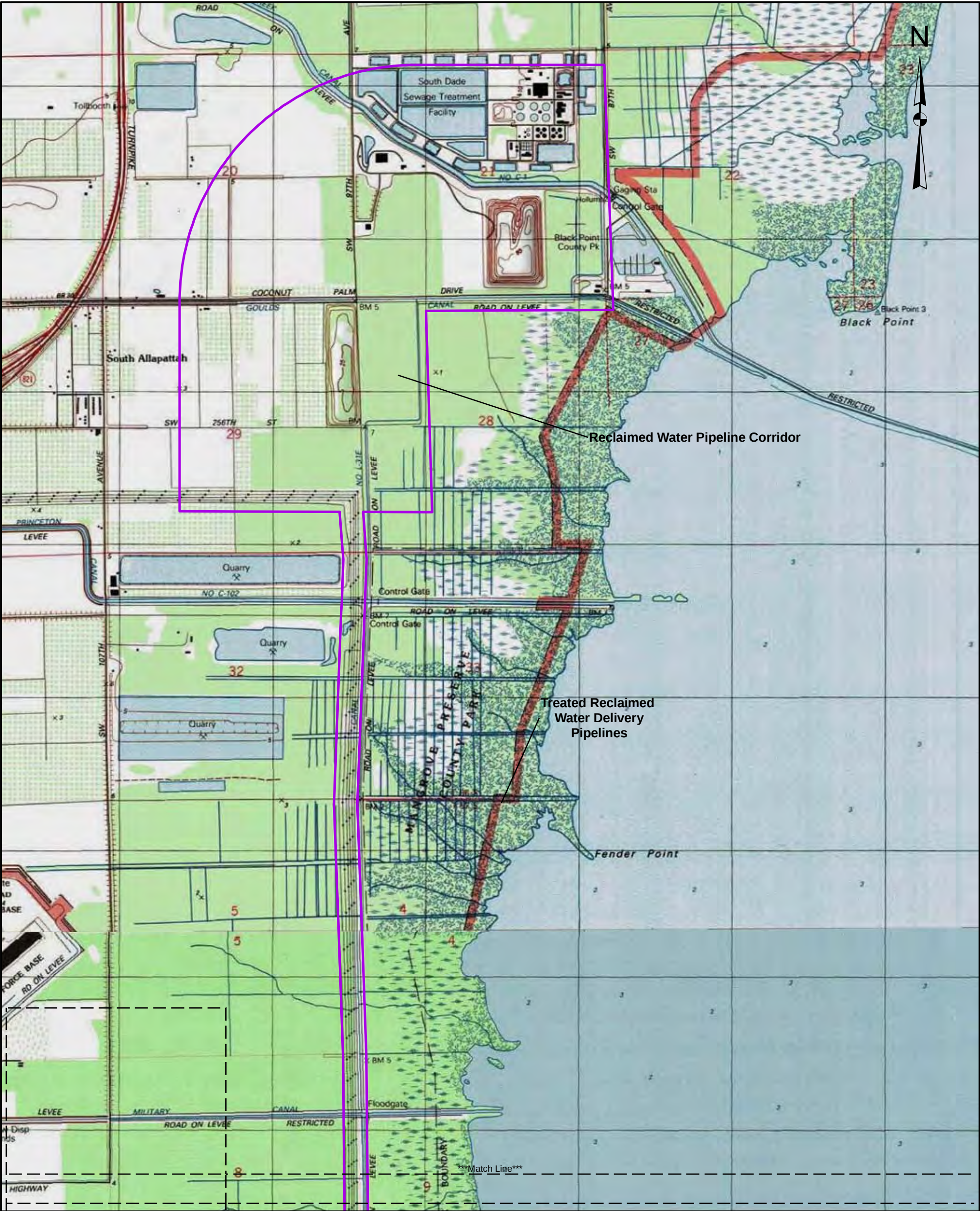


FIGURE 1	FILE NO.: 08387594J003 REV.: 1 PLOT DATE: 6/12/2009	TITLE PLANT AND NON-TRANSMISSION FACILITIES USGS TOPOGRAPHIC MAP Sheet 2 of 3	PROJECT TURKEY POINT UNITS 6 & 7 PROJECT	
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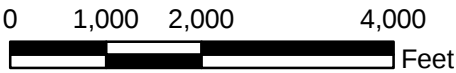


LEGEND

- Turkey Point Units 6 & 7 Site
- Plant and Non-Transmission Facilities

REFERENCES

1. Topographic Map, USGS Quadrangles: Goulds, Perrine, Homestead, Arsenicker Keys, 1994.



SITE KEY

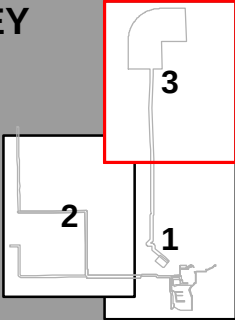


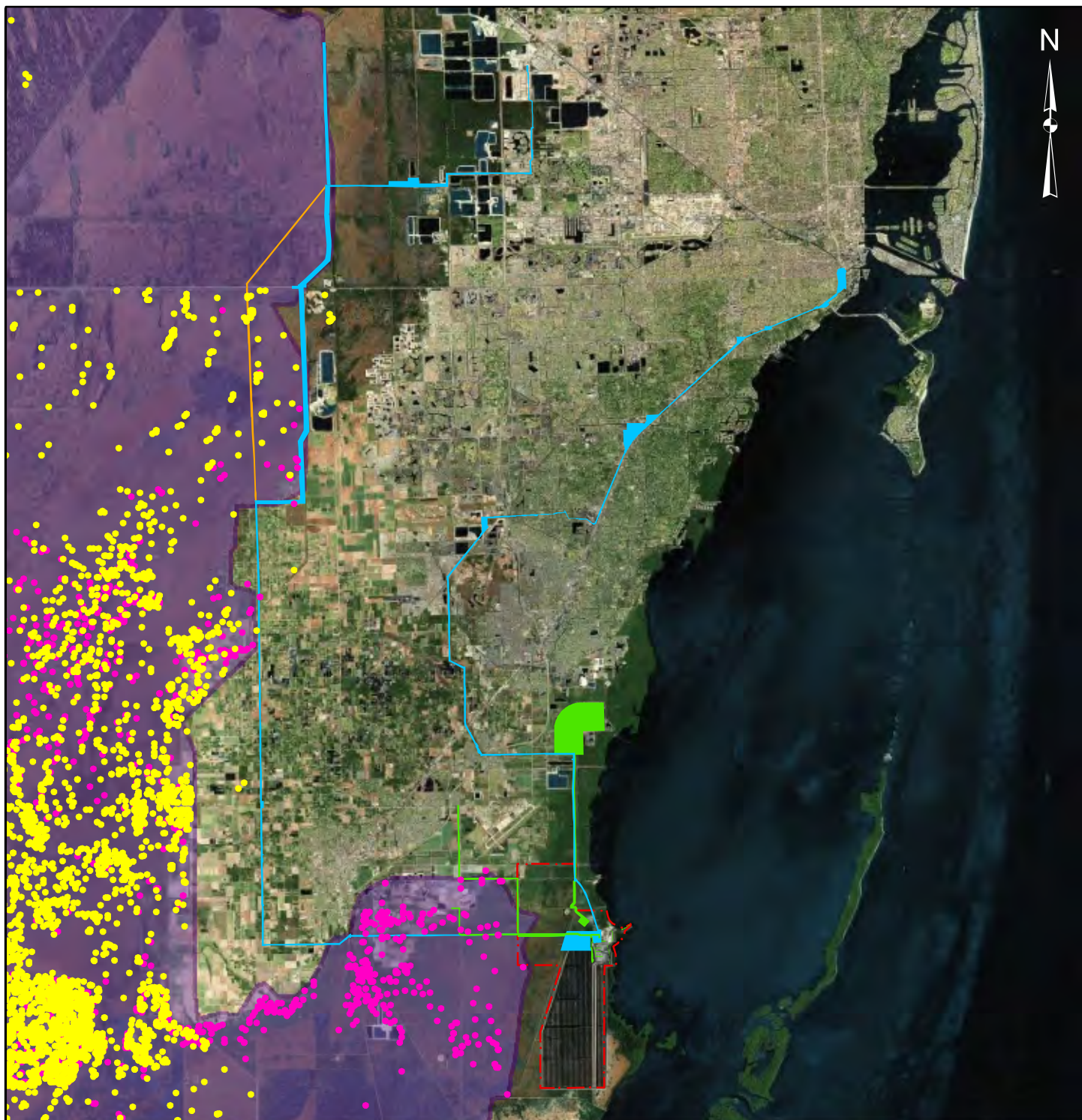
FIGURE 1

FILE NO.: 0838/594J003
REV.: 1
PLOT DATE: 6/12/2009

TITLE
**PLANT AND NON-TRANSMISSION FACILITIES
USGS TOPOGRAPHIC MAP**
Sheet 3 of 3

PROJECT
**TURKEY POINT UNITS 6 & 7
PROJECT**





LEGEND

- 1981 - 1988
- 1989 - 2008
- Florida Panther Consultation Area South
- Associated Linear Facilities - Transmission Lines and Corridors
- Plant and Non-Transmission Facilities
- Secondary Corridor
- Turkey Point Plant Property

REFERENCES

1. Panther Events, FWC, ENP, BCNP, 1981-2008
2. Panther Consultation Area South, USFWS, 2007



PROJECT

**TURKEY POINT UNITS 6 & 7
PROJECT**

TITLE

PANTHER RADIO TELEMETRY DATA



FILE No. 08387584J008

REV. 1

PLOT DATE 6/12/2009

FIGURE

135 10

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regard to the design of associated facilities, and utilization of previously impacted areas to the greatest extent practicable.

