

Governing Board Meeting
July 12, 2012



**Florida Power & Light Company
Turkey Point Units 6 & 7 Project**

SFWMD Electrical Power Plant and Non-Transmission Facilities Agency Report

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sfwmd.gov

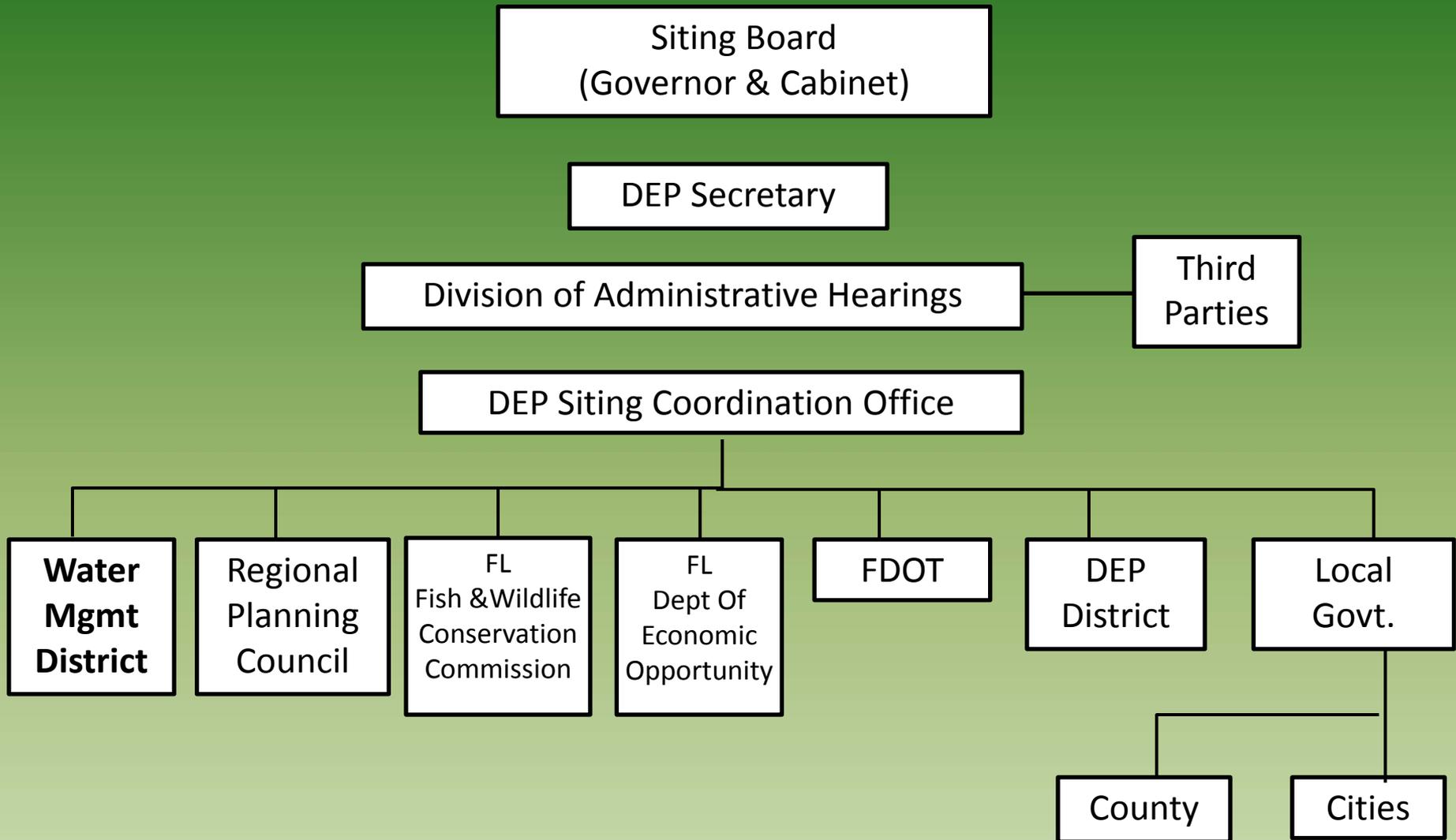
Legislative Provisions Chapter 403, F.S.

