3.0 SITE AND VICINITY CHARACTERIZATION

The existing FPL Port Everglades Plant is located within the City of Hollywood, in Broward County, Florida. The existing Site is situated within approximately 92.5 acres of land owned by FPL. The FPL owned property is also in the mid-port section within the jurisdictional area of Port Everglades (Port). The Site is surrounded by Port facilities and industrial activities, such as intermodal shipping, oil storage, cruise ship docking, and light commercial. The Site has convenient access to State Road (S.R.) 84 and Interstate (I)-595 and is locally accessible by Eller Drive to the south. Roadways that surround the Site include SE 14th Avenue to the east, Eisenhower Drive to the west, and SE 26th Street to the north. The Port entrance channel and the ICW are approximately 0.5 mile to the east of the FPL property. Figures 3.0.0-1 and 3.0.0-2 show the general vicinity around the FPL property. The Project will be located within the existing Port Everglades Plant boundaries except for the associated linear facilities outside the existing Port Everglades Plant boundary.

3.1 Site and Associated Facilities Delineation

The Project for which FPL seeks certification includes dismantlement of the existing Units 1 through 4 and construction of the combined cycle unit, the construction parking and laydown areas and certain transmission related activities. FPL is seeking a Site Certification that will include decommissioning and dismantling the existing four steam boilers and appurtenance equipment and constructing a 3-on-1 combined cycle natural gas-fired unit.

3.1.1 Existing Uses

The existing Port Everglades Plant has been operating at the current location since the 1960s. The commercial in service dates for these units are as follows:

- Unit 1 – June 1960,
- Unit 2 – April 1961,
- Unit 3 – July 1964, and
- Unit 4 – April 1965.

The existing 12 simple cycle natural gas turbine units, employee parking areas, switchyard, and transmission system are not proposed as part of the Site Certification. Figures 3.1.1-1, 3.1.1-2 and 3.1.1-3 show the existing Port Everglades Plant Property, PEEC Site, and parking and laydown areas during Project construction, respectively. The Site to be certified consists of approximately 67.1 acres while the existing Port Everglades Property consists of approximately 92.5 acres.

3.1.2 Adjacent Properties and Nearby Areas

Within one mile of the Site are the municipal jurisdictions of the City of Hollywood, the City of Fort Lauderdale, the City of Dania Beach, and the Fort Lauderdale-Hollywood International Airport (a County Regional Facility). The existing land uses within this distance are consistent with Port related activities that are predominantly industrial activities, such as oil storage, cruise ships, and light commercial. The closest residences are in the Harbor Inlet community, within the City of Fort Lauderdale in Broward County and approximately 0.8 mile to the northeast of the Site.

3.1.3 One Hundred Year Flood Zone

The Federal Emergency Management Agency (FEMA) Flood Zones map for the Site (FEMA, 1996) is shown as an overlay to the aerial image of the Site in Figure 3.1.3-1. As recorded on the Flood Insurance Rate Map, most of the Site is situated within Zone X, with the intake and discharge canals situated within Zone AE. Zone X is an area that is determined to be outside of the 100 year and 500 year flood zones. Zone AE is an area that is determined to be inundated by the 100 year flooding.

The hurricane evacuation routes and storm surge map for the Site is shown in Figure 3.1.3-2.

3.2 Social and Political Environment

3.2.1 Governmental Jurisdictions

The Site is located within the City of Hollywood, Broward County, Florida. The Site is also within the jurisdictional area of Port Everglades. Within 5 miles of the Site are a total of eight municipalities:

- City of Dania Beach,
- Town of Davie,
- City of Fort Lauderdale,
- City of Hollywood,
- City of Lauderhill,
- Village of Lazy Lake,
- City of Plantation, and
- City of Wilton Manors.

Also within 5 miles of the Site is property associated with Broward County and Broward County Regional Facilities.

The City of Hollywood, City of Dania Beach, City of Fort Lauderdale, and Broward County Regional Facility are all within 1 mile of the Site.

Figure 3.2.1-1 depicts an area map showing governmental jurisdictions within a 1 mile radius of the Site. Figure 3.2.1-2 depicts an area map with 1-, 2-, 3-, 4-, and 5-mile radii around the Site for municipalities, federal and state jurisdictions, county jurisdictions, and city parks.

There are 2 state parks (Hugh Taylor Birch State Park and John U. Lloyd Beach State Park) and 10 Broward County parks (Roosevelt Gardens Park, Franklin Park, Reverend Samuel Delevoe Park, Sunview Park, Secret Woods Nature Center, Boaters Park, Topeekeegee Yugnee Park, West Lake Park, Anne Kolb Nature Center, and Hollywood North Beach Park) located within 5 miles of the Site. There are also 2 areas identified as containing Critical Habitat [e.g., areas identified as Staghorn coral *Acropora cervicornis*) and Elkhorn coral (*Acropora palmata*)], and 4 locations designated as Outstanding Florida Waters (OFW): Hugh Taylor Birch State Park, John U. Lloyd Beach State Park, Hollywood North Beach Park, and West Lake Park, all located within 5 miles of the site. Table 3.2.1-1 presents a list of governmental jurisdictions within 5 miles of the Site.

None of the following governmental jurisdictions are located within 5 miles of the Site:

- National Parks, National Forests, National Seashores, National Wildlife Refuges, National Wilderness Areas, National Memorials or Monuments, National Historic Landmarks, National Wild & Scenic Rivers,
- Marine Sanctuaries, Estuarine Sanctuaries,
- Roadless Area Review and Evaluation (RARE) Areas,
- State Forests, State Wildlife Management Areas, State Areas of Critical State Concern, State Conservation and Recreation Lands, Save our Rivers Lands, State Archaeological Landmarks or landmark zones,
- Aquatic Preserves, Florida Springs, Florida Wild & Scenic Rivers, Indian Reservations, or Military Reservations.

3.2.2 Zoning and Land Use Plans

Both Broward County and the City of Hollywood adopted comprehensive plans (Plans) that meet the requirements of the Local Government Comprehensive Planning and Land Development Regulations Act of 1985, Chapter 163, Part II, F.S. (Act). The future land use element of each plan, which includes a future land use map, assigns specific land uses to defined land use classifications. The Broward County Planning Council determined that the County Plan is the effective plan for the Site. The Project is consistent with and conforms to the County Plan.

On June 2, 2011, the Act was redesignated as the Community Planning Act. Although some provisions of the Act have been repealed and amended, comprehensive plans which were adopted prior to June 2, 2011 are still valid. The State Community Planning Act does not create regulatory authority that is not otherwise authorized by State law.

3.2.2.1 Broward County Comprehensive Plan

Pursuant to the authority granted to it by the Broward County Charter, the Plan which the Board of County Commissioners adopted is applicable to both the unincorporated area of the County and the land within the incorporated municipalities of the County.

According to the County Land Use Plan Map, the 67-acre area of the Site upon which the new electrical generating unit will be constructed and operated is within the Electrical Generating Facility future land use classification and the remainder of the Site is within the Utilities future land use classification. The existing and proposed use of the Site for an electrical generating facility is and will remain consistent with the uses which are permitted by the County Plan. A letter from the Broward County Planning Council confirming consistency with the County Plan is included in SCA Appendix 10.5 Land Use Plan Descriptions.

3.2.2.2 City of Hollywood Comprehensive Plan

The County Plan has been determined to be the effective plan for the Site. Figure 3.2.2-1 indicates how and where the Project will interact with the land use categories of the County Plan.

3.2.2.3 Zoning

The Site is zoned Port Everglades Development District (PEDD) (Figure 3.2.2-2). PEDD zoning designation is intended to provide land use patterns that are appropriate and consistent with port activities irrespective of whether the land is regulated by the cities of Hollywood, Fort Lauderdale or Dania Beach. Utilities, including electric and gas facilities and services, are a permitted use within the PEDD. The existing and proposed use of the Site is consistent and will remain consistent with the uses permitted by the PEDD.

3.2.3 Demography and Ongoing Land Use

3.2.3.1 Demography

Within 5 miles of the Site there are a total of eight municipalities:

- City of Dania Beach,

- Town of Davie,
- City of Fort Lauderdale,
- City of Hollywood,
- City of Lauderhill,
- Village of Lazy Lake,
- City of Plantation, and
- City of Wilton Manors.

Within 5 miles of the Site there is also property associated with Broward County and Broward County Regional Facilities. The area is a mix of industrial, commercial and residential development.

From 2000 to 2010, the population for the City of Hollywood increased by 1.0 percent (U.S. Census Bureau, 2010), while the population within Broward County and Florida increased by 7.7 and 17.6 percent, respectively. Using the available U.S. Census information, the table below depicts the population changes between 2000 and 2010 for the County and municipal areas located within the 5 mile study area. In addition, 2009 population estimates from the Florida Statistical Abstracts for municipalities not available from the 2010 U.S. Census are also shown in the table (BEA, 2010).

Jurisdiction	U.S. Census 2000	U.S. Census 2010	Percent Change from 2000
City of Hollywood	139,357	140,768	1.0
City of Dania Beach	20,061	29,639	47.74
Town of Davie	75,720	91,992	21.49
City of Fort Lauderdale	152,397	165,521	8.61
City of Lauderhill	57,585	66,887	16.15
Village of Lazy Lake	38	24	-36.84
City of Plantation	82,934	84,955	2.44
City of Wilton Manors	12,697	11,632	-8.39
Broward County	1,623,018	1,748,066	7.7
Florida	15,982,378	18,801,310	17.6

According to the Florida Statistical Abstract (UF/BEBR, 2011), the median population projections for all of Broward County for 2035 indicates continued growth, with an estimated population of approximately 1,949,700, a 9 percent increase from 2010.

3.2.3.2 Ongoing Land Use

Existing land use patterns in the vicinity of the Site are depicted in Figure 3.2.3-1. Land uses that surround the Site consists of transportation services that include Port facilities and industrial activities, such as intermodal shipping, oil storage, cruise ship docking, and light commercial. Within the 5 mile radius are areas that consist of low density residential, regional activity centers, industrial, and commercial uses. The closest residences to the Site are located within the Harbor Inlet community, located in the City of Fort Lauderdale approximately 0.8 mile to the northeast of the Site.

Based on the population data and the existing land use data, there are no abnormal changes in the population or land use patterns in the vicinity of the Site. State, county, and local recreational areas are situated throughout the county in areas designated and used for parks and recreation. These areas are not in the immediate vicinity of the Site and would potentially not be affected by the construction or operation activities associated with the Project.

3.2.4 Leases, Easements, Title, Agency Works

3.2.4.1 Existing Easement and Authorizations

FPL utilizes a number of existing easements, licenses and other authorizations for facilities required for operations at the Port Everglades Plant. Some of these existing easements, licenses and authorizations will continue to be necessary with the operation of PEEC and some will require changes to support the Project. These authorizations include:

1) Perpetual easements for cooling water intake and discharge structures granted by Broward County,
2) A License Agreement with Broward County granting fuel oil piping easements from multiple Port berths,
3) A perpetual cooling water discharge canal easement to the ICW, issued by Broward County, and
4) A water discharge canal easement extending from FPL property due east along SE 32nd Street to the ICW, issued by Broward County.

Each of these existing easements and authorizations is summarized below.

(1) Intake and discharge structure water piping easements

In 1957, the Broward County Port Authority (Port), now the Port Everglades Department within Broward County, granted FPL easements for locating sub-grade water intake and discharge structures. The easement was amended in 1960, 1965 and again in 2011. These easements allow cooling water to be withdrawn from the ICW through the western end of Port Slip No. 3 and to be discharged to the discharge canal leading to the ICW. The intake easement to Slip No. 3 is 125 ft wide and continues from the northeast corner of the FPL owned property under the Port property to the western end of Port Slip No. 3. This easement contains four, 12 ft diameter culvert pipes. PEEC will require continued use of this perpetual easement.

The 1957 easement conveyance from Broward County also granted an easement for FPL to build an intake in an alternate location to the existing intake canal. The currently unused easement starts at the northeastern corner of the eastern fuel oil storage tanks area and runs northeast across Eisenhower Boulevard to the ICW, ending at the southeastern corner of the cruise ship terminal. PEEC may require the use of this easement as an alternative route for the aquatic organism return system as described further below. Attachment 10.12-1 in SCA Appendix 10.12 Current Leases and Easements contains drawings that identify this intake canal water piping and discharge structure easement.

(2) Fuel oil piping easements from multiple Port berths

The Port Everglades Plant has several fuel oil piping systems connecting the existing Plant to multiple Port berths. In 2008 Broward County and FPL entered into a "License Agreement" by which Broward County authorized the continued use of existing pipelines and multiple easements for these pipelines, as specifically described in the License Agreement and Exhibits thereto. The easements cover the piping systems for waterborne delivery of No. 6 and No. 2 fuel oil. Attachment 10.12-2 of SCA Appendix 10.12 Current Leases and Easements contains an easement survey for the fuel oil piping systems.

The No. 6 heavy fuel oil systems deliver fuel to the existing Port Everglades Plant Units 1 through 4 heavy oil storage tanks for the Plant's exclusive use. The No. 2 light fuel oil systems are dedicated to deliver Jet-A fuel to the existing light oil storage tanks owned by FPL but are leased to and operated by a third party. From those light oil storage tanks, Jet-A fuel is delivered to FPL's Gas Turbine Power Park - Port Everglades and to other offsite users such as FPL's Gas Turbine Power Park - Lauderdale and Fort Lauderdale-Hollywood International Airport. This No. 2 light fuel oil piping is not part of the PEEC Project. The easements and berths commence from the northeast corner of the

FPL property to multiple berths around Port Slips No. 3 and No. 1. The License Agreement is for a ten year term, after which the agreement provides that the facilities must be removed, deactivated or abandoned.

(3) Discharge canal water channel to the ICW

The 1957 easement conveyance from Broward County, as amended, granted an easement for a water discharge canal to the ICW. The existing discharge water canal easement is 125 feet wide and follows the channel centerline from the southeast corner of the FPL property to the ICW. The PEEC Project will require continued use of this existing perpetual easement. Attachment 10.12-1 in Appendix 10.12 Current Leases and Easements contains drawings that identify the easement for the discharge canal water channel to the ICW.

4) Water discharge canal easement

The 1945 easement conveyance from Broward County granted an easement for FPL that runs due east from the eastern edge of Eisenhower Boulevard (which is adjacent to the PEEC Site) north of and parallel to SE 32nd Street. The currently unused water discharge canal easement ends at the same location as the intake canal easement, namely the southeastern corner of the sea walls between Terminals 18 and 19.

All the easements summarized above are shown on Figure 3.2.4-1 with more detailed information contained in Attachment 10.12-1 in Appendix 10.12 Current Leases and Easements.

3.2.4.2 PEEC Associated Linear Facilities

FPL recognizes that locations of any easements or other authorizations for PEEC must account for future planned projects at the Port. As a result, FPL has taken a corridor approach in identifying associated linear facilities that maximizes the flexibility for coordinating the required PEEC associated linear facility easements with Broward County. This will allow the location of these associated linear facilities to avoid or minimize impacts to the Port's operations and future capital projects to the greatest extent possible.

ULSD Oil Pipeline Routes

The No. 6 piping and delivery systems within the easements will no longer be required for operation of PEEC. These No. 6 heavy fuel oil easements require some changes as described below. In this

SCA, FPL seeks to obtain the approval of these changes to the easements required for operation of PEEC. FPL also seeks to make the easements for the use of the property for the necessary associated linear facilities permanent. Coordination of changes to easements with the Broward County Port Everglades Department will occur in order to provide a planned modified system that will be consistent with the potential Port Slip No. 3 widening and future master vision plan projects.

Delivery of No. 6 heavy fuel oil to the Port Everglades Plant Units 1 through 4 will no longer continue with PEEC. Heavy fuel oil piping from Berths 10, 11, 12, 13, 14, and 15 that leads to the heavy oil storage tanks for the existing Port Everglades Plant will be taken out of service. The heavy fuel oil storage tanks will also be removed from service. FPL may release or abandon all or part of the easements used for No. 6 heavy fuel oil piping going to Berths 10, 11, 12, 14, and 15. FPL may seek changes of the No. 6 heavy fuel oil piping easement to Berth 13 to allow for the installation of new ULSD oil piping, providing FPL an offloading berth and connection to the Port's fuel oil delivery header system. Due to the age of the existing pipes, prior use for exclusive delivery of heavy oil, and to minimize environmental risk over the expected life of PEEC, it may be necessary for FPL to remove the existing No. 6 heavy fuel oil piping.

PEEC will use ULSD oil as the backup fuel supply. FPL requires the ability to receive waterborne deliveries of ULSD oil to ensure an adequate supply to PEEC under all circumstances and maximize the plant's ability to receive cost-effective fuel deliveries. Changes to the piping and easements are expected as required to result in multiple berth delivery capabilities for ULSD oil via the Port's fuel oil delivery header system. Per guidance from Port staff, PEEC anticipates connecting ULSD oil piping to the Port's fuel header near Berth 13 at Port Slip No. 3. The ULSD oil will be stored in a new storage tank on FPL property. Figure 3.2.4-2 shows FPL easements that are to be released, abandoned, or modified as part of the PEEC Project.

Aquatic Organism Return System Routes

FPL is required to install an aquatic organism return system as a provision of the Port Everglades Plant Industrial Wastewater Facility Permit No. FL0001538 issued by the FDEP. Aquatic organisms removed from the screens protecting PEEC's once-through cooling water infrastructure must be returned to the ICW. The aquatic organism return system will be located below grade on Port property and will require periodic at-grade access points to perform maintenance. The preferred northern route for the aquatic organism return system terminates at Port Slip No. 1.

Two alternatives to routing the aquatic organism return system to the proposed PEEC associated linear facilities corridor are possible using existing FPL easements. The alternative routes would place the aquatic organism return system piping within either the existing water discharge canal easement near SE 32nd Street or within unused intake canal easements described previously.

While the shorter overall distance of these alternate routes to return aquatic organisms to the ICW is beneficial, the endpoint of the system is less desirable as it would be in the southeastern corner of the seawalls in proximity of the Port's cruise ship terminal. Operations related to the docking of the largest cruise ships in the world, and the increased distance from currents originating in the inlet connecting the ICW to the Atlantic Ocean, are a few of the challenges to utilizing this location as the aquatic organism return system endpoint. In addition, the water discharge canal easement near SE 32nd Street is located within an area used for cruise ship passenger vehicle parking and stops on the eastern side of Eisenhower Boulevard just short of FPL property.

A short segment (approximately 114 ft) of new easement would be required to connect the existing water discharge canal easement near SE 32nd Street from its current endpoint at the eastern edge of Eisenhower Boulevard crossing westward to the PEEC Site. For these reasons, both alternative routes have not been evaluated in further detail at this time.

FPL seeks approval through this SCA of a Corridor within which a right-of-way for the PEEC associated linear facilities comprised of the aquatic organism return system piping and the ULSD oil system piping will be located and established in coordination with Broward County. The typical minimum width of the right-of-way necessary for the ULSD oil system and aquatic organism return system piping is 10 feet. The proposed corridor for these associated linear facilities and future easements are depicted on Figure 3.2.4-3.

3.2.5 Regional, Scenic, Cultural, and Natural Landmarks

There are two state parks, two areas identified as containing Critical Habitat, four locations designated as OFW, and ten Broward County Regional and Neighborhood Parks located within 5 miles of the Site.

The state parks i.e., Hugh Taylor Birch State Park and John U. Lloyd Beach State Park and the county parks, i.e., Roosevelt Gardens Parks, Franklin Park, Reverend Samuel Delevoe Park, Sunview Park, Secret Woods Nature Center, Boaters Park, Topeekeegee Yugnee Park, West Lake Park Anne Kolb

Nature Center, and Hollywood North Beach Park, offer outdoor recreational opportunities to residents and visitors and are identified in Figure 3.2.1-2, Government Jurisdictions (Municipalities) within 1-, 2-, 3-, 4-, and 5-Mile radii. Hugh Taylor Birch State Park, John U. Lloyd Beach State Park, West Lake Park and Hollywood North Beach Park are OFWs.

Located along the eastern shores of Florida, the Staghorn coral and Elkhorn coral were determined by the National Marine Fisheries Service (NMFS) as threatened in March 2005. The Acropora genus is the most abundant and species rich group of coral in the world.

3.2.6 Archaeological and Historical Sites

A desktop cultural resource survey was conducted in accordance with Chapter 267, F.S. (Florida Historical Resources Act), Chapter 1A-46 (Archaeological and Historical reporting Standards and Guidelines) to assist in identifying any previously recorded cultural resources and areas with the potential for containing unrecorded cultural resources within the Site. A copy of the desktop cultural survey report is provided in SCA Appendix 10.7.2 Cultural Resources. A brief description of the survey findings are provided in this section and a discussion of potential impacts from the Project are discussed in Section 5.9.

The survey consisted of researching and reviewing: the Florida Master Site File (FMSF); U.S. Geological Survey (USGS) quadrangle maps; previous cultural resource studies; property appraiser data; historic plat maps and aerials; and FPL records. A reconnaissance visit was also conducted. The FMSF serves as an archive and repository of information about Florida's recorded cultural resources that are listed, eligible, or potentially eligible for the National Historic Preservation Act (NHPA) and resources with potential or confirmed human remains. A review of the USGS quadrangle maps, historic plat maps, and historic aerials assist to establish the pre-development environment and land use history of a project area, as well as identify any potential historic resources within the area of the Site. The work of previous investigations is reviewed to gather information about the types of historic and cultural features that could be expected to occur within a project area.

The study determined that there were no previously recorded archaeological or historical sites within FPL's Port Everglades Plant property. The Port Everglades historic resource group that consists of most of the Port Everglades turning basin is located approximately 0.5 mile northeast of the Site. This area is potentially eligible for listing in the National Register of Historic Places (NRHP) but many of the historic elements or features have been altered or demolished.

Examination of aerial and maps indicate that the area of the Port Everglades Plant property was historically a low lying area that is considered to have a low probability for archaeological sites and features.

3.2.7 Social and Economic Characteristics and Public Services

3.2.7.1 Social and Economic Characteristics

The Project will be located entirely within the City of Hollywood in Broward County, Florida. The City of Dania Beach, City of Fort Lauderdale, and Broward County Regional Facility are all within 1 mile of the Site.

Labor Force

Broward County's labor force was reported at 985,607 as of December 2010, with approximately 885,009 residents listed as employed (Labor Statistics Workforce, 2011). According to Florida labor statistics, Broward County had an unemployment rate of 10.2 percent for December 2010, which is a 3.7 percent increase since the end of November 2008. For Florida and the U.S., unemployment was 12.0 and 9.4 percent, respectively, for December 2010. In November 2008, the unemployment rates were reported as 7.2 and 6.8 percent, respectively.

The average monthly private sector employment by major industry groups in Broward County for 2009, as reported by the Florida Statistical Abstract, is depicted in the following table. Construction and utilities provide approximately 5.33 and 0.21 percent of the county's employment, respectively, while the majority of the county employment is supplied by retail trade (16.14 percent) and health care and social assistance (12.76 percent).

Major Industry Group	Employment	Major Industry Group	Employment
All Industries	578,281	Agriculture, Forestry, Fishing, and Hunting	630
Mining	96	Utilities	1,231
Construction	30,798	Manufacturing	23,901
Wholesale Trade	38,248	Retail Trade	93,308
Transportation and Warehousing	19,408	Information Services	16,046
Finance and Insurance	34,207	Real Estate and Rental and Leasing	18,040
Professional and Technical Services	49,398	Management of Companies and Enterprises	5,029
Administrative and Waste Services	53,535	Educational Services	19,445
Health Care and Social Assistance	73,789	Arts, Entertainment, and Recreation	10,403
Accommodation and Food Services	65,218	Other Services	25,545

Source: UF/BEBR, 2011.

The Broward County employment annual projections for the construction and utilities industries are estimated to be 4.92 and 1.31 percent, respectively, between 2010 and 2018 (Florida Agency for Workforce Innovation, 2011).

3.2.7.2 General Income

Based on 2010 data, the City of Hollywood had an estimated per capita personal income of $23,729, which is an increase of $1,632 since 2000 (U.S. Census, 2011).

Based on 2010 data, Broward County had an estimated per capita personal income of $26,373 compared to Florida and United States per capita personal income of $24,272 and $26,059, respectively (U.S. Census, 2011).

The median household income in the City of Hollywood was $41,188 in 2010 (U.S. Census, 2011). When compared to the 2000 median household income, this was an 11 percent increase. In 2010, Broward County had a median household income of $48,063, while Florida had a median household income of $44,409, which was an increase of 13 percent and 12.6 percent from 2000, respectively.

Construction makes up approximately 6.0 percent of the total non-farm earnings in the county (2010 U.S. Census, 2011). The average wage per construction job in Broward County in 2009 was $44,802 (BEA, 2011).

3.2.7.3 Housing

Based on 2010 data, the total number of housing units in Broward County was 810,388, with 15.3 percent of those units vacant. For the City of Hollywood, the total number of housing units was 71,070, with 17.8 percent of those units vacant in 2010 (U.S. Census, 2011).

The total occupied housing units in Broward County for 2010 was 686,047 (City of Hollywood; 58,438), with 66.6 percent of those units occupied by the owners (City of Hollywood; 59.6 percent) and 33.4 percent occupied by renters (City of Hollywood; 40.4 percent). The average cost to purchase a home in Broward County in 2010 was estimated at $128,600 (City of Hollywood; $109,000) (U.S. Census, 2011).

In addition, Broward County has a total of 3,292 commercial lodgings, representing 137,799 lodging units. The total number of apartment buildings, rooming houses, rental condominiums, and transient apartment building units in the County was approximately 106,551 in 2010 (UF/BEBR, 2011).

3.2.8 Area Public Service and Utilities

3.2.8.1 Education

Public education in Florida is operated on a countywide basis. Each county's respective school district establishes educational policies and staffing requirements. The Broward County Public School District includes:

- 140 elementary schools,
- 1 K-8 school,
- 41 middle schools,
- 31 high schools,
- 16 adult/technical/centers,
- 1 virtual school, and
- 68 charter schools.

Broward County had a total enrollment of 256,872 for the 2010-2011 school year. This enrollment represents a 1,669-student increase since the 2009-2010 school year. Broward County schools

employed approximately 36,388 personnel (15,870 instructional staff; 10,894 clerical; 1,465 administrators; and 8,159 substitute/temporary teachers) for the 2009-2010 school year (Broward County District, 2011). By year 2016, the County anticipates an increase in the school enrollment to approximately 259,365 (approximately 1 percent increase).

Within 5 miles of the Site, there are approximately 48 public schools and 26 private schools. Within 1 mile of the Site, there are approximately 6 public schools and no private schools.

3.2.8.2 Transportation

The Project is located on the north side of Eller Drive between SE 14th Avenue and Eisenhower Boulevard/SE 19th Avenue. The primary roadway system providing access to and from the FPL property consists of one freeway (I-595), three arterial roadways (S.R. 84, Griffin Road, and U.S. 1), and one collector street (Eisenhower Boulevard).

I-595 is generally an 8 lane freeway extending from I-75 on the west to U.S. 1/Eller Drive on the east. S.R. 84 provides 4 through lanes in each direction (8 lane arterial roadway) from I-95 to SW 9th Avenue and becomes a 6 lane highway between SW 9th Avenue and U.S. 1. East of U.S. 1, S.R. 84 provides access to Port Everglades and to the Site via Eisenhower Boulevard. Griffin Road is a major east-west arterial roadway and provides three through lanes between I-95 and U.S. 1 (6 lane facility). Federal Highway (U.S. 1) provides north-south mobility through eastern Broward County and generally provides three through lanes (6 lane facility) in each direction between Griffin Road and S.R. 84. Eisenhower Boulevard is a north-south 4 lane divided collector roadway extending from 17th Street Causeway on the north to Eller Drive on the south.

Existing and future link traffic volumes on the main access routes (I-595, S.R. 84, Griffin Road, and U.S. 1/Federal Highway) were obtained from Broward County's Metropolitan Planning Organization. Table 3.2.8.2-1 documents the existing roadway conditions. The traffic volumes, published by the county, are also provided in Appendix 10.7.4. In addition, turning movement counts were conducted October 25, 2011, between 7:00 a.m. and 9:00 a.m. and from 4:00 p.m. to 6:00 p.m.

3.2.8.3 Medical Facilities

The Broward County Sheriff's Office, Department of Fire Rescue, will respond and provide emergency medical services to the Site. Broward Health is a nonprofit community health system that offers a full spectrum of services for residents and visitors of Broward County.

Broward Health includes approximately 30 healthcare facilities within Broward County. Broward County has 7 hospitals/medical centers (Broward Health, August 2011) and approximately 265 nursing and residential care facilities (UF/BEBR, 2011). There are approximately 4,372 licensed doctors of medicine and 653 licensed doctors of osteopathy, 1,248 dentists, 1,061 dental hygienists, 2,923 dental radiographers, 7,022 health practitioners (including chiropractors, optometrists, podiatrists, occupational therapists, physical therapists, massage therapists, nursing home administrators, and psychologists), 26,514 registered and practical nurses, 383 dispensing opticians, and 3,223 pharmacists and pharmacist interns in the county (UF/BEBR, 2011).

With 7 hospitals/medical centers located within the county, 5 provide emergency services: Broward General Medical Center is located approximately 1.5 miles north of the Site and has an Emergency Department and a Level 1 Trauma Center. The Trauma Center is 1 of 3 accredited centers in South Florida that provides around the clock care staffed with trauma surgeons, emergency medicine physicians, nurses and ancillary staff, and a rooftop helipad. The Broward General Medical Center is also a Certified Stroke Center that provides rapid diagnostic and treatment of stroke patients admitted to the Emergency Department.

3.2.8.4 Law Enforcement

The Broward County Sheriff's Office has provided law enforcement services for Port Everglades since 1991. The Broward County Sheriff's Office employs a staff of approximately 5,800. The services that are provided to Port Everglades include Harbor Patrol, Investigations Unit, Bomb Detection, and a K-9 Unit. The Broward County Sheriff's Office also manages the Security Operations Center Port Identification Office, which issues and monitors over 22,000 permanent identification cards and 15,000 temporary cards yearly. The Broward County Sheriff's Office Port Everglades District Office is located to the west and adjacent to the FPL property.

3.2.8.5 Fire Rescue

The Site is located within Port Everglades and is provided fire rescue support from the Broward County Sheriff's Office, Department of Fire Rescue. The Site is within Station No. 6 service area

that provides specialized firefighting and emergency response capabilities for the unique environment of Port Everglades. Station No. 6 maintains a multi-agency communication protocol between the airport, seaport, and the U.S. Coast Guard (USCG). The Station maintains two engines: an Advanced Life Support rescue unit and a specialized chemical truck (e.g., capable of deploying water, firefighting foam or dry chemical extinguishing agents). Fire Rescue Station No. 6 is located within the Broward County Sheriff's Office Port Everglades District Office and is west and adjacent to the FPL property on Eller Drive.

3.2.8.6 Recreational Facilities

Broward County and the municipalities within the County offer recreational activities to residents and visitors. Broward County Parks and Recreation Division includes 18 regional parks and nature centers, six neighborhood parks, and 21 natural areas, consisting of 6,500 total acres. Within 5 miles of the Site there are ten Broward County Regional and Neighborhood Parks:

- Roosevelt Gardens Parks,
- Franklin Park,
- Reverend Samuel Delevoe Park,
- Sunview Park,
- Secret Woods Nature Center,
- Boaters Park,
- Topeekeegee Yugnee Park,
- West Lake Park,
- Anne Kolb Nature Center, and
- Hollywood North Beach Park.

Figure 3.2.1-2 provides a location of park and recreational facilities that are within these jurisdictional areas. As previously indicated, within 5 miles of the Site there are a total of eight municipalities.

3.2.8.7 Electricity and Natural Gas

Electricity is provided by FPL to Broward County and the Site. Natural gas is supplied to Broward County and the Site by Florida Gas Transmission Company (FGT).

3.2.8.8 Water Supply and Sewage Treatment Facilities

Through the City of Fort Lauderdale Public Works Department, regional water and wastewater service is provided to approximately 300,000 residents and businesses in central Broward County.

The department operates and maintains two water treatment plants (i.e., Charles W. Fiveash and Peele-Dixie) and a regional wastewater treatment plant (i.e., G. T. Lohmeyer) for the city and adjacent municipalities.

The city gets its water from 36 wells that draw water from the Biscayne Aquifer. Water is treated and distributed through the 2 city-operated facilities. The Site receives water from the Charles W. Fiveash Regional Water Treatment Plant. The Fiveash facility has a distribution capability of 70 million gallons per day (MGD).

The George T. Lohmeyer Wastewater Treatment Plant is a central regional facility that receives and treats wastewater for the City of Fort Lauderdale, Wilton Manor, Oakland Park, and Port Everglades (including the Site), as well as sections of Tamarac and unincorporated Broward County. The Lohmeyer facility has a collection capability of 55.7 MGD.