In accordance with regulatory guidelines of the FDEP and USACE, FPL proposes that the loss of wetland habitat associated with the Project be mitigated by a combination of regional wetland restoration, enhancement, and preservation consistent with the regional restoration goals of the Comprehensive Everglades Restoration Plan (CERP) within the Biscayne Bay Coastal Wetlands (BBCW) study area and Model Lands Basin, as well as use of the FDEP- and USACE-approved mitigation banks. The current mitigation plan was developed to identify several mitigation opportunities for consideration that collectively provide more functional lift than required to offset the Project's wetland impacts. The final mitigation plan will incorporate those mitigation options that cumulatively provide the necessary functional lift to offset the Project's wetland impacts upon completion of final design of Project features. However, it is important to recognize that the Project provides environmental benefits that far surpass those presented in the mitigation plan alone.

FPL has collaboratively worked with local, state and federal agencies during the development of the Project to identify mitigation opportunities of regional interest. The mitigation plan includes a suite of potential mitigation alternatives combined with utilization of regional mitigation banks. FPL has proposed two alternative packages of mitigation alternatives, each of which provide regional functional lift to compensate for wetland impacts. The mitigation alternatives are broadly focused on two geographic areas, the Model Lands Basin west of the Turkey Point Plant and the BBCW study area west of the L-31E Canal, north of the Turkey Point Plant. Mitigation options focused upon the Model Lands Basin are designed to provide regional wetland enhancement through restoration of historical freshwater flows, continuing FPL's role as an environmental steward in this important region. Mitigation alternatives located within the BBCW study area include ~~provision of a water management feature which may benefit regional ecosystem restoration plans, as well as~~ wetland enhancement, hydrologic restoration, and conveyance of FPL property to the public trust. The conveyance of FPL property would connect the ~~water management feature~~ restored wetlands with state and federal environmentally protected lands to the east, completing acquisition of an important segment of the BBCW project. ~~County approvals necessary to support land use and zoning aspects of the water management feature are being pursued and would be necessary in order to enable this valuable mitigation alternative.~~

1.0 INTRODUCTION

FPL proposes to construct and operate two new nuclear generating units (Units 6 & 7) and supporting facilities at a Site within the existing Turkey Point plant property boundaries, as well as new transmission lines and other off-site associated linear and non-linear facilities. The Project has been described in the Site Certification and Federal Dredge and Fill Applications submitted to FDEP and USACE, respectively, in June 2009.

Through continued consultation with the Compatibility Working Group (CWG), including representatives of the South Florida Water Management District (SFWMD), Florida Department of Environmental Protection (FDEP), Miami-Dade County Department of Environmental Management (DERM), Miami-Dade County Planning and Zoning, Miami-Dade County Water and Sewer Department (MDWASD), U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), Biscayne National Park (BNP), and Everglades National Park (ENP), the Project design team has refined the Project to avoid and/or minimize wetland impacts as well as incorporate several mitigation opportunities to offset the loss of wetland functions resulting from unavoidable wetland impacts associated with the Project.

Avoidance and minimization efforts focused upon minimizing impacts to high-quality wetlands in Site selection, reduction in the acreage of impact with regard to the design of associated facilities, and utilization of previously impacted areas to the greatest extent practicable. The location for the Units 6 & 7 Site is within the existing Turkey Point industrial wastewater facility. Utilization of this previously impacted area allows for avoidance of over 200 acres of impact to coastal mangrove and/or freshwater marsh wetlands. Parking and laydown areas were initially located adjacent to SW 359th Street and 117th Avenue, impacting approximately 159 acres of wetlands, including large areas of high-quality sawgrass-dominated freshwater marsh. Avoidance and minimization efforts associated with the relocation of the parking and laydown areas to locations within the existing Turkey Point Plant and industrial wastewater facility resulted in significant reduction in wetland impacts. The reconfigured and relocated parking and laydown areas, reduced in size and limited to previously-impacted, low-quality wetlands, reduced the wetland impact acreage by approximately 100 acres (66 percent) compared to the initial locations. ~~The Project's fill source area was originally located on a parcel immediately north of SW 344th Street/Palm Drive, which would have incurred approximately 300 acres of wetland impact. Based on input from the CWG, avoidance and minimization efforts associated with the fill source area resulted in selection of an alternate site from~~

~~that originally proposed to one dominated by agricultural land uses, resulting in a reduction of wetland impact by approximately 248 acres (83 percent).~~ Avoidance and minimization efforts associated with the Project's linear facilities (i.e., reclaimed water pipelines, access roads, and transmission lines) include selection of corridors that maximize opportunities for co-location with existing disturbed linear facilities such as existing roadways, canals, and rights-of-way. Co-location with existing linear features minimizes the amount of additional clearing of rights-of-way required for construction and reduces wetland impacts. Additional avoidance and minimization efforts associated with the transmission line corridor include exchange of the existing FPL easement through the ENP for a new easement located adjacent to the existing L-31N canal. Through exchange of the existing easement, FPL is minimizing impacts to high quality wetlands within the ENP and co-locating the new transmission facilities with existing disturbed linear features, which will reduce environmental impacts to vegetative communities and wildlife resources.

The Project and associated non-linear facilities (i.e., nuclear administration building, training building, parking area, FPL reclaimed water treatment facility, radial collector wells and delivery pipelines, and equipment barge unloading area, ~~and FPL owned fill source~~) will result in approximately ~~372~~ 320 acres of permanent wetland impact, 6 acres of temporary wetland impact, and 3 acres of secondary wetland impact. To compensate for impacts to wetland areas adjacent to areas of direct impact, secondary impact acreage has been assessed at 25 ft surrounding all fill activities.

As discussed in Chapter 9.0 of the SCA, the Project's associated linear facilities (transmission lines, FPL reclaimed water pipelines, access road improvements, and potable water pipelines) have generally been located within corridors proposed for certification rather than within specific rights-of-way. Locating linear facilities within corridors allows flexibility in routing and incorporation of additional wetland avoidance/minimization opportunities during final design of the transmission lines, pipelines, and access road improvements. For purposes of wetland impact assessment, a conservative scenario was utilized for linear facilities in order to ensure that the mitigation plan would provide more than sufficient mitigation to offset all impacts following final route selection and refinement of linear facility engineering design. In the case of the transmission corridors, this enveloping approach results in a worst-case scenario of wetland impacts that is expected to be reduced upon final engineering design. Using the conservative assumptions, the total estimated wetland impacts resulting from construction of the associated linear facilities include 308 acres of permanent wetland impact for the transmission line structure pads and associated patrol roads, 81.6 acres of permanent and 45 acres of secondary wetland impact associated with the Units 6 & 7 access road improvements,

and 42 acres of temporary wetland impact associated with installation of the underground reclaimed water and potable water pipelines. A summary of the Project's wetland impacts is provided in Table 1-1.

TABLE 1-1 (Rev. 1)
UNITS 6 & 7 PROJECT WETLAND IMPACT SUMMARY

Area	Wetland Impacts (acres)			Functional Loss (UMAM Credits)
	Direct	Secondary ^a	Temporary	
Units 6 & 7 Site	250.2			128.3 ^b
Associated Non-Linear Facilities	122.2 70.1	3	6.4	77.9 52.5
Access Roads	81.6	45		80.6
Reclaimed Water Pipelines			41.9	N/A ^c
Transmission Line Corridors	308 ^d			241 ^d
TOTAL	762 710	48	48	528 502

^a Secondary wetland impact calculated as 25-foot zone surrounding areas of wetland fill; functional loss for secondary impacts calculated as 60 percent of direct impact.

^b Functional loss calculated via W.A.T.E.R. functional assessment methodology for the Units 6 & 7 Site = 148.4 W.A.T.E.R. credits.