- **Power Plant Siting Act**
- **Transmission Line Siting Act**
- **One stop permitting process for the location and operation of electrical power plants and transmission lines**

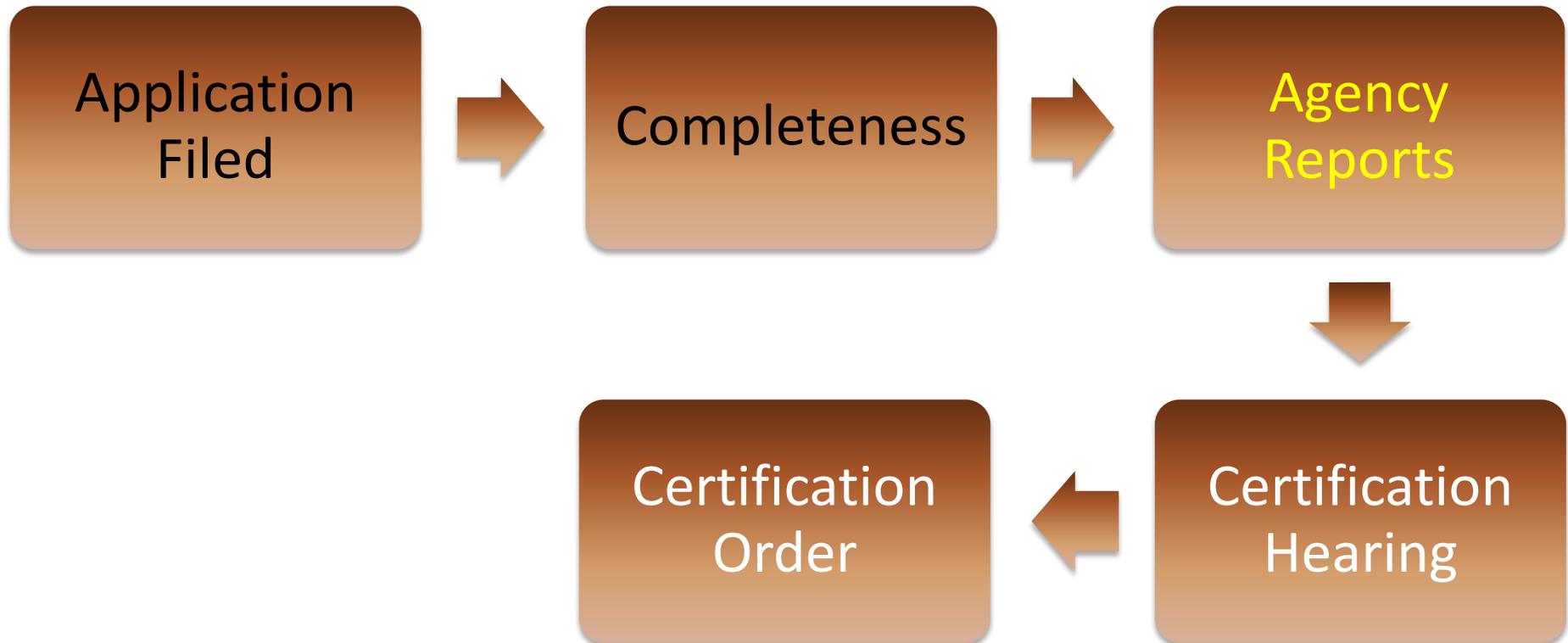
Certification Pre-emption

- **Certification supersedes all other state permits, licenses, laws, ordinances, and regulations.**
- **Excluding federal permits and licenses, a Siting Act Certification is the only permit or license for the location, construction and operation of the project.**