3.2.8.9 Solid Waste Disposal

There are 38 licensed solid waste management facilities in Broward County. This includes two nominal 2,250 ton per day (TPD) municipal solid waste (MSW) resource recovery facilities, 10 transfer stations, 16 recycling facilities, 4 landfills (2 active, 2 long-term care), and 6 other licensed facilities (e.g, hauling). Existing solid waste from the Port Everglades Plant includes MSW and recycled materials. Approved contractors collect and transport the solid waste generated at the existing Port Everglades Plant for recycling or disposal. Minor amounts of hazardous wastes (waste solvents, oil, paints, and other chemicals) are generated from the existing operation. The existing FPL Port Everglades Plant is a Conditionally Exempt Small Quantity Generator (CESQG) of hazardous waste, and this is not expected to change with the operation of PEEC.

3.3 Physical and Biological Environment

The cooling-water intake withdraws water from the western end of Port Slip No. 3, which is connected to the Port Everglades Turning Basin, the ICW and the Atlantic Ocean through a tidal inlet (see Subsection 3.3.4.1). The Port Everglades Turning Basin and the ICW have a semi-diurnal tide range of approximately 2.53 feet (ft). Salinity in the Port Everglades Turning Basin and the ICW near the tidal inlet is approximately that of seawater.

PEEC is located within the jurisdictional boundaries of SFWMD. The SFWMD Basis of Review (BOR) for Water Use Permit Applications (March 18, 2010) defines seawater as water with a chloride

concentration at or above 19,000 milligrams per liter (mg/L). Based on the properties of seawater, a chloride concentration of 19,000 mg/L corresponds to a salinity of 34.3 parts per thousand (ppt) (Neumann & Pierson, 1966, p. 40). North and south of the harbor, the ICW is connected to numerous channels and waterways that carry stormwater runoff from upland areas. Consequently, downward excursions in the salinity concentration typically occur during wet periods. Salinity in the ICW approximately 1.5 miles north and south of the inlet is typically between 20 and 36 ppt (Broward County, FL, February 28, 2001).

3.3.1 Geology and Hydrology

The geology and hydrology of the Site vicinity are discussed below. The information presented in this Section provides a summary of the geohydrologic baseline information and draws heavily upon previously published regional studies. The regional studies include, but are not limited to:

- Reese, R.S., and Richardson, Emily, 2008, Synthesis of the Hydrogeologic Framework of the Floridan Aquifer System and Delineation of a Major Avon Park Permeable Zone in Central and Southern Florida: U.S. Geological Survey Scientific Investigations Report 2007-5207, 60 pp., 4 pls., plus apps.
- Preliminary Hydrogeologic Framework, ASR Regional Study, Final Report [Ron Reese (USGS) and Emily Richardson (SFWMD), October 4, 2004].
- Reese and Memberg, 2000. Hydrogeology and the Distribution of Salinity in Floridan Aquifer System, Palm Beach County, Florida, U.S. Geological Survey, Water Resources Investigations Report 99-4061.

Site specific subsurface information was obtained from borings performed by Ardaman & Associates, Inc. between December 2003 and January 2004 for the existing Port Everglades Plant.

3.3.1.1 Geologic Description of the Site and Area

A general description of the geology and hydrogeology of eastern Broward County, including the Site, is provided below. Based upon the FPL topographic survey by A.R. Toussaint & Associates, Inc. (June 17, 1994), the Site in the area of the Power Block is 15 ft to 17 ft National Geodetic Vertical Datum 1929 (NGVD 29). The Site slopes down between the Power Block and the property boundaries. Along the property boundaries the site elevation is typically 6 ft to 7 ft NGVD 29. According to the Soil Survey of Broward County, Florida, published by the U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS), the majority of the Site is occupied by Urban Land.

The Site lies in the physiographic region of the Atlantic Coastal Ridge (Fernald and Patton, 1984).

Based on the soil boring data, the uppermost undifferentiated deposits at the Site are primarily composed of sand and limestone fill material (20 ft thick; 16 ft to −4 ft NGVD 29). Below the fill material is a less permeable layer composed sandy silt with high organic content (5 ft thick; −4 ft to −9 ft NGVD 29). Underlying this layer is the top portion of the Biscayne Aquifer, which is composed of fine grained sand (40 ft thick; −9 ft to −49 ft NGVD 29). The limestone portion of the Biscayne Aquifer begins approximately −50 ft NGVD 29. The base of the Biscayne Aquifer is approximately −300 to −350 ft NGVD 29.

Rock units ranging in age from Paleocene to recent underlay the Site. Formations and groups discussed in this report include (from oldest to youngest): the Cedar Keys Formation of Paleocene age; Oldsmar Formation of lower Eocene age; Avon Park Formation of middle Eocene age; Ocala Limestone of upper Eocene age; Hawthorn Group of Miocene; and undifferentiated deposits of Pliocene, Pleistocene, and Holocene age (Reese and Richardson, 2004).

The following is a summary of the lithology and approximate thickness of each geologic unit anticipated at the Site, based on regional geology.

In general, the Cedar Keys Formation is subdivided by lithologic character and corresponding geophysical log characteristics into six units (Winston, 1994). In descending order they are: Unit A, characterized by a preponderance of anhedral and cryptocrystalline dolomite; euhedral dolomite is subordinate. Unit B is characterized by the presence of numerous relic grain textures in chalky to microcrystalline euhedral dolomite. Unit C is predominately anhydrite, with subordinate chalky to very fine microcrystalline euhedral dolomite. Unit D is characterized by a predominance of relic grains in a chalky to very fine microcrystalline euhedral dolomite, with few thin bedded anhydrites. Units E and F are similar in texture to Unit D, but contain fewer beds of relic grain texture. The top of the Cedar Keys Formation is found below the Boulder Zone. The massive anhydrite beds that form the base of the Floridan Aquifer System (FAS) are usually found 500 to 600 ft below the Boulder Zone (Reese and Memberg, 2000).

The Oldsmar Formation is limestone interbedded with dolomite. The Oldsmar Formation is approximately 1,100 to 1,500 ft thick in Broward County. The lower 300 to 600 ft of the Oldsmar Formation, locally called the Boulder Zone, is predominantly dolomite and contains massively bedded, cavernous, or fractured dolomite of high permeability and dense, recrystallized dolomite of

low permeability. At the Site, the top of the Boulder Zone is approximately −2,900 to −3,000 ft NGVD 29 (Reese and Memberg, 2000).

The Avon Park Formation in Broward County is composed predominantly of limestone interbedded with dolostones. Cherty dolostones are typical in the lowermost Avon Park Formation. The Avon Park Formation is approximately 1,000 ft thick in the study area. In Broward County, the top of the Avon Park Formation is approximately −1,100 ft NGVD 29 to −1,200 ft NGVD 29. The upper portion of the Avon Park Formation is part of the Upper Floridan Aquifer (UFA). Confining units separate the UFA from the Lower Floridan Aquifer (LFA).

The Ocala Limestone overlies the Avon Park. The Ocala Limestone is micritic or chalky limestone, to a medium grained calcarenitic limestone, to a coquinoid limestone. Regionally, this unit varies in thickness from 0 to 300 ft. This unit is part of the UFA.

Rocks of Miocene age at the Site belong to the Hawthorn Group. The Hawthorn Group is divided into lower carbonate and upper clastic sequences. The lower carbonate sequence is composed of poorly to moderately indurate phosphatic micrites and dolomites. The upper clastic sequence is composed primarily of greenish-gray phosphatic silts interbedded with coarse sand and sandstones. Clay beds in the Hawthorn Group function as the upper confining units for the FAS (Duncan et al, 1994). In the area of the Site, this unit ranges from 600 to 700 ft in thickness and the top of the Hawthorn Group is approximately −350 ft NGVD 29. The top of the Hawthorn Group occurs at a poorly consolidated sand or sandy silt beneath the biogenic limestones of the Tamiami Formation.

The formation of Pleistocene age consists of alternating beds of Miami Oolite, Anastasia, Fort Thompson and Key Largo Formations of sandstone, shell and limestone, which are intermixed with the Pamlico Sands (Reese, 1994).

The undifferentiated deposits consist of unconsolidated shell beds, sandy clay, quartz sands and sandy and shelly limestone. At the Site, the thickness of the surficial aquifer is approximately 350 ft.

3.3.1.2 Detailed Site Lithologic Description

Site lithology was determined from borings performed by Ardaman & Associates, Inc. for FPL between December 2003 and January 2004. The borings extended 50 to 60 ft below ground surface (ft-bgs). Based on the soil boring data, the uppermost undifferentiated deposits at the Site are primarily composed of sand and limestone fill material (20 ft thick; 16 ft to −4 ft NGVD 29). Below

the fill material is a less permeable layer composed sandy silt with high organic content (5 ft thick; −4 ft to −9 ft NGVD 29). Underlying this layer is the top portion of the Biscayne Aquifer, which is composed of fine grained sand (40 ft thick; −9 ft to −49 ft NGVD 29). The limestone portion of the Biscayne Aquifer begins approximately −50 ft NGVD 29. The base of the Biscayne Aquifer is approximately −300 to −350 ft NGVD 29.

3.3.1.3 Geologic Maps

Figure 3.3.1-1 presents hydrogeology, aquifer characteristics, and groundwater flow of the surficial aquifer system (SAS), Broward County (USGS, 1988). The Site is located just north and east of well G-2347 shown in Figure 3.3.1-1.

3.3.1.4 Bearing Strength

The Site is suitable for PEEC from a geotechnical standpoint. Lightly loaded structures could be supported on shallow foundations established in structural fill. Paving for access roads or parking areas could also be supported by structural fill. Heavily loaded structures will be supported on deep foundations such as piles, augured cast piles, stone columns, or other ground improvement methods to reduce settlement to acceptable levels.

3.3.2 Subsurface Hydrology

3.3.2.1 Subsurface Hydrology Data for the Site

There are four major components to the subsurface hydrogeologic framework in southern Florida: the unconfined SAS, which in coastal Broward County is part of the Biscayne Aquifer; the nearly impermeable sediments of the Hawthorn Group, which separates the surficial aquifer from the Floridan Aquifer; the confined FAS, which includes both the UFA and the LFA; and the Boulder Zone, which is part of the LFA. These components are discussed further below.

Surficial Aquifer System

The Biscayne Aquifer (surficial aquifer) is an unconfined aquifer that underlies approximately 4,000 square miles within Palm Beach, Broward, Miami-Dade, and Monroe Counties. In Broward County, the surficial aquifer is comprised primarily of sands, shell beds, and sandy limestone. In Broward County, the SAS varies in thickness from 200 to 350 ft. At the Port Everglades Plant, the SAS is between 250 and 300 ft thick.

Based on water table maps from Broward County, site boring data, one nearby monitoring well and National Oceanographic and Atmospheric Administration (NOAA) tide data, the water table at the

Site is estimated to be between 1.0 and 1.5 ft NGVD 29. The regional hydraulic gradient in the area of the Site is generally from west to east with a slope less than 1 ft per mile. Surface recharge in the area around the Port should be small [0.5 to 2 inches per year (in/yr)] due to the high percentage of directly connected impervious area.

At the Site, the hydraulic conductivity is less than 10 feet per day (ft/day) in the fill material between the ground surface and −9 ft NGVD 29. Slug test data reported in the SFWMD DBHYDRO database for shallow (10 to 15 ft) wells near the site give hydraulic conductivity values of between 2 and 4 ft/day. In the sand layer between −9 and −130 ft NGVD 29, the hydraulic conductivity should be much higher. The hydraulic conductivity in this layer, based on clean sand, is estimated to be between 10 and 35 ft/day and in the limestone below −130 ft NGVD 29 the hydraulic conductivity is estimated to be between 1,000 and 1,500 ft/day (Reese, 1994). Using a hydraulic gradient of 1 ft per mile and an effective porosity of 25 percent, the average groundwater flow velocity in the three layers described above would be approximately 1 foot per year (ft/yr), 10 ft/yr, and 415 ft/yr, respectively.

The Biscayne Aquifer is a designated Sole Source Aquifer of drinking water for Broward County. However, due to the close proximity of PEEC to the coast the surficial aquifer at the Site is only marginally fresh [total dissolved solids (TDS) concentrations <1,000 mg/L] in a relatively thin layer near the surface.

Intermediate Confining Beds

The Intermediate Confining Unit (ICU) is present throughout the Broward County and consists of phosphatic clay, silt, sand, limestone, and dolomite deposits of the Hawthorn Group. The Hawthorn Group sediments serve as a confining unit separating the SAS from the FAS. In the vicinity of the Site, the ICU is approximately 600 to 700 ft thick and well confined.

Floridan Aquifer

The FAS in the vicinity of the Site consists of the UFA, Middle Confining Unit (MCU), and LFA and ranges in age from Paleocene to Eocene. The uppermost permeable zones in the UFA occur in close association with an unconformity at the base of the Hawthorn Group. The top of the FAS near the site is approximately −950 ft NGVD 29. The thickness of the FAS near the site is between 2,800 and 2,900 ft. The MCU from −1,200 to −2,050 ft NGVD 29 is the primary confinement between the UFA and the LFA. The MCU contains a permeable zone, approximately 150 ft thick, called the Avon Park

Permeable Zone (APPZ). In the area of the Site, the APPZ is likely found between −1,400 and −1,650 ft NGVD 29. The LFA is approximately 1,700 ft thick and includes the Boulder Zone.

Reese and Richardson (2004) show the transmissivity of the UFA, in the area of the Site, to be approximately 20,000 square feet per day (ft^2/day). Near the Site, water in the UFA is brackish [total dissolved solids (TDS) concentrations range from approximately 2,500 to 3,500 mg/L].

The middle confining unit that separates the UFA and LFA consists of sediments from the Middle Eocene era with compositions similar to the UFA and LFA. Near the Site, the top of the MCU is approximately −1,200 ft NGVD 29 and the total thickness is approximately 800 ft. The confining unit separating the UFA and the APPZ is approximately 200 ft thick. The confining unit separating the APPZ and the LFA is approximately 400 ft thick. Near the Site, water in the APPZ has TDS concentrations between 5,000 mg/L and 35,000 mg/L.

The LFA is below the middle confining unit and above the sub-Floridan confining unit. The LFA consists of the thick complex sequence of limestone and dolostone. Near the coast, water in the LFA has TDS concentrations of 35,000 mg/L or more. The top of the LFA is approximately −2,050 ft NGVD 29. The thickness is estimated to be 1,700 ft. The LFA also contains the Boulder Zone.

Boulder Zone

The deeply buried zone of cavernous permeability, called the Boulder Zone, is found in fractured dolomite in the LFA and underlies most of southern Florida. The top of the Boulder Zone is irregular and near the Site the top is approximately −2,900 to −3,000 ft NGVD 29. The permeability of the Boulder Zone is extremely high because of its cavernous nature. This anomalous permeability, which prevents pressure buildup in injection wells, coupled with the fact that the Boulder Zone contains saltwater, makes it a commonly used zone for receiving injected wastewaters. The Boulder Zone is overlain by approximately 700 ft of low permeability limestone and dolomite, which limits upward movement of injected fluids to shallower parts of the FAS.

3.3.2.2 Karst Hydrogeology

Karst terrains develop in areas underlain by carbonate rocks such as limestone. They often have drainage systems that are reflected on the surface as sinkholes, springs, disappearing streams, or even caves (FDEP, November 4, 2011).

According to USGS Map Series No. 10, Sinkhole Type, Development, and Distribution in Florida, (Sinclair & Stewart, 1985), the Site is located in Area II, where the cover is reported to be 30 to 200 ft thick. In these areas, sinkholes are reported to be few, shallow, of small diameter, and develop gradually. Borings drilled at the Site do not show indications of Karst hydrogeology, such as voids or losses of circulation, within 50 ft of the surface.

3.3.3 Site Water Budget and Area Users

3.3.3.1 Site Water Budget

Climate and Meteorology

The Site is located in southeast peninsular Florida, which has a climate characterized as mild subtropical. Temperatures in the vicinity (measured at Fort Lauderdale-Hollywood International Airport, Florida) range from an average low of approximately 57 degrees Fahrenheit (°F) in January, to an average high of approximately 90°F in August, with an annual average of approximately 79°F.

The mean total annual rainfall in Fort Lauderdale, Florida, is 66.64 inches; with mean monthly totals ranging from 2.39 to 9.81 inches. Generally, the period of the year with the heaviest rainfall is from June to October. 62 percent of the annual rainfall occurs during the wet season [http://www.weather.com/weather/wxclimatology/monthly/graph/USFL0149].

Mean annual type-A pan evaporation is 74.5 inches (SFWMD, DBHYDRO Database, Station S140 SPW E, 1985 to 2011). Average pan evaporation is less than 6 inches per month from October through February and between 6.5 and 8.7 inches per month between March and September. Mean annual potential evaporation is approximately 54 in/yr (SFWMD DBHYDRO Station S140W, 2005 to 2011). Mean annual lake evaporation in eastern Broward County is approximately 51 in/yr (Fernald & Patton, 1984). Evapotranspiration from plants and soil, which is less than lake evaporation, is approximately 39 to 42 in/yr (Fernald & Patton, 1984). Consequently, regional surface water runoff and surficial aquifer recharge combined is between 13 and 28 in/yr. In the area of the Port and the Site, surficial aquifer recharge is limited due to the high percentage of directly connected impervious area. Therefore, most of the excess rainfall (precipitation minus evapotranspiration) is removed as stormwater runoff.

Groundwater Resources

The two major aquifers in Broward County are recharged from separate sources. The surficial aquifer is primarily supplied by rainfall in Broward and Palm Beach Counties. The UFA is supplied by

rainfall in the topographically high areas centered in Polk and Highlands Counties. A very small amount of water flow [i.e., less than 1 inch per year (in/yr)] recharges the surficial aquifer from the UFA due to the artesian pressures in the UFA.

Surface Water Resources

The Site is located directly adjacent to the Port Everglades Turning Basin, the ICW, and the Port Everglades tidal inlet that connects the ICW with the Atlantic Ocean. The intake canal to the north withdraws cooling water from Port Slip No. 3. The approximately 1 mile discharge canal flows south into the ICW. There are no other significant surface water bodies in the vicinity.

Groundwater/Surface Water Interactions

There is a complex hydrologic interaction between the SAS and the extensive network of navigation channels, water supply and drainage canals in southeast Florida. These canals, levees, pumps, and water control structures that were constructed by the U.S. Army Corps of Engineers (USACE) as part of the Central and South Florida Flood Control Project are currently operated by SFWMD. The FAS is confined by more than 600 ft of low permeability sediments. Therefore, there is very little interaction between the Floridan and the surficial aquifers. The upward recharge of the surficial aquifer from the FAS is approximately 1 in/yr.

3.3.3.2 Area Users

Use of surface water (other than "seawater") and fresh or saline groundwater is regulated by SFWMD. Information gathered from SFWMD was used to prepare the following summary of water uses near the Site.

There are no public supply wells permitted by the SFWMD within 1 mile of the Site. In addition, the Site is not located in any wellfield protection zone adopted by Broward County (Broward County, FL, February 27, 2001).

Figure 3.3.3-1 and Table 3.3.3-1 show the water use permits (surface and groundwater) within 5 miles of the Site, most of which are for irrigation, public supply, and industrial purposes. Sources of water used for these purposes include the surficial aquifer, the Floridan Aquifer, and small lakes/ponds. There are 416 permitted public supply withdrawals within 5 miles of the Site in the SFWMD database. The majority of the public supply is provided by the surficial aquifer.

The Port Everglades Plant currently uses water from the City of Fort Lauderdale and withdraws marine water from the ICW via the intake canal, the Port Everglades Turning Basin and the ICW. SFWMD has not required consumptive use permits for withdrawals of marine water for the existing Port Everglade Plant's once-through cooling system.

3.3.4 Surficial Hydrology

3.3.4.1 Hydrologic Characterization

The existing Site is west of the Port Everglades Turning Basin and the ICW, which are located at the west end of the 800 ft channel connecting the Port to the Atlantic Ocean. The Port Everglades Turning Basin is approximately 38 ft deep, approximately 1 mile long (north to south) and approximately 0.5 mile wide.

Port Everglades tidal inlet is a dredged maintained channel with design depth of 33 ft for a mid-width of 200 ft (NOAA NOS Nautical Chart 11472, 1985; see Figure 3.3.4-1). NOAA (2011) reports that the mean tidal range at the Port is 2.53 ft, the spring range is 2.81 ft, and the mean tide level is 0.74 ft NGVD 29.

The ICW is classified by FDEP as Class III Marine water. Salinity in the ICW approximately 1.5 miles north and south of the inlet is typically between 20 ppt and 36 ppt (Broward County, FL, February 28, 2001).

The existing Port Everglades Plant began operating in the 1960s and consists of four generating units (Units 1 through 4). Units 1 and 2 began commercial operation in 1960 and 1961, respectively. Units 3 and 4 began commercial operation in 1964 and 1965, respectively. The existing Port Everglades Plant configuration includes the withdrawal of once-through cooling water from the west end of Slip No. 3 of Port Everglades. The slip is 1,200 ft long and 280 ft wide. The withdrawal is made through four 244 ft long, 12 ft diameter concrete pipes that pass under Eisenhower Boulevard. The intake canal is approximately 2,100 ft long, 100 ft wide, and 13 ft deep at mean low water. The intake canal has been previously determined by the EPA not to be "waters of the U.S". and FDEP not to be "waters of the State." The total design intake flow rate of the existing Port Everglades Plant was 899,600 gallons per minute (gpm). The full load design temperature rise for the existing Port Everglades Plant was 13.8°F.

The discharge of once-through cooling water and other wastewaters is permitted under FDEP Industrial Wastewater (IWW) Permit No. FL0001538. FPL conducted Impingement Mortality and

Entrainment Characterization Studies (IMECS) at the Port Everglades facility between April 2006 and April 2007 (ENSR, March 2008). The IMECS report is included in Appendix 10.2.1. The outcome of these studies was that the current FDEP IWW permit (Condition I.B.15) requires FPL to develop a plan to return live fish, shellfish, and other aquatic organisms collected or trapped on the intake screens to their natural habitat. The plan will be developed and implemented as part of the PEEC Project.

The maximum extent of the thermal plume resulting from the existing Port Everglades Units 1 through 4 discharge was predicted using a mathematical model as part of a previous permit requirement. The surface area of the discharge canal between the Plant and the ICW is approximately 11.7 acres (Envirosphere Company, Inc., c. 1975). The area enclosed by the 5°F and the 10°F isotherms within the ICW were determined to be 7.6 acres and 1.7 acres, respectively. Biological impact assessments of the thermal discharges from the existing Port Everglades Plant were conducted by Applied Biology, Inc. (ABI) in 1975 and 1987. The 1987 study reached the following conclusions:

1. Based on results of 1975 studies, operation of the Port Everglades Plant appears to have had relatively little impact on resident fish and shellfish and plankton communities near the Plant.
2. Thermal impacts to benthic communities appear to be confined to the immediate discharge canal. Impacts are greatest during the summer when discharge temperatures exceed thermal tolerance limits of many resident organisms.
3. Following abatement of warm summer discharge temperatures, recruitment of benthic organisms into the discharge canal has historically been rapid.
4. Benthic communities within the ICW adjacent to the Port Everglades discharge canal appear unaffected by thermal discharges from the Plant.
5. No long-term negative impacts resulting from Plant operation have been documented for benthos of the ICW. During spring sampling periods, species richness in the ICW increased two to three fold between 1975 and 1987.

Water quality data submitted with the most recent NPDES permit renewal application is shown in Table 3.3.4-1.

3.3.4.2 Measurement Programs

Water quality, biological and flow data required to meet the conditions of the revised IWW Permit will be monitored and reported.

3.3.5 Vegetation/Land Use

Vegetation/land use surveys of the Port Everglades Plant Property and surrounding areas were completed in September 2011. The resulting vegetation/land use map of the Port Everglades Plant Property, the Site and surrounding area is found in Figure 3.3.5-1. This figure also shows the Site and the associated linear facilities corridor. Vegetative communities in and adjacent to the Port Everglades Plant Property, the Site and surrounding area as discussed in detail in Subsection 3.3.6.1. Vegetative communities in and adjacent to the associated linear facilities corridors are discussed in Subsection 3.3.6.2.

The FPL Port Everglades Plant Property and Site is located in a densely developed industrial area within Port Everglades. The Port Everglades Plant Property and Site are primarily occupied by electric power generating facilities, buildings, parking lots, and other infrastructure of the existing Port Everglades Plant [Florida Land Use, Cover and Forms Classification System (FLUCFCS)] 831 (Florida Department of Transportation, 1999), oil storage (FLUCFCS 146) and canals (FLUCFCS 512).

The surrounding vicinity is dominated by Port Everglades (FLUCFCS 815) and oil storage (FLUCFCS 146), located immediately east and west of the Port Everglades Plant Property (Figure 3.3.5-1). Additional land uses within the area surrounding the Port Everglades Plant Property include canals, port slips and turning basins, and the ICW (FLUCFCS 512), light industrial (FLUCFCS 155), commercial and service (FLUCFCS 140), mangrove swamp (FLUCFCS 612), and areas dominated by melaleuca (FLUCFCS 424) and Australian pine (FLUCFCS 437).

3.3.6 Ecology

3.3.6.1 Species Environmental Relationships

The following subsections include descriptions of important flora and fauna within the Port Everglades Plant Property, the Site and the surrounding area. This discussion includes information related to the presence of important wildlife species and the value of the vegetative habitats present. The following descriptions of the flora at or near the Port Everglades Plant Property and Site follow the FLUCFCS Level III codes.

Terrestrial Ecology Systems—Flora

The majority of the Port Everglades Plant Property is comprised of facilities related to electric power generation at the existing Port Everglades Plant (FLUCFCS Code 831). The existing electric power facilities do not include areas of significant natural vegetative habitats.

Within the existing Port Everglades Plant Property boundary, there is an area of open land on the northern side of the cooling water discharge canal adjacent to the pair of fuel oil tanks described below (FLUCFCS Code 190). This area is generally a mowed and maintained lawn with a small number of cabbage palm (*Sabal palmetto*). The ground cover is a mix of grasses and ruderal species.

The cooling-water intake (north side) and discharge (south side) canals are upland cut ditches (FLUCFCS Code 512). The banks of the canals are overgrown primarily with Brazilian pepper (*Schinus terebinthifolius*) and Australian pine (*Casuarina equisetifolia*) with scattered Mexican fireplant (*Poinsettia heterophylla*), Painted leaf (*Poinsettia cyathophora*), Durban crowfoot grass (*Dactyloctenium aegyptium*), Virginia creeper (*Parthenocissus quinquefolia*), and Prickly pear cactus (*Opuntia humifusa*).

). There is also a pair of oil storage tanks associated with the Gas Turbine Power Park – Port Everglades within the Port Everglades Plant Property. There are no natural or undeveloped areas within these portions of the Port Everglades Plant Property.

As described in Section 3.3.5, the area around the Port Everglades Plant Property is comprised of densely developed industrial and commercial areas. Natural terrestrial vegetative communities are scarce within the urban environment surrounding the Port Everglades Plant Property. Limited areas of mangrove wetlands and areas dominated by melaleuca and Australian pine occur near but not contiguous with the Port Everglades Plant Property.

A number of fuel oil storage tanks exist on the northern portions of the Port Everglades Property and Site east of the cooling water intake canal (FLUCFCS Code 146). A pair of fuel oil storage tanks exists on Port Everglades Property that are located north of the cooling water discharge canal and east of the Site. There is also a pair of oil storage tanks associated with the Gas Turbine Power Park – Port Everglades adjacent to the Site. There are no natural or undeveloped areas within these portions of the Port Everglades Property and Site.

Terrestrial Ecology Systems—Fauna

Wildlife habitat was altered in the late 1950s when the Port Everglades Plant was constructed. Natural vegetative communities have been cleared from the Port Everglades Plant Property and Site. Although small areas of mowed and maintained grass lawn are located within the Port Everglades Plant Property and Site, these areas do not provide quality wildlife habitat. Due to the prevalence of industrial and commercial development, vegetative communities adjacent to the Port Everglades Plant Property and Site are also disturbed and do not provide quality wildlife habitat.

Aquatic Systems

The only aquatic systems that occur within the Port Everglades Plant Property and the Site are the cooling-water intake and discharge canals (FLUCFCS Code 512). Previous studies have found no seagrasses within the canals, and there is no designated critical habitat for Johnson's seagrass (*Halophila johnsonii)* within all of Broward County.

Aquatic systems adjacent to the Port Everglades Plant Property include the ICW and Port Everglades slips and turning basin (FLUCFCS Code 512).

Threatened and Endangered Species

Plant and animal species designated by the U.S. Fish and Wildlife Service (FWS), the Florida Fish and Wildlife Conservation Commission (FWC), and the Florida Department of Agriculture and Consumer Services (FDACS) as endangered, threatened, species of special concern, commercially exploited, or under review, were included in this category.

Literature review, geographic information systems (GIS) database queries, and field reconnaissance were utilized to determine the species that could potentially be present in the habitats found on the Port Everglades Plant Property. Primary sources of information are the Florida Natural Areas Inventory (FNAI) database (2008); Florida Committee on Rare and Endangered Plants and Animals (FCREPA) reports; Preservation of Native Flora of Florida Law, Rule Chapter 5B-40, F.A.C.; the Regulated Plant Index (5B-40.0055); and Notes on Florida's Endangered and Threatened Plants, FDACS, Division of Plant Industry, Bureau of Entomology, Nematology and Plant Pathology – Botany Section, Contribution No. 38, Addition 2, Gainesville.

No threatened or endangered species were observed at or adjacent to the Port Everglades Plant Property and Site during field surveys although the manatee, which is classified as endangered by both the FWS and FWC, is known to occur in the vicinity of the Port Everglades Plant.

Plant and Animal Surveys

A combination of evaluation of habitat conditions, literature reviews, previous studies, FNAI database queries, and field surveys were used to identify federally and state listed species whose ranges and habitat preferences include the Port Everglades Plant Property and Site. The rareness and seasonality of threatened and endangered species did not warrant either multi-season surveys or an evaluation of threatened and endangered species habitat conditions to determine their potential presence or absence on the Port Everglades Plant Property.

Flora

Threatened, endangered, and/or plant species of special concern that occur within Broward County are listed in Table 3.3.6-1. Due to the impacted nature of the Port Everglades Plant Property and Site, no suitable habitat for listed plant species exists within the Port Everglades Plant Property and Site. The data obtained from the FNAI did not include any documented occurrences of listed plant species within the Site. There was one historically documented occurrence of sea lavender (*Argusia gnaphalodes*) a Florida endangered species, within one mile of the Site. Within a 5 mile radius of the Port Everglades Plant Property, the FNAI data includes historical occurrences of sea lavender, Atlantic Coast Florida lantana (*Lantana depressa* var. *floridana*), golden leather fern (*Acrostichum aureum*, large-flowered rosemary (*Conradina grandiflora*), silver palm (*Coccothrinax argentata*), and West Indies mahogany (*Swietenia mahogany*) as shown in Figure 3.3.6-1.

Fauna

Threatened, endangered, and/or animal species of special concern that occur within Broward County are listed in Table 3.3.6-1. Due to the lack of suitable habitat and highly developed industrial and commercial surroundings, no threatened or endangered species occur within the Port Everglades Plant Property and Site. The FNAI database review did not result in any occurrences of listed animal species at the Port Everglades Plant Property and Site. However, a query of the FNAI database resulted in several documented occurrences of listed species within a 5 mile radius of the Site (see Figure 3.3.6-1, Listed and Observed Species Occurrences Within 5 Miles). In addition, manatees are known to congregate in the vicinity of the Site and a Manatee Protection Plan is included as part of the IWW permit requirements.

3.3.6.2 Associated Linear Facilities Corridors -- Ecology

The preferred corridor for the fuel oil pipeline and aquatic organism return system (corridor) is located in a previously developed portion of Port Everglades. The corridor is occupied by roads, an abandoned rail spur and other infrastructure of the existing Port Everglades [Florida Land Use, Cover and Forms Classification System (FLUCFCS)] 815 (Florida Department of Transportation, 1999) as shown in Figure 3.3.5-1.

The surrounding vicinity is dominated by Port Everglades, the existing power plant (FLUCFCS Code 831) and oil and natural gas storage (FLUCFCS Code 146). Additional land uses within the area surrounding the preferred corridor include port slips, canals and the ICW (FLUCFCS Code 512), light industrial (FLUCFCS Code 155), commercial and service (FLUCFCS Code 140).

The majority of the preferred corridor comprises paved roads and cargo processing areas for the port. There are scattered landscape islands with sod ground cover, planted cabbage palms (*Sabal palmetto*) and small oak trees.

Wetlands

Within the area of the preferred corridor, three agencies, the USACE, FDEP, and Broward County, have rules that apply to wetlands jurisdiction. To be jurisdictional, a wetland must ascribe to a minimum of two characteristics defined by rule: presence of vegetation listed as belonging in wetlands, having a certain defined hydrology, and/or the presence of hydric soils. There are no jurisdictional wetlands within the corridor, but it is immediately adjacent to wetlands associated with the outside of the cooling-water intake and barge canals.

Terrestrial Ecology Systems

Natural vegetative communities have been cleared from the preferred corridor. Although small areas of mowed and maintained grass lawn are located within the corridor, these areas do not provide quality wildlife habitat. Due to the prevalence of industrial and commercial development, vegetative communities adjacent to the preferred corridor are also disturbed and do not provide quality wildlife habitat.