^c Loss of functional value for temporary impacts associated with pipeline installation will be replaced through in-situ restoration.

^d Transmission line impacts approximated utilizing conservative estimates regarding road and pad design layout within corridor and average functional assessment scores within the corridor segments; actual wetland impacts will be reduced upon completion of detailed engineering design. Acreage of clearing/conversion of forested to herbaceous wetlands will be calculated upon completion of detailed engineering design.

In accordance with regulatory guidelines of the FDEP and USACE, as well as the Miami-Dade County Unusual Use Approval Conditions, FPL proposes that the loss of wetland habitat associated with the Project be mitigated for through a combination of wetland restoration, enhancement, and preservation consistent with the regional restoration goals of the Comprehensive Everglades Restoration Plan (CERP) within the Biscayne Bay Coastal Wetlands (BBCW) study area and Model Lands Basin, as well as use of the FDEP- and USACE-approved EMB and Hole in the Donut Mitigation Bank (HID).

In consultation with the CWG, the current mitigation plan was developed to identify several mitigation opportunities for consideration that collectively provide more functional lift than required to offset the Project's wetland impacts. The final mitigation plan will incorporate those mitigation

options that cumulatively provide the necessary functional lift to offset the Project's wetland impacts upon completion of final design of Project features. The following sections do not constitute the final mitigation project list and/or sequence for utilization. FPL is reviewing the availability and technical feasibility of these and other mitigation projects on an ongoing basis, and new information about these options or the identification of new mitigation projects to substitute for individual components of the current plan will be incorporated into the final mitigation plan. A summary of the various mitigation alternatives is presented in Table 1-2.

TABLE 1-2 (Rev. 1)
MITIGATION ALTERNATIVE SUMMARY

Mitigation Alternative	Location	Activity	Acreage	Functional Lift (UMAM)
1	Northwest Restoration Site	Vegetative enhancement, hydrologic restoration, preservation, recreational facilities	240	31.2
2	Water Management SW 320 th Street Feature Restoration Site	Vegetative enhancement, hydrologic restoration, preservation	577	47.3 59.8
3	S20A/L-31E Hydrologic Enhancement Site	Hydrologic enhancement, restoration	293	38.1
4	Card Sound Canal Weir Hydrologic Enhancement Site	Hydrologic enhancement	250	32.5
5	Model Lands Basin Hydrologic Enhancement Site (Reclaimed Water)	Hydrologic enhancement	600	48
6	Model Lands Basin Hydrologic Enhancement Site (Additional Culverts)	Hydrologic enhancement	150 (contained within Alt 5 acreage)	8
7	Everglades Mitigation Bank	Mitigation Credits	1,039	128.3 (UMAM)/ 148.4 (W.A.T.E.R.)
8	Hole in the Donut Mitigation Bank	Mitigation Credits	348-403 ^a	271-311 (UMAM)/ 348-403 (Ratio) ^a
9	Pipeline Restoration	Vegetative restoration	N/A	N/A
10	Potential ENP Seepage Management Study Area	Hydrologic enhancement	TBD ^b	TBD ^b
11	Wildlife Habitat Creation/Preservation	Create crocodile nesting habitat; wood stork foraging habitat; preserve panther habitat	TBD ^c	TBD ^c
TOTAL			3,347-3,402 ^a	604-644 617-657 (UMAM) ^a

N/A = Not Applicable; temporary impact associated with pipeline installation restored *in-situ*.

^a Range of acreage/functional lift for alternate mitigation packages. Final number to be determined upon completion of Project feature design and refinement of mitigation alternatives.

^b Acreage and functional lift associated with Potential ENP Seepage Management Study Area to be determined.

^c Acreage of crocodile nesting habitat, wood stork foraging habitat, and amount of panther habitat units to be determined.

TABLE 2-1
UNITS 6 & 7 SITE WETLAND FUNCTIONAL ASSESSMENT SUMMARY

FLUCFCS Code	Wetland Type	W.A.T.E.R. Score	Impact Acreage	Site Suitability Multiplier	Functional Loss (W.A.T.E.R. Credits)
510	Active Canals	0.54	4.1	1.05	2.32
511	Remnant Canals	0.59	8.4	1.05	5.20
531	Open Water/ Discharge Canal 1	0.54	12	1.05	6.80
612-A	Mangrove Heads	0.70	12.2	1.05	8.97
612-B	Dwarf Mangroves	0.65	16.9	1.05	11.53
650	Mud Flats	0.55	187.5	1.05	108.28
743-Wet	Wetland Spoil Areas	0.55	9.1	1.05	5.26
			250.2		148.4

2.1.5 Associated Non-Linear Facilities

Wetlands within the areas of the nuclear administration building, training building, and parking areas are reduced in functional value due to their isolated location within the Turkey Point facility, surrounding paved parking lots, encroachment of exotic/nuisance species of vegetation, lack of upland vegetative buffers, and hydrologic alteration.

Mangrove wetlands associated with the radial collector wells and delivery pipelines are higher quality systems connected to Biscayne Bay. These wetlands are slightly reduced in functional value due to the existing fill and roadways associated with the existing Turkey Point Plant, but exhibit minimal amounts of nuisance/exotic species, experience a relatively unaltered hydrologic regime, and provide significant wildlife habitat.

Dwarf mangrove and freshwater marsh wetlands associated with the FPL reclaimed water treatment facility and treated water pipeline are reduced in functional value due to hydrologic alteration and presence of exotic species of vegetation, although they are considered high-quality wildlife habitat. These areas are isolated from Biscayne Bay due to the historical construction of the primary Turkey Point Plant access road and contain areas dominated by the exotic species Australian pine.

~~The FPL owned fill source area contains low quality wetlands associated with active tree nurseries. These wetland systems are impacted through the prevalence of nuisance/exotic vegetation, primarily Brazilian pepper, cattail, and napier grass. Hydrologic alteration is evident throughout the area, and~~

~~the wetlands are further reduced in quality as wildlife habitat due to the surrounding active agricultural operations.~~

Expansion of the equipment barge unloading area will require excavation of upland fill material and approximately 0.1 acre of dredging within the existing man-made turning basin. The expansion is not expected to result in any impacts to adjacent surface waters through utilization of BMPs to isolate the construction area with turbidity curtains, silt screens, or other erosion and turbidity control measures.

A summary of the UMAM functional assessment results for the associated non-linear facilities is provided below; UMAM wetland assessment forms are provided in Appendix A.

TABLE 2-2 (Rev. 1)
ASSOCIATED NON-LINEAR FACILITIES
WETLAND FUNCTIONAL ASSESSMENT SUMMARY

FLUCFCS Code	Wetland Type	UMAM Score	Impact Acreage	Functional Loss (Credits)
Nuclear Administration Building, Training Building, and Parking Areas				
612	Mangrove Swamps	0.67	18.5	12.39
612/618	Mangrove/Willow	0.63	7.6	4.79
SUBTOTAL			26.1	17.18
Radial Collector Well Pipelines^a				
612	Mangrove Swamps	0.87	3	N/A
FPL Reclaimed Water Treatment Facility				
612-B/641	Dwarf Mangroves	0.77	44	35.27 ^b
Treated Reclaimed Water Delivery Pipelines^a				
612-B	Dwarf Mangroves	0.77	3.1	N/A
617	Mixed Wetland Hardwoods	0.70	0.3	N/A
SUBTOTAL			3.4	N/A
Equipment Barge Unloading Area				
510	Barge Basin	0.50	0.1	N/A
FPL-Owned Fill Source Area				
511	Ditches	0.50	5.2	2.60
619	Exotic Wetland Hardwoods	0.47	33.7	15.84
631	Wetland Scrub	0.53	4.4	2.33
641	Freshwater Marches	0.53	9.8	4.66
SUBTOTAL			52.4	25.43
TOTAL			76.65	52.5

^a Loss of functional value for temporary impacts associated with delivery pipeline installation will be replaced through in-situ restoration.

^b Includes 1.39 credits associated with 3 acres of secondary impacts surrounding FPL Water Treatment Facility.

3.0 PROPOSED MITIGATION PLAN

Wetland impacts will be mitigated through a combination of wetland restoration, enhancement, and preservation consistent with the regional restoration goals of the CERP within the BBCW study area and Model Lands Basin, as well as purchase of mitigation credits from the EMB and HID. Due to FPL's large land holdings in the area, there is an opportunity to offer a variety of mitigation activities that would not only offset the Project's wetland impacts, but support regional restoration goals benefiting BNP and CERP projects. FPL proposes two potential mitigation alternative packages for consideration in compensation for wetland impacts. The purchase of mitigation credits from the EMB and HID, as well as support of ongoing ENP seepage management projects, in-situ restoration of temporarily impacted wetlands associated with pipeline installation, wildlife habitat creation and preservation are common to each enhancement project package. However, FPL provides a choice of six enhancement projects that are grouped into two packages of three projects each. Package A provides for two enhancement projects in the region of the BBCW study area north of the plant and one project associated with the S-20A structure adjacent to the existing cooling canals. Package B provides for three enhancement projects within the Model Lands Basin to the west of the existing cooling canals.