Entities Involved in Certification Process



Certification Process



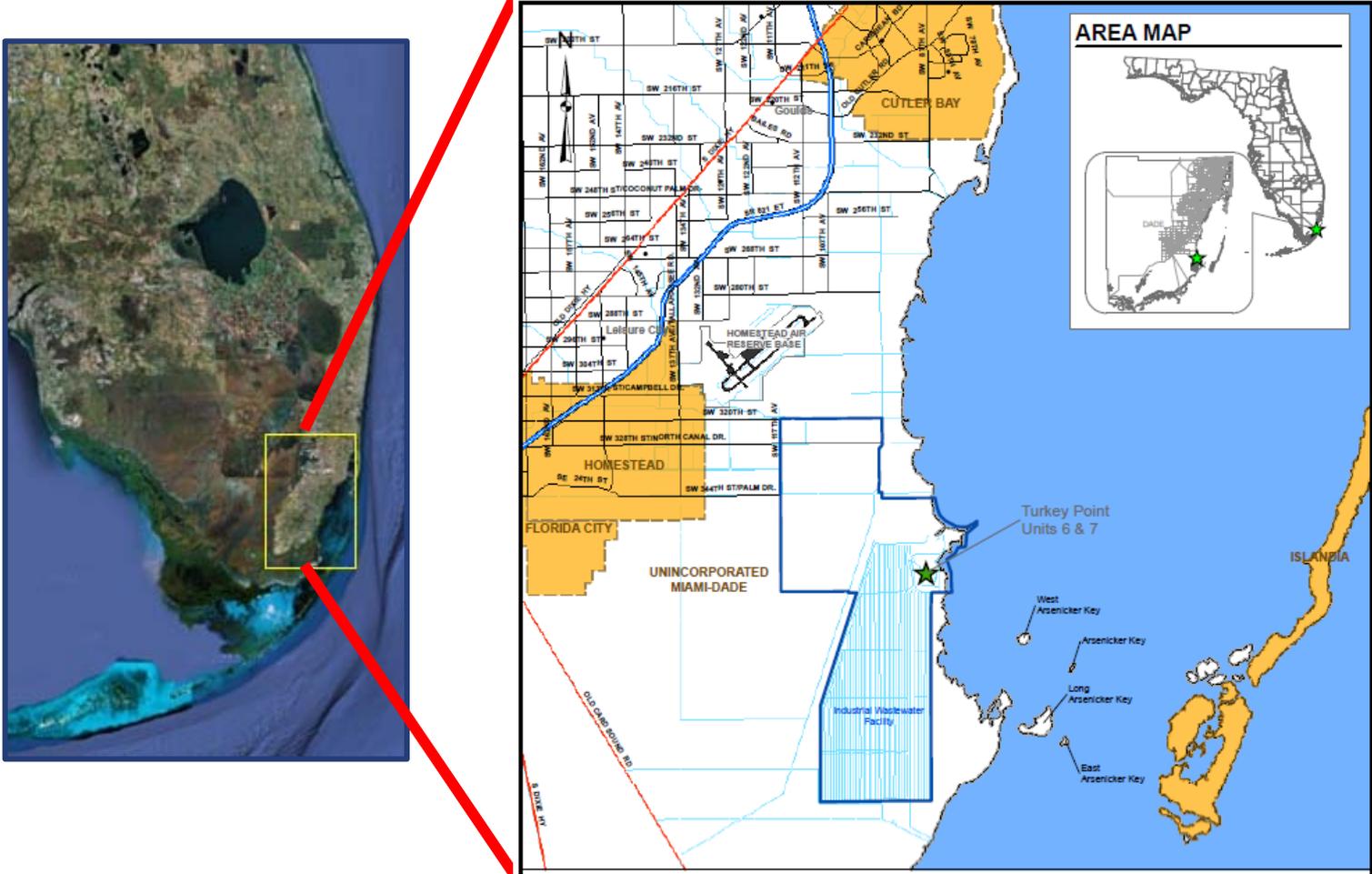
Agency Reports

- **Submittal deadline set by Administrative Law Judge**
- **Agency reports, with proposed Conditions of Certification, are submitted to DEP**
- **DEP prepares Project Analysis with a recommendation whether the project should be approved, denied or approved with conditions of certification**