Aquatic Systems

Aquatic systems adjacent to the preferred corridor include the cooling-water intake canal, ICW and Port Everglades slips and turning basin (FLUCFCS Code 512).

Threatened and Endangered Species

Due to the lack of suitable habitat and highly developed industrial and commercial surroundings, no threatened or endangered species are likely to occur within the preferred corridor. The FNAI database review did not result in any occurrences of listed animal species within the corridor.

3.3.6.3 Pre-Existing Stresses

Terrestrial Systems

The greatest pre-existing stress to terrestrial systems of the Port Everglades Plant Property, Site and surrounding area is the result of commercial and industrial development. The natural topography, soils, and hydrology of the Port Everglades Plant Property and Site are extensively altered as a result of the addition of fill material and topographic grading. Any natural ecosystems and wildlife habitat that may have previously been located at the Port Everglades Plant Property and Site have been lost, and natural drainage features have been modified.

Aquatic Systems

Aquatic systems in the vicinity of the Port Everglades Plant Property and Site are subjected to stress from numerous sources related to commercial, industrial and urban land use, development, and the construction and operation of water management systems. Pre-existing stresses include:

- Altered hydrology,
- Altered salinity,
- Elevated loads of nutrients and organic matter,
- Input of contaminants,
- Power plant intake/discharge,
- Port Everglades,
- Physical alterations, and
- Boating and fishing pressure.

3.3.6.4 Measurement Programs

Terrestrial Ecology

Terrestrial ecological resources were evaluated through reconnaissance, previous studies, and literature searches. Vegetative communities, wildlife utilization, and potential for threatened and endangered wildlife occurrence were addressed during reconnaissance surveys.

Wetland Methodology

Within the area of the Port Everglades Plant Property and Site, three agencies, the USACE, FDEP, and Broward County, have rules that apply to wetlands jurisdiction. To be jurisdictional, a wetland must ascribe to a minimum of two characteristics defined by rule: presence of vegetation listed as belonging in wetlands, having a certain defined hydrology, and/or the presence of hydric soils. The applicable characteristics for wetland determination as prescribed by the regulatory agencies were used. There are no jurisdictional wetlands on the Port Everglades Plant Property and Site outside of the cooling-water intake and discharge canals.

3.3.7 Noise

3.3.7.1 Background Information

Sound propagation involves three principal components: a noise source, a person or a group of people, and the transmission path. While two of these components, the noise source and the transmission path, are easily quantified (i.e., by direct measurements or through predictive calculations), the effect of noise on humans is the most difficult to determine due to the varying responses of humans to the same or similar noise patterns. The perception of sound (noise) by humans is very subjective, and just as for odors and taste, it is very difficult to predict a response from any particular individual to these levels.

Noise above certain levels can impact the health and welfare of plant employees, the general public and wildlife. The magnitude of noise levels or loudness is referred to as sound pressure level (SPL), with units in decibels (dB). Decibels are calculated as a logarithmic function of SPL in air to a reference effective pressure, which is considered the hearing threshold, or:

$$SPL = 20 \log_{10} (P_e/P_o)$$

where: P_e = measured effective pressure of sound wave in micropascals (µPa), and

P_o = reference effective pressure of 20 µPa.

To account for the effect of how the human ear perceives sound pressure, at moderate to low levels, SPLs are adjusted for frequency (or pitch). One of the most commonly used frequency filters is the A-weighting (dBA), which adjusts measurements for the approximated response of the human ear to low frequency SPLs [i.e., below 1,000 hertz (Hz)] and high frequency SPLs (i.e., above 10,000 Hz).

Noise has two different types of effects on people: the direct physical effects such as hearing loss and the less direct effects involving interference with activities such as sleep and conversation. In the

early 1970s, the EPA established numerical noise standards (EPA, 1974). The noise standards were developed without considering cost or technical feasibility. In developing these standards, the EPA drew upon a large body of survey data describing the degree of activity interference and resulting annoyance for a variety of noise levels. However, these standards were not meant to be pragmatic or realistic for short term noise control purposes (Harris, 1991).

3.3.7.2 Local Noise Ordinances

There are no Florida or federal noise regulations applicable to the Project. PEEC is located within the City of Hollywood that has a noise ordinance codified in Chapter 100 Noise, Title IX General Regulations, City of Hollywood Code of Ordinances. The City of Hollywood noise ordinance does not have quantitative noise limits, rather the noise ordinance prohibits "uninvited noise" that is "unreasonably loud" as defined in the ordinance. Uninvited noise is defined as "noise not originating on the receiving property" while unreasonably loud is defined as "uninvited noise shall be deemed unreasonably loud if it is plainly audible inside of a receiving property across a property line and causes actual interference with a person's peaceful enjoyment of a residence or the peace and tranquility of the surrounding neighborhood" (Section 100.01). A violation of the ordinance is based on the filing of the complaint with information on circumstances of the noise and is enforced by a law enforcement officer. A violation of the noise ordinance is a nuisance under the City of Hollywood's ordinances. There is also a limitation on construction, alteration, repair, excavation, or demolition of any building or structure no earlier than 7:00 a.m. and no later than 6:00 p.m., Monday through Friday. Such work is also restricted to no earlier than 8:00 a.m. and no later than 6:00 p.m. on Saturday, and no times on Sunday. Construction work may proceed outside the time limitations with approval from the City of Hollywood. The City of Hollywood noise ordinance prohibits unreasonably loud noise as defined in the ordinance.

Broward County has a noise ordinance that sets maximum allowable sound levels (Broward County, Code of Ordinances, Part II, Chapter 27 - Pollution Control, Article VII. - Noise, Ordinance No. 2003-07). The ordinance identifies goals, applicability, prohibitions, and policies that are used to guide development with regards to noise in Broward County. The Broward County noise ordinance limits the maximum allowable sound levels measured at the receiving property boundary with governmental facilities, community service facilities, commercial/business facilities (shown in the table below).

MAXIMUM ALLOWABLE SOUND LEVELS

Receiving Property Category	Time	L_{50} Sound Level (dBA)[a]	L_{max} Sound Level (dBA)
Residential property, or residential portion of a multi use property	At all times	55	65
Government facilities, community service facilities, commercial/ business facilities	At all times	65	75

[a] L_{50} equals the sound pressure level exceed 50 percent of the time, based on any measurement period of not less than ten (10) minutes.
[b] A source of sound shall not be considered in violation of the sound level limits set for in the table, if the measured sound level exceeds the background sound level by less than five (5) dBA.

Exemptions from the Broward County maximum allowable sound levels include the operation of motor vehicles on a public and private right of way; the operation of boats, ships or vessels on a waterway, and movement of aircraft. Operation of any tools or equipment used in construction, drilling, dredge and fill, or demolition work is exempt from the maximum allowable sound levels from 7:00 a.m. to 7:00 p.m. Routine maintenance of public service utilities is also exempt from the maximum allowable sound levels from 7:00 a.m. to 7:00 p.m.

3.3.7.3 Ambient Noise Measurements

Ambient noise monitoring was conducted in August 2011 to obtain baseline noise measurements for this Project. The equipment and procedures used to monitor the baseline noise levels conformed with the requirements for procedures, methods, and equipment specified by the American National Standards Institute (ANSI) (1993, R2008). Specifically, the noise measurements followed the ANSI S12.9/Part 3-1993 (R2008): "Quantities and Procedures for Description and Measurement of Environmental Sound, Part 3: Short-term Measurements with an Observer Present."

Noise measurements were made using a sound level meter that was set to the slow response mode to obtain consistent, integrated, A-weighted SPLs. Concurrent one-third octave band frequencies were also measured at all monitoring locations. The octave band data from each monitoring location was measured and stored during each monitoring period. Both daytime and nighttime monitoring measurements were performed to accurately assess the baseline noise conditions.

Integrated SPL data consisting of the following noise parameters were collected at each location:

- L_{eq} - The sound pressure level averaged over the measurement period; this parameter is the continuous steady sound pressure level that would have the

same total acoustic energy as the real fluctuating noise over the same time period;

- L_{max} - The maximum sound pressure level for the sampling period;
- L_{min} - The minimum sound pressure level for the sampling period; and
- L_n - The sound pressure levels which were exceeded n percent of the time during the sampling period. For example, L_{90} is the level exceeded 90 percent of the time.

The SPL data were analyzed and reported in both dB and dBA. The higher the decibel value, the louder the sound.

The SPL averages were calculated using the following formula:

$$\text{Average SPL} = 10 \text{ Log} \frac{\sum_{i=1}^{N} 10^{(SPL_i/10)}}{N}$$

where: N = number of observations, and
SPL_i = individual SPL in data set.

The SPLs and octave band data were collected during each monitoring event, using measurement techniques set forth by ANSI S12.9-1993/Part 3, 1993.

The noise monitoring equipment used during the study included:

- Larson Davis Model 824 Precision Integrating Sound Level Meter with Real Time Frequency Analyzer,
- Larson Davis Model PRM902 Microphone Preamplifier,
- Larson Davis Model 2560 Prepolarized ½ inch Condenser Microphone,
- Windscreen, tripod, and various cables,
- Sound Level Meter Calibration Unit, and
- Larson Davis Model CAL200 Sound Level Calibrator, 94/114 dB at 1,000 Hz.

Monitoring was conducted using the sound level meter mounted on a tripod at a height of 1.5 meters (m) (5 ft) above grade. A windscreen was used because all measurements were taken outdoors. The microphone was positioned so that a random incidence response was achieved. The sound level

meter and octave band analyzer were calibrated immediately prior to and just after the sampling period to provide a quality control check of the sound level meter's operation during monitoring.

Local meteorological conditions (wind speed, wind direction, temperature, and relative humidity) were measured during the monitoring periods. The operator recorded detailed field notes during monitoring and included major noise sources in the area. The Larson Davis sound level meter complies with Type I - Precision requirements set forth for sound level meters and for one-third octave filters. The calibration certificates are provided in SCA Appendix 10.7.3.

3.3.7.4 Noise Monitoring Locations

Figure 3.3.7-1 presents the locations where SPLs and octave band data were collected during the August 2011 ambient noise monitoring. The eight monitoring locations were selected to measure the existing baseline ambient noise levels at or near the Port Everglades Plant property boundary. Since the plant is located in an industrial area, there are no sensitive receptors in the immediate area.

3.3.7.5 Measured Ambient Sound Pressure Levels

Table 3.3.7-1 presents the existing baseline ambient sound pressure levels obtained in August 2011. SPL data shown in the tables for this section are integrated over the monitoring period, and reflect the "equivalent," "minimum," "maximum," and "10th percentile" (L_{90} = the SPL exceeded 90 percent of the time during the monitoring period) noise levels.

The L_{eq} reflects the total noise energy over the monitoring periods at each location. As a result, loud transient noises such as noise from traffic, aircraft, insects, and barking dogs all influence the observed values. The more persistent the transient loud noises, the higher the L_{eq}. For this reason, a more appropriate indicator of background noise levels is the L_{90}, which is the sound pressure level exceeded 90 percent of the time. Transient noise is generally excluded unless almost continuous noise occurs during monitoring, such as along a heavily traveled highway. The L_{min} and L_{max} reflect the minimum and maximum observed sound pressure levels, respectively. When the magnitude of the L_{max} is close (within a few dBA) to the L_{eq}, the observed noise levels are typically influenced by a continuous source of noise. When the magnitude of the L_{min} is close (within a few dBA) to the L_{90}, the observed sound pressure levels typically indicate lower amounts of transient noises.

Units 1 through 4 were offline during all the periods when the daytime and nighttime noise monitoring was conducted. Several of the simple cycle natural gas turbine units associated with the Gas Turbine Power Park – Port Everglades were operating during the afternoon when measurements

were taken. These units will continue to operate in the future during the construction and operation of PEEC. Operation of several of the units on August 1 and 2 was typical for that time of year. However, these units are typically operated for only a few hundred hours per year to meet peak electric demands such as that observed during a summer afternoon.

The ambient daytime L_{eq} observed in August 2011 are shown in Table 3.3.7-1 and reflect the influence of several of the simple cycle natural gas turbine units associated with the Gas Turbine Power Park – Port Everglades on observed afternoon noise levels and the influence of air traffic from the Fort Lauderdale-Hollywood International Airport, highway and local traffic, and typical noise sources from surrounding industrial activity during the daytime and nighttime. The daytime L_{eq} for the property boundary monitoring locations ranged from 78.7 dBA at Monitoring Location 6 during the afternoon to 55.7 dBA at Monitoring Location 1 during the morning. The highest L_{eq} observed in the afternoon at Monitoring Location 6, as well as the 72.3 dBA observed in the afternoon at Monitoring Location 5, were a result of the operation of the nearby gas turbine units. All of FPL's electric generating units were offline during the nighttime and morning monitoring periods and, as shown in Table 3.3.7-1, the L_{eq} observed at Monitoring Locations 5 and 6 were much lower. The nighttime L_{eq} noise levels ranged from 63.4 dBA at Monitoring Location 6 to 44.9 dBA at Monitoring Location 3.

The L_{90} excludes most of the transient noise and is more reflective of continuous noise sources. For the boundary monitoring locations the daytime L_{90} ranged from 73.2 dBA at Monitoring Location 6 during the afternoon to 50.3 dBA at Monitoring Location 2 during the morning. The nighttime L_{90} noise levels ranged from 62.4 dBA at Monitoring Location 6 to 44.0 dBA at Monitoring Location 3.

The observed L_{90} that exclude transient noise sources at the monitoring locations are typical of industrial noise areas and heavily traveled transportation corridors. The area surrounding the Port Everglades Plant is industrial and many of the transient noise sources observed during the noise monitoring, such as traffic on public roads and aircraft, are exempt from the ordinance. As described previously, the Broward County noise ordinance does not include maximum allowable sound levels for an industrial receiving property category. The Broward County ordinance has maximum allowable sound levels of 75 dBA and 65 dBA for government facilities, community service facilities and commercial/business facilities a generally less intense land use than for industrial facilities. Nonetheless, the daytime measurement (morning and afternoon) L_{90} that excludes transient noise sources were all less than 75 dBA for all monitoring locations and less than 65 dBA for all

monitoring locations except Monitoring Locations 5 and 6. The latter were influenced by the operation of the gas turbine units.

Several nearby communities, such as the City of Dania Beach located west of the Site and the City of Fort Lauderdale located north and west of the Site, have noise ordinances that include industrial land use. Both cities have a maximum permissible sound level of 75 dBA for a receiving land use classified as industrial. As shown in Table 3.3.7-1, all L_{90} measurements, which excludes transient noise sources, were less than 75 dBA.

3.3.8 Other Environmental Features

Outdoor lighting for PEEC will be necessary to satisfy Occupational Safety and Health Administration (OSHA) requirements for safety and security. Unconstrained lighting can cause "light pollution," which includes "sky glow" and "light trespass." Sky glow is the result of stray light being scattered in the atmosphere brightening the natural sky background level. Light trespass is the term used to describe light or illuminance that strays from its intended purpose and potentially becomes an annoyance. To evaluate the potential lighting impacts for the Project, an ambient outdoor lighting study was conducted and is presented in this section.

3.3.8.1 Background

Light is part of the electromagnetic spectrum, which ranges from radio waves to gamma rays. Electromagnetic radiation waves are fluctuations of electric and magnetic fields, which can transport energy from one location to another. Visible light is not inherently different from the other parts of the electromagnetic spectrum with the exception that the human eye has evolved to detect visible waves. The human eye responds to light based on its frequency. The frequency of light that is within the visible range establishes the observed color. While the response varies from person to person, the Commission Internationale de l'Eclairage (C.I.E., International Commission on Illumination) defined standard luminosity coefficients for the human eye in 1931.

A "candela" refers to the luminous intensity of a lighting source and is measured in candelas (cd). A "lumen" is the total luminous flux of a light source of one candela of luminous intensity. Illuminance is the total luminous flux incident on a surface per unit area. A "lux" is the measure of illumination (1 lumen) that falls on one square meter. The English measurement is the "foot-candle," which is the same illumination (1 lumen) falling on one square feet. A lux is equivalent to 0.093 foot-candle; one foot-candle is 10.76 lux. Luminance is the perceived brightness of an object which has been

illuminated by a source. Common examples of luminance are presented in Table 3.3.8-1. The luminance of an object depends on its material characteristics and reflectance and is measured in candelas per square meter (cd/m^2).

Light Trespass

Some municipalities and states have established programs to reduce light trespass. Light trespass standards are typically based on the amount of light from a light source that is transmitted onto adjoining properties. Light trespass standards are typically different for different land uses. Florida, the City of Hollywood, and Broward County do not have quantitative requirements pertaining to light trespass.

Sky Glow

The earliest measures of sky glow, also called sky brightness, were based on a scale upon which the magnitude of stars visible to the human eye is divided into 6 levels. The brightest star is a magnitude 1 and the dimmest (faintest) star is a magnitude 6. More recently, the magnitude scale was modified to express astronomical surface brightness (stars, planets, etc.) in units known as magnitudes per square arcsecond ($mag/arcsec^2$). The measurement scale is inverse and logarithmic, and is generally used in small area photometry and astronomy. Due to the land use in the area, sky glow measurements were not collected due to the relatively bright nature of the security, safety, street, and industrial lighting in the area.

3.3.8.2 Ambient Illumination Measurements

Illuminance measurements were taken to assess the existing ambient conditions in the vicinity of the Site. Measurements were taken at locations along the fence line of the FPL plant property to determine ambient illumination conditions. The illumination monitoring field efforts were conducted during August 2011. The August 2011 baseline monitoring events were conducted to obtain ambient nighttime light (illuminance) measurements. Measurements were taken using a calibrated Li-Cor LI-189 Photometer and recorded in kilolux (Klux).

The August 2011 illuminance measurements were collected at eight light monitoring locations in three different directions at a height of 5 ft above grade. The first measurement was collected with the meter facing directly up to the night sky. The second measurement was collected with the meter facing offsite light sources perpendicular to the ground. The third measurement was collected with the meter facing onsite light sources also aligned perpendicular to the ground. This was done to

address the light emitted on to and from the existing Port Everglades Plant. The light monitoring locations were the identical to noise monitoring locations presented in Figure 3.3.7-1.

The nighttime ambient illuminance measurements for August 2011 at locations around the Port Everglades Plant property boundary are summarized in Table 3.3.8-2. The observations were collected during a new moon during a clear evening with little to no cloud cover.

The nighttime illuminance with the photometer pointing straight up ranged from 2.2 klux at Location 8 to 0.3 klux recorded at Location 4. The maximum onsite and offsite facing measurements were also located at Location 8, 1.4 klux and 2.3 klux, respectively. The elevated illuminance level measured at Location 8 was due to the nearby bright street lights and Port security lighting in the area of the security gate off of Eisenhower Boulevard. The measurements show that both offsite and onsite light sources contributed to the overall illuminance at Port Everglades Plant property boundary. The range of measurements, when compared to examples in Table 3.3.8-1, reflect the industrial and urban nature of the Site that contains considerable facility and street lighting for continued operations and safety.

TABLE 3.2.1-1

GOVERNMENTAL JURISDICTIONS WITHIN 5-MILES OF THE SITE

County Parks		
City	**Map ID**	**Park Name**
Fort Lauderdale	1	Secret Woods Nature Center
Hollywood	2	West Lake Park
Fort Lauderdale	3	Franklin Park
Fort Lauderdale	4	Roosevelt Gardens Park
Fort Lauderdale	5	Delevoe Park
Hollywood	6	Hollywood North Beach
Fort Lauderdale	7	Lewis Chisolm Park
Fort Lauderdale	8	Lafayette Hart Park
Dania Beach	9	Boater's Park
Hollywood	10	Topeekeegee Yugnee Park

City Parks		
City	**Map ID**	**Park Name**
Hollywood	1	Hollywood Beach Community Center
Hollywood	2	Oakridge Park
Wilton Manors	3	Rachel Richardson Park
Hollywood	4	Hollywood Marina
Fort Lauderdale	5	Sunview Park
Fort Lauderdale	6	Boulevard Gardens Park
Fort Lauderdale	7	Stranahan Park
Fort Lauderdale	8	Greenfield Park
Fort Lauderdale	9	Swimming Hall Of Fame
Fort Lauderdale	10	Lincoln Park
Fort Lauderdale	11	Townsend Park
Fort Lauderdale	12	J C Carter Park
Fort Lauderdale	13	Maj William Lauderdale Park
Fort Lauderdale	14	Hardy, Florence C Park
Fort Lauderdale	15	Bubier Park
Fort Lauderdale	16	Ft Lauderdale High School Park
Fort Lauderdale	17	Birch Los Olas Anchorage
Fort Lauderdale	18	Riverland Elementary Park
Fort Lauderdale	19	Westwood Heights (triangle) Park
Fort Lauderdale	20	Hortt Park
Fort Lauderdale	21	Provident Park
Fort Lauderdale	22	Tarpon Cove Park
Fort Lauderdale	23	Holiday Park
Fort Lauderdale	24	Victoria Park
Fort Lauderdale	25	Bennett Elem School Park
Fort Lauderdale	26	Idlewyld Park

TABLE 3.2.1-1

GOVERNMENTAL JURISDICTIONS WITHIN 5-MILES OF THE SITE

City Parks		
City	**Map ID**	**Park Name**
Fort Lauderdale	27	D C Alexander Park
Fort Lauderdale	28	Riverland Park
Fort Lauderdale	29	Stranahan High School Park
Fort Lauderdale	30	Denison Property Site 125
Fort Lauderdale	31	Coontie Hatchee Landing
Fort Lauderdale	32	Esplanade Park (discovery Park)
Fort Lauderdale	33	Riverwalk Park - South Ii
Fort Lauderdale	34	Harbordale School/park
Fort Lauderdale	35	Flagler Heights
Hollywood	36	Waterview Park
Fort Lauderdale	37	Flamingo Park
Fort Lauderdale	38	Tarpon River Park
Fort Lauderdale	39	Sweeting Park
Fort Lauderdale	40	Sailboat Bend Preserve
Fort Lauderdale	41	Snyder Park
Fort Lauderdale	42	Riverwalk Park - North Iii
Fort Lauderdale	43	Sistrunk Park
Fort Lauderdale	44	Middle River Terrace Park
Fort Lauderdale	45	Virginia S Young Park
Fort Lauderdale	46	Benenson Park
Fort Lauderdale	47	Mizell Center
Fort Lauderdale	48	Floyd Hull Stadium
Fort Lauderdale	49	Riverside Park
Fort Lauderdale	50	Riverwalk Park - North I
Fort Lauderdale	51	15th St Boat Basin
Fort Lauderdale	52	Melrose Park
Fort Lauderdale	53	Guthrie-blake Park
Fort Lauderdale	54	Dillard Park
Fort Lauderdale	55	North Fork School/park
Fort Lauderdale	56	Lauderdale Manors Park
Fort Lauderdale	57	Lauderdale Villas Park
Fort Lauderdale	58	Riverwalk Park - South I
Fort Lauderdale	59	Riverwalk Park - North Ii
Fort Lauderdale	60	Sunrise Middle School/pool Only
Fort Lauderdale	61	Annie Beck Park
Fort Lauderdale	62	Sunset School/park
Fort Lauderdale	63	North Fork Riverfront Park
Fort Lauderdale	64	Warfield Park
Fort Lauderdale	65	Poinciana Park
Fort Lauderdale	66	Riverwalk Park - South

TABLE 3.2.1-1

GOVERNMENTAL JURISDICTIONS WITHIN 5-MILES OF THE SITE

City Parks		
City	**Map ID**	**Park Name**
Fort Lauderdale	67	Himarshee Park
Fort Lauderdale	68	Hector Park
Fort Lauderdale	69	Purple Pickle Park
Fort Lauderdale	70	Civic Peoples Park
Fort Lauderdale	71	Ann Herman Park
Fort Lauderdale	72	St Thomas Aquinas School
Fort Lauderdale	73	Georgian Oaks (pud)
Fort Lauderdale	74	Rogers School
Fort Lauderdale	75	Colleys Landing
Fort Lauderdale	76	Walker School Park
Fort Lauderdale	77	Bryant H Peney Park
Fort Lauderdale	78	Welcome Park
Fort Lauderdale	79	Francis I Abreu Place
Fort Lauderdale	80	Virginia Shuman Young Park
Fort Lauderdale	81	Cliff Lake Park
Fort Lauderdale	82	Dillard Park Green Space
Fort Lauderdale	83	Bayview Dr Canal Ends
Fort Lauderdale	84	South Beach
Parkland	85	Equestrian Center At Temple Park
Fort Lauderdale	86	Croissant Park Center
Fort Lauderdale	87	Merle Fogg Park
Fort Lauderdale	88	Collie Hammock Park
Fort Lauderdale	89	New River Dockage
Fort Lauderdale	90	Jack Kaye Park
Fort Lauderdale	91	George W English Park/boat Ramps
Fort Lauderdale	92	Westwood Heights School/park
Fort Lauderdale	93	Willingham Park
Fort Lauderdale	94	Public Beach
Wilton Manors	95	Colohatchee Park
Dania Beach	96	C W Thomas Park
Dania Beach	97	Byrd Park
Dania Beach	98	Mildred V Jones Park
Dania Beach	99	Frost Park
Wilton Manors	100	Colohatchee Boat Ramp
Dania Beach	101	It Parker Community Ctr
Wilton Manors	102	Hagen Park
Hollywood	103	Holland Park
Hollywood	104	Hollywood Beach Bandshell/theater
Hollywood	105	Charnow Park
Hollywood	106	Eppleman Park

TABLE 3.2.1-1

GOVERNMENTAL JURISDICTIONS WITHIN 5-MILES OF THE SITE

City Parks		
City	**Map ID**	**Park Name**
Hollywood	107	Henry Graham Park
Hollywood	108	Martin Luther King Jr Park/commcenter
Dania Beach	109	Nyberg Swanson House
Dania Beach	110	Sun Garden Isles Park
Hollywood	111	Mara Berman Giulianti Park
Wilton Manors	112	Veterans Park
Hollywood	113	Boggs Field
Hollywood	114	Eco Grande Golf Course
Hollywood	115	Rainbow Tot Lot
Hollywood	116	Emerald Hills Park
Dania Beach	117	Northside Melaleuca Park
Dania Beach	118	Tigertail Park
Dania Beach	119	Ocean Park
Dania Beach	120	Patrick J Meli Park
Dania Beach	121	Mullikin Park
Hollywood	122	Oakwood Hills Park
Hollywood	123	Rotary Park
Hollywood	124	Dowdy Baseball Park
Hollywood	125	Hollywood Beach Golf & Country Club
Hollywood	126	John B Kooser Memorial Park
Wilton Manors	127	Richardson Park & Preserve

State Parks		
City	**Map ID**	**Park Name**
Fort Lauderdale	1	H Taylor Birch State Park
Hollywood	2	John U Lloyd State Park

Historic Preservations		
City	**Map ID**	**Park Name**
Fort Lauderdale	1	Bonnet House

Note: See Figure 3.2.1-2

TABLE 3.2.8.2-1.
PORT EVERGLADES ENERGY CENTER
EXISTING TRAFFIC CONDITIONS

Roadway	From	To	Number of Lanes	2009 Current AADT	Level of Service*	
					Adopted	Current
Griffin Road	I-95	U.S. 1	6	29,500	D	C
S.R. 84	I-95	SW 9th Ave	8	55,000	D	D
	SW 9th Ave.	U.S. 1	6	44,000	D	D
I-595	I-95	U.S. 1	8	108,000	D	C
I-595/ Eller Drive	U.S. 1	SW 14th Ave	4	15,500	D	B
U.S. 1/ Federal Highway	Griffin Road	I-595/ Eller Drive	6	48,000	D	C
	I-595/ Eller Drive	S.R. 84	6	23,000	D	B

Source: Broward County Metropolitan Planning Organization, 2011.

Note: AADT= annual average daily traffic.

*Level of Service (LOS) Descriptions (Florida Department of Transportation)

LOS A = Completely free-flow conditions. The operation of vehicles is virtually unaffected by the presence of other vehicles and operations are constrained only by the geometric feature of the highway and by driver preferences.

LOS B = Free flow, although the presence of other vehicles becomes noticeable. Average travel speeds are the same as LOS A, but drivers have slightly less freedom to maneuver. Minor disruptions are easily absorbed, although local deterioration will be more obvious.

LOS C = Influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is clearly affected by other vehicles. Minor disruptions can cause serious local deterioration on service.

LOS D = Ability to maneuver is severely restricted due to traffic congestion. Travel speed is reduced by the increasing volume. Only minor disruptions can be absorbed.

LOS E = Operations at or near capacity, an unstable level. Disruptions cannot be dissipated readily.

LOS F = Forced or breakdown flow. Vehicles arrive at a rate greater than the rate at which they are discharged. The demand exceeds the computed capacity of the planned facility.