Either alternative proposal identifies mitigation alternatives that collectively provide the functional lift necessary to offset the Project's wetland impacts. Alternate mitigation opportunities identified during ongoing consultation with the USACE and FDEP may be substituted for options currently proposed, as appropriate. The final mitigation plan will incorporate those mitigation options that cumulatively provide the necessary functional lift to offset the Project's wetland impacts upon completion of final design of Project features, in conjunction with input from the USACE and FDEP.

Below, the six individual mitigation alternatives are discussed as potential components of the final mitigation proposal: Northwest Restoration Site, ~~Water Management Feature~~ SW 320th Street Restoration Site, S20A/L-31E Hydrologic Enhancement Site, Card Sound Canal Weir Hydrologic Enhancement Site, Model Lands Basin Hydrologic Enhancement Site (Reclaimed Water), and the Model Lands Basin Hydrologic Enhancement Site (Additional Culverts). The credits associated with the Everglades Mitigation Bank and the Hole in the Donut Mitigation Bank, Pipeline Restoration, Potential ENP Seepage Management Study Area, and Wildlife Habitat Creation and Preservation would be combined with either Package A or Package B projects to comprise the full proposed Mitigation Plan (see Figure 1).

3.2 SW 320th Street Restoration Site – Package A

The SW 320th Street Restoration Site, located approximately 4 miles northwest of the Units 6 & 7 Site, encompasses a total of 577 acres, comprised of parcels located on the north and south of the C-103 Canal and extending east toward SFWMD-owned parcels adjacent to the L-31E Canal and the BNP (Figure 5). Restoration and enhancement of these parcels will be achieved through the removal of exotic species of vegetation, removal of ditches to restore natural topography and hydrology, supplemental planting of desirable native wetland vegetation, and transfer of lands to the BNP or SFWMD.

Current land use/land cover within the SW 320th Street Restoration Site is shown in Figure 6. . The area is comprised of wetlands dominated by nuisance/exotic species Brazilian pepper and Australian pine, as well as cattail, primrose willow, and Carolina willow, and additional areas of palm tree nurseries. The eastern portion of the SW 320th Street Restoration Site includes a 250-acre parcel of historical palm tree nurseries currently being restored to freshwater marsh.

Mitigation activities at the SW 320th Street Restoration Site will involve extensive exotic species eradication efforts to remove Brazilian pepper and Australian pine infestation. Following mechanical and herbicide treatment of exotic vegetation, the areas will be topographically graded, including backfilling of agricultural ditches, and planted with native wetland species to encourage vegetative succession within the restored mixed wetland hardwoods and freshwater marsh wetlands. Subsequent treatments of exotic species of vegetation will be conducted to discourage regrowth of Brazilian pepper and Australian pine, and native wetland vegetation will be installed to supplement natural recruitment of native species from the seedbank, as necessary. The 250-acre eastern portion of the SW 320th Street Restoration Site, currently under restoration but not under a conservation easement, would be preserved and transferred to the public trust as part of the overall SW 320th Street Restoration Site mitigation alternative.

Following restoration of wetlands within the SW 320th Street Restoration Site, these parcels are proposed to be transferred to the public trust, under the management of the SFWMD, BNP, or FDEP, to further the conservation of wetlands within the BBCW area. The juxtaposition of the Restoration Site adjacent to lands previously conveyed from FPL to SFWMD that are adjacent to the L-31E Canal and BNP will result in significant increase in the overall acreage of property under conservation. These lands will be preserved and will be protected from future development in the area.

Within the SW 320th Street Restoration Site, the current UMAM functional score for Brazilian pepper and Australian pine-dominated wetlands is 0.53. The functional score is a reflection of diminished ecological conditions as a result of the widespread proliferation of exotic species and historical hydrologic impacts. Upland areas of active palm tree nursery within the Restoration Site were assigned a UMAM score of 0.27, due to current lack of wetland functions. It can reasonably be expected that after exotic vegetation removal and maintenance, removal of ditches, establishment of a native marsh and mixed wetland hardwood vegetative community, and preservation of the area, the functional value of the area would improve, with UMAM scores ranging from 0.60 to 0.70 as a result of increased health of the vegetative community, subsequent increase in wildlife utilization, and transfer of restored lands to the public trust (see Figure 7). For the 250-acre parcel currently under restoration, the preservation of this area and transfer to the public trust will generate a functional lift of 0.07, which when multiplied by a preservation adjustment factor of 0.9 results in an adjusted lift of 0.06 per acre, or a total of 15.8 credits for 250 acres of preserved wetlands. Within the 327 acres of mixed wetland/exotic hardwoods and tree nurseries adjacent to the C-103 Canal, the difference between pre- and post-mitigation UMAM functional scores is 0.17 for wetland parcels and 0.33 for the palm tree nursery areas. For wetland parcels, when divided by the TL and R factors (TL of 10 years = 1.25, R factor of 1.5, $TL \times R = 1.875$), the resulting functional lift per acre is 0.09. For the palm tree nursery areas, an increased risk factor was utilized (TL of 10 years = 1.25, R factor of 2, $TL \times R = 2.5$), with a resulting adjusted functional lift of 0.13 per acre. For the entire SW 320th Street Restoration Site, the functional lift associated with restoration and preservation of 577 acres is 47.3 credits.

A summary of the existing and post-restoration wetland habitats and functional assessment scores is provided in Table 3-2 (Rev. 1).

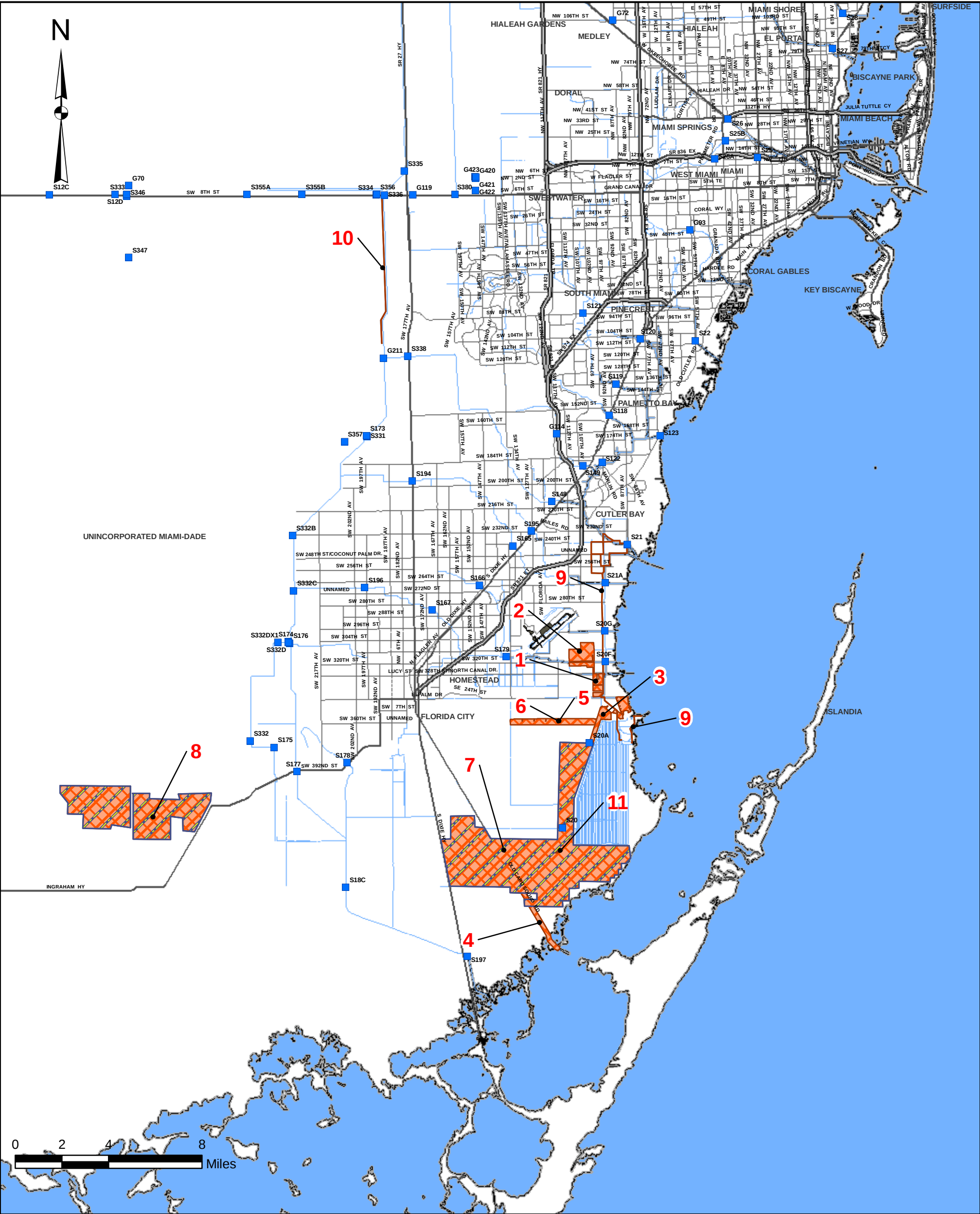
TABLE 3-2 (Rev. 1)
SW 320th STREET RESTORATION SITE
FUNCTIONAL ASSESSMENT SUMMARY