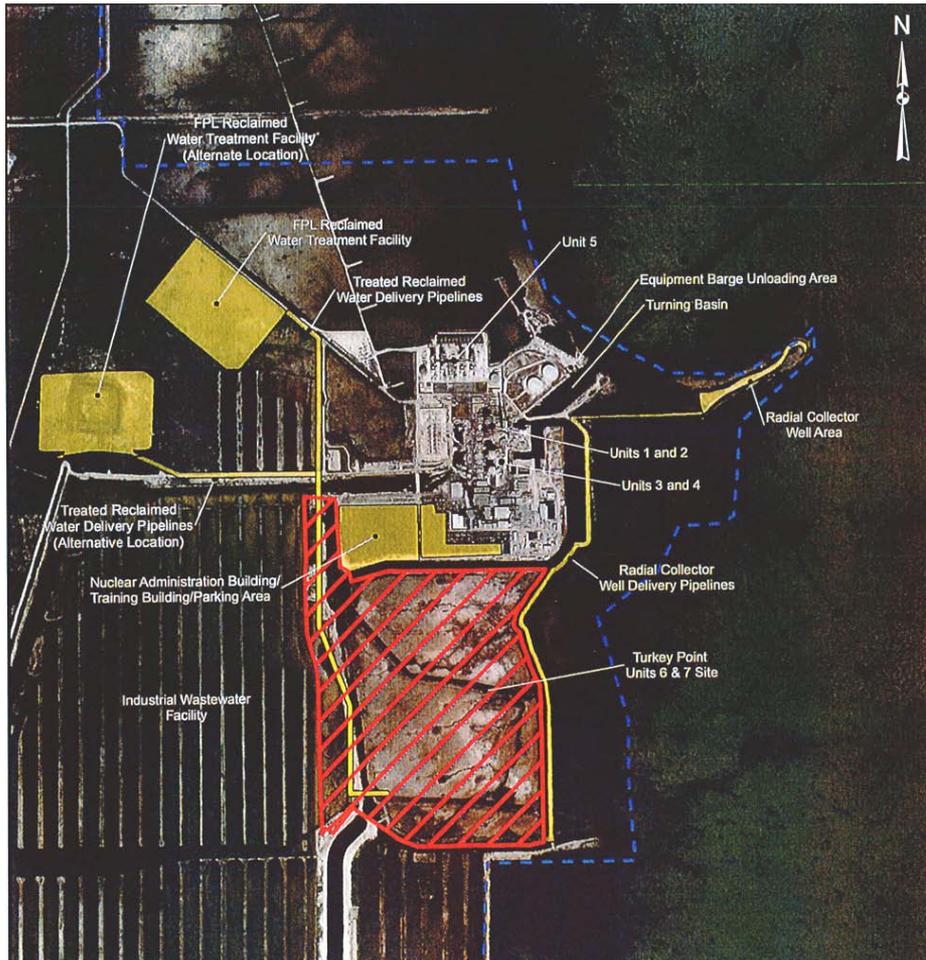
Certification Hearing

- **Primarily disputes on conditions, alternate corridors, agency recommendations on approval or denials.**
- **Each party, including agencies, presents evidence to Administrative Law Judge**
- **A Recommended Order is submitted to the Siting Board (Governor & Cabinet).**
- **Siting Board makes final determination on Certification and issues Final Order.**
- **Certification Order is generally valid for the life of the project, subject to the conditions therein.**