TABLE 3.3.3-1
WATER USE PERMITS WITHIN 5 MILES OF PEEC

Permit Number	Facility ID	Project Name	Status	Section	Range	Township	County	Source	Pump Capacity (Gallons per Minute)
06-01474-W	164591	BROWARD COUNTY SOUTH REGIONAL WELLFIELD	Abandoned	25,36	41	50	Broward	Aquifer Unspecified	0
06-01474-W	164600	BROWARD COUNTY SOUTH REGIONAL WELLFIELD	Abandoned	25,36	41	50	Broward	Aquifer Unspecified	0
06-05997-W	254438	FGT 6" FORT LAUDERDALE LOOP HYDROTEST	Primary	30	42	50	Broward	Biscayne Aquifer	90
06-06359-W	260230	SR 826 / EXPRESS CONNECTOR (FM 403984-1)	Primary	23	42	50	Broward	Biscayne Aquifer	600
06-02074-W	6450	12 AVENUE SITE	Standby	16	42	48	Broward	Biscayne Aquifer	110
06-01934-W	4128	THE 110 TOWER BUILDING GROUNDWATER REMEDIATION	Standby	10	42	50	Broward	Biscayne Aquifer	12
06-01837-W	2194	1505 SOUTH FEDERAL HWY	Standby	3	42	51	Broward	Biscayne Aquifer	40
06-01837-W	2195	1505 SOUTH FEDERAL HWY	Standby	3	42	51	Broward	Biscayne Aquifer	40
06-01837-W	2196	1505 SOUTH FEDERAL HWY	Standby	3	42	51	Broward	Biscayne Aquifer	40
06-01845-W	2291	ARDCO	Standby	22	42	50	Broward	Biscayne Aquifer	25
06-01845-W	2292	ARDCO	Standby	22	42	50	Broward	Biscayne Aquifer	15
06-01697-W	9947	AMERADA HESS 09291	Standby	14	42	50	Broward	Biscayne Aquifer	25
06-01608-W	9327	SHELL PORT EVERGLADES DISTRIBUTION PLANT	Standby	23	42	50	Broward	Biscayne Aquifer	15
06-01904-W	3389	NATIONAL LINEN SERVICE	Standby	3	42	50	Broward	Biscayne Aquifer	20
06-00122-W	16521	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	80
06-00122-W	16522	CITY WIDE IRRIGATION	Standby	12,13	41	49	Broward	Biscayne Aquifer	80
06-00122-W	16523	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	80
06-00122-W	16524	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	80
06-00122-W	16525	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	80
06-00122-W	16526	CITY WIDE IRRIGATION	Standby	12,13	41	49	Broward	Biscayne Aquifer	80
06-00122-W	16527	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	150
06-00122-W	16528	CITY WIDE IRRIGATION	Standby	12,13	41	49	Broward	Biscayne Aquifer	0
06-00122-W	16549	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	150
06-00122-W	16550	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	150
06-00122-W	16551	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	400
06-00122-W	16552	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	300
06-00122-W	16553	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	300
06-00122-W	16555	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	150
06-00122-W	24562	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	80
06-00122-W	24563	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	150
06-00122-W	24564	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	0
06-00122-W	24566	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	150
06-00122-W	24567	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	150
06-02035-W	5743	MELROSE PARK	Standby	18	42	50	Broward	Biscayne Aquifer	400
06-01600-W	9473	EXXON STATION 4-4961	Standby	2	42	50	Broward	Biscayne Aquifer	32
06-01873-W	2688	HESS STATION NO 09304	Primary	3	42	50	Broward	Biscayne Aquifer	25
06-02001-W	5020	BETHUNE ELEMENTARY	Standby	4	42	51	Broward	Biscayne Aquifer	300
06-01626-W	9530	MOBIL STATION 02-FGR	Standby	17	42	50	Broward	Biscayne Aquifer	25
06-00122-W	16529	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	150
06-00122-W	16530	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	150
06-00122-W	16531	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	500
06-00122-W	16532	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	500
06-00122-W	16533	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	500
06-00122-W	16538	CITY WIDE IRRIGATION	Primary	12,13	41	49	Broward	Biscayne Aquifer	150
06-01382-W	8725	EAST SUNRISE BOULEVARD TEXACO (1420 E. SUNRISE & 14TH AVE)	Primary	2	42	50	Broward	Biscayne Aquifer	10
06-01382-W	8726	EAST SUNRISE BOULEVARD TEXACO (1420 E. SUNRISE & 14TH AVE)	Primary	2	42	50	Broward	Biscayne Aquifer	20
06-01382-W	8727	EAST SUNRISE BOULEVARD TEXACO (1420 E. SUNRISE & 14TH AVE)	Primary	2	42	50	Broward	Biscayne Aquifer	20
06-01383-W	8736	7-ELEVEN STORE NO 30000 - RECOVERY WELL	Standby	10	42	50	Broward	Biscayne Aquifer	65
06-01455-W	8973	ALAMO FORT LAUDERDALE	Standby	22	42	50	Broward	Biscayne Aquifer	20
06-01311-W	8538	SHELL 88 39998.26	Standby	3	42	50	Broward	Biscayne Aquifer	20
06-01335-W	8617	SHELL SERVICE STATION	Standby	4	42	51	Broward	Biscayne Aquifer	20
06-01530-W	9222	FIRESTONE STORE #1822	Standby	10	42	50	Broward	Biscayne Aquifer	25

TABLE 3.3.3-1
WATER USE PERMITS WITHIN 5 MILES OF PEEC

Permit Number	Facility ID	Project Name	Status	Section	Range	Township	County	Source	Pump Capacity (Gallons per Minute)
06-01566-W	9346	TEXACO STATION 24-021-1343	Standby	33	42	49	Broward	Biscayne Aquifer	25
06-01566-W	9347	TEXACO STATION 24-021-1343	Standby	33	42	49	Broward	Biscayne Aquifer	20
06-01843-W	2280	MOBIL STATION 02-HYT	Standby	21	42	50	Broward	Biscayne Aquifer	8
06-01795-W	13790	FOREST LAWN CENTRAL	Primary	5	42	50	Broward	Biscayne Aquifer	300
06-01839-W	2199	EXXON STATION NO 4-5893 (2330 S FEDERAL HIGHWAY)	Standby	14	42	50	Broward	Biscayne Aquifer	15
06-01534-W	9217	HARBOUR TOWNE MARINA	Standby	35	42	50	Broward	Biscayne Aquifer	30
06-01902-W	3245	EXXON STATION NO 4-5272 (FDEP# 068502009)	Standby	2	42	50	Broward	Biscayne Aquifer	3
06-01902-W	3246	EXXON STATION NO 4-5272 (FDEP# 068502009)	Standby	2	42	50	Broward	Biscayne Aquifer	3
06-01258-W	8347	GREENSPACE NURSERY	Primary	4	42	50	Broward	Biscayne Aquifer	50
06-01246-W	24786	AMOCO SERVICE STATION #829	Primary	34	42	49	Broward	Biscayne Aquifer	40
06-01270-W	8392	AMOCO SERVICE STATION #743 (601 SW 17TH ST & N FEDERAL HWY)	Primary	18	42	49	Broward	Biscayne Aquifer	30
06-01270-W	8393	AMOCO SERVICE STATION #743 (601 SW 17TH ST & N FEDERAL HWY)	Primary	18	42	49	Broward	Biscayne Aquifer	30
06-01599-W	9337	COMMERCE COMPLEX	Primary	20	42	50	Broward	Biscayne Aquifer	50
06-01899-W	3013	REMEDIAL ACTION PLAN	Standby	10	42	51	Broward	Biscayne Aquifer	0
06-01899-W	3014	REMEDIAL ACTION PLAN	Standby	10	42	51	Broward	Biscayne Aquifer	50
06-01895-W	3015	TEXACO RETAIL FACILITY DEP FACILITY NO 068502666	Primary	14	42	50	Broward	Biscayne Aquifer	7
06-01895-W	3016	TEXACO RETAIL FACILITY DEP FACILITY NO 068502666	Primary	14	42	50	Broward	Biscayne Aquifer	7
06-01895-W	3017	TEXACO RETAIL FACILITY DEP FACILITY NO 068502666	Primary	14	42	50	Broward	Biscayne Aquifer	7
06-01895-W	3018	TEXACO RETAIL FACILITY DEP FACILITY NO 068502666	Primary	14	42	50	Broward	Biscayne Aquifer	7
06-01895-W	3019	TEXACO RETAIL FACILITY DEP FACILITY NO 068502666	Primary	14	42	50	Broward	Biscayne Aquifer	7
06-02423-W	25516	STATE ROAD 7 (US 441) RIVERLAND ROAD TO BROWARD BOULEVARD	Primary	6,7,18	42	50	Broward	Biscayne Aquifer	110
06-02423-W	25517	STATE ROAD 7 (US 441) RIVERLAND ROAD TO BROWARD BOULEVARD	Primary	6,7,18	42	50	Broward	Biscayne Aquifer	110
06-02857-W	30649	BUSINESS PARK/HOTEL IRRIGATION	Primary	33	42	50	Broward	Biscayne Aquifer	50
06-01474-W	5619	BROWARD COUNTY SOUTH REGIONAL WELLFIELD	Standby	25,36	41	50	Broward	Biscayne Aquifer	0
06-01474-W	5620	BROWARD COUNTY SOUTH REGIONAL WELLFIELD	Standby	25,36	41	50	Broward	Biscayne Aquifer	0
06-02733-W	29180	DANIA FARMS INC	Primary	34	42	50	Broward	Biscayne Aquifer	200
06-01474-W	136899	BROWARD COUNTY SOUTH REGIONAL WELLFIELD	#N/A	25,36	41	50	Broward	Biscayne Aquifer	0
06-01474-W	136901	BROWARD COUNTY SOUTH REGIONAL WELLFIELD	Monitor	25,36	41	50	Broward	Biscayne Aquifer	0
06-01474-W	136903	BROWARD COUNTY SOUTH REGIONAL WELLFIELD	#N/A	25,36	41	50	Broward	Biscayne Aquifer	0
06-02299-W	22430	TACO BELL RESTAURANT	Standby	7	42	50	Broward	Biscayne Aquifer	55
06-02801-W	29948	INTERNATIONAL GAME FISH ASSOCIATON	Primary	33	42	50	Broward	Biscayne Aquifer	30
06-02837-W	30268	FRANKLIN PARK	Primary	5	42	50	Broward	Biscayne Aquifer	110
06-02239-W	21544	RINKER MATERIALS/HOLLYWOOD	Primary	8	42	51	Broward	Biscayne Aquifer	220
06-02239-W	21545	RINKER MATERIALS/HOLLYWOOD	Primary	8	42	51	Broward	Biscayne Aquifer	220
06-02239-W	21546	RINKER MATERIALS/HOLLYWOOD	Primary	8	42	51	Broward	Biscayne Aquifer	100
06-02671-W	28525	RHONDA HOLLANDER	Primary	3	42	51	Broward	Biscayne Aquifer	58
06-02685-W	28623	WILLOW MANOR NORTH	Primary	34	42	50	Broward	Biscayne Aquifer	30
06-02683-W	30297	ESTATES OF FT LAUDERDALE	Primary	32	42	50	Broward	Biscayne Aquifer	175
06-02683-W	30298	ESTATES OF FT LAUDERDALE	Primary	32	42	50	Broward	Biscayne Aquifer	175
06-01575-W	1471	PORT 95 COMMERCE PARK	Abandoned	20	42	50	Broward	Biscayne Aquifer	0
06-01575-W	1472	PORT 95 COMMERCE PARK	Abandoned	20	42	50	Broward	Biscayne Aquifer	0
06-02624-W	27682	CONNER WAREHOUSE	Primary	20	42	50	Broward	Biscayne Aquifer	30
06-03512-W	118907	KINGSTON BUILDING	Primary	7	42	50	Broward	Biscayne Aquifer	55
06-03417-W	115861	HAGEN PARK	Primary	27	42	49	Broward	Biscayne Aquifer	75
06-03417-W	115862	HAGEN PARK	Standby	27	42	49	Broward	Biscayne Aquifer	40
06-02791-W	29934	SOFTSCAPES INC	Primary	9	42	50	Broward	Biscayne Aquifer	60
06-02791-W	29935	SOFTSCAPES INC	Primary	9	42	50	Broward	Biscayne Aquifer	60
06-03749-W	129274	SUN HARBOUR	Primary	9	42	50	Broward	Biscayne Aquifer	45
06-03572-W	121578	FAMILY NUTRITION CENTER	Primary	6	42	50	Broward	Biscayne Aquifer	50
06-03595-W	122170	STIRLING BUSINESS PARK	Primary	34	42	50	Broward	Biscayne Aquifer	90
06-02678-W	28585	VICTORY LIVING PROGRAMS	Primary	33	42	50	Broward	Biscayne Aquifer	115
06-02678-W	122092	VICTORY LIVING PROGRAMS	Primary	33	42	50	Broward	Biscayne Aquifer	40
06-02930-W	32018	EDGEWOOD DRAINAGE IMPROVEMENTS & (PASSIVE PARK)	Primary	21	42	50	Broward	Biscayne Aquifer	150

TABLE 3.3.3-1
WATER USE PERMITS WITHIN 5 MILES OF PEEC

Permit Number	Facility ID	Project Name	Status	Section	Range	Township	County	Source	Pump Capacity (Gallons per Minute)
06-02797-W	29933	GULFSTREAM APARTMENTS	Primary	34	42	50	Broward	Biscayne Aquifer	30
06-02929-W	31855	MAVERICK MANAGEMENT INC	Primary	6	42	50	Broward	Biscayne Aquifer	45
06-03499-W	118304	ANGLERS LANDING CENTER	Primary	29	42	50	Broward	Biscayne Aquifer	75
06-03185-W	105280	DOWDY PARK	Primary	10	42	51	Broward	Biscayne Aquifer	250
06-03184-W	105273	BOGGS FIELD	Primary	9	42	51	Broward	Biscayne Aquifer	250
06-03371-W	112972	FLORIDA EAST COAST RAILWAY	Primary	34	42	50	Broward	Biscayne Aquifer	40
06-03717-W	127612	TREASURE COVE YACHT CLUB TOWNHOMES	Primary	29	42	50	Broward	Biscayne Aquifer	50
06-03380-W	113211	RENAISSANCE ON THE OCEAN	Production	36	42	50	Broward	Biscayne Aquifer	40
06-03380-W	113212	RENAISSANCE ON THE OCEAN	Injection	36	42	50	Broward	Biscayne Aquifer	0
06-03380-W	113666	RENAISSANCE ON THE OCEAN	Production	36	42	50	Broward	Biscayne Aquifer	100
06-03380-W	113667	RENAISSANCE ON THE OCEAN	Injection	36	42	50	Broward	Biscayne Aquifer	0
06-04246-W	162908	WATER IRRIGATION PROJECT	Primary	33	42	50	Broward	Biscayne Aquifer	100
06-03665-W	125078	AMERICAN TELECOM PARTNERS	Primary	21	42	50	Broward	Biscayne Aquifer	30
06-04036-W	146407	THUNDERBIRD DEVELOPMENT AKA VILLAS AT HARBOR ISLES WEST	Primary	32	42	50	Broward	Biscayne Aquifer	90
06-03315-W	110781	SUNTRUST BANK - BROWARD	Primary	9	41	48	Broward	Biscayne Aquifer	20
06-04001-W	144915	WILTON PINES TOWNHOMES	Primary	26	42	49	Broward	Biscayne Aquifer	100
06-04001-W	144918	WILTON PINES TOWNHOMES	e Plugged and Abanc	26	42	49	Broward	Biscayne Aquifer	0
06-03289-W	109979	YOUNG ISRAEL OF HOLLYWOOD	Primary	31	42	50	Broward	Biscayne Aquifer	50
06-03635-W	123352	OLDIE GOLDIE BAR	Primary	5	42	50	Broward	Biscayne Aquifer	40
06-04742-W	213534	DELL MANOR CONDOMINIUM	Primary	51	10	42	Broward	Biscayne Aquifer	60
06-04742-W	213535	DELL MANOR CONDOMINIUM	Injection	51	10	42	Broward	Biscayne Aquifer	0
06-03696-W	126680	DILLARD HIGH SCHOOL	Primary	32	42	49	Broward	Biscayne Aquifer	85
06-03696-W	133659	DILLARD HIGH SCHOOL	Primary	32	42	49	Broward	Biscayne Aquifer	90
06-03696-W	169124	DILLARD HIGH SCHOOL	Primary	32	42	49	Broward	Biscayne Aquifer	60
06-04358-W	170948	RIVERLAND PARK	Primary	8	42	50	Broward	Biscayne Aquifer	125
06-04241-W	161528	WILTON GARDENS	Primary	26	42	49	Broward	Biscayne Aquifer	60
06-04474-W	184774	NORTH WEST 6TH STREET (SISTRUNK BLVD LANDSCAPE)	Primary	5	42	50	Broward	Biscayne Aquifer	120
06-04199-W	158671	PLUMMER CONVENIENCE STORE	Primary	5	42	50	Broward	Biscayne Aquifer	75
06-04071-W	149945	WELL	Primary	5	42	50	Broward	Biscayne Aquifer	40
06-03834-W	133478	NW 21ST/23RD AVENUE ROADWAY IMPROVEMENTS	Primary	32,33	42	49	Broward	Biscayne Aquifer	60
06-04342-W	169207	STRANAHAN HIGH SCHOOL	Primary	9	42	50	Broward	Biscayne Aquifer	275
06-04342-W	169208	STRANAHAN HIGH SCHOOL	Primary	9	42	50	Broward	Biscayne Aquifer	90
06-04342-W	169209	STRANAHAN HIGH SCHOOL	Primary	9	42	50	Broward	Biscayne Aquifer	120
06-04342-W	169210	STRANAHAN HIGH SCHOOL	Primary	9	42	50	Broward	Biscayne Aquifer	60
06-05121-W	221483	HALLANDALE/W HOLLYWOOD/RIVERLAND/SHERIDAN HILLS ELEM/HOLLYWO	Primary		0	0	Broward	Biscayne Aquifer	200
06-04630-W	191863	COLLINS ELEM/ATTUCKS MIDDLE/OLSEN MIDDLE/SEAGULL SCHOOL	Primary	3,4	42	51	Broward	Biscayne Aquifer	300
06-04630-W	191864	COLLINS ELEM/ATTUCKS MIDDLE/OLSEN MIDDLE/SEAGULL SCHOOL	Primary	3,4	42	51	Broward	Biscayne Aquifer	200
06-04630-W	191865	COLLINS ELEM/ATTUCKS MIDDLE/OLSEN MIDDLE/SEAGULL SCHOOL	Primary	3,4	42	51	Broward	Biscayne Aquifer	200
06-04630-W	191866	COLLINS ELEM/ATTUCKS MIDDLE/OLSEN MIDDLE/SEAGULL SCHOOL	Primary	3,4	42	51	Broward	Biscayne Aquifer	100
06-04713-W	193167	NORTH FORK ELEMENTARY	Primary	4	42	50	Broward	Biscayne Aquifer	200
06-05163-W	215577	CROISSANT PARK, VIRGINIA YOUNG, SUNLAND PARK, PLANTATION ELE	Primary		0	0	Broward	Biscayne Aquifer	150
06-05163-W	215578	CROISSANT PARK, VIRGINIA YOUNG, SUNLAND PARK, PLANTATION ELE	Primary		0	0	Broward	Biscayne Aquifer	100
06-05163-W	215580	CROISSANT PARK, VIRGINIA YOUNG, SUNLAND PARK, PLANTATION ELE	Primary		0	0	Broward	Biscayne Aquifer	350
06-05163-W	215581	CROISSANT PARK, VIRGINIA YOUNG, SUNLAND PARK, PLANTATION ELE	Primary		0	0	Broward	Biscayne Aquifer	120
06-05163-W	215582	CROISSANT PARK, VIRGINIA YOUNG, SUNLAND PARK, PLANTATION ELE	Primary		0	0	Broward	Biscayne Aquifer	200
06-05163-W	215583	CROISSANT PARK, VIRGINIA YOUNG, SUNLAND PARK, PLANTATION ELE	Primary		0	0	Broward	Biscayne Aquifer	200
06-04696-W	192971	ORIOLE ELEM/JAMES S RICKARDS, SUNRISE & LAUDERDALE LAKES MID	Primary	11,20,35	42	49	Broward	Biscayne Aquifer	200
06-05122-W	214682	EDGEWOOD, LLOYD ESTATES, WELLEBY ELEM	Primary	20	41	49	Broward	Biscayne Aquifer	350
06-05123-W	214694	BENNETT, SAWGRASS, PARK LAKES ELEM/CHARLES DREW FAMILY RESOU	Primary	22	42	49	Broward	Biscayne Aquifer	120
06-04520-W	188740	CRYSTAL LAKES	Primary	4	42	51	Broward	Biscayne Aquifer	140
06-04692-W	192805	LAKE MAYAN APARTMENTS	Primary	13	42	50	Broward	Biscayne Aquifer	32
06-04692-W	192806	LAKE MAYAN APARTMENTS	Injection	13	42	50	Broward	Biscayne Aquifer	0
06-01225-W	8276	RUNWAY GROWERS, INC. NURSERY	Primary	20	42	50	Broward	Biscayne Aquifer	250

TABLE 3.3.3-1
WATER USE PERMITS WITHIN 5 MILES OF PEEC

Permit Number	Facility ID	Project Name	Status	Section	Range	Township	County	Source	Pump Capacity (Gallons per Minute)
06-01225-W	8277	RUNWAY GROWERS, INC. NURSERY	Primary	20	42	50	Broward	Biscayne Aquifer	250
06-05870-W	231401	SUN RECYCLING I I I	Primary	20	42	50	Broward	Biscayne Aquifer	120
06-05744-W	228029	ANCHOR BAY APARTMENTS	Primary	26	42	50	Broward	Biscayne Aquifer	50
06-05969-W	253868	STIRLING OFFICE	Primary	4	42	51	Broward	Biscayne Aquifer	50
06-05745-W	228034	MOTOR SERVICES HUGO STAMP	Primary	22	42	50	Broward	Biscayne Aquifer	50
06-05056-W	213490	ARDEN PARK	Recharge	31	42	50	Broward	Biscayne Aquifer	70
06-05056-W	213491	ARDEN PARK	Recharge	31	42	50	Broward	Biscayne Aquifer	100
06-01279-W	8471	SOUTH BROWARD HIGH SCHOOL	Primary	10	42	51	Broward	Biscayne Aquifer	300
06-01279-W	168558	SOUTH BROWARD HIGH SCHOOL	Primary	10	42	51	Broward	Biscayne Aquifer	60
06-04448-W	179993	SHERIDAN STREET TRI-RAIL STATION	Primary	5	42	51	Broward	Biscayne Aquifer	36
06-05642-W	226688	OAKWOOD CENTER	Primary	33	42	50	Broward	Biscayne Aquifer	40
06-05013-W	198502	LAFAYETTE HART PARK	Primary	5	42	50	Broward	Biscayne Aquifer	35
06-05111-W	214493	LETO ACRES	Primary	32	42	50	Broward	Biscayne Aquifer	90
06-05111-W	214494	LETO ACRES	Primary	32	42	50	Broward	Biscayne Aquifer	50
06-06073-W	255877	FORT LAUDERDALE HIGH SCHOOL POOL	Primary	34	42	49	Broward	Biscayne Aquifer	240
06-06073-W	255878	FORT LAUDERDALE HIGH SCHOOL POOL	Injection	34	42	49	Broward	Biscayne Aquifer	0
06-05039-W	212890	DIXIE COURT HOUSING AUTHORITY	Primary	4	42	50	Broward	Biscayne Aquifer	70
06-04980-W	197266	BOYMIC FARMS LTD	Primary	21	42	50	Broward	Biscayne Aquifer	80
06-05485-W	223346	DIXIE COURT PHASE 3	Primary	4	42	50	Broward	Biscayne Aquifer	170
06-01714-W	221478	CONSERVATION SUBSTATION	Primary	18,19,23,25,	39	47	Broward	Biscayne Aquifer	50
06-05305-W	218636	RIO A C WELL	Primary	16	42	50	Broward	Biscayne Aquifer	65
06-05305-W	218637	RIO A C WELL	Abandoned	16	42	50	Broward	Biscayne Aquifer	0
06-05478-W	223113	FORT LAUDERDALE READY MIX BATCH PLANT	Primary	22	42	50	Broward	Biscayne Aquifer	375
06-05478-W	223114	FORT LAUDERDALE READY MIX BATCH PLANT	Primary	22	42	50	Broward	Biscayne Aquifer	375
06-03545-W	219063	BROWARD AREA OFFICE	Primary	3,4,15,33	41	50	Broward	Biscayne Aquifer	160
06-03545-W	219064	BROWARD AREA OFFICE	Primary	3,4,15,33	41	50	Broward	Biscayne Aquifer	160
06-05473-W	223041	SECURE STORAGE AT 84	Primary	21	42	50	Broward	Biscayne Aquifer	100
06-05048-W	213182	AIRPORT/SEAPORT EMS WAREHOUSE FIRE STATION	Primary	29	42	50	Broward	Biscayne Aquifer	70
06-05837-W	231169	UNI WELD	Primary	29	42	50	Broward	Biscayne Aquifer	40
06-05837-W	231170	UNI WELD	e Plugged and Abanc	29	42	50	Broward	Biscayne Aquifer	0
06-04926-W	196304	BROWARD COUNTY POLICE BENEVOLENT	Primary	20	42	50	Broward	Biscayne Aquifer	35
06-04971-W	197143	ALL STEEL & GYPSUM PRODUCTS	Primary	32	42	50	Broward	Biscayne Aquifer	60
06-05161-W	215527	BARCAR WAREHOUSE	Primary	2	42	50	Broward	Biscayne Aquifer	40
06-04981-W	219074	FLORIDA POWER AND LIGHT ANDREWS SUBSTATION	Primary	16,18,28	42	48	Broward	Biscayne Aquifer	100
06-04981-W	219075	FLORIDA POWER AND LIGHT ANDREWS SUBSTATION	Primary	16,18,28	42	48	Broward	Biscayne Aquifer	100
06-04981-W	219077	FLORIDA POWER AND LIGHT ANDREWS SUBSTATION	Primary	16,18,28	42	48	Broward	Biscayne Aquifer	100
06-05097-W	214151	HIDDEN HARBOR CONDOMINIUM	Primary	34	42	49	Broward	Biscayne Aquifer	69
06-05097-W	214152	HIDDEN HARBOR CONDOMINIUM	Primary	34	42	49	Broward	Biscayne Aquifer	0
06-05606-W	225726	CITY OF WILTON MANORS	Primary		0	0	Broward	Biscayne Aquifer	55
06-05606-W	225727	CITY OF WILTON MANORS	Primary		0	0	Broward	Biscayne Aquifer	55
06-05606-W	225728	CITY OF WILTON MANORS	Primary		0	0	Broward	Biscayne Aquifer	55
06-05606-W	225730	CITY OF WILTON MANORS	Primary		0	0	Broward	Biscayne Aquifer	70
06-05606-W	225731	CITY OF WILTON MANORS	Primary		0	0	Broward	Biscayne Aquifer	55
06-05606-W	225733	CITY OF WILTON MANORS	Primary		0	0	Broward	Biscayne Aquifer	120
06-05606-W	225735	CITY OF WILTON MANORS	Primary		0	0	Broward	Biscayne Aquifer	55
06-05287-W	218064	84 COMMERCE CENTER	Primary	20	42	50	Broward	Biscayne Aquifer	40
06-05961-W	253736	FIRST MT PLEASANT MISSIONARY BAPTIST CHURCH	Primary	5	42	50	Broward	Biscayne Aquifer	8.5
06-05961-W	253737	FIRST MT PLEASANT MISSIONARY BAPTIST CHURCH	Primary	5	42	50	Broward	Biscayne Aquifer	8.5
06-04263-W	167991	COOLING TOWER MAKE UP WATER	Primary	15	42	40	Broward	Biscayne Aquifer	300
06-04263-W	169668	COOLING TOWER MAKE UP WATER	Standby	15	42	40	Broward	Biscayne Aquifer	55
06-04263-W	169669	COOLING TOWER MAKE UP WATER	Standby	15	42	40	Broward	Biscayne Aquifer	55
06-04263-W	257869	COOLING TOWER MAKE UP WATER	Monitor	15	42	40	Broward	Biscayne Aquifer	0
06-05416-W	220821	LOW KEY MEATS	Primary	5	42	50	Broward	Biscayne Aquifer	50

TABLE 3.3.3-1
WATER USE PERMITS WITHIN 5 MILES OF PEEC

Permit Number	Facility ID	Project Name	Status	Section	Range	Township	County	Source	Pump Capacity (Gallons per Minute)
06-00130-W	14613	TOPEEKEEGEE YUGNEE PARK	Primary	5,8	42	51	Broward	Biscayne Aquifer	400
06-00130-W	14614	TOPEEKEEGEE YUGNEE PARK	Standby	5,8	42	51	Broward	Biscayne Aquifer	200
06-00130-W	14615	TOPEEKEEGEE YUGNEE PARK	Plugged and Abanc	5,8	42	51	Broward	Biscayne Aquifer	0
06-00130-W	24454	TOPEEKEEGEE YUGNEE PARK	Standby	5,8	42	51	Broward	Biscayne Aquifer	200
06-06176-W	258072	RIVERBEND SOUTH	Primary	5	42	50	Broward	Biscayne Aquifer	200
06-01426-W	8864	CEMEX - SOUTH FORT LAUDERDALE READY-MIX	Primary	22	42	50	Broward	Biscayne Aquifer	225
06-00123-W	31028	FORT LAUDERDALE PUBLIC WATER SUPPLY	Abandoned	13332	42	49	Broward	Biscayne Aquifer	0
06-00038-W	138200	HOLLYWOOD WATER TREATMENT PLANT	Monitor	25,36	41	50	Broward	Biscayne Aquifer	0
06-00038-W	138201	HOLLYWOOD WATER TREATMENT PLANT	Monitor	25,36	41	50	Broward	Biscayne Aquifer	0
06-00123-W	31028	FORT LAUDERDALE PUBLIC WATER SUPPLY	Abandoned	13332	42	49	Broward	Biscayne Aquifer	0
06-00123-W	31030	FORT LAUDERDALE PUBLIC WATER SUPPLY	Abandoned	13332	42	49	Broward	Biscayne Aquifer	0
06-00123-W	31030	FORT LAUDERDALE PUBLIC WATER SUPPLY	Abandoned	13332	42	49	Broward	Biscayne Aquifer	0
06-00123-W	117164	FORT LAUDERDALE PUBLIC WATER SUPPLY	Monitor	13332	42	49	Broward	Biscayne Aquifer	0
06-00123-W	117165	FORT LAUDERDALE PUBLIC WATER SUPPLY	Monitor	13332	42	49	Broward	Biscayne Aquifer	0
06-00123-W	117166	FORT LAUDERDALE PUBLIC WATER SUPPLY	Monitor	13332	42	49	Broward	Biscayne Aquifer	0
06-00123-W	212902	FORT LAUDERDALE PUBLIC WATER SUPPLY	Monitor	13332	42	49	Broward	Biscayne Aquifer	0
06-00123-W	212903	FORT LAUDERDALE PUBLIC WATER SUPPLY	Monitor	13332	42	49	Broward	Biscayne Aquifer	0
06-00123-W	212904	FORT LAUDERDALE PUBLIC WATER SUPPLY	Monitor	13332	42	49	Broward	Biscayne Aquifer	0
06-00123-W	212912	FORT LAUDERDALE PUBLIC WATER SUPPLY	Monitor	13332	42	49	Broward	Biscayne Aquifer	0
06-00431-W	28612	FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL AIRPORT	Plugged and Abanc	22,27,34	42	50	Broward	Biscayne Aquifer	0
06-00431-W	28613	FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL AIRPORT	Standby	22,27,34	42	50	Broward	Biscayne Aquifer	90
06-00431-W	28614	FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL AIRPORT	Plugged and Abanc	22,27,34	42	50	Broward	Biscayne Aquifer	0
06-00431-W	28615	FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL AIRPORT	Primary	22,27,34	42	50	Broward	Biscayne Aquifer	500
06-00431-W	28616	FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL AIRPORT	Standby	22,27,34	42	50	Broward	Biscayne Aquifer	0
06-00431-W	28617	FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL AIRPORT	Primary	22,27,34	42	50	Broward	Biscayne Aquifer	300
06-00431-W	163665	FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL AIRPORT	Primary	22,27,34	42	50	Broward	Biscayne Aquifer	150
06-01419-W	8866	CEMEX - SUNRISE READY-MIX	Primary	34	42	49	Broward	Biscayne Aquifer	225
06-06329-W	259735	THE GARDEN CENTER LLC	Primary	3	42	51	Broward	Biscayne Aquifer	100
06-03910-W	138789	FORT LAUDERDALE HIGH SCHOOL	Primary	34	42	49	Broward	Biscayne Aquifer	240
06-01562-W	9319	HILLS ENTERPRISES, INC.	Primary	33	42	50	Broward	Biscayne Aquifer	45
06-01562-W	9320	HILLS ENTERPRISES, INC.	Primary	33	42	50	Broward	Biscayne Aquifer	45
06-01562-W	259895	HILLS ENTERPRISES, INC.	Primary	33	42	50	Broward	Biscayne Aquifer	45
06-01562-W	259896	HILLS ENTERPRISES, INC.	Primary	33	42	50	Broward	Biscayne Aquifer	45
06-06344-W	259941	NEW CHURCH BUILDING	Primary	18	42	50	Broward	Biscayne Aquifer	60
06-06257-W	258833	SATORI	Primary	35	42	49	Broward	Biscayne Aquifer	70
06-00187-W	21916	CITY OF DANIA BEACH	#N/A	23,26-36	42	50	Broward	Biscayne Aquifer	0
06-00187-W	21917	CITY OF DANIA BEACH	Primary	23,26-36	42	50	Broward	Biscayne Aquifer	1400
06-00187-W	136781	CITY OF DANIA BEACH	Monitor	23,26-36	42	50	Broward	Biscayne Aquifer	0
06-00187-W	136781	CITY OF DANIA BEACH	Monitor	23,26-36	42	50	Broward	Biscayne Aquifer	0
06-00187-W	136782	CITY OF DANIA BEACH	Monitor	23,26-36	42	50	Broward	Biscayne Aquifer	0
06-00187-W	136782	CITY OF DANIA BEACH	Monitor	23,26-36	42	50	Broward	Biscayne Aquifer	0
06-00187-W	136783	CITY OF DANIA BEACH	Monitor	23,26-36	42	50	Broward	Biscayne Aquifer	0
06-00187-W	136783	CITY OF DANIA BEACH	Monitor	23,26-36	42	50	Broward	Biscayne Aquifer	0
06-00187-W	136784	CITY OF DANIA BEACH	Monitor	23,26-36	42	50	Broward	Biscayne Aquifer	0
06-00187-W	136784	CITY OF DANIA BEACH	Monitor	23,26-36	42	50	Broward	Biscayne Aquifer	0
06-00187-W	136785	CITY OF DANIA BEACH	Monitor	23,26-36	42	50	Broward	Biscayne Aquifer	0
06-00187-W	136785	CITY OF DANIA BEACH	Monitor	23,26-36	42	50	Broward	Biscayne Aquifer	0
06-00187-W	260022	CITY OF DANIA BEACH	Primary	23,26-36	42	50	Broward	Biscayne Aquifer	800
06-02472-W	40571	PORT 95 COMMERCE PARK PARCEL G BUILDINGS 200 AND 300	Primary	29,30	42	50	Broward	Lake	80
06-02834-W	42197	PORT 95 COMMERCE PARK	Primary	29	42	50	Broward	Lake	150
06-02834-W	42198	PORT 95 COMMERCE PARK	Primary	29	42	50	Broward	Lake	80
06-06335-W	259818	CRYSTAL LAKE TOWNHOMES	Primary	4	42	51	Broward	Off-site Lake(s)	50
06-03519-W	119468	MERIDIAN	Primary	4	42	51	Broward	Off-site Lake(s)	79