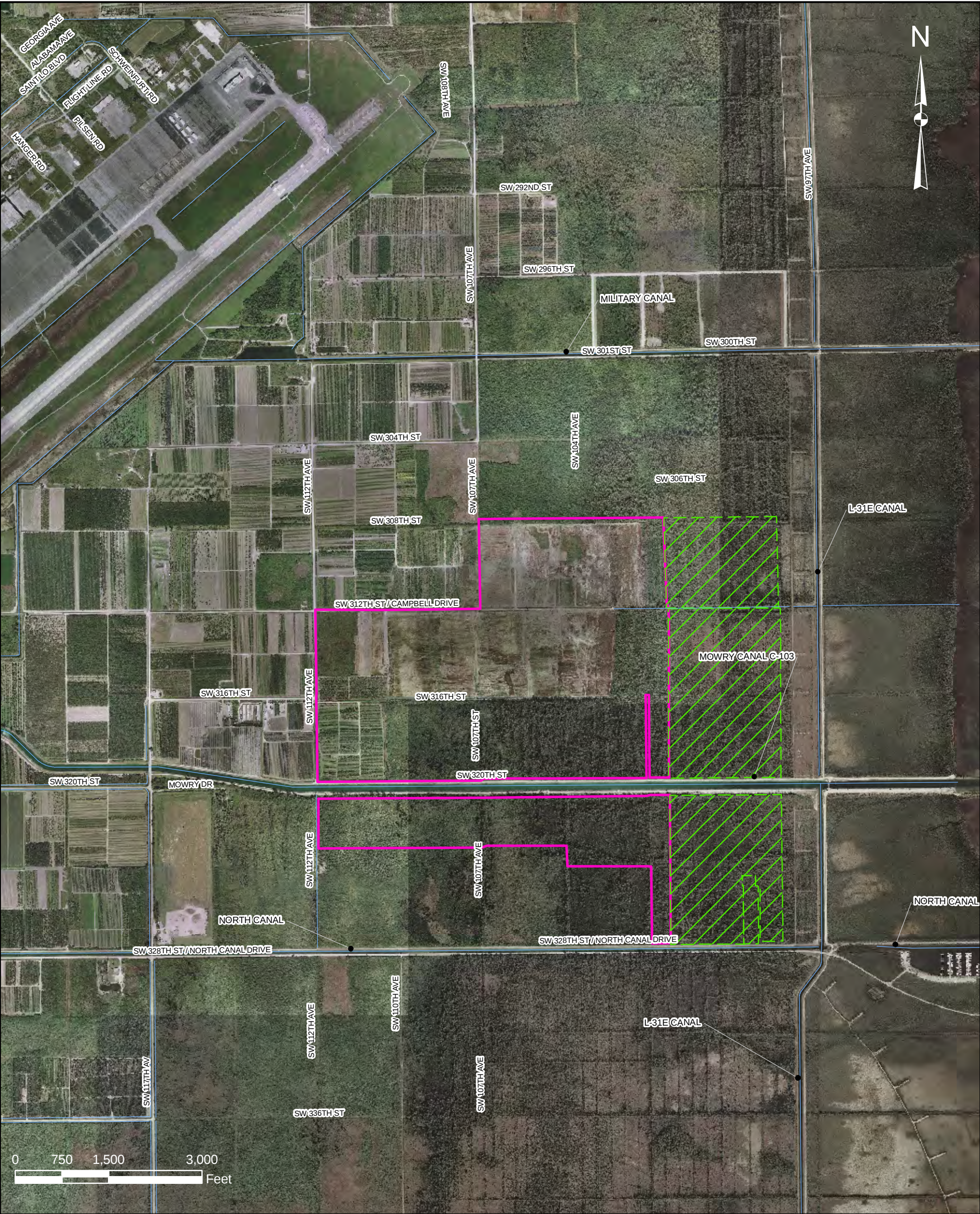
Wetland Type (FLUCFCS Code)	Target Community (FLUCFCS Code)	Acres	UMAM Score		Time Lag x Risk	Lift per Acre	Functional Lift (Credits)
			Pre	Post			
Mixed Wetland Hardwoods/Mixed Forested Wetlands/ Brazilian Pepper (617/630/422)	Freshwater Marsh/Mixed Wetland Hardwoods (641/617)	255	0.53	0.70	1.875	0.09	22.95
Palm Tree Nursery (241)	Freshwater Marsh (641)	72	0.27	0.60	2.5	0.13	9.36
Freshwater Marsh (641)	Freshwater Marsh (641) - Preservation	250	0.53	0.60	0.9 (pres. adjust factor)	0.06	15
		577					47.3

3.3 S20A/L-31E Hydrologic Enhancement Site – Package A

The S20A/L-31E Hydrologic Enhancement Site consists of isolated sawgrass marsh with scattered tree islands and remnants of tidal mangroves associated with historic tidal creek channels. These areas have been isolated due to construction of the L-31E Canal, the Turkey Point industrial wastewater facility, and the Turkey Point Plant entrance road (Figure 8).

An isolated parcel of predominantly native marsh is located directly north of the Turkey Point Plant cooling canal system. This parcel is bounded on the west by the L-31E levee, to the south by the patrol road surrounding the cooling canal system, to the east by the contractor access roadway to the Turkey Point Plant, and to the north by the main entry roadway to the Turkey Point Plant. Historically, a small creek passed through this parcel and flowed to the east to Biscayne Bay. Currently the wetland parcel is hydrologically isolated and no longer contributes the historic nutrient transfer to Biscayne Bay. As part of this mitigation alternative, two gated weir culverts will be