Project Location - Miami-Dade County

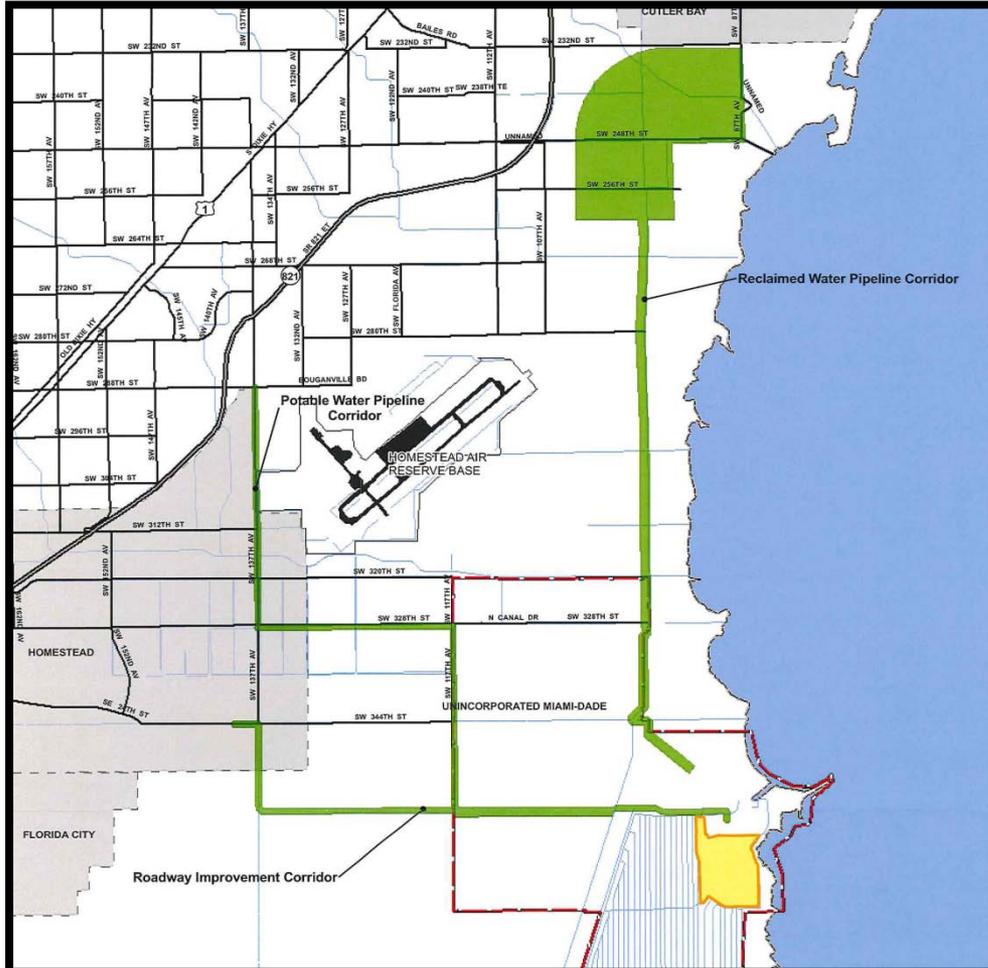


Plant Facilities



- **Units 6 & 7 - Two 1100 Megawatt Nuclear Units**
- **Reclaimed Water Treatment Facility**
- **Radial Collector Well System**
- **Equipment Barge Unloading Area**
- **Nuclear Administration and Training Buildings**

Linear Non-Transmission Facilities



- Reclaimed Water Pipeline
- Potable Water Pipeline
- Roadway Improvements

SFWMD Assessments

- **Earthwork (Excavation, Spoils Deposition, Dewatering)**
- **Cooling Water Supply**
- **Roadway Improvements**
- **Water Pipelines**

Earthwork: Excavation and Dewatering

Concerns

- Migration of excavated sediments and nutrients to Biscayne Bay from storage area
- Portion of FPL designated spoils storage area is adjacent to SFWMD Canal that has open connection to Biscayne Bay
- Dewatering volumes associated with deep excavation of Units 6&7 power block site

Conditions

- FPL shall use best management practices for containment of deposited spoils on cooling canal system (CCS) berms
- Westernmost 3500-foot segment of southern CCS berm to use additional protective measures
- FPL shall use grouting method during dewatering to significantly reduce volume

Cooling Water Supply