TABLE 3.3.3-1
WATER USE PERMITS WITHIN 5 MILES OF PEEC

Permit Number	Facility ID	Project Name	Status	Section	Range	Township	County	Source	Pump Capacity (Gallons per Minute)
06-03470-W	117423	PORT 95 800	Primary	30	42	50	Broward	On-site Borrow Pit(s)	175
06-05939-W	253368	TRANSMONTAIGNE TERMINAL SOUTH PIPELINE CONSTRUCTION	Primary	23	42	50	Broward	On-site Borrow Pit(s)	600
06-05964-W	253735	BODENWEBER	Primary	5	42	11	Broward	On-site Borrow Pit(s)	245
06-02934-W	42710	PARCEL F AT PORT 95 COMMERCE PARK	Primary	29	42	50	Broward	On-site Canal(s)	200
06-02022-W	34978	G AND K SERVICES AT PORT 95 COMMERCE PARK	Production	30	42	50	Broward	On-site Lake(s)	80
06-02017-W	34527	DANIA MOTORCROSS PARK	Production	29	42	50	Broward	On-site Lake(s)	600
06-02078-W	35225	SHERIDAN 300	Production	3	42	51	Broward	On-site Lake(s)	100
06-01795-W	35681	FOREST LAWN CENTRAL	Production	5	42	50	Broward	On-site Lake(s)	500
06-02162-W	35467	PORT 95 COMMERCE PARK	Production	29	42	50	Broward	On-site Lake(s)	120
06-01941-W	34615	KENAN TRANSPORT	Production	20	42	50	Broward	On-site Lake(s)	150
06-02504-W	40829	PORT 95 COMMERCE PARK PARCEL J	Primary	29	42	50	Broward	On-site Lake(s)	50
06-02586-W	41152	RAVENSWOOD PARKING	Production	29	42	50	Broward	On-site Lake(s)	260
06-01575-W	34707	PORT 95 COMMERCE PARK	Production	20	42	50	Broward	On-site Lake(s)	325
06-01575-W	34708	PORT 95 COMMERCE PARK	Production	20	42	50	Broward	On-site Lake(s)	325
06-01575-W	34709	PORT 95 COMMERCE PARK	Production	20	42	50	Broward	On-site Lake(s)	130
06-03258-W	108527	SHERIDAN LAKES CONDOMINIUM INC	Primary	8	42	51	Broward	On-site Lake(s)	250
06-03258-W	108525	SHERIDAN LAKES CONDOMINIUM INC	Primary	8	42	51	Broward	On-site Lake(s)	250
06-03290-W	109984	PARCEL C AT PORT 95 COMMERCE PARK	Primary	29	42	50	Broward	On-site Lake(s)	250
06-03906-W	139011	GRIFFIN LAKES AKA VILLAS AT HARBOR ISLES	Primary	32	42	50	Broward	On-site Lake(s)	110
06-04551-W	190206	TASK 1 WESTSIDE DEVELOPMENT	Primary	27,28	42	50	Broward	On-site Lake(s)	150
06-01225-W	194172	RUNWAY GROWERS, INC. NURSERY	Primary	20	42	50	Broward	On-site Lake(s)	145
06-05525-W	224201	NEW RIVER COVE	Primary	19	42	50	Broward	On-site Lake(s)	150
06-05056-W	213492	ARDEN PARK	Primary	31	42	50	Broward	On-site Lake(s)	100
06-05056-W	213493	ARDEN PARK	Primary	31	42	50	Broward	On-site Lake(s)	200
06-04332-W	186355	SHERIDAN OCEAN CLUB	Primary	2	42	51	Broward	On-site Lake(s)	200
06-00431-W	127934	FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL AIRPORT	Primary	22,27,34	42	50	Broward	On-site Lake(s)	200
06-00431-W	127935	FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL AIRPORT	Primary	22,27,34	42	50	Broward	On-site Lake(s)	200
06-01567-W	35839	OAKWOOD PLAZA	Secondary	4	42	51	Broward	On-site Lake(s)	175
06-01567-W	35839	OAKWOOD PLAZA	Secondary	4	42	51	Broward	On-site Lake(s)	175
06-01567-W	35840	OAKWOOD PLAZA	Primary	4	42	51	Broward	On-site Lake(s)	175
06-02676-W	41585	SPORTSMANS PARK	Primary	33	42	50	Broward	On-site Lake(s)/Pond(s)	150
06-02639-W	41442	PORT 95 PARCEL E	Primary	29,30	42	50	Broward	On-site Lake(s)/Pond(s)	110
06-02958-W	42863	FT LAUDERDALE AIRPORT STATION	Primary	33	42	50	Broward	On-site Lake(s)/Pond(s)	140
06-02756-W	41862	ANGLERS OFFICE PARK	Primary	32	42	50	Broward	On-site Lake(s)/Pond(s)	90
06-02931-W	42675	PORT 95 COMMERCE PARK PARCEL H 4140 BUILDING	Primary	29	42	50	Broward	On-site Lake(s)/Pond(s)	200
06-02333-W	39937	OAKBRIDGE	Primary	31	42	50	Broward	On-site Lake(s)/Pond(s)	150
06-02333-W	39938	OAKBRIDGE	Primary	31	42	50	Broward	On-site Lake(s)/Pond(s)	150
06-02888-W	42425	DCOTA PHASE I,II,III,IV	Primary	33	42	50	Broward	On-site Lake(s)/Pond(s)	200
06-02888-W	42426	DCOTA PHASE I,II,III,IV	Primary	33	42	50	Broward	On-site Lake(s)/Pond(s)	200
06-03013-W	43198	PARCEL F NORTH AT PORT 95 COMMERCE PARK - OFFICE	Production	29	42	50	Broward	On-site Lake(s)/Pond(s)	250
06-03013-W	110029	PARCEL F NORTH AT PORT 95 COMMERCE PARK - OFFICE	Primary	29	42	50	Broward	On-site Lake(s)/Pond(s)	250
06-04036-W	146409	THUNDERBIRD DEVELOPMENT AKA VILLAS AT HARBOR ISLES WEST	Primary	32	42	50	Broward	On-site Lake(s)/Pond(s)	100
06-04197-W	158590	BLACK OLIVE EAST NURSERY	Primary	30	42	50	Broward	On-site Lake(s)/Pond(s)	200
06-04197-W	158591	BLACK OLIVE EAST NURSERY	Primary	30	42	50	Broward	On-site Lake(s)/Pond(s)	200
06-00130-W	37993	TOPEEKEEGEE YUGNEE PARK	Production	5,8	42	51	Broward	On-site Lake(s)/Pond(s)	200
06-00130-W	37994	TOPEEKEEGEE YUGNEE PARK	Production	5,8	42	51	Broward	On-site Lake(s)/Pond(s)	200
06-05426-W	220977	RIVERBEND CORPORATE PARK	Primary	5	42	50	Broward	On-site Lake(s)/Pond(s)	70
06-04693-W	192829	U S 1/F L L	Primary	22,26,27	42	50	Broward	On-site Lake(s)/Pond(s)	350
06-04693-W	192830	U S 1/F L L	Primary	22,26,27	42	50	Broward	On-site Lake(s)/Pond(s)	350
06-04693-W	192831	U S 1/F L L	Primary	22,26,27	42	50	Broward	On-site Lake(s)/Pond(s)	80
06-01567-W	259271	OAKWOOD PLAZA	Primary	4	42	51	Broward	SFWMD C-10 (Hollywood) Canal	200
06-01567-W	259271	OAKWOOD PLAZA	Primary	4	42	51	Broward	SFWMD C-10 (Hollywood) Canal	200
06-01567-W	259276	OAKWOOD PLAZA	Secondary	4	42	51	Broward	SFWMD C-10 (Hollywood) Canal	200

TABLE 3.3.3-1
WATER USE PERMITS WITHIN 5 MILES OF PEEC

Permit Number	Facility ID	Project Name	Status	Section	Range	Township	County	Source	Pump Capacity (Gallons per Minute)
06-01567-W	259277	OAKWOOD PLAZA	Primary	4	42	51	Broward	SFWMD C-10 (Hollywood) Canal	200
06-01617-W	9490	HOLLYWOOD CENTRAL GARAGE CITY OF	Standby	10	42	51	Broward	Surficial Aquifer System	14
06-01617-W	9491	HOLLYWOOD CENTRAL GARAGE CITY OF	Standby	10	42	51	Broward	Surficial Aquifer System	14
06-01617-W	9492	HOLLYWOOD CENTRAL GARAGE CITY OF	Standby	10	42	51	Broward	Surficial Aquifer System	14
06-01148-W	3375	AMOCO FACILITY #958 DEP FACILITY 68501538	Primary	9	42	50	Broward	Surficial Aquifer System	16
06-01509-W	9171	CHEVRON STATION NO. 367227	Standby	20	42	50	Broward	Surficial Aquifer System	10
06-01509-W	9172	CHEVRON STATION NO. 367227	Primary	20	42	50	Broward	Surficial Aquifer System	15
06-01148-W	3376	AMOCO FACILITY #958 DEP FACILITY 68501538	Standby	9	42	50	Broward	Surficial Aquifer System	16
06-01588-W	9406	EXXON SERVICE STATION #4-4457	Standby	14	42	50	Broward	Surficial Aquifer System	14
06-01588-W	9453	EXXON SERVICE STATION #4-4457	Standby	14	42	50	Broward	Surficial Aquifer System	14
06-02164-W	19728	FT LAUDERDALE AIRPORT PARKING FACILITY	Primary	29	42	50	Broward	Surficial Aquifer System	170
06-01891-W	2992	JACKS AUTO SALES	Primary	8	42	50	Broward	Surficial Aquifer System	20
06-02765-W	110359	FPL BROWARD COUNTY SUBSTATIONS	Primary	4,36	40	51	Broward	Surficial Aquifer System	30
06-02765-W	110352	FPL BROWARD COUNTY SUBSTATIONS	Primary	4,36	40	51	Broward	Surficial Aquifer System	30
06-02765-W	110354	FPL BROWARD COUNTY SUBSTATIONS	Primary	4,36	40	51	Broward	Surficial Aquifer System	30
06-02663-W	28498	OAKRIDGE PLAZA	Primary	31	42	50	Broward	Surficial Aquifer System	55
06-02663-W	28503	OAKRIDGE PLAZA	Primary	31	42	50	Broward	Surficial Aquifer System	65
06-02754-W	29458	GORE NURSERY	Primary	16	42	50	Broward	Surficial Aquifer System	100
06-02754-W	29459	GORE NURSERY	Primary	16	42	50	Broward	Surficial Aquifer System	100
06-02754-W	29473	GORE NURSERY	Primary	16	42	50	Broward	Surficial Aquifer System	20
06-03692-W	126550	KODNER PROPERTY	Primary	34	42	50	Broward	Surficial Aquifer System	50
06-03692-W	126551	KODNER PROPERTY	Primary	34	42	50	Broward	Surficial Aquifer System	50
06-04741-W	193557	ST THOMAS AQUINAS HIGH SCHOOL	Primary	8	42	50	Broward	Surficial Aquifer System	50
06-04741-W	193558	ST THOMAS AQUINAS HIGH SCHOOL	Primary	8	42	50	Broward	Surficial Aquifer System	40
06-04741-W	193559	ST THOMAS AQUINAS HIGH SCHOOL	Primary	8	42	50	Broward	Surficial Aquifer System	35
06-04741-W	193560	ST THOMAS AQUINAS HIGH SCHOOL	Primary	8	42	50	Broward	Surficial Aquifer System	40
06-04741-W	193563	ST THOMAS AQUINAS HIGH SCHOOL	Primary	8	42	50	Broward	Surficial Aquifer System	40
06-04741-W	193564	ST THOMAS AQUINAS HIGH SCHOOL	Primary	8	42	50	Broward	Surficial Aquifer System	40
06-04803-W	194345	DUSKY MARINE	Primary	33	42	50	Broward	Surficial Aquifer System	30
06-05893-W	252808	NORTHWEST GARDENS PHASES 1-4	Primary	4	42	50	Broward	Surficial Aquifer System	45
06-05893-W	252809	NORTHWEST GARDENS PHASES 1-4	Primary	4	42	50	Broward	Surficial Aquifer System	45
06-05893-W	252810	NORTHWEST GARDENS PHASES 1-4	Primary	4	42	50	Broward	Surficial Aquifer System	45
06-05893-W	252811	NORTHWEST GARDENS PHASES 1-4	Primary	4	42	50	Broward	Surficial Aquifer System	45
06-04332-W	186354	SHERIDAN OCEAN CLUB	Recharge	2	42	51	Broward	Surficial Aquifer System	75
06-06027-W	255154	DR KENNEDY HOMES	Primary	4	42	50	Broward	Surficial Aquifer System	70
06-06027-W	255203	DR KENNEDY HOMES	e Plugged and Abanc	4	42	50	Broward	Surficial Aquifer System	0
06-06038-W	255360	SHORE CLUB CONDO	Primary	30	43	49	Broward	Surficial Aquifer System	60
06-06038-W	255363	SHORE CLUB CONDO	Primary	30	43	49	Broward	Surficial Aquifer System	0
06-05550-W	224721	CITY OF DANIA BEACH PUBLIC SAFETY FACILITY	Primary	29	42	50	Broward	Surficial Aquifer System	50
06-05364-W	219981	ZUGAR GROWERS	Primary	20	42	50	Broward	Surficial Aquifer System	250
06-05364-W	219982	ZUGAR GROWERS	Secondary	20	42	50	Broward	Surficial Aquifer System	200
06-05364-W	219983	ZUGAR GROWERS	Primary	20	42	50	Broward	Surficial Aquifer System	150
06-05364-W	219984	ZUGAR GROWERS	Secondary	20	42	50	Broward	Surficial Aquifer System	60
06-05364-W	219985	ZUGAR GROWERS	Primary	20	42	50	Broward	Surficial Aquifer System	60
06-05296-W	218382	HAZMAT/TRT FIRE RESCUE STATION	Primary	22	42	50	Broward	Surficial Aquifer System	70
06-05426-W	257843	RIVERBEND CORPORATE PARK	Primary	5	42	50	Broward	Surficial Aquifer System	200
06-01561-W	9311	TEXACO STATION 24-021-911	Standby	33	42	50	Broward	Unspecified	32
06-01561-W	9312	TEXACO STATION 24-021-911	Standby	33	42	50	Broward	Unspecified	32
06-01561-W	9313	TEXACO STATION 24-021-911	Standby	33	42	50	Broward	Unspecified	32
06-02012-W	41398	BRANDSMART (PORT 95 COMMERCE PARK)	Primary	30	42	50	Broward	Unspecified	105
06-02012-W	41399	BRANDSMART (PORT 95 COMMERCE PARK)	Primary	30	42	50	Broward	Unspecified	95
06-00038-W	138208	HOLLYWOOD WATER TREATMENT PLANT	Monitor	25,36	41	50	Broward	Unspecified	0
06-00038-W	138210	HOLLYWOOD WATER TREATMENT PLANT	Monitor	25,36	41	50	Broward	Unspecified	0

TABLE 3.3.3-1
WATER USE PERMITS WITHIN 5 MILES OF PEEC

Permit Number	Facility ID	Project Name	Status	Section	Range	Township	County	Source	Pump Capacity (Gallons per Minute)
06-02943-W	42713	FT LAUDERDALE HOLLYWOOD INT'L AIRPORT TASK 1 WEST SIDE	Primary	28	42	50	Broward	Water Table Aquifer	400
06-02943-W	42713	FT LAUDERDALE HOLLYWOOD INT'L AIRPORT TASK 1 WEST SIDE	Primary	28	42	50	Broward	Water Table Aquifer	400
06-02943-W	42714	FT LAUDERDALE HOLLYWOOD INT'L AIRPORT TASK 1 WEST SIDE	Primary	28	42	50	Broward	Water Table Aquifer	820
06-02943-W	42714	FT LAUDERDALE HOLLYWOOD INT'L AIRPORT TASK 1 WEST SIDE	Primary	28	42	50	Broward	Water Table Aquifer	820
06-02943-W	42715	FT LAUDERDALE HOLLYWOOD INT'L AIRPORT TASK 1 WEST SIDE	Primary	28	42	50	Broward	Water Table Aquifer	1160
06-02943-W	42715	FT LAUDERDALE HOLLYWOOD INT'L AIRPORT TASK 1 WEST SIDE	Primary	28	42	50	Broward	Water Table Aquifer	1160
06-02943-W	42716	FT LAUDERDALE HOLLYWOOD INT'L AIRPORT TASK 1 WEST SIDE	Primary	28	42	50	Broward	Water Table Aquifer	400
06-02943-W	42716	FT LAUDERDALE HOLLYWOOD INT'L AIRPORT TASK 1 WEST SIDE	Primary	28	42	50	Broward	Water Table Aquifer	400
06-02943-W	42717	FT LAUDERDALE HOLLYWOOD INT'L AIRPORT TASK 1 WEST SIDE	Primary	28	42	50	Broward	Water Table Aquifer	400
06-02943-W	42717	FT LAUDERDALE HOLLYWOOD INT'L AIRPORT TASK 1 WEST SIDE	Primary	28	42	50	Broward	Water Table Aquifer	400
06-02943-W	42718	FT LAUDERDALE HOLLYWOOD INT'L AIRPORT TASK 1 WEST SIDE	Primary	28	42	50	Broward	Water Table Aquifer	820
06-02943-W	42718	FT LAUDERDALE HOLLYWOOD INT'L AIRPORT TASK 1 WEST SIDE	Primary	28	42	50	Broward	Water Table Aquifer	820
06-05888-W	252502	NORTH WEST GARDENS I NORTH	Primary	4	42	50	Broward	Water Table Aquifer	275
06-05889-W	252505	NORTH WEST GARDENS I SOUTH	Primary	4	42	50	Broward	Water Table Aquifer	275
06-05879-W	252325	B P BROWARD #572	Primary	9	42	50	Broward	Water Table Aquifer	1500
06-05885-W	252464	PORT EVERGLADES BERTH 7	Primary	14	42	50	Broward	Water Table Aquifer	400
06-05732-W	230645	ATLANTIC VILLAGE HOTEL AND MARINA	Primary	28	42	50	Broward	Water Table Aquifer	1200
06-05732-W	230646	ATLANTIC VILLAGE HOTEL AND MARINA	Standby	28	42	50	Broward	Water Table Aquifer	1200
06-05503-W	223959	SEA GATE PLAZA	Primary	10	42	50	Broward	Water Table Aquifer	7000
06-06052-W	255640	AIRFIELD MODIFICATIONS TAXIWAY C EXTENSION - TASK 3	Primary	27,28	42	50	Broward	Water Table Aquifer	3500
06-06052-W	255641	AIRFIELD MODIFICATIONS TAXIWAY C EXTENSION - TASK 3	Primary	27,28	42	50	Broward	Water Table Aquifer	3500
06-06052-W	255642	AIRFIELD MODIFICATIONS TAXIWAY C EXTENSION - TASK 3	Primary	27,28	42	50	Broward	Water Table Aquifer	420
06-06052-W	255643	AIRFIELD MODIFICATIONS TAXIWAY C EXTENSION - TASK 3	Primary	27,28	42	50	Broward	Water Table Aquifer	3500
06-06052-W	255644	AIRFIELD MODIFICATIONS TAXIWAY C EXTENSION - TASK 3	Primary	27,28	42	50	Broward	Water Table Aquifer	3500
06-06052-W	255645	AIRFIELD MODIFICATIONS TAXIWAY C EXTENSION - TASK 3	Primary	27,28	42	50	Broward	Water Table Aquifer	820
06-06052-W	255646	AIRFIELD MODIFICATIONS TAXIWAY C EXTENSION - TASK 3	Primary	27,28	42	50	Broward	Water Table Aquifer	420
06-06052-W	255647	AIRFIELD MODIFICATIONS TAXIWAY C EXTENSION - TASK 3	Primary	27,28	42	50	Broward	Water Table Aquifer	1160
06-06052-W	255648	AIRFIELD MODIFICATIONS TAXIWAY C EXTENSION - TASK 3	Primary	27,28	42	50	Broward	Water Table Aquifer	1160
06-06052-W	255649	AIRFIELD MODIFICATIONS TAXIWAY C EXTENSION - TASK 3	Primary	27,28	42	50	Broward	Water Table Aquifer	3500
06-06052-W	255650	AIRFIELD MODIFICATIONS TAXIWAY C EXTENSION - TASK 3	Primary	27,28	42	50	Broward	Water Table Aquifer	3500
06-06052-W	255651	AIRFIELD MODIFICATIONS TAXIWAY C EXTENSION - TASK 3	Primary	27,28	42	50	Broward	Water Table Aquifer	1160
06-06052-W	255652	AIRFIELD MODIFICATIONS TAXIWAY C EXTENSION - TASK 3	Primary	27,28	42	50	Broward	Water Table Aquifer	1160
06-06052-W	255653	AIRFIELD MODIFICATIONS TAXIWAY C EXTENSION - TASK 3	Primary	27,28	42	50	Broward	Water Table Aquifer	420
06-06052-W	255654	AIRFIELD MODIFICATIONS TAXIWAY C EXTENSION - TASK 3	Primary	27,28	42	50	Broward	Water Table Aquifer	1160
06-06052-W	255655	AIRFIELD MODIFICATIONS TAXIWAY C EXTENSION - TASK 3	Primary	27,28	42	50	Broward	Water Table Aquifer	420
06-06106-W	256758	GALLERIA CORPORATE CENTRE	Primary	36	42	49	Broward	Water Table Aquifer	1650
06-05746-W	228048	HARBORAGE CLUB	Primary	14	42	50	Broward	Water Table Aquifer	2260
06-06179-W	258091	FORT LAUDERDALE HIGH SCHOOL POOL FACILITY	Primary	34	42	49	Broward	Water Table Aquifer	1800
06-06297-W	259327	SRWWTP CITY OF HOLLYWOOD - REUSE SYSTEM EXPANSION	Primary	11	42	51	Broward	Water Table Aquifer	1000
06-03617-W	122705	FORMER PHILLIPS 66 BOB'S	Primary	18	42	50	Broward	Water Table Aquifer	75
06-03617-W	122706	FORMER PHILLIPS 66 BOB'S	Primary	18	42	50	Broward	Water Table Aquifer	75
06-03617-W	163692	FORMER PHILLIPS 66 BOB'S	Primary	18	42	50	Broward	Water Table Aquifer	10
06-03617-W	163706	FORMER PHILLIPS 66 BOB'S	Primary	18	42	50	Broward	Water Table Aquifer	10
06-05746-W	228067	HARBORAGE CLUB	Recharge	14	42	50	Broward	Water Table Aquifer	450
06-05746-W	228068	HARBORAGE CLUB	Recharge	14	42	50	Broward	Water Table Aquifer	450
06-05746-W	228154	HARBORAGE CLUB	Recharge	14	42	50	Broward	Water Table Aquifer	450

Source: SFWMD Water Use Regulation Facility Sites, November 2011.

TABLE 3.3.4-1
WATER QUALITY OF INTRACOASTAL WATERWAY NORTH AND SOUTH OF PORT EVERGLADES

		Station 38 (North of Port)					Station 39 (South of Port)				
Parameter	**Units**	**N**	**# Below MDL**	**Maximum**	**Mean**	**Minimum**	**N**	**# Below MDL**	**Maximum**	**Mean**	**Minimum**
Temperature	°C	72	0	31.6	26.2	19	70	0	31.6	26.4	19.0
Temperature	°F	72	0	88.9	79.2	66.2	70	0	88.9	79.5	66.2
pH	Std. Unit	73	0	8.4	7.9	6.7	71	0	8.4	7.9	7.6
Conductivity	micromhos	36	0	52800	43033	21000	34	0	54400	47500	31000
Salinity	ppt	70	0	34.9	27.7	3.9	68	0	36.2	31.0	19.1
Total Organic Carbon	mg/l	61	0	13.5	6.4	0.4	59	0	44.7	5.58	0.95
Turbidity	NTU	73	0	7.6	2.2	0.5	71	0	230	6.6	0.25
Dissolved Oxygen	mg/l	72	0	8.3	5.9	3.2	70	0	13.6	5.7	3.7
BOD	mg/l	48	0	5.2	1.2	0.2	46	1	4.0	1.0	0.1
Total Phosphorus	mg/l	67	14	0.239	0.054	0.01	65	24	0.809	0.056	0.010
Nitrite + Nitrate (NO_2+NO_3)	mg/l	77	3	0.098	0.341	0.005	65	4	0.208	0.065	0.005
Ammonia (NH_3)	mg/l	62	23	0.221	0.047	0.005	60	40	0.178	0.037	0.005
Total Kjeldahl Nitrogen (TKN)	mg/l	66	0	1.57	0.611	0.082	64	2	1.52	0.58	0.04
Total Nitrogen	mg/l	66	calc	1.635	0.709	0.147	64	calc	1.546	0.646	0.086

Notes:
When value was below the MDL, MDL/2 was used in calculation.
Period of Record: 1972-1997
Station 38: Approximately 0.6 miles north of Port Everglades Tidal Inlet at 17th Street Bridge over ICW
Station 39: Approximately 1.8 miles south of Port Everglades Tidal Inlet, By Dania Cut-off canal
calc = calculated.

Source: Broward County, Florida Historical Water Quality Atlas: 1972-1997, Broward County Department of Planning and Environmental Protection, TR 01-03, February 28, 2001

TABLE 3.3.6-1

THREATENED, ENDANGERED, AND SPECIES OF SPECIAL CONCERN KNOWN TO OCCUR WITHIN BROWARD COUNTY, FLORIDA

Scientific Name	Common Name	Federal Status	State Status
Plants			
Acrostichum aureum	Golden Leather Fern	N	T
Aeschynomene pratensis	Meadow Jointvetch	N	E
Argusia gnaphalodes	Sea Lavender	N	E
Asplenium dentatum	American Toothed Spleenwort	N	E
Asplenium serratum	American Bird's Nest Fern	N	E
Asimina tetramera	Four-petal Pawpaw	E	E
Calopogon multiflorus	Many-flowered Grass-pink	N	E
Chamaesyce cumulicola	Sand-dune Spurge	N	E
Cladonia perforata	Perforate Reindeer Lichen	E	E
Coccothrinax argentata	Silver Palm	N	T
Conradina grandiflora	Large-flowered Rosemary	N	T
Ctenitis sloanei	Florida Tree Fern	N	E
Cucurbita okeechobeensis	Okeechobee Gourd	E	E
Epidedrum nocturnum	Night-scented Orchid	N	E
Glandularia maritima	Coastal Vervain	N	E
Halophila johnsonii	Johnson's Seagrass	T	N
Jacquemontia reclinata	Beach Jacquemontia	E	E
Lantana depressa var. floridana	Atlantic Coast Florida Lantana	N	E
Lechea cernua	Nodding Pinweed	N	T
Lechea divaricata	Pine Pinweed	N	E
Linum carteri var. smallii	Small's flax	N	E
Nemastylis floridana	Celestial Lily	N	E
Okenia hypogaea	Burrowing Four-o'clock	N	E
Ophioglossum palmatum	Hand Fern	N	E
Panicum abscissum	Cutthroat Grass	N	E
Polygala smallii	Tiny Polygala	E	E
Pteris bahamensis	Bahama Brake	N	T
Pteroglossaspis ecristata	Giant Orchid	N	T
Roystonea elata	Florida Royal Palm	N	E
Sacoila lanceolata var. paludicola	Fahkahatchee Ladies' -tresses	N	T
Schizaea pennula	Ray Fern	N	E
Swietenia mahogani	West Indies Mahogany	N	T
Tephrosia angustissima var. curtissii	Coastal Hoary-pea	N	E
Thelypteris serrata	Toothed Maiden Fern	N	E
Tillandsia flexuosa	Banded Wild-pine	N	T
Tolumnia bahamensis	Dancing-lady Orchid	N	E
Trichostigma octandrum	Hoop Vine	N	E
Zanthoxylum coriaceum	Biscayne Prickly Ash	N	E
Gastropods			
Orthalicus reses reses	Stock Island Tree Snail	T	E
Amphibians			
Rana capito	Gopher Frog	N	SSC

TABLE 3.3.6-1

THREATENED, ENDANGERED, AND SPECIES OF SPECIAL CONCERN KNOWN TO OCCUR WITHIN BROWARD COUNTY, FLORIDA

Scientific Name	Common Name	Federal Status	State Status
Reptiles			
Alligator mississippiensis	American Alligator	T (SA)	SSC
Caretta caretta	Loggerhead	T	T
Chelonia mydas	Green Turtle	E	E
Crocodylus acutus	American Crocodile	T	E
Dermochelys coriacea	Leatherback	E	E
Drymarchon couperi	Eastern Indigo Snake	T	T
Eretmochelys imbricata	Hawksbill	E	E
Gopherus polyphemus	Gopher Tortoise	N	T
Lepidochelys kempii	Kemp's Ridley	E	E
Pituophis melanoleucus mugitus	Florida Pine Snake	N	SSC
Tantilla oolitica	Rim Rock Crowned Snake	N	T
Birds			
Aphelocoma coerulescens	Florida Scrub-jay	T	T
Aramus guarauna	Limpkin	N	SSC
Athene cunicularia floridana	Florida Burrowing Owl	N	SSC
Caracara cheriway	Crested Caracara	T	T
Charadrius melodus	Piping Plover	T	T
Egretta caerulea	Little Blue Heron	N	SSC
Egretta thula	Snowy Egret	N	SSC
Egretta tricolor	Tricolored Heron	N	SSC
Eudocimus albus	White Ibis	N	SSC
Falco peregrinus	Peregrine Falcon	N	E
Falco sparverius paulus	Southeastern American Kestrel	N	T
Grus canadensis pratensis	Florida Sandhill Crane	N	T
Haematopus palliatus	American Oystercatcher	N	SSC
Mycteria americana	Wood Stork	E	E
Pelecanus occidentalis	Brown Pelican	N	SSC
Picoides borealis	Red-cockaded Woodpecker	E	SSC
Platalea ajaja	Roseate Spoonbill	N	SSC
Rostrhamus sociabilis plumbeus	Snail Kite	E	E
Rynchops niger	Black Skimmer	N	SSC
Sterna antillarum	Least Tern	N	T
Mammals			
Podomys floridanus	Florida Mouse	N	SSC
Puma concolor coryi	Florida Panther	E	E
Sciurus niger shermani	Sherman's Fox Squirrel	N	SSC
Trichechus manatus	Manatee	E	E
Ursus americanus floridanus	Florida Black Bear	N	T

Notes:

E = Endangered

N = Not currently listed, nor currently being considered for listing

SSC = Species of Special Concern

T = Threatened

T (SA) = Threatened due to similarity of appearance to the American crocodile (*Crocodylus acutus*)

Source: Florida Natural Areas Inventory, 2008.

TABLE 3.3.7-1
AMBIENT SOUND PRESSURE LEVELS OBSERVED AT FPL PORT EVERGLADES PLANT PROPERTY BOUNDARY LOCATIONS IN AUGUST 2011

Monitoring Location	Coordinates	Date	Time	Sound Pressure Levels (dBA)				Observations
				Min	Max	L_{90}	Leq	
1: Southeast corner fenceline near tankyard	26°04'59.6" N	1-Aug-11	Afternoon	49.4	89.6	52.2	69.0	Aircraft noise, some thunder, moderate traffic
	80°07'20.9" W	1-Aug-11	Night	44.9	77.2	45.7	58.6	Heavy insect noise, light traffic, aircraft noise
		2-Aug-11	Morning	48.9	66.1	50.7	55.7	Moderate road traffic, light insect noise, light air traffic
2. Northern gate of eastern tankyard off of Eisenhower Blvd	26°05'8.6" N	1-Aug-11	Afternoon	50.0	89.6	52.0	68.7	Moderate traffic, gas turbines
	80°07'17.3" W	1-Aug-11	Night	47.9	76.4	48.7	60.0	Port sound, moderate traffic inc. truck toward end, insect
		2-Aug-11	Morning	48.6	87.7	50.3	68.1	Moderate traffic, some truck, slight aircraft traffic
3: Southwest of discarge canal	26°04'58.3" N	1-Aug-11	Afternoon	55.7	81.8	58.1	68.1	Heavy traffic, some aircraft, wind noise
	80°07'28.1" W	1-Aug-11	Night	43.3	52.1	44.0	44.9	Distant traffic, light port traffic, insect
		2-Aug-11	Morning	54.0	75.8	54.4	63.0	Truck traffic, airport, insects, light noise from plant or north
4: Southwestern corner near gate	26°04'57.4" N	1-Aug-11	Afternoon	54.9	87.1	56.7	67.6	Aircraft noise, heavy traffic, wind and insect noise, some truck/heavy vehicle
	80°07'40.2" W	1-Aug-11	Night	47.0	66.8	47.9	54.1	Insect noise, light traffic, some trucks
		2-Aug-11	Morning	50.8	78.4	54.6	63.6	Light air traffic, moderate road traffic inc. truck, insect noise
5: Western fenceline just north of paved parking lot	26°05'08.4" N	1-Aug-11	Afternoon	65.4	81.9	67.9	72.3	6B, 5A, 7A, 4B, 7B, 4A, 8A, 8B Gas turbines running, moderate truck
	80°07'40.3" W	1-Aug-11	Night	48.9	72.9	50.3	56.2	Some truck traffic, gate opening/closing, insect noise
		2-Aug-11	Morning	51.8	76.2	53.2	61.4	Moderate traffic, some insect, overhead electric line, light air traffic
6: Northwest fenceline corner	26°05'14.8" N	1-Aug-11	Afternoon	71.0	86.6	73.2	78.7	6B, 5A, 7A, 4B, 7B, 4A, 8A, 8B Gas turbines running, light truck/air
	80°07'40.6" W	1-Aug-11	Night	60.9	67.4	62.4	63.4	Transformer noise, light traffic, insect
		2-Aug-11	Morning	61.5	79.0	62.8	64.7	Transformer fan constant, light truck traffic, airport noise, off-site ops
7:Northern fenceline, south of tankyard access gate	26°05'14.2" N	1-Aug-11	Afternoon	54.7	78.9	56.8	63.4	Light road traffic, some truck, light airplane noise
	80°07'29.3" W	1-Aug-11	Night	50.5	69.7	51.5	55.8	Plant noise, light draft, air traffic, insect
		2-Aug-11	Morning	57.1	69.4	58.9	60.8	Constant offsite equipment ops (CEMEX), Plant PA, light truck/air traffic
8: Inside fenceline, west of main gate and guard shack	26°05'09.2" N	1-Aug-11	Afternoon	54.9	79.1	56.8	64.0	Moderate truck traffic, some air traffic, power plant maintenance
	80°07'28.3" W	1-Aug-11	Night	53.1	73.8	54.0	58.5	Insect, light traffic, some plant background operations
		2-Aug-11	Morning	52.1	72.0	53.9	59.8	Light traffic, plant background operations, offsite plant activity

Source: Golder, 2011.