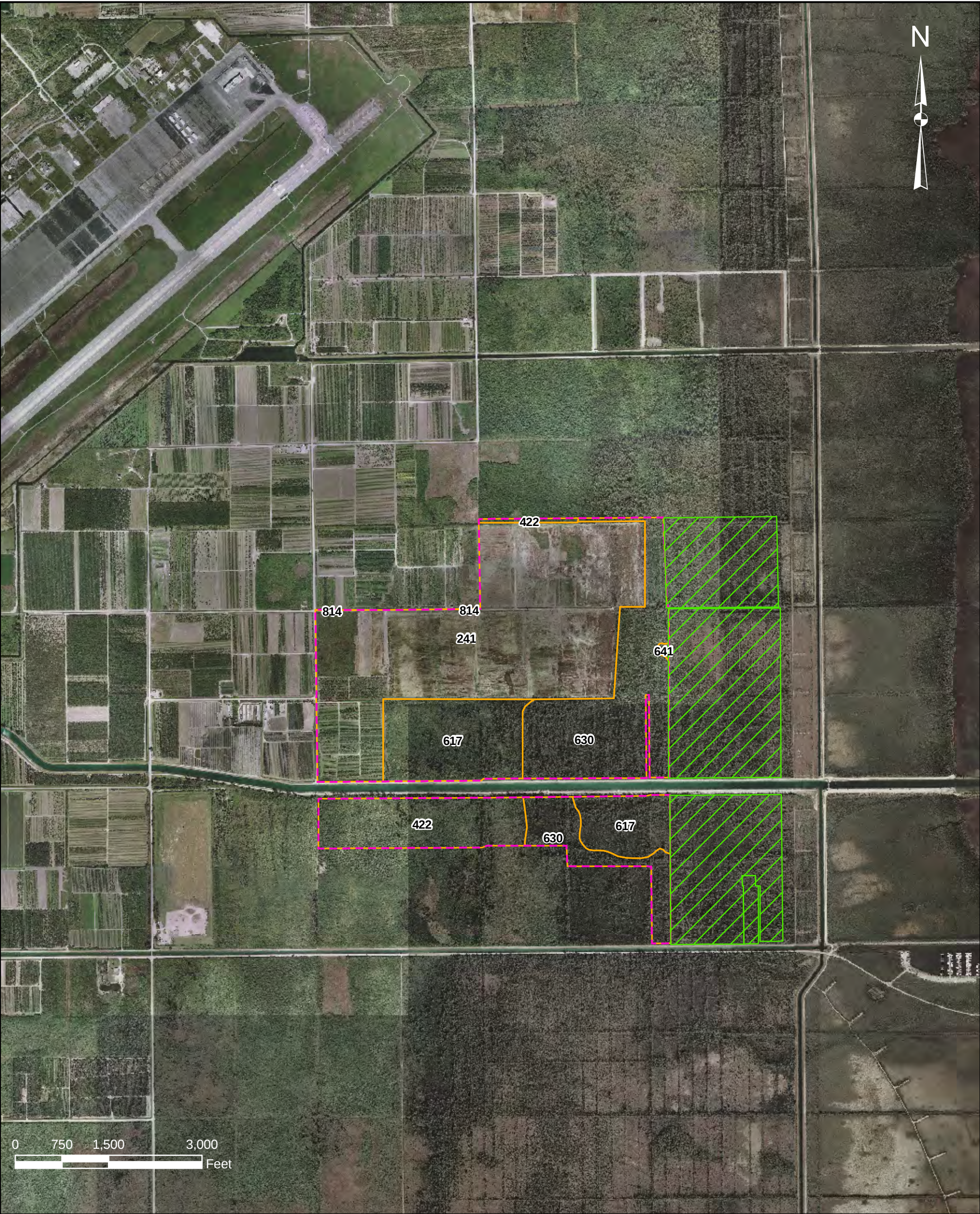
LEGEND

- Lands Previously Transferred to the State by FPL
- SW 320th Street Restoration Site

REFERENCES

1. Imagery, Miami-Dade County, 2007.

FIGURE 5	FILE NO. 08387594K005 REV. 1 PLOT DATE 6/12/2009	TITLE SW 320TH STREET RESTORATION SITE AERIAL MAP	PROJECT TURKEY POINT UNITS 6 & 7 PROJECT	
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LEGEND

- Lands Previously Transferred to the State by FPL

SW 320th Street Restoration Site

241 - Tree Nurseries

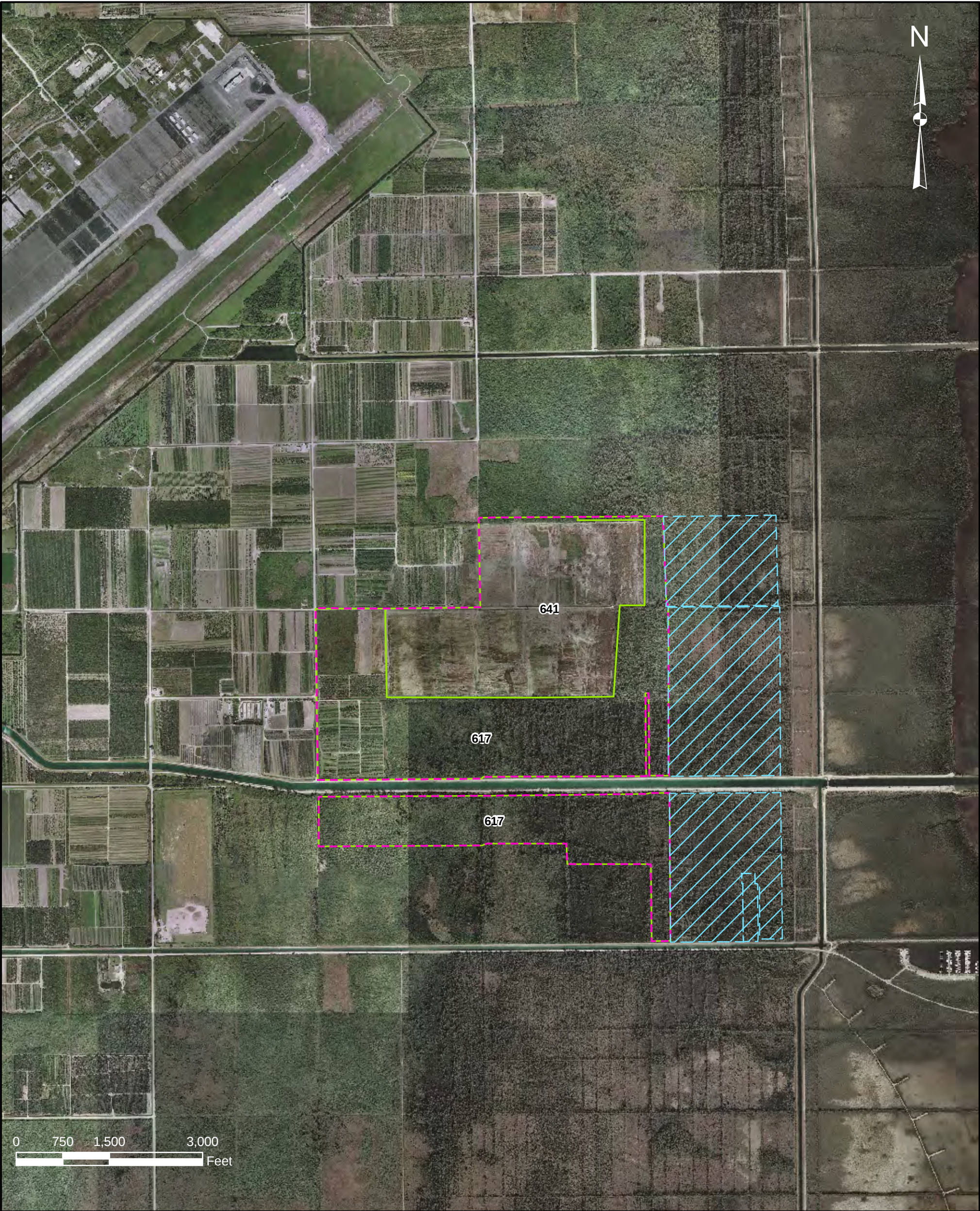
422 - Brazilian Pepper

511 - Ditches

617 - Mixed Wetland Hardwoods
- 619 - Exotic Wetland Hardwoods
- 619 / 631 - Exotic Wetland Hardwoods / Wetland Scrub
- 630 - Wetland Forested Mixed
- 631 - Wetland Scrub
- 641 - Freshwater Marshes
- 814 - Roads and Highways

REFERENCES

1. Imagery, Miami-Dade County, 2007.
2. Land Use / Land Cover, SFWMD, 2004.



LEGEND

- Lands Previously Transferred to the State by FPL
- SW 320th Street Restoration Site
- 530 - Reservoirs
- 617 - Mixed Wetland Hardwoods
- 641 - Freshwater Marshes

REFERENCES

1. Imagery, Miami-Dade County, 2007.

FILE NO. 08387594K07		PROJECT	
REV. 1			
PLOT DATE 6/12/2009			
TITLE			
SW 320TH STREET RESTORATION SITE PROPOSED LAND USE / LAND COVER		TURKEY POINT UNITS 6 & 7 PROJECT	
FIGURE 7			

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

Site/Project Name FPL Turkey Point Units 6 & 7 Project		Application Number		Assessment Area Name or Number SW 320 th Street Restoration Site - Tree Nurseries	
FLUCCs code 241		Further classification (optional)		Impact or Mitigation Site? Mitigation	Assessment Area Size 72 acres
Basin/Watershed Name/Number C-103/North Canal/03090202		Affected Waterbody (Class)		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 Tree nurseries lie to the north and west of the parcels. Mixed wetland forests and exotic species lie to the east and south. Further east is the L-31E canal and Biscayne Bay.					
Assessment area description The SW 320th Street Restoration Site encompasses a total of 577 acres, including parcels located on the north and south of the C-103 Canal, extending east towards SFWMD-owned parcels adjacent to the L-31E Canal and the BNP. The parcels include 255 acres of wetlands dominated by Brazilian pepper, Australian pine, and Carolina willow, as well as 72 acres of palm tree nurseries. The eastern portion of the SW 320th Street Site includes a 250-acre parcel of historical palm tree nurseries currently being restored to freshwater marsh.					
Significant nearby features Homestead Air Force Base, FPL Turkey Point Plant, Biscayne Bay			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique		
Functions Water storage			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) Wading birds, shorebirds, forage fishes			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Occasional use by wading birds such as roseate spoonbill (SSC), white ibis (SSC), little blue heron (SSC), wood stork (E), reddish egret (SSC), snowy egret (SSC) and tricolored heron (SSC)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None					
Additional relevant factors:					
Assessment conducted by: K. Bullock, S. Rizzo			Assessment date(s): 5/4/2009		

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

Site/Project Name FPL Turkey Point Units 6 & 7 Project	Application Number	Assessment Area Name or Number SW 320 th Street Restoration Site - Tree Nurseries
Impact or Mitigation Mitigation	Assessment conducted by: K. Bullock, S. Rizzo	Assessment date: 5/4/2009

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) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
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.500(6)(a) Location and Landscape Support		Current: Location and landscape support variable is reduced due to tree nurseries, proximity of roadways, presence of exotic vegetation, and ditching. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 6, due to planted palms; b) Invasive exotic species = 6, due to planted palms; c) Wildlife access to and from outside = 6, due to surrounding roadways and tree nurseries; d) functions that benefit fish & wildlife downstream-distance or barriers = 6, provides no functions; e) Impacts to wildlife listed in Part 1 by outside land uses = 6, slightly reduced due to surrounding habitat loss; f) Hydrologically connected areas downstream of assessment area = 6, connected through ditches to surrounding tree farms; g) Dependency of downstream areas on assessment area = 6, some benefit to downstream areas.	
w/o pres or current	with	With: Location and landscape support variable is higher because area will be preserved. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 6, due to proximity of roadways; b) Invasive exotic species = 8, little coverage; c) Wildlife access to and from outside = 6, decreased due to limitations imposed by surrounding roadways and lack of open water connection; d) functions that benefit fish & wildlife downstream-distance or barriers = 6, area somewhat isolated from other habitats; e) Impacts to wildlife listed in Part 1 by outside land uses = 7, little to no surrounding habitat loss; f) Hydrologically connected areas downstream of assessment area = 6, connected through culverts to L31E; g) Dependency of downstream areas on assessment area = 7, more benefit to downstream areas due to exotic removal.	
6	7		
.500(6)(b) Water Environment (n/a for uplands)		Current: The water environment score is reduced due to the prevalence of ditching on the site. Individual parameter scores: a) water levels and flows = 1, altered water level due to ditching; b) water level indicators = 1, less than expected; c) soil moisture = 1, drier than expected; d) soil erosion or deposition = 1, due to nursery operations; e) evidence of fire history = N/A; f) vegetation community zonation = 1, not present; g) hydrologic stress on vegetation = 1, due to altered hydrologic regime; h) use by animal species with specific hydrological requirements = 1, very few; i) vegetative species tolerant of and associated with water quality degradation = N/A; j) direct observation of water quality = N/A, no discoloration, turbidity, or sheen; k) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.	
w/o pres or current	with	With: The water environment score is increased due to the removal of ditching on the site. Individual parameter scores: a) water levels and flows = 6, more typical water flows; b) water level indicators = 6, mostly consistent with expected; c) soil moisture = 6, mostly consistent with expected; d) soil erosion or deposition = 6, mostly typical patterns; e) evidence of fire history = N/A; f) vegetation community zonation = 6, due to removal of palms; g) hydrologic stress on vegetation = 6, due to improved hydrologic regime; h) use by animal species with specific hydrological requirements = 6, some due to improved hydrology and resultant increase in number of fish species; i) vegetative species tolerant of and associated with water quality degradation = 6, mostly minimal; j) direct observation of water quality = 6, mostly no discoloration, turbidity, or sheen; k) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.	
1	5		
.500(6)(c) Community structure		Current: The community structure variable is reduced due to presence of planted palms. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 1, planted palms; b) invasive exotics or other invasive plant species = 1, planted palms; c) regeneration and recruitment = 1, planted palms; d) age & size distribution = 1, less than expected; e) density and quality of coarse woody debris, snag, den, and cavity = 1, none present; f) plant condition = 1, planted palms; g) land management practices = 1, highly altered; h) topographic features = 1, not present; i) siltation or algal growth in submerged aquatic plant communities = N/A.	
1. Vegetation and/or 2. Benthic Community		With: The community structure variable is increased due to removal of planted palms and improved hydrology. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 6, mostly native species; b) invasive exotics or other invasive plant species = 6, little to moderate coverage; c) regeneration and recruitment = 6, mostly consistent with expected; d) age & size distribution = 6, slightly less than expected; e) density and quality of coarse woody debris, snag, den, and cavity = 6, mostly adequate for system type; f) plant condition = 6, improved due to improved hydrology; g) land management practices = 6, due to removal of ditching; h) topographic features = 6, due to removal of ditching; i) siltation or algal growth in submerged aquatic plant communities = N/A.	
w/o pres or current	with		
1	6		

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.27	0.60

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

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.33

If mitigation
Time lag (t-factor) = 1.25
Risk factor = 2

For mitigation assessment areas
RFG = delta/(t-factor x risk) = 0.13

Credits = RFG x 72 acres = 9.36

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

Site/Project Name FPL Turkey Point Units 6 & 7 Project		Application Number		Assessment Area Name or Number SW 320 th Street Restoration Site - Mixed Wetland Hardwoods/Mixed Forested Wetlands	
FLUCCs code 617/630		Further classification (optional)		Impact or Mitigation Site? Mitigation	Assessment Area Size 255 acres
Basin/Watershed Name/Number C-103/North Canal/03090202		Affected Waterbody (Class)		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 Tree nurseries lie to the north and west of the parcels. Mixed wetland forests and exotic species lie to the east and south. Further east is the L-31E canal and Biscayne Bay.					
Assessment area description The SW 320th Street Restoration Site encompasses a total of 577 acres, including parcels located on the north and south of the C-103 Canal, extending east towards SFWMD-owned parcels adjacent to the L-31E Canal and the BNP. The parcels include 255 acres of wetlands dominated by Brazilian pepper, Australian pine, and Carolina willow, as well as 72 acres of palm tree nurseries. The eastern portion of the SW 320th Street Site includes a 250-acre parcel of historical palm tree nurseries currently being restored to freshwater marsh.					
Significant nearby features Homestead Air Force Base, FPL Turkey Point Plant, Biscayne Bay			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique		
Functions Water storage			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) Wading birds, shorebirds, forage fishes			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Occasional use by wading birds such as roseate spoonbill (SSC), white ibis (SSC), little blue heron (SSC), wood stork (E), reddish egret (SSC), snowy egret (SSC) and tricolored heron (SSC)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None					
Additional relevant factors:					
Assessment conducted by: K. Bullock, S. Rizzo			Assessment date(s): 5/4/2009		

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

Site/Project Name FPL Turkey Point Units 6 & 7 Project	Application Number	Assessment Area Name or Number SW 320 th Street Restoration Site - Mixed Wetland Hardwoods/Mixed Forested Wetlands
Impact or Mitigation Mitigation	Assessment conducted by: K. Bullock, S. Rizzo	Assessment date: 5/4/2009

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) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
--	---	---	--	---

.500(6)(a) Location and Landscape Support		Current: Location and landscape support variable is slightly reduced due to proximity of roadways, presence of exotic vegetation, and ditching. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 6, due to proximity of roadways; b) Invasive exotic species = 6, moderate coverage; c) Wildlife access to and from outside = 6, decreased due to limitations imposed by surrounding roadways and lack of open water connection; d) functions that benefit fish & wildlife downstream-distance or barriers = 6, area somewhat isolated from other habitats; e) Impacts to wildlife listed in Part 1 by outside land uses = 6, slightly reduced due to surrounding habitat loss; f) Hydrologically connected areas downstream of assessment area = 6, connected through culverts to L31E; g) Dependency of downstream areas on assessment area = 6, some benefit to downstream areas. With: Location and landscape support variable is higher because area will be preserved. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 6, due to proximity of roadways; b) Invasive exotic species = 8, little coverage; c) Wildlife access to and from outside = 6, decreased due to limitations imposed by surrounding roadways and lack of open water connection; d) functions that benefit fish & wildlife downstream-distance or barriers = 6, area somewhat isolated from other habitats; e) Impacts to wildlife listed in Part 1 by outside land uses = 7, little to no surrounding habitat loss; f) Hydrologically connected areas downstream of assessment area = 6, connected through culverts to L31E; g) Dependency of downstream areas on assessment area = 7, more benefit to downstream areas due to exotic removal.	
w/o pres or current	with	6	7
.500(6)(b)Water Environment (n/a for uplands)		Current: The water environment score is reduced due to the prevalence of ditching on the site. Individual parameter scores: a) water levels and flows = 5, altered water level due to ditching; b) water level indicators = 4, less than expected; c) soil moisture = 5, drier than expected; d) soil erosion or deposition = 7, typical patterns; e) evidence of fire history = N/A; f) vegetation community zonation = 5, altered due to presence of exotics; g) hydrologic stress on vegetation = 5, some due to altered hydrologic regime; h) use by animal species with specific hydrological requirements = 5, due to lack of open water connection and resultant reduction in number of fish species; i) vegetative species tolerant of and associated with water quality degradation = 5, moderate; j) direct observation of water quality = 8, no discoloration, turbidity, or sheen; k) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A. With: The water environment score is increased due to the removal of ditching on the site. Individual parameter scores: a) water levels and flows = 8, more typical water flows; b) water level indicators = 8, consistent with expected; c) soil moisture = 8, consistent with expected; d) soil erosion or deposition = 7, typical patterns; e) evidence of fire history = N/A; f) vegetation community zonation = 8, due to removal of exotics; g) hydrologic stress on vegetation = 8, due to improved hydrologic regime; h) use by animal species with specific hydrological requirements = 8, due to improved hydrology and resultant increase in number of fish species; i) vegetative species tolerant of and associated with water quality degradation = 7, minimal; j) direct observation of water quality = 8, no discoloration, turbidity, or sheen; k) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.	
w/o pres or current	with	5	7
.500(6)(c)Community structure		Current: The community structure variable is reduced due to presence of exotics and hydrologic isolation. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 5, mix of exotic and native species; b) invasive exotics or other invasive plant species = 5, moderate coverage; c) regeneration and recruitment = 5, slightly less than expected; d) age & size distribution = 5, less than expected; e) density and quality of coarse woody debris, snag, den, and cavity = 7, adequate for system type; f) plant condition = 5, due to dead stems and low productivity; g) land management practices = 5, due to alteration of community structure; h) topographic features = 5, less than optimal; i) siltation or algal growth in submerged aquatic plant communities = N/A. With: The community structure variable is increased due to removal of exotics and improved hydrology. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 8, native species; b) invasive exotics or other invasive plant species = 9, minimal coverage; c) regeneration and recruitment = 8, consistent with expected; d) age & size distribution = 7, slightly less than expected; e) density and quality of coarse woody debris, snag, den, and cavity = 7, adequate for system type; f) plant condition = 8, improved due to improved hydrology; g) land management practices = 8, due to removal of ditching; h) topographic features = 8, due to removal of ditching; i) siltation or algal growth in submerged aquatic plant communities = N/A.	
w/o pres or current	with	5	7