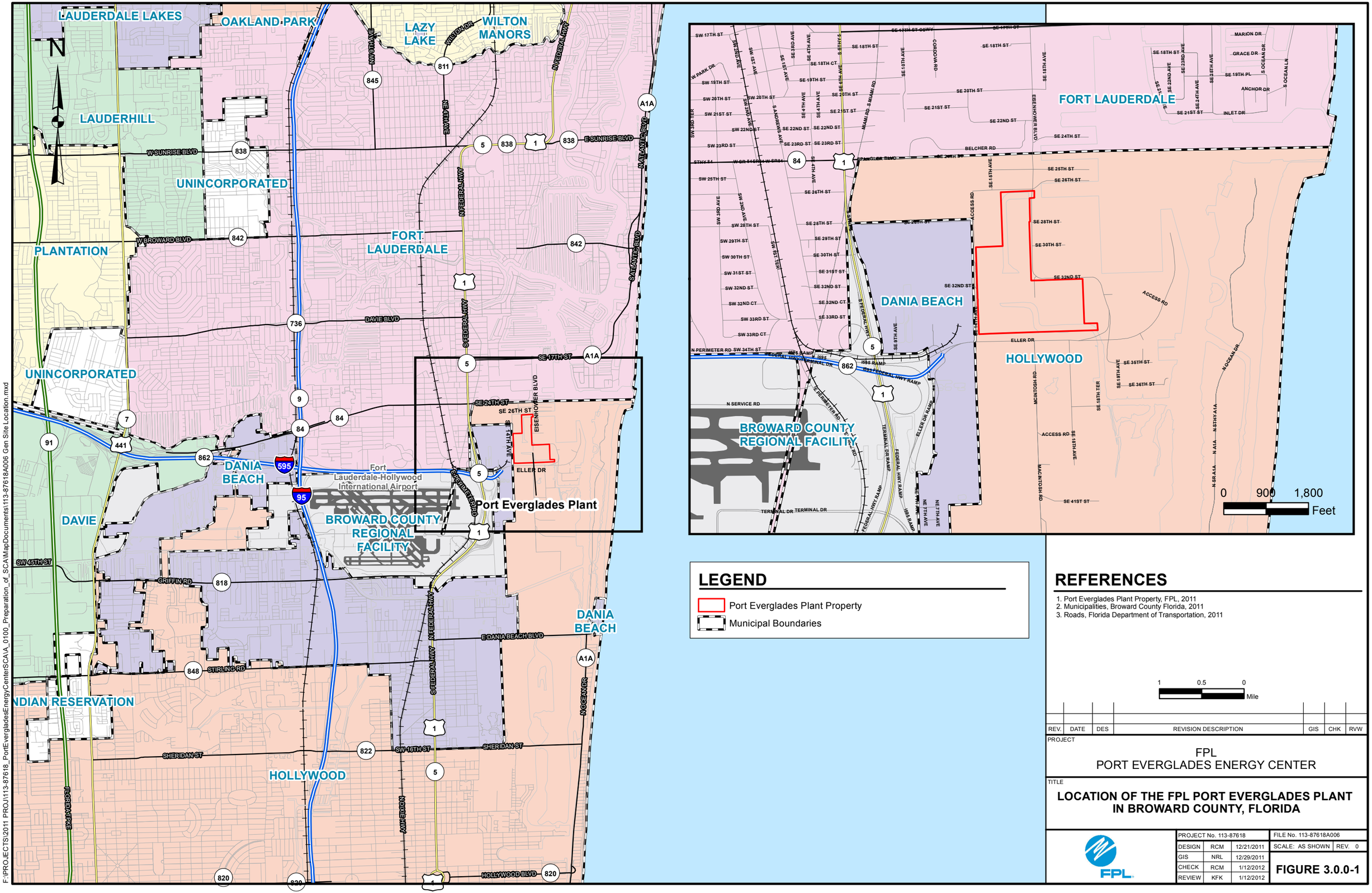
TABLE 3.3.8-1
EXAMPLES OF TYPICAL ILLUMINANCE

		Illuminance (lux)
Outdoor	Bright Sun	100,000 - 130,000
	Hazy Day	32,000
	Partly Cloudy	25,000
	Cloudy	10,000
	Overcast	1,000
	Sunrise/Sunset on Clear Day	400
	Full Moon	0.1
	Moonless Clear Night Sky	0.001
	Moonless Overcast Night Sky	0.0001
	Starlight	0.00005
Indoor	Typical TV Studio	1,000
	Bright Office with Large Contrast	400
	Hall Way	80
	Living Room	50
	Good Street Lighting	20
	Poor Street Lighting	1

Source: Electro-Optics Handbook,1979; Williams, 1999.

TABLE 3.3.8-2
BASELINE ILLUMINANCE IN THE VICINITY OF THE FPL PORT EVERGLADES POWER PLANT
AUGUST 2011

Monitoring Location	Coordinates	Date	Weather	Direction	Night (Klux)	Observations
1: Southeast corner fence line near tankard	26°04'59.6" N 80°07'20.9" W	1-Aug-11	Clear/New Moon	Up Facing On-site Facing Off-site	0.5 0.2 0.6	Security lighting from eastern tank yard and distant plant lighting
2: Northern gate of eastern tank yard off of Eisenhower Blvd	26°05'8.6" N 80°07'17.3" W	1-Aug-11	Clear/New Moon	Up Facing On-site Facing Off-site	1.5 1.3 2.3	Security lighting from eastern tank yard, parking lot lighting north of Eisenhower Blvd, and street lighting
3: Southwest of discharge canal	26°04'58.3" N 80°07'28.1" W	1-Aug-11	Clear/New Moon	Up Facing On-site Facing Off-site	0.4 0.7 0.4	Distant plant lighting and distant Port Everglades lighting
4: Southwestern corner near gate	26°04'57.4" N 80°07'40.2" W	1-Aug-11	Clear/New Moon	Up Facing On-site Facing Off-site	0.3 0.5 0.0	Distant plant lighting and distant street lighting
5: Western fence line just north of paved parking lot	26°05'08.4" N 80°07'40.3" W	1-Aug-11	Clear/New Moon	Up Facing On-site Facing Off-site	0.4 NA NA	Plant lighting to the east and street and off-site building security lighting to the west
6: Northwest fence line corner	26°05'14.8" N 80°07'40.6" W	1-Aug-11	Clear/New Moon	Up Facing On-site Facing Off-site	0.4 0.6 0.2	Lighting from the simple cycle peaker units and distant street lighting
7:Northern fence line, south of tank yard access gate	26°05'14.2" N 80°07'29.3" W	1-Aug-11	Clear/New Moon	Up Facing On-site Facing Off-site	1.5 1.4 1.8	Lighting from tank yard to the north, Eisenhower Blvd street lighting, and plant lighting to the south
8: Inside fence line, west of main gate and guard shack	26°05'09.2" N 80°07'28.3" W	1-Aug-11	Clear/New Moon	Up Facing On-site Facing Off-site	2.2 1.4 2.3	Plant lighting, security lighting at access gate, and Eisenhower Blvd street lighting



LEGEND

- Port Everglades Plant Property
- Municipal Boundaries

REFERENCES

1. Port Everglades Plant Property, FPL, 2011
2. Municipalities, Broward County Florida, 2011
3. Roads, Florida Department of Transportation, 2011

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

LOCATION OF THE FPL PORT EVERGLADES PLANT IN BROWARD COUNTY, FLORIDA

PROJECT No. 113-87618			FILE No. 113-87618A006		
DESIGN	RCM	12/21/2011	SCALE: AS SHOWN	REV.	0
GIS	NRL	12/29/2011			
CHECK	RCM	1/12/2012	**FIGURE 3.0.0-1**		
REVIEW	KFK	1/12/2012			

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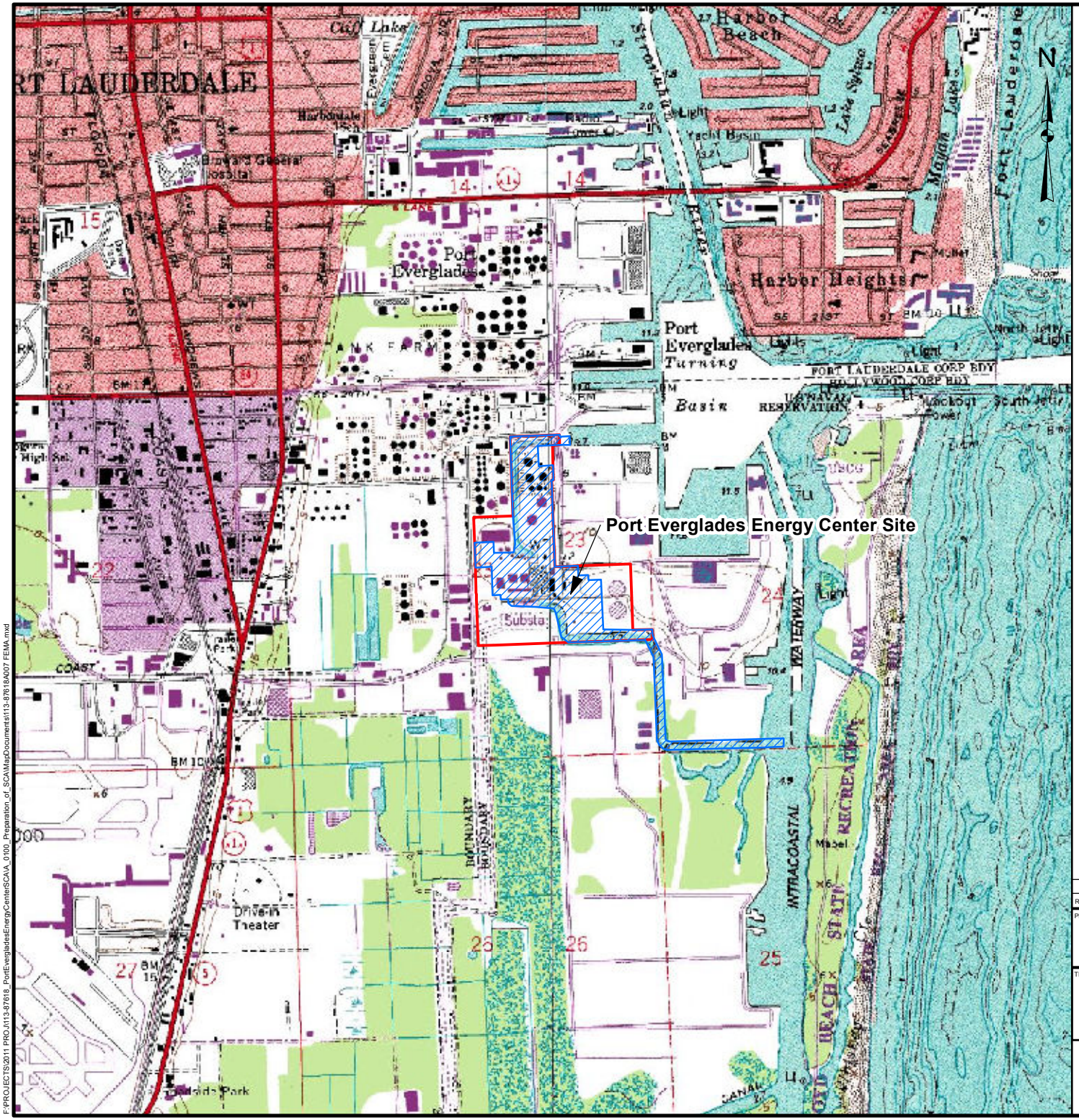
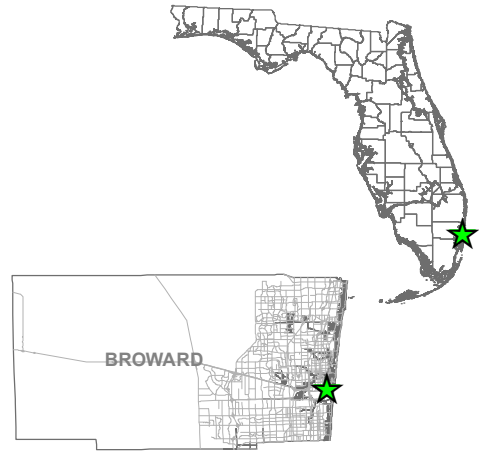


AREA MAP



LEGEND

- Port Everglades Energy Center Site
- Port Everglades Plant Property

REFERENCES

1. Port Everglades Plant Property, Port Everglades Energy Center Site FPL. 2011
2. USGS Topographic Image courtesy of the U.S. Geological Survey Microsoft TerraService OpenGIS Map Server, Accessed October, 2011.

2,000 1,000 0
Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

EXISTING PLANT AND PROJECT LOCATIONS

PROJECT No. 113-87618			FILE No. 113-87618A026		
DESIGN	RCM	12/21/2011	SCALE: AS SHOWN	REV.	0
GIS	NRL	1/13/2012	FIGURE 3.0.0-2		
CHECK	RCM	1/13/2012			
REVIEW	KFK	1/13/2012			

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LEGEND

Port Everglades Plant Property

REFERENCES

1. Port Everglades Plant Property, FPL. 2011
2. Aerial Imagery, USDA/FSA Aerial Photography Field Office, 2010

500 250 0
Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

AERIAL OF THE PORT EVERGLADES PLANT PROPERTY

PROJECT No. 113-87618			FILE No. 113-87618A021		
DESIGN	RCM	12/21/2011	SCALE: AS SHOWN	REV.	0
GIS	NRL	1/13/2012	FIGURE 3.1.1-1		
CHECK	RCM	1/13/2012			
REVIEW	KFK	1/13/2012			

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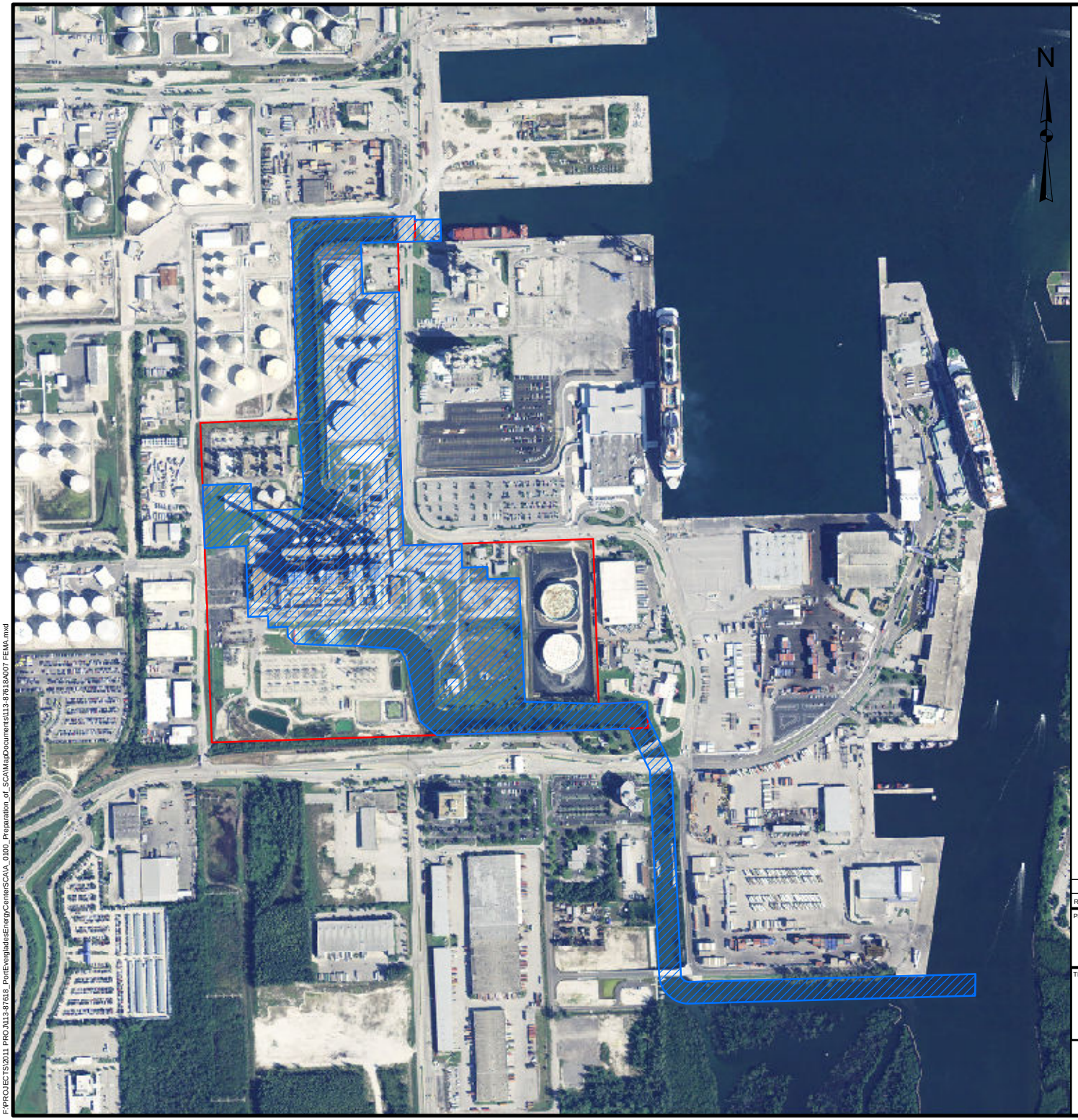

LEGEND

- Port Everglades Energy Center Site
- Port Everglades Plant Property

REFERENCES

1. Port Everglades Energy Center Site, Port Everglades Plant Property FPL. 2011
2. Aerial Imagery, USDA/FSA Aerial Photography Field Office, 2010

500 250 0
Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

AERIAL OF THE PORT EVERGLADES ENERGY CENTER SITE

PROJECT No. 113-87618			FILE No. 113-87618A003		
DESIGN	RCM	12/21/2011	SCALE: AS SHOWN	REV.	0
GIS	NRL	12/29/2011			
CHECK	RCM	1/12/2012	FIGURE 3.1.1-2		
REVIEW	KFK	1/12/2012			

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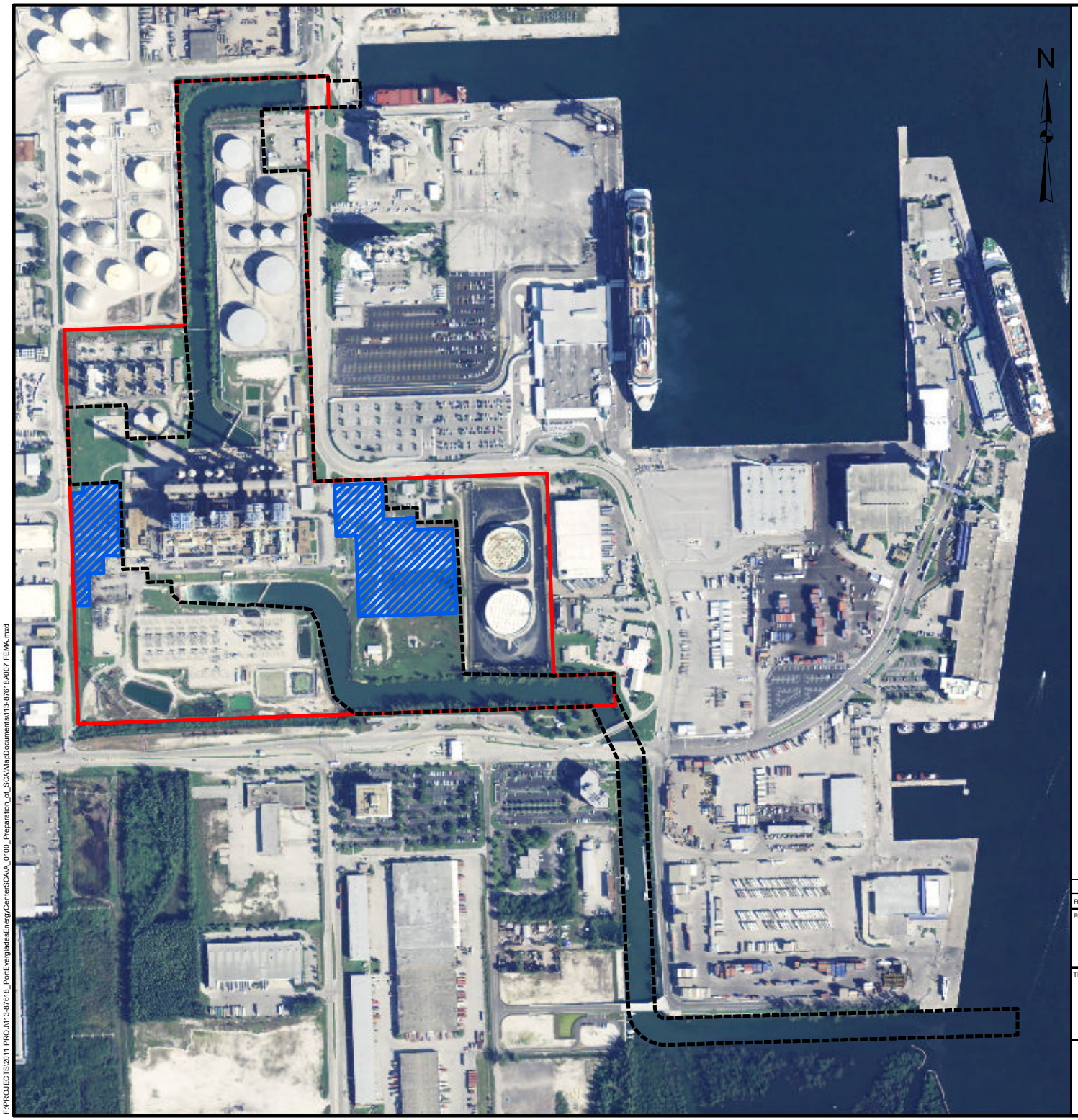

LEGEND

- Port Everglades Plant Property
- Port Everglades Energy Center Site
- Construction Parking & Laydown Area

REFERENCES

1. Port Everglades Energy Center Site, Port Everglades Plant Property, Construction Parking & Laydown Area, FPL. 2011
2. Aerial Imagery, USDA/FSA Aerial Photography Field Office, 2010

650 325 0
Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

AERIAL OF THE PARKING AND LAYDOWN AREAS DURING PROJECT CONSTRUCTION

PROJECT No. 113-87618			FILE No. 113-87618A031		
DESIGN	RCM	12/21/2011	SCALE: AS SHOWN	REV.	0
GIS	NRL	1/13/2012	FIGURE 3.1.1-3		
CHECK	RCM	1/13/2012			
REVIEW	KFK	1/13/2012			

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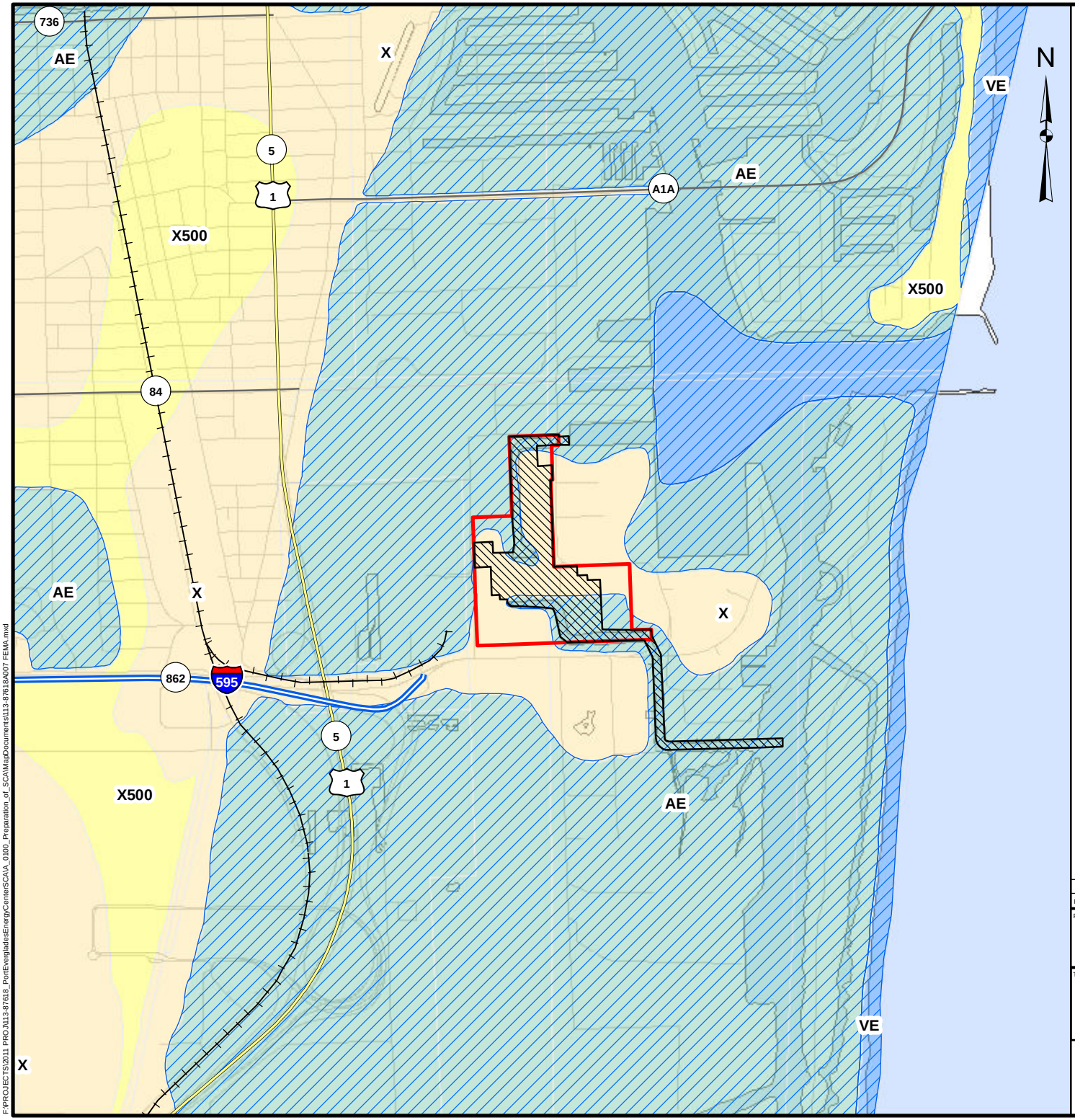

LEGEND

- Port Everglades Plant Property
- Port Everglades Energy Center Site
- AREAS WITHIN 100-YEAR FLOODPLAIN

FLOOD ZONES

AE	AE - AN AREA INUNDATED BY 100-YEAR FLOODING FOR WHICH BASE FLOOD ELEVATIONS HAVE BEEN DETERMINED.
VE	VE - AN AREA INUNDATED BY 100-YEAR FLOODING WITH VELOCITY HAZARD (WAVE ACTION); BASE FLOOD ELEVATIONS HAVE BEEN DETERMINED.
X	X - AN AREA THAT IS DETERMINED TO BE OUTSIDE THE 100-YEAR AND 500-YEAR FLOODPLAINS.
X500	X500 - AN AREA INUNDATED BY 500-YEAR FLOODING; AN AREA INUNDATED BY 100-YEAR FLOODING WITH AVERAGE DEPTHS OF LESS THAN 1 FT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; OR AND AREA PROTECTED BY LEVEES FROM 100-YEAR FLOODING.

REFERENCES

1. Port Everglades Plant Property, Port Everglades Energy Center Site, FPL, 2011
2. Flood Zones, FEMA, 1996

2,000 1,000 0 Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

FEMA FLOOD ZONES

PROJECT No. 113-87618			FILE No. 113-87618A007		
DESIGN	RCM	12/21/2011	SCALE: AS SHOWN	REV.	0
GIS	NRL	1/13/2012			
CHECK	RCM	1/13/2012	FIGURE 3.1.3-1		
REVIEW	KFK	1/13/2012			

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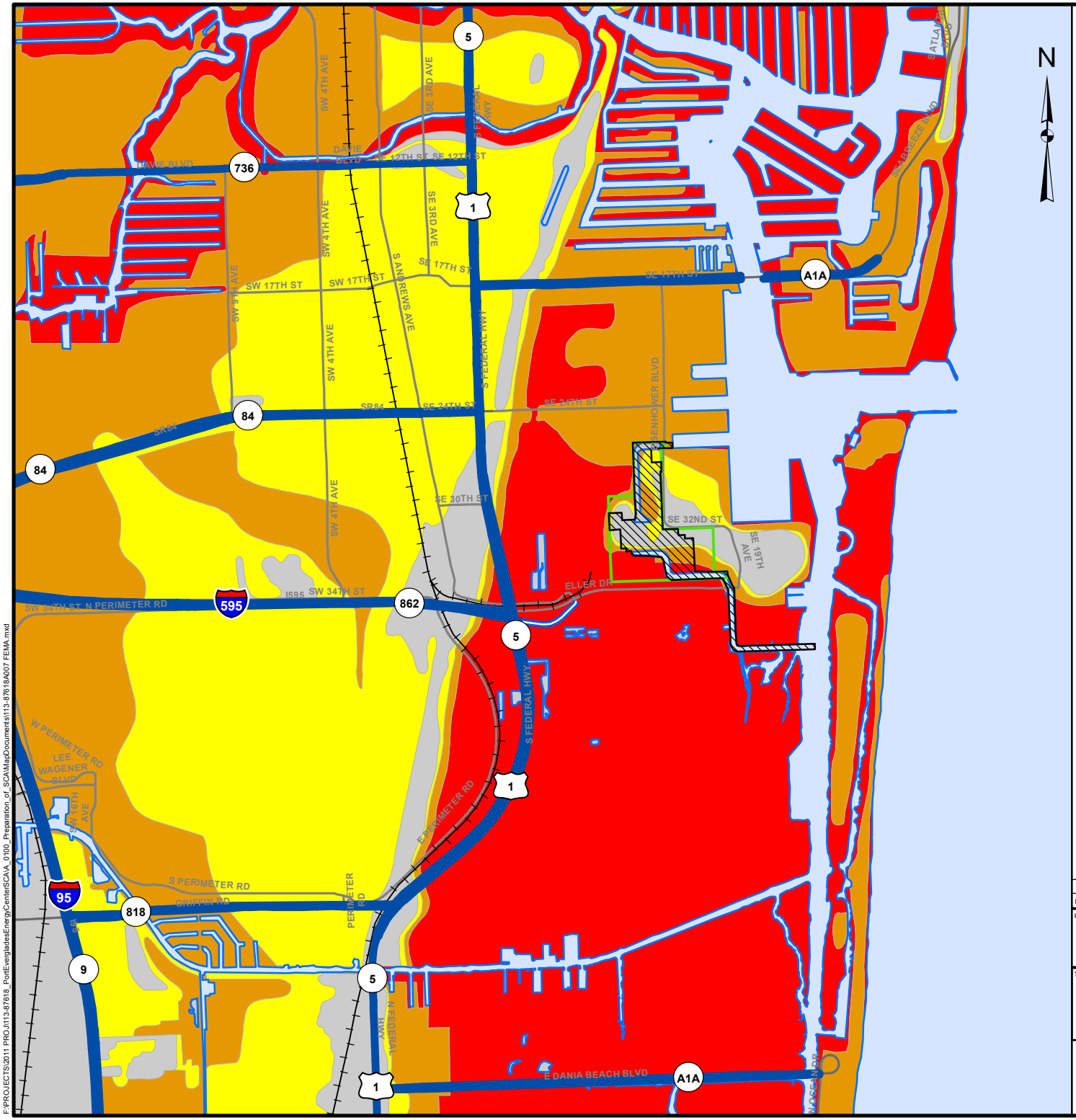

LEGEND

- Evacuation Routes
- Port Everglades Plant Property
- Port Everglades Energy Center Site

Storm Category

- 1
- 3
- 5

NOTE

Storm categories shown as outlined in the City of Hollywood Comprehensive Plan Storm Surge and Evacuation Routes Map CM-15 Dated July 19, 2007.

REFERENCES

1. Port Everglades Plant Property, Port Everglades Energy Center Site, FPL, 2011
2. Storm Category, National Hurricane Center/NOAA and South Florida Water Management District (storm surge data) 1999.
3. Evacuation Routes, Florida Department of Emergency Management, 2009.

2,000 1,000 0 Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

HURRICANE EVACUATION ROUTES AND STORM SURGE MAP

PROJECT No. 113-87618			FILE No. 113-87618A032		
DESIGN	RCM	12/21/2011	SCALE: AS SHOWN	REV.	0
GIS	NRL	1/13/2012	FIGURE 3.1.3-2		
CHECK	RCM	1/13/2012			
REVIEW	KFK	1/13/2012			

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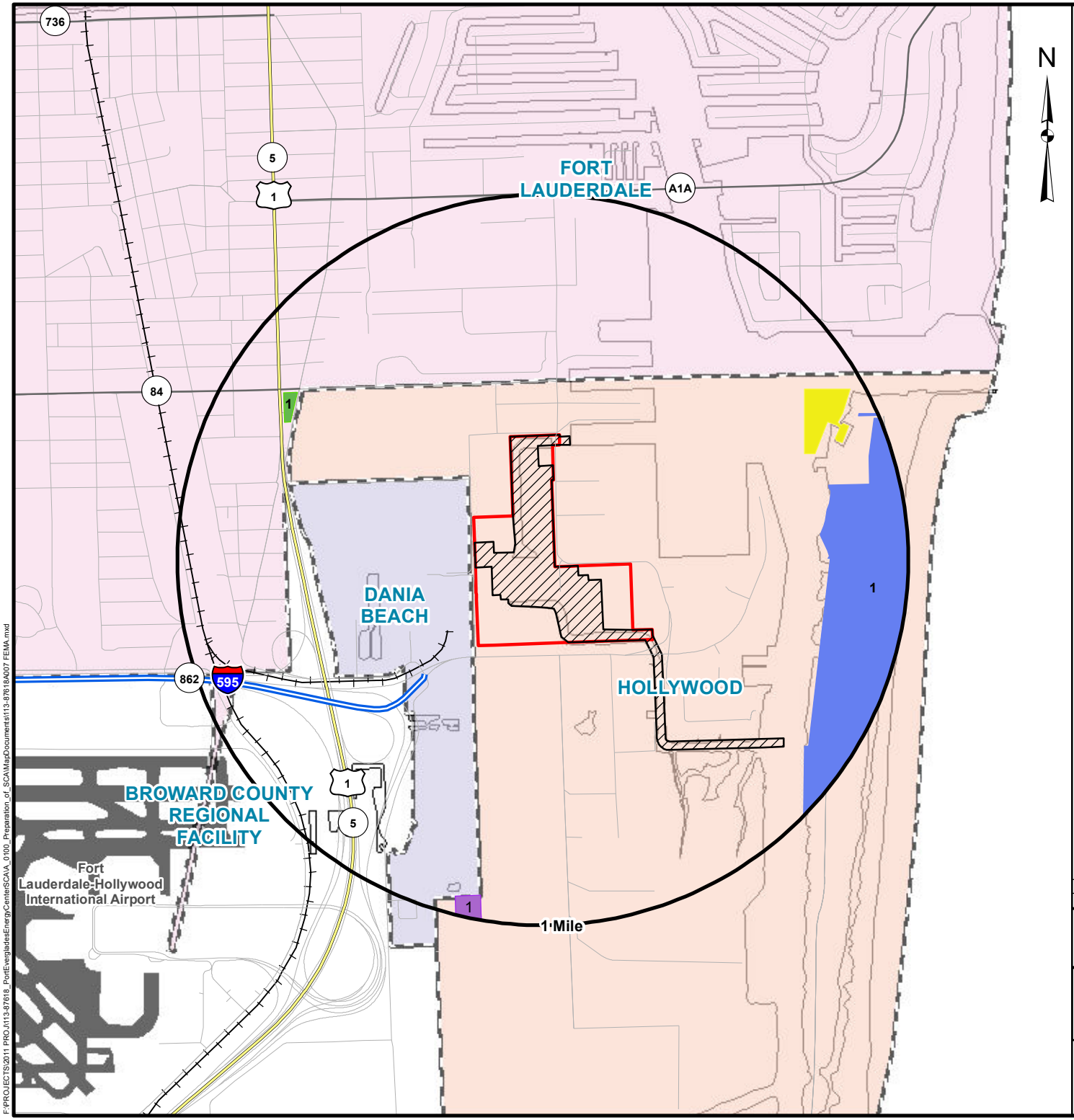

LEGEND

- Port Everglades Plant Property
- Port Everglades Energy Center Site
- Seagrass
- City Parks
  - 1 - Welcome Park
- County Parks
  - 1 - West Lake Park/Anne Kolb Nature Center
- State Parks
  - 1, John U Lloyd State Park

REFERENCES

1. Port Everglades Plant Property, Port Everglades Energy Center Site, FPL, 2011
2. City, County, and State Parks, Broward County Florida, 2011
3. Seagrass, Florida FIsha and Wildlife Conservation Commission - Fish and Wildlife Reasearch Institute, 2009
4. Municipal Boundaries, Broward County Florida, 2011

2,000 1,000 0 Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

GOVERNMENTAL JURISDICTIONS WITHIN 1-MILE RADIUS

PROJECT No. 113-87618			FILE No. 113-87618A001	
DESIGN	RCM	12/21/2011	SCALE: AS SHOWN	REV. 0
GIS	NRL	12/29/2011		
CHECK	RCM	1/12/2012		
REVIEW	KFK	1/12/2012		

FIGURE 3.2.1-1

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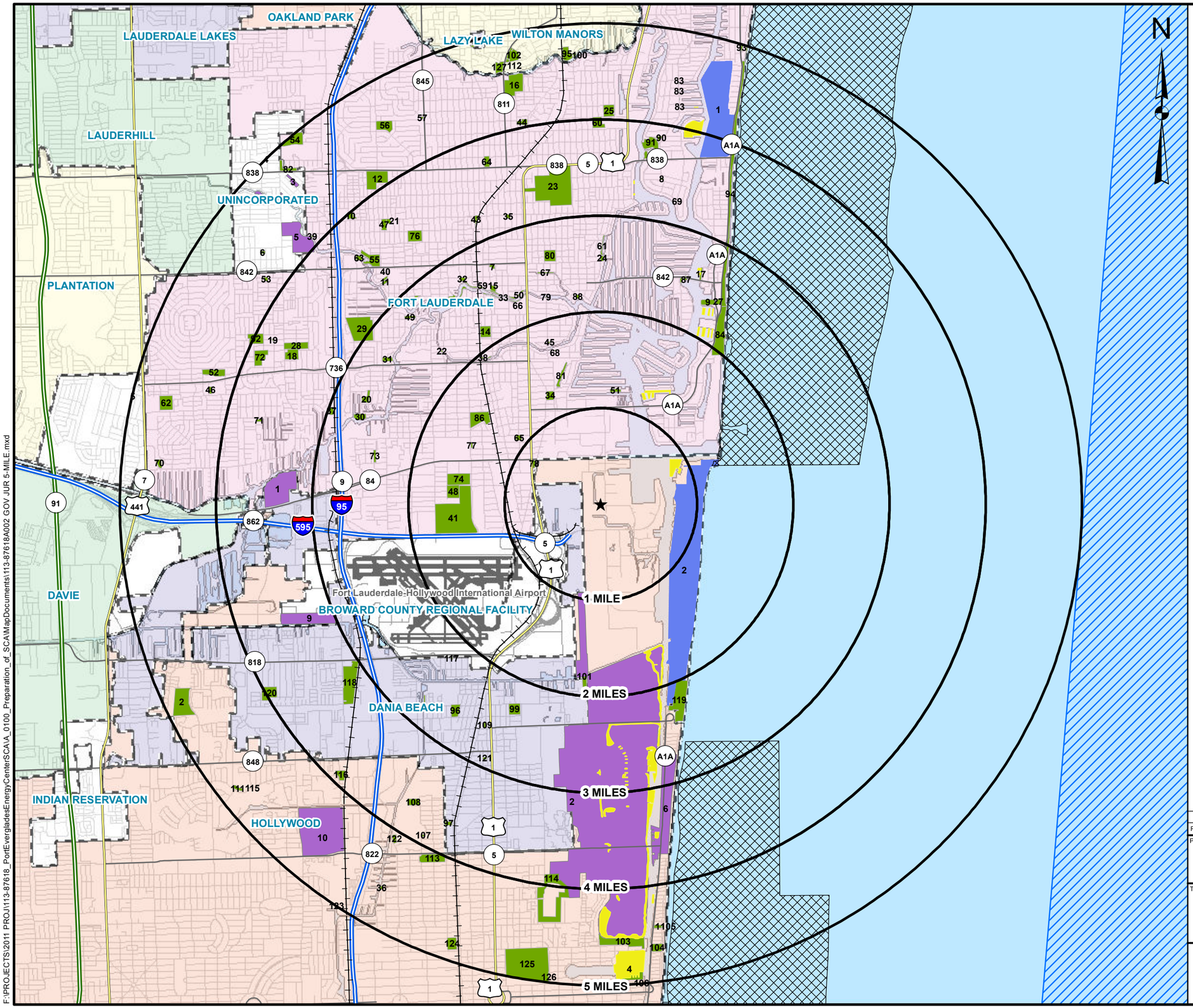

LEGEND

- ★ Port Everglades Plant and Port Everglades Energy Center Site
- Municipal Boundaries
- Coral Critical Habitat
- Seagrass
- Marine Protected Areas
- State Parks
- County Parks
- City Parks

NOTE

See Table 3.2.1-1 for list of Governmental Jurisdictions

REFERENCES

1. Port Everglades Energy Center Site, FPL 2011
2. Municipalities, City Parks, County Parks, State Parks, Broward County Florida, 2011
3. Seagrass, Florida Fish and Wildlife Conservation Commission-Fish and Wildlife Research Institute, 2009
4. Coral Critical Habitat, NOAA, National Marine Fisheries Service, Accessed October 2011
5. Marine Protected Areas, NOAA Marine Protected Areas Center / US Dept. of the Interior, 2010

1 0.5 0 Mile

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

GOVERNMENTAL JURISDICTIONS WITHIN 1,2,3,4, AND 5-MILE RADII

PROJECT No. 113-87618			FILE No. 113-87618A002	
DESIGN	RCM	12/21/2011	SCALE: AS SHOWN	REV. 0
GIS	NRL	12/29/2011		
CHECK	RCM	1/12/2012	FIGURE 3.2.1-2	
REVIEW	KFK	1/12/2012		

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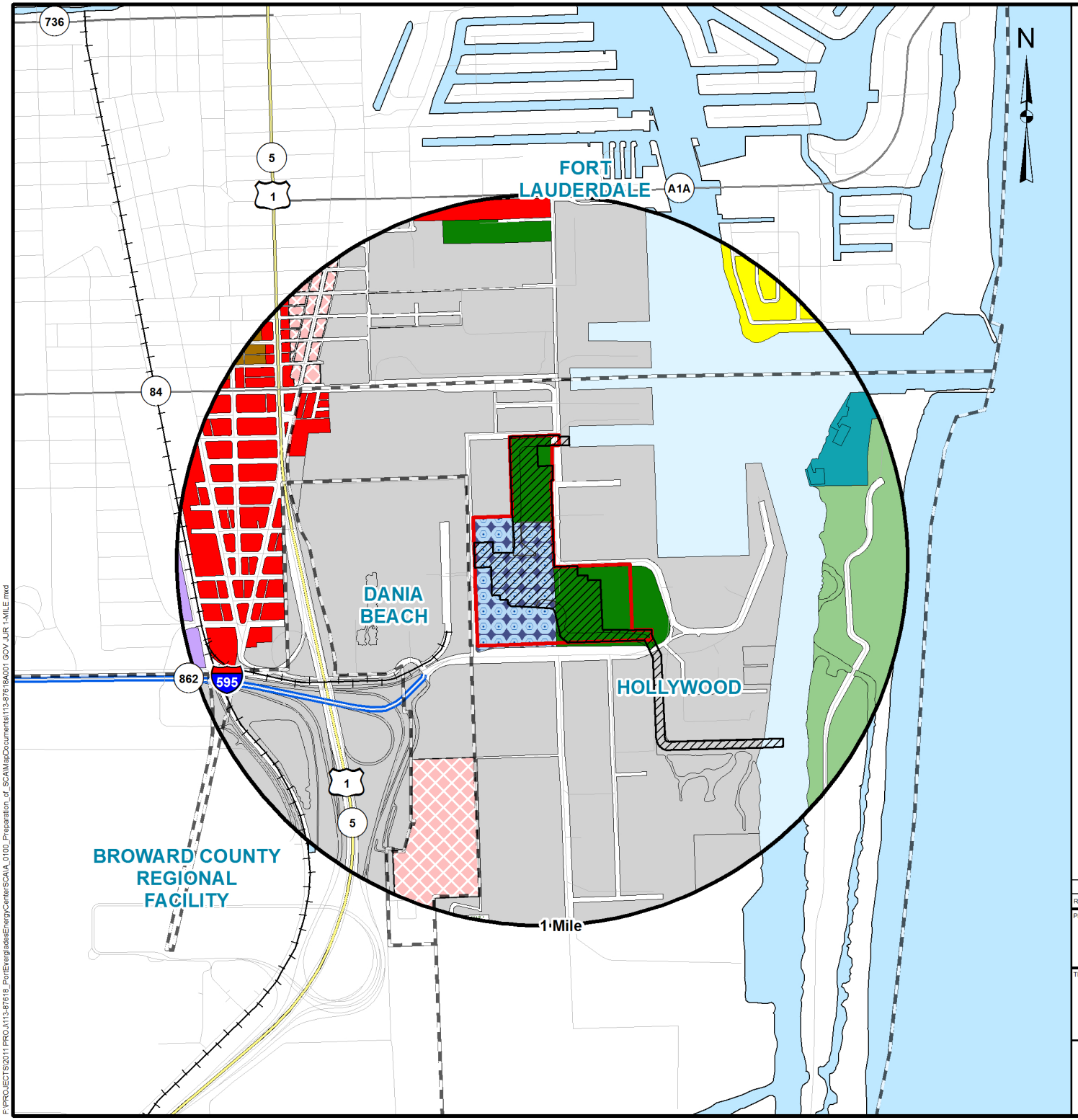

LEGEND

- Port Everglades Energy Center Site
- Port Everglades Plant Property
- Municipal Boundaries

Broward County Land Use

- Low (5) Residential
- Medium-High (25) Residential
- Commercial
- Employment Center - High
- Industrial
- Conservation - Natural Reservations
- Recreation & Open Space
- Community Facilities
- Utilities
- Electrical Generation Facilities
- Transportation
- Right of Way
- Water

REFERENCES

1. Port Everglades Plant Property, Port Everglades Energy Center Site FPL, 2011
2. Municipal Boundaries, Land Use, Broward County Florida, 2011

2,000 1,000 0 Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

BROWARD COUNTY PLANNING COUNCIL LAND USE PLAN MAP

FPL

PROJECT No. 113-87618			FILE No. 113-87618A008	
DESIGN	JDG	08/11/2011	SCALE: AS SHOWN	REV. 0
GIS	NRL	1/13/2012		
CHECK	RCM	1/13/2012	FIGURE 3.2.2-1	
REVIEW	KFK	1/13/2012		

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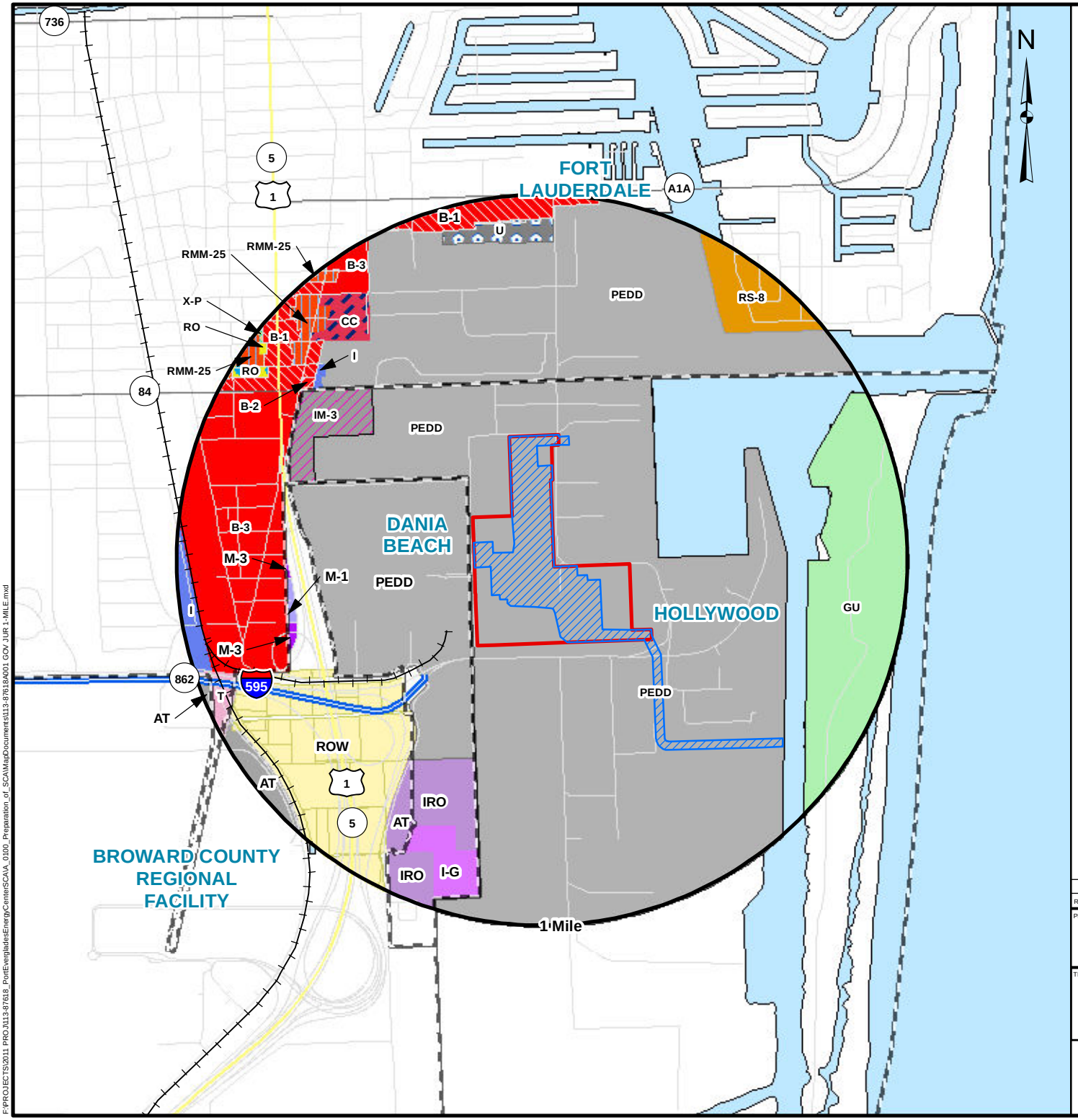

LEGEND

- Port Everglades Energy Center Site
- Port Everglades Plant Property
- Municipal Boundaries

City of Hollywood

- GU - Government Use District
- IM-3 - Medium Intensity Industrial and Manufacturing District
- PEDD - Port Everglades Development District

City of Fort Lauderdale

- B-1 - Boulevard Business
- B-2 - General Business
- B-3 - Heavy Commercial / Light Industrial Business
- CC - Commerce Center District
- I - General Industrial
- PEDD - Port Everglades Development District
- RMM-25 - Residential Multi-Family / Mid Rise / Medium High Density
- RO - Residential Office
- RS-8 - Residential Single Family / Low-Medium Density
- T - Transportation
- U - Utility
- X-P - Exclusive Use / Parking

City of Dania Beach

- I-G - Industrial
- IRO - Industrial
- PEDD - Port Everglades Development District

Unincorporated Broward County

- AT - Airport
- M-1 - Limited Manufacturing and Industrial
- M-3 - Intense Manufacturing and Industrial
- ROW - No Zoning, ROW-related

REFERENCES

1. Port Everglades Energy Site, Port Everglades Plant Property, FPL, 2011
2. Municipal Boundaries, Broward County Florida, 2011
3. Zoning, City of Hollywood, City of Fort Lauderdale, City of Dania Beach, Broward County, 2011.

2,000 1,000 0 Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

ZONING

PROJECT No. 113-87618			FILE No. 113-87618A009		
DESIGN	KK	1/11/2012	SCALE: AS SHOWN	REV.	0
GIS	NRL	1/13/2012			
CHECK	RCM	1/13/2012	**FIGURE 3.2.2-2**		
REVIEW	KFK	1/13/2012			

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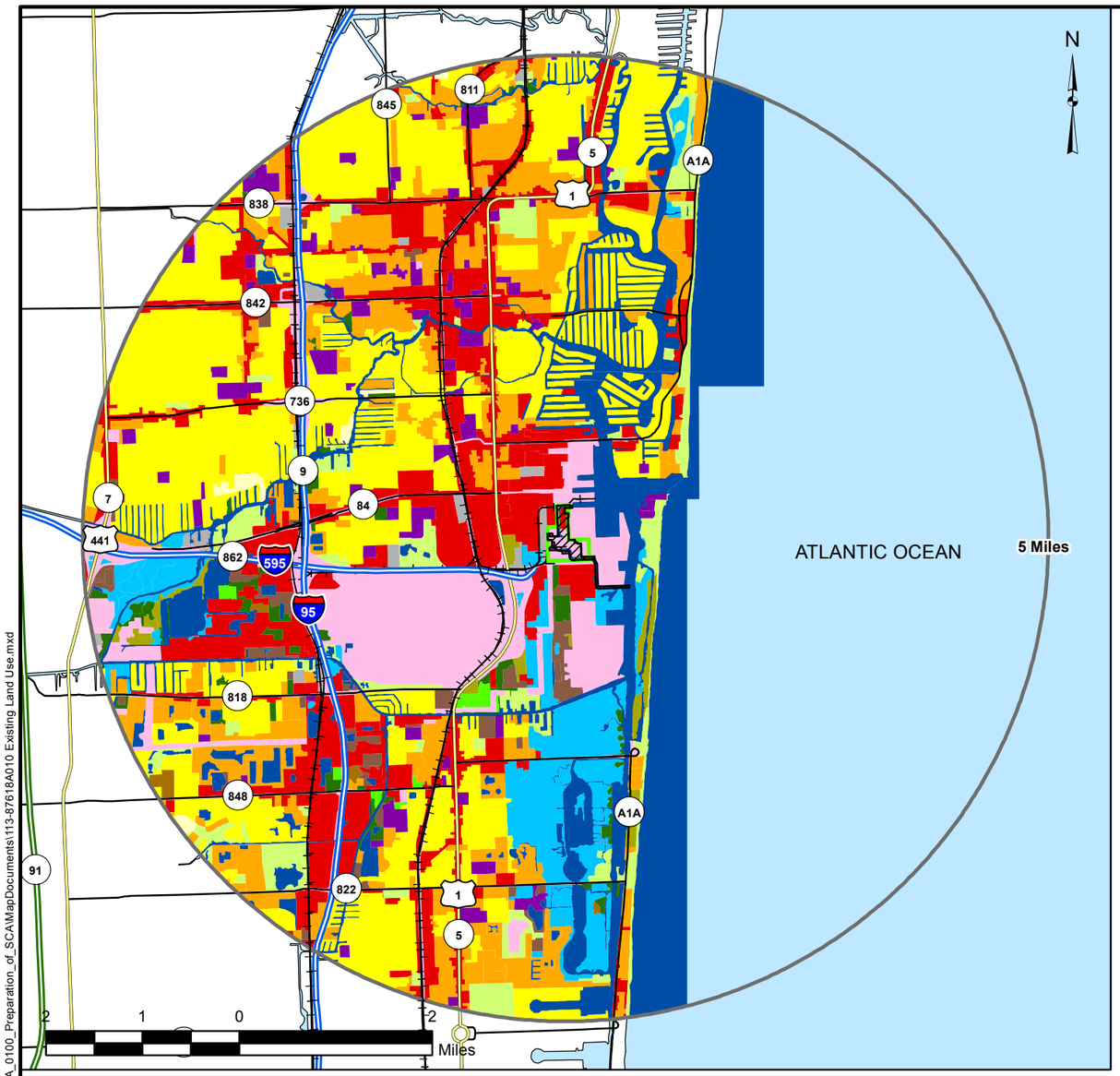

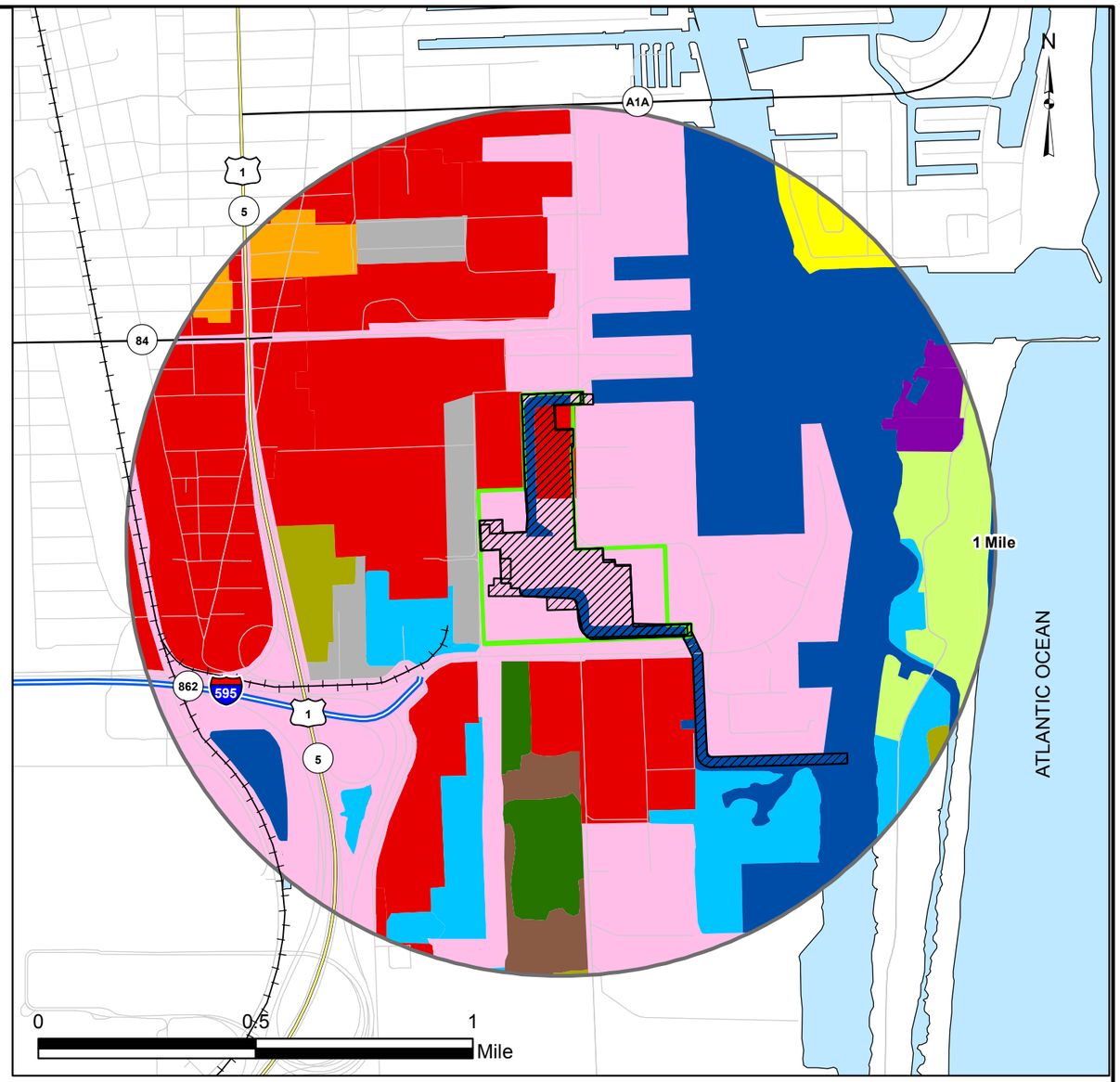

LEGEND

- Port Everglades Plant Property
- Port Everglades Energy Center Site

Existing Land Use (SFWMD based on FLUCCS Level II)

- Low Density Urban
- Medium Density Urban
- High Density Urban
- Commercial
- Industrial
- Mining
- Institutional
- Recreational
- Open Land
- Agriculture
- Rangeland
- Upland Forests
- Water
- Wetlands
- Barren Land
- Transportation, Communication, Utilities

REFERENCES

1. Port Everglades Plant Property, Port Everglades Energy Center Site, FPL, 2011
2. Existing Land Use, South Florida Water Managemet District Florida Land Use, Cover and Forms Classification System Level II, 2008

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

EXISTING LAND USE

PROJECT No. 113-87618			FILE No. 113-87618A010		
DESIGN	RCM	12/21/2011	SCALE: AS SHOWN	REV.	0
GIS	NRL	1/13/2012	**FIGURE 3.2.3-1**		
CHECK	RCM	1/13/2012			
REVIEW	KFK	1/13/2012			

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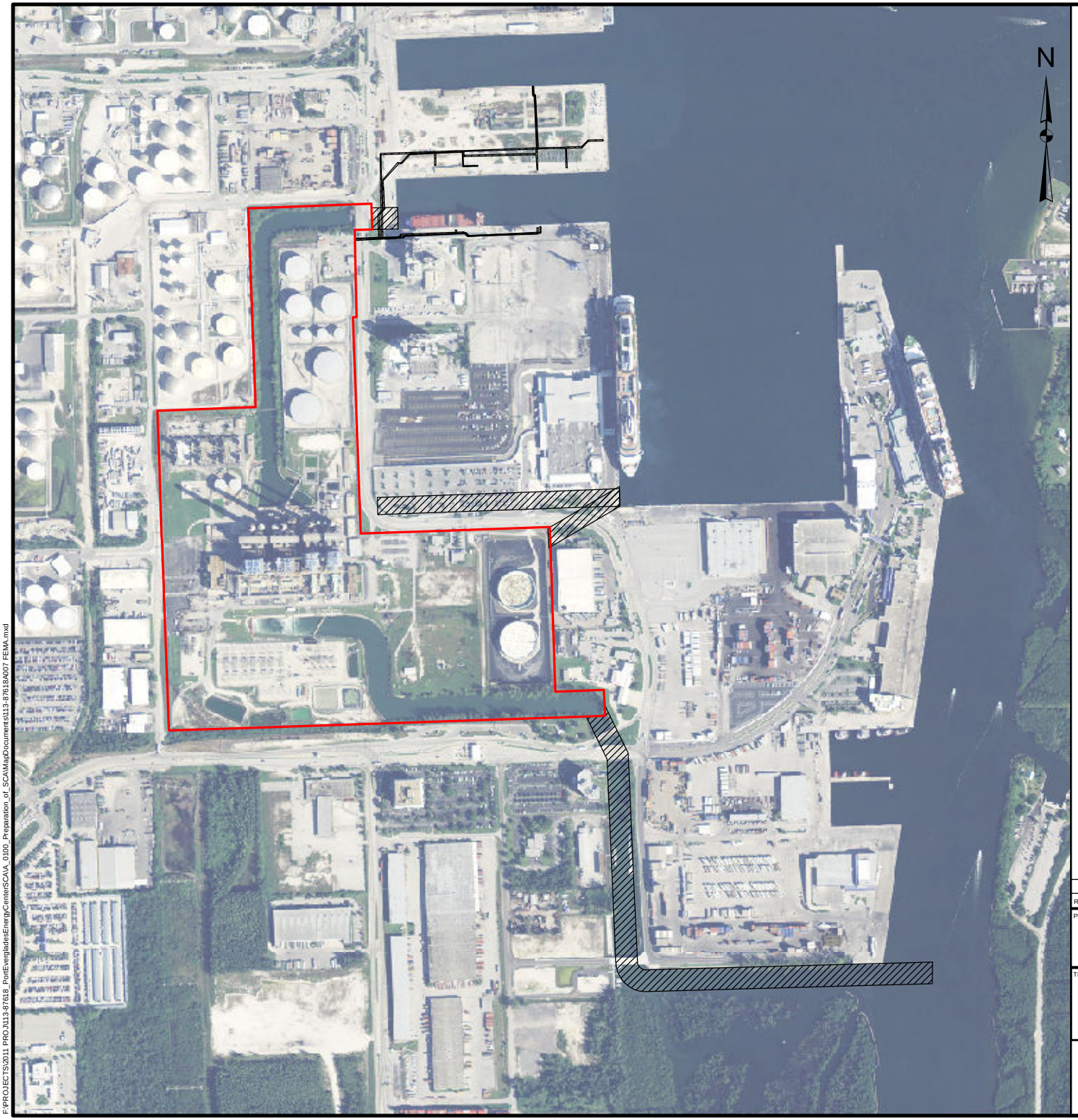

LEGEND

- Port Everglades Plant Property
- Existing Easements

REFERENCES

1. Port Everglades Plant Property, Existing Easements, FPL. 2011
2. Aerial Imagery, USDA/FSA Aerial Photography Field Office, 2010

800 400 0
Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

AERIAL OF THE PORT EVERGLADES PLANT PROPERTY AND EXISTING EASEMENTS

PROJECT No. 113-87618			FILE No. 113-87618A033		
DESIGN	RCM	1/5/2012	SCALE: AS SHOWN	REV.	0
GIS	NRL	1/11/2012	FIGURE 3.2.4-1		
CHECK	RCM	1/13/2012			
REVIEW	KFK	1/13/2012			