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.53	0.70

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

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.17

If mitigation
Time lag (t-factor) = 1.25
Risk factor = 1.5

For mitigation assessment areas
RFG = delta/(t-factor x risk) = 0.09

Credits = RFG x 255 acres = 22.95

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

Site/Project Name FPL Turkey Point Units 6 & 7 Project		Application Number		Assessment Area Name or Number SW 320 th Street Restoration Site- Preservation - Freshwater Marshes	
FLUCCs code 641		Further classification (optional)		Impact or Mitigation Site? Mitigation	
				Assessment Area Size 250 acres	
Basin/Watershed Name/Number C-103/North Canal/03090202		Affected Waterbody (Class)		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 Tree nurseries lie to the north and west of the parcels. Mixed wetland forests and exotic species lie to the east and south. Further east is the L-31E canal and Biscayne Bay.					
Assessment area description The SW 320th Street Restoration Site encompasses a total of 577 acres, including parcels located on the north and south of the C-103 Canal, extending east towards SFWMD-owned parcels adjacent to the L-31E Canal and the BNP. The parcels include 255 acres of wetlands dominated by Brazilian pepper, Australian pine, and Carolina willow, as well as 72 acres of palm tree nurseries. The eastern portion of the SW 320th Street Site includes a 250-acre parcel of historical palm tree nurseries currently being restored to freshwater marsh.					
Significant nearby features Homestead Air Force Base, FPL Turkey Point Plant, Biscayne Bay			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique		
Functions Water storage			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) Wading birds, shorebirds, forage fishes			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Occasional use by wading birds such as roseate spoonbill (SSC), white ibis (SSC), little blue heron (SSC), wood stork (E), reddish egret (SSC), snowy egret (SSC) and tricolored heron (SSC)		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None					
Additional relevant factors:					
Assessment conducted by: K. Bullock, S. Rizzo			Assessment date(s): 5/4/2009		

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

Site/Project Name FPL Turkey Point Units 6 & 7 Project	Application Number	Assessment Area Name or Number SW 320 th Street Restoration Site - Preservation Freshwater Marshes
Impact or Mitigation Mitigation	Assessment conducted by: K. Bullock, S. Rizzo	Assessment date: 5/4/2009

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) Condition is optimal and fully supports wetland/surface water functions	Moderate(7) Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal (4) Minimal level of support of wetland/surface water functions	Not Present (0) Condition is insufficient to provide wetland/surface water functions
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.500(6)(a) Location and Landscape Support		Current: Location and landscape support variable is slightly reduced due to presence of invasive vegetation and surrounding tree nurseries. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 6, due to surrounding habitats; b) Invasive exotic species = 6, moderate coverage; c) Wildlife access to and from outside = 6, decreased due to limitations imposed by surrounding roadways and lack of open water connection; d) functions that benefit fish & wildlife downstream-distance or barriers = 6, some functions; e) Impacts to wildlife listed in Part 1 by outside land uses = 6, slightly reduced due to surrounding habitat loss; f) Hydrologically connected areas downstream of assessment area = 6, connected through culverts/ditching to L31E; g) Dependency of downstream areas on assessment area = 6, some benefit to downstream areas. With: Location and landscape support variable is higher because area will be preserved. Individual parameter scores: a) Support to wildlife listed in Part 1 by outside habitats = 7, increased due to improvement of surrounding habitats; b) Invasive exotic species = 7, little coverage; c) Wildlife access to and from outside = 7, due to improvement of surrounding habitats; d) functions that benefit fish & wildlife downstream-distance or barriers = 7, due to improvement in surrounding habitats; e) Impacts to wildlife listed in Part 1 by outside land uses = 7, little to no surrounding habitat loss; f) Hydrologically connected areas downstream of assessment area = 7, due to improved hydrology in surrounding area; g) Dependency of downstream areas on assessment area = 7, more benefit to downstream areas due to improved hydrology in surrounding area.	
w/o pres or current	with	6	7
.500(6)(b)Water Environment (n/a for uplands)		Current: The water environment score is reduced due to lack of natural water flow. Individual parameter scores: a) water levels and flows = 5, altered water level; b) water level indicators = 4, less than expected; c) soil moisture = 5, drier than expected; d) soil erosion or deposition = 4, increased; e) evidence of fire history = N/A; f) vegetation community zonation = 5, altered due to presence of invasives; g) hydrologic stress on vegetation = 5, some due to altered hydrologic regime; h) use by animal species with specific hydrological requirements = 5, due to lack of open water connection and resultant reduction in number of fish species; i) vegetative species tolerant of and associated with water quality degradation = 5, moderate; j) direct observation of water quality = 8, no discoloration, turbidity, or sheen; k) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A. With: The water environment score is same as current; no improvements proposed. Individual parameter scores: a) water levels and flows = 5, altered water level; b) water level indicators = 4, less than expected; c) soil moisture = 5, drier than expected; d) soil erosion or deposition = 4, increased; e) evidence of fire history = N/A; f) vegetation community zonation = 5, altered due to presence of invasives; g) hydrologic stress on vegetation = 5, some due to altered hydrologic regime; h) use by animal species with specific hydrological requirements = 5, due to lack of open water connection and resultant reduction in number of fish species; i) vegetative species tolerant of and associated with water quality degradation = 5, moderate; j) direct observation of water quality = 8, no discoloration, turbidity, or sheen; k) existing water quality data = N/A; l) water depth wave, wave energy, currents and light penetration = N/A.	
w/o pres or current	with	5	5
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community		Current: The community structure variable is reduced due to presence of invasive species. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 5, mix of exotic and native species; b) invasive exotics or other invasive plant species = 5, moderate coverage; c) regeneration and recruitment = 5, slightly less than expected; d) age & size distribution = 5, less than expected; e) density and quality of coarse woody debris, snag, den, and cavity = 5, not adequate for system type; f) plant condition = 5, due to dead stems and low productivity; g) land management practices = 5, due to alteration of community structure; h) topographic features = 5, less than optimal; i) siltation or algal growth in submerged aquatic plant communities = N/A. With: The community structure variable is slightly increased due to natural regeneration from surrounding properties. Individual parameter scores: a) plant community species in the canopy, shrub, or ground stratum = 6, mostly native species; b) invasive exotics or other invasive plant species = 6, some coverage; c) regeneration and recruitment = 6, mostly consistent with expected; d) age & size distribution = 6, slightly less than expected; e) density and quality of coarse woody debris, snag, den, and cavity = 6, mostly adequate for system type; f) plant condition = 6, improved due to improved hydrology in surrounding area; g) land management practices = 6, improved; h) topographic features = 5, less than optimal; i) siltation or algal growth in submerged aquatic plant communities = N/A.	
w/o pres or current	with	5	6

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.53	0.60

If preservation as mitigation,
Preservation adjustment factor = 0.9
Adjusted mitigation delta = 0.06

For impact assessment areas
FL = delta x acres =

Delta = [with-current]
0.07

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

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

Credits = adjusted mitigation delta x 250 acres = 15