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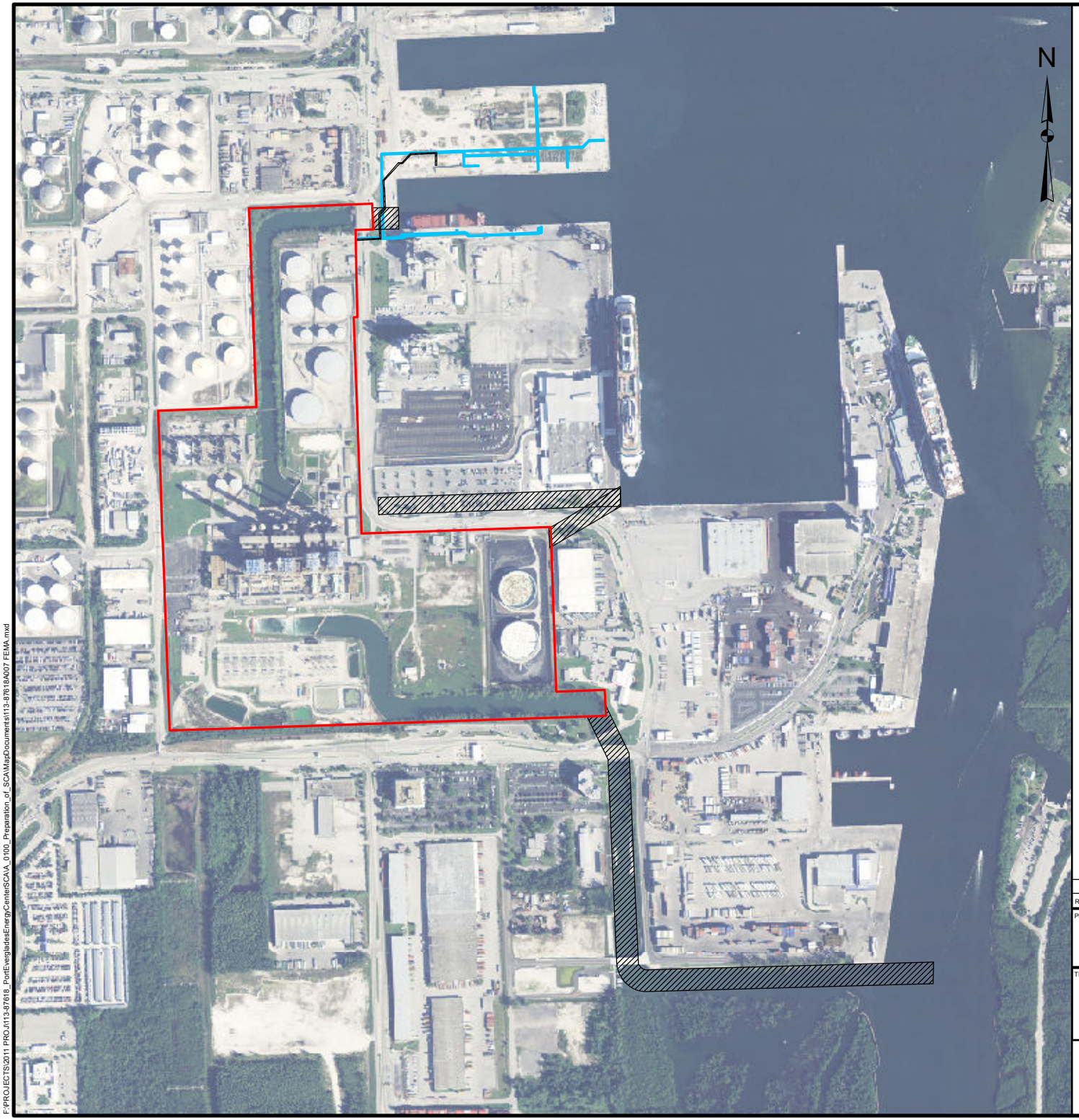

LEGEND

Port Everglades Plant Property

Easements

To Remain

To be Released

REFERENCES

1. Port Everglades Plant Property, Easements, FPL. 2011
2. Aerial Imagery, USDA/FSA Aerial Photography Field Office, 2010

800 400 0 Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

AERIAL OF THE PORT EVERGLADES PLANT PROPERTY AND EXISTING EASEMENT CHANGES

PROJECT No. 113-87618			FILE No. 113-87618A035		
DESIGN	RCM	1/5/2012	SCALE: AS SHOWN	REV.	0
GIS	NRL	1/13/2012	FIGURE 3.2.4-2		
CHECK	RCM	1/13/2012			
REVIEW	KFK	1/13/2012			

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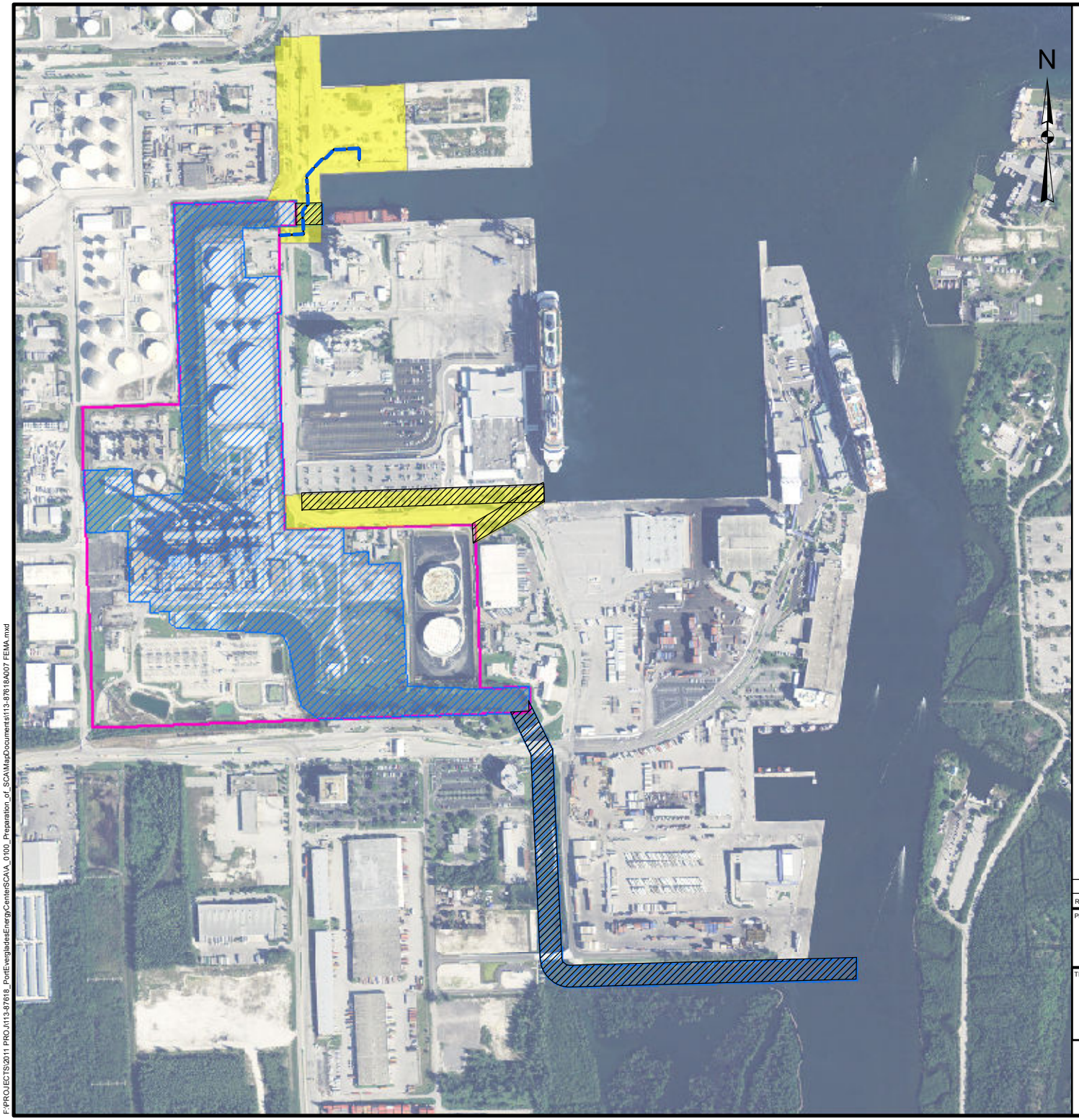

LEGEND

- Proposed Associated Linear Facilities (ULSD Pipeline)
- Port Everglades Plant Property
- Port Everglades Energy Center Site
- Associated Linear Facility Corridors
- Existing Easements

REFERENCES

1. Port Everglades Plant Property, Existing Easements, Proposed Associated Linear Facilities Easements, Port Everglades Energy Site, Associated Linear Facility Corridors, FPL. 2011
2. Aerial Imagery, USDA/FSA Aerial Photography Field Office, 2010

800 400 0
Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

AERIAL OF THE PORT EVERGLADES PLANT PROPERTY AND FUTURE EASEMENTS

PROJECT No. 113-87618			FILE No. 113-87618A034		
DESIGN	RCM	1/5/2012	SCALE: AS SHOWN	REV.	0
GIS	NRL	1/13/2012			
CHECK	RCM	1/13/2012	FIGURE 3.2.4-3		
REVIEW	KFK	1/13/2012			

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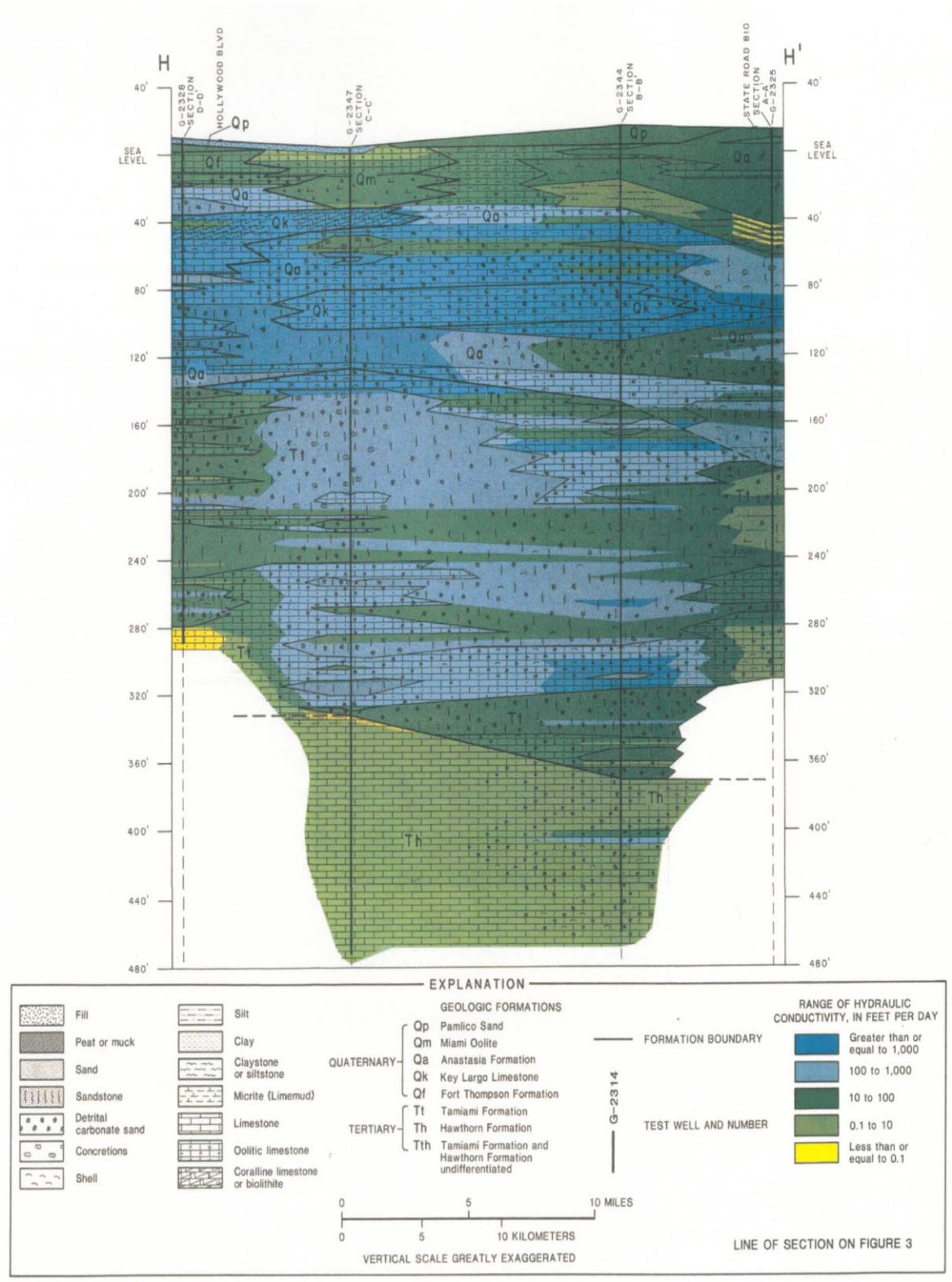
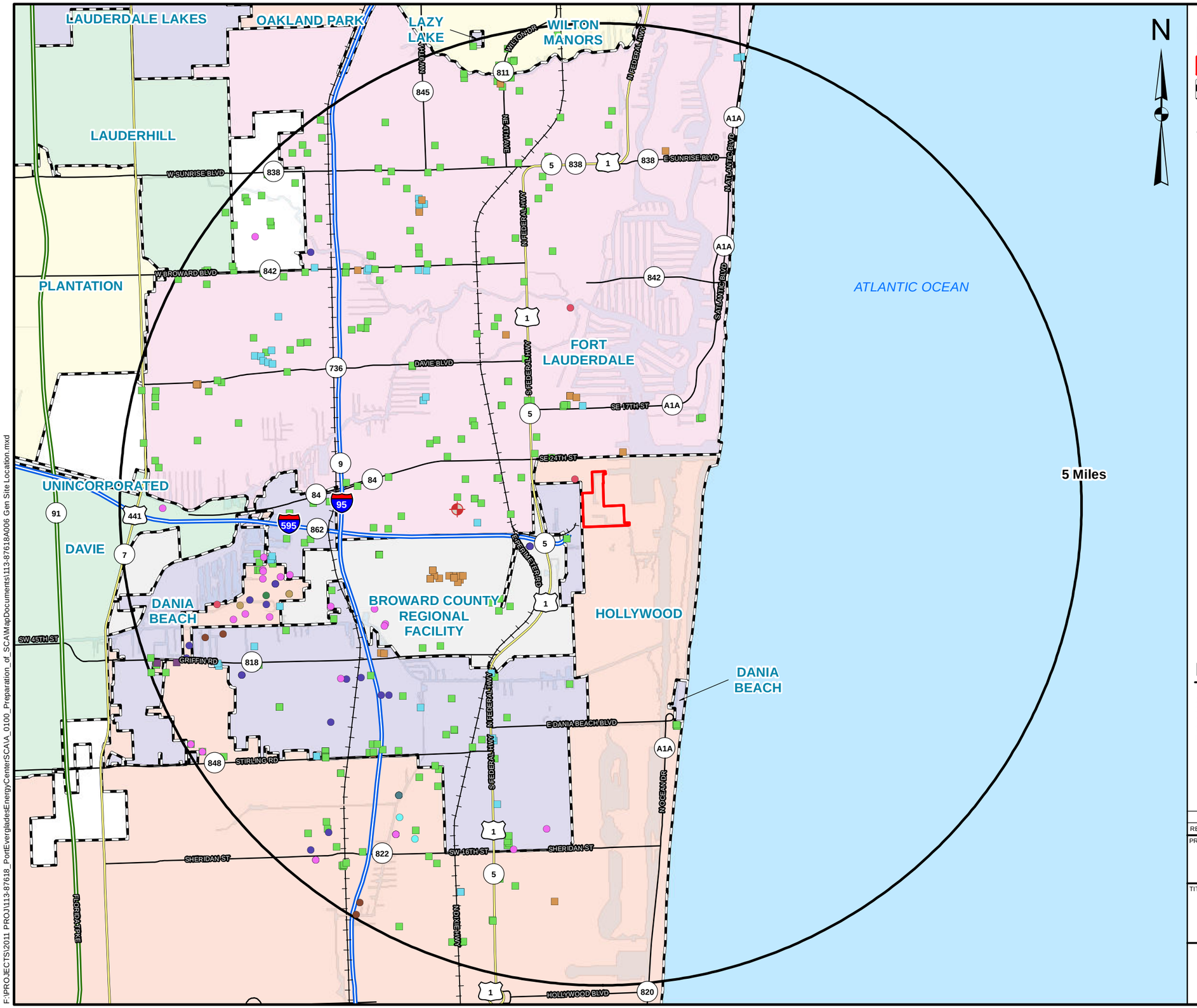


Figure 22.--Hydrogeologic section H-H' showing ranges of hydraulic conductivity.

Figure 3.3.1-1
Hydrogeology, Aquifer Characteristics, and Groundwater Flow of the Surficial Aquifer System, Broward County, Florida

Y:\Projects\2011\113-87618 FPL PEEC SCA\Chapters\Chapter 3\Figures\Figure 3.3.1-1 Hydrology.docx

Source: USGS, 1988.



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LEGEND

- Port Everglades Plant Property
- Municipal Boundaries
- USGS Test Site

Water Use Sources

- Aquifer Unspecified
- Biscayne Aquifer
- Lake
- Off-site Lake(s)
- On-site Borrow Pit(s)
- On-site Canal(s)
- On-site Lake(s)
- On-site Lake(s)/Pond(s)
- SFWMD C-10 (Hollywood) Canal
- Surficial Aquifer System
- Unspecified
- Water Table Aquifer

REFERENCES

1. Port Everglades Plant Property, FPL, 2011
2. Municipalities, Broward County Florida, 2011
3. Water Use Sources, South Florida Water Management District, 2011
4. USGS Test Site, Hydrogeology, Aquifer Characteristics, and Ground-Water Flow of the Surficial Aquifer System Broward County, Florida, USGS Survey Water Resources Investigations Report 87-4034 Table 1, 1988

1 0.5 0 Mile

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

WATER USE PERMITS WITHIN A 5-MILE RADIUS

PROJECT No. 113-87618			FILE No. 113-87618A012		
DESIGN	RCM	12/21/2011	SCALE: AS SHOWN	REV.	0
GIS	NRL	1/13/2012	**FIGURE 3.3.3-1**		
CHECK	RCM	1/13/2012			
REVIEW	KFK	1/13/2012			

LEGEND

- Port Everglades Energy Center Site
- Port Everglades Plant Property

REFERENCES

1. Port Everglades Plant Property, Port Everglades Energy Center Site FPL. 2011
2. Nautical Chart, NOAA Electronic Navigational Chart 11467_5, Downloaded September, 2010.

2,000 1,000 0 Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

NOAA NAUTICAL CHART

FPL

PROJECT No. 113-87618			FILE No. 113-87618A014	
DESIGN	RCM	12/21/2011	SCALE: AS SHOWN	REV. 0
GIS	NRL	1/13/2012		
CHECK	RCM	1/13/2012	FIGURE 3.3.4-1	
REVIEW	KFK	1/13/2012		

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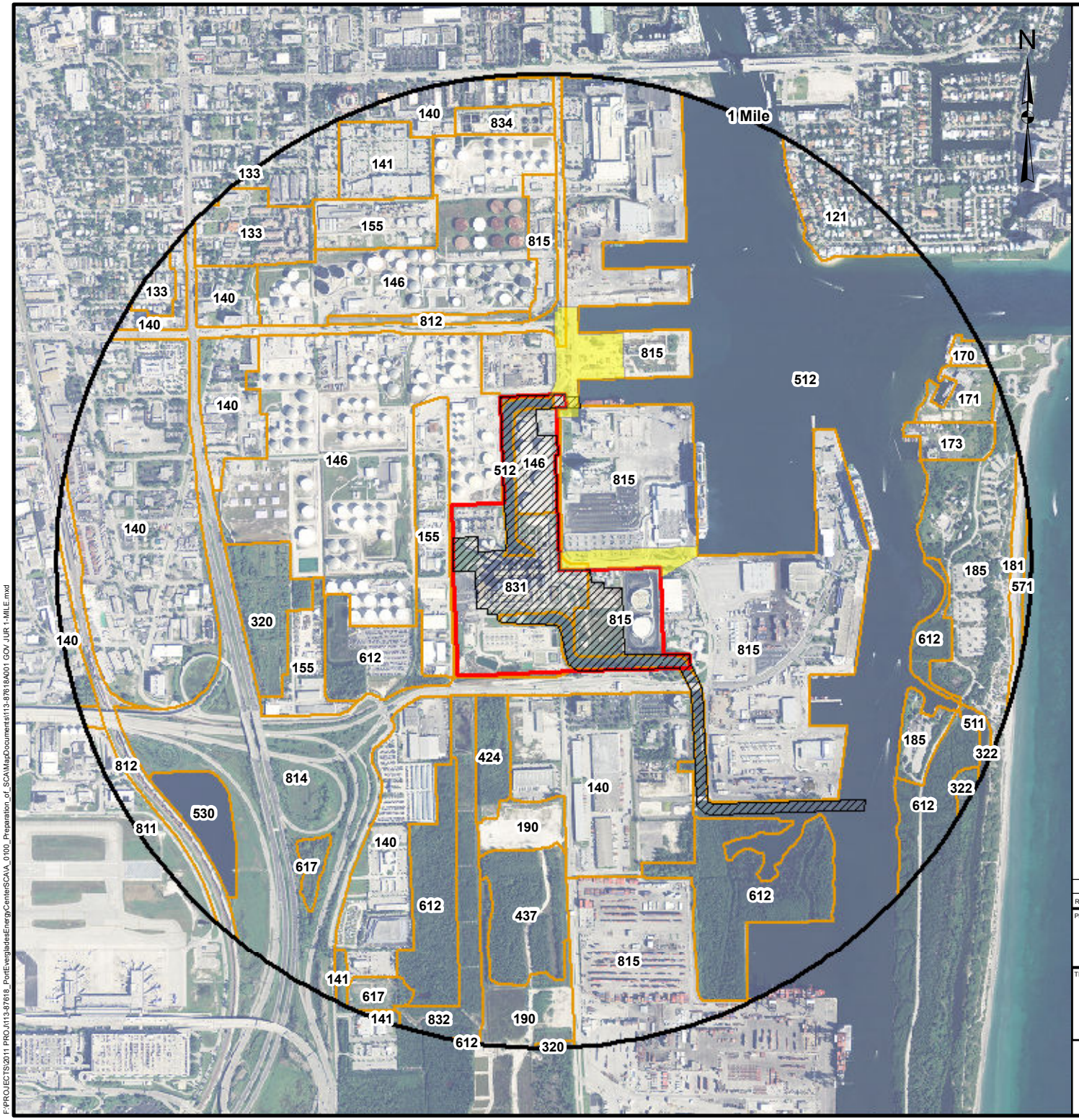

LEGEND

- Associated Linear Facility Corridors
- Port Everglades Energy Center Site
- Port Everglades Plant Property
- SFWMD Land Use / Land Cover
  - 121 - Fixed Single Family
  - 133 - Multiple Dwelling, Low Rise
  - 140 - Commercial and Services
  - 141 - Shopping Centers
  - 146 - Oil and Gas Storage
  - 155 - Other Light Industrial
  - 170 - Institutional
  - 171 - Educational Facility
  - 173 - Military
  - 181 - Swimming Beach
  - 185 - Parks and Zoos
  - 190 - Open Land
  - 320 - Shrub and Brushland
  - 322 - Coastal Shrub
  - 424 - Melaleuca
  - 437 - Australian Pine
  - 511 - Natural River, Stream
  - 512 - Channelized Waterway
  - 530 - Reservoirs
  - 571 - Altantic Ocean
  - 612 - Mangrove Swamp
  - 617 - Mixed Shrubs
  - 811 - Airports
  - 812 - Railroads and Railyards
  - 814 - Roads and Highways
  - 815 - Port Facilities
  - 831 - Electrical Power Facilities
  - 832 - Electrical Power Transmission Lines
  - 834 - Sewage Treatment

REFERENCES

1. Port Everglades Plant Property, Port Everglades Energy Center Site Associated Linear Facility Corridors FPL, 2011
2. Land Use, South Florida Water Management District, 2008
3. Aerial Imagery Courtesy of ESRI OpenGIS Map Server, Accessed January, 2012

1,500 750 0 Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

VEGETATION / LAND USE

PROJECT No. 113-87618			FILE No. 113-87618A016		
DESIGN	KK	1/11/2012	SCALE: AS SHOWN	REV.	0
GIS	NRL	1/16/2012			
CHECK	RCM	1/16/2012	FIGURE 3.3.5-1		
REVIEW	KFK	1/16/2012			

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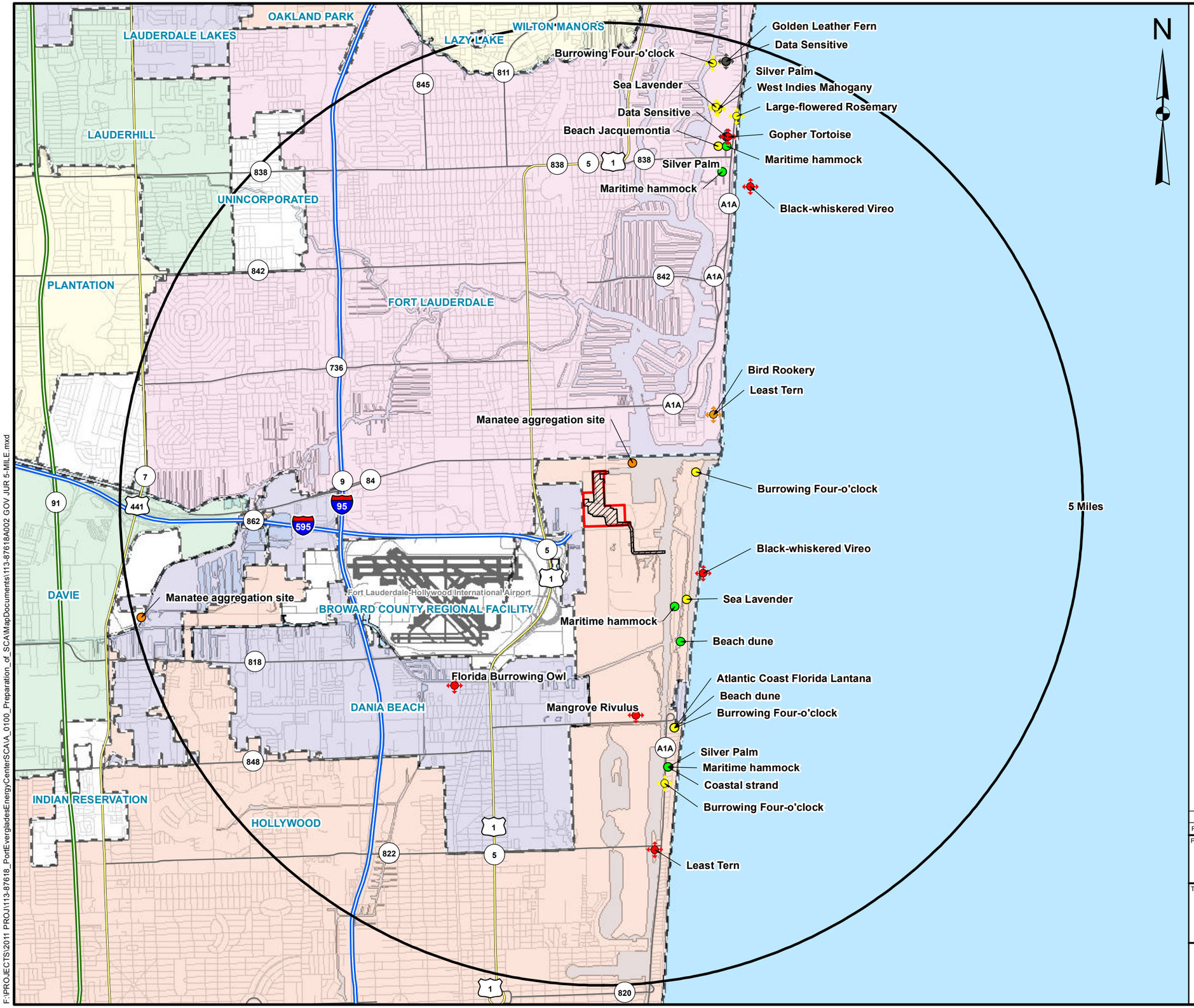

LEGEND

- Port Everglades Energy Center Site
- Port Everglades Plant Property

Element Occurrences

- Animals
- Plants
- Communities
- Other
- Data Sensitive
- Point Indicates General Vicinity of Element

REFERENCES

1. Port Everglades Plant Property, Port Everglades Energy Center Site, FPL 2011
2. Municipalites, Broward County, 2011
3. Element Occurrences, FNAI, 2007

1 0.5 0 Mile

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

LISTED AND OBSERVED SPECIES OCCURRENCES WITHIN 5 MILES

PROJECT No. 113-87618			FILE No. 113-87618A017	
DESIGN	RCM	12/21/2011	SCALE: AS SHOWN	REV. 0
GIS	NRL	1/16/2012		
CHECK	RCM	1/16/2012	**FIGURE 3.3.6-1**	
REVIEW	KFK	1/16/2012		

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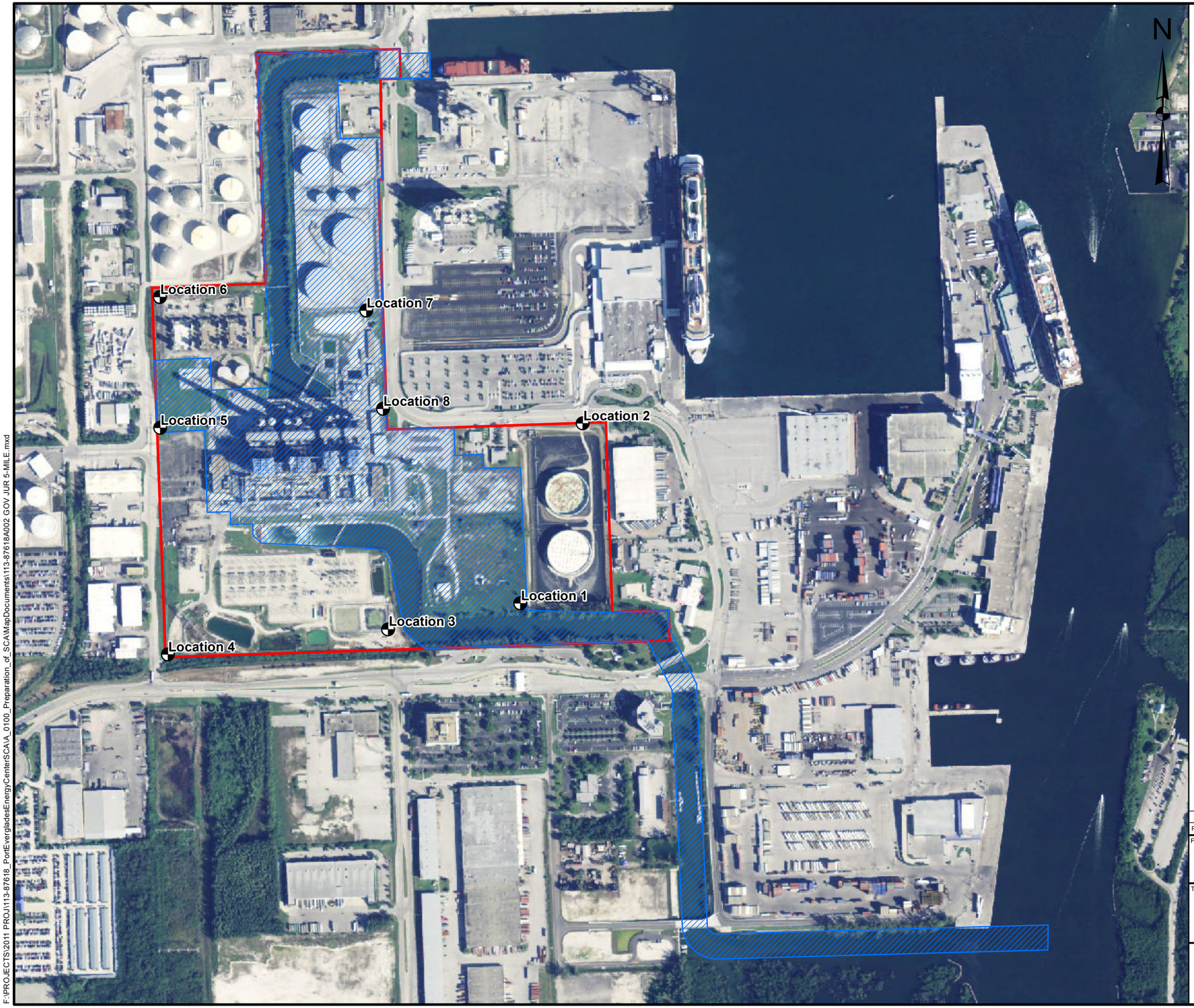

LEGEND

- Monitoring Locations
- Port Everglades Plant Property
- Port Everglades Energy Center Site

REFERENCES

1. Port Everglades Plant Property, Port Everglades Energy Center Site, FPL 2011
2. Monitoring Locations, Golder Associates Inc., 2011
3. Aerial Image Courtesy of Microsoft Bing Service Open GIS Map Server, Accessed November 2011

500 250 0
Feet

REV.	DATE	DES	REVISION DESCRIPTION	GIS	CHK	RVW

PROJECT

FPL
PORT EVERGLADES ENERGY CENTER

TITLE

NOISE AND LIGHT MONITORING LOCATIONS

PROJECT No. 113-87618			FILE No. 113-87618A022	
DESIGN	RCM	12/21/2011	SCALE: AS SHOWN	REV. 0
GIS	NRL	1/16/2012		
CHECK	RCM	1/16/2012	**FIGURE 3.3.7-1**	
REVIEW	KFK	1/16/2012		

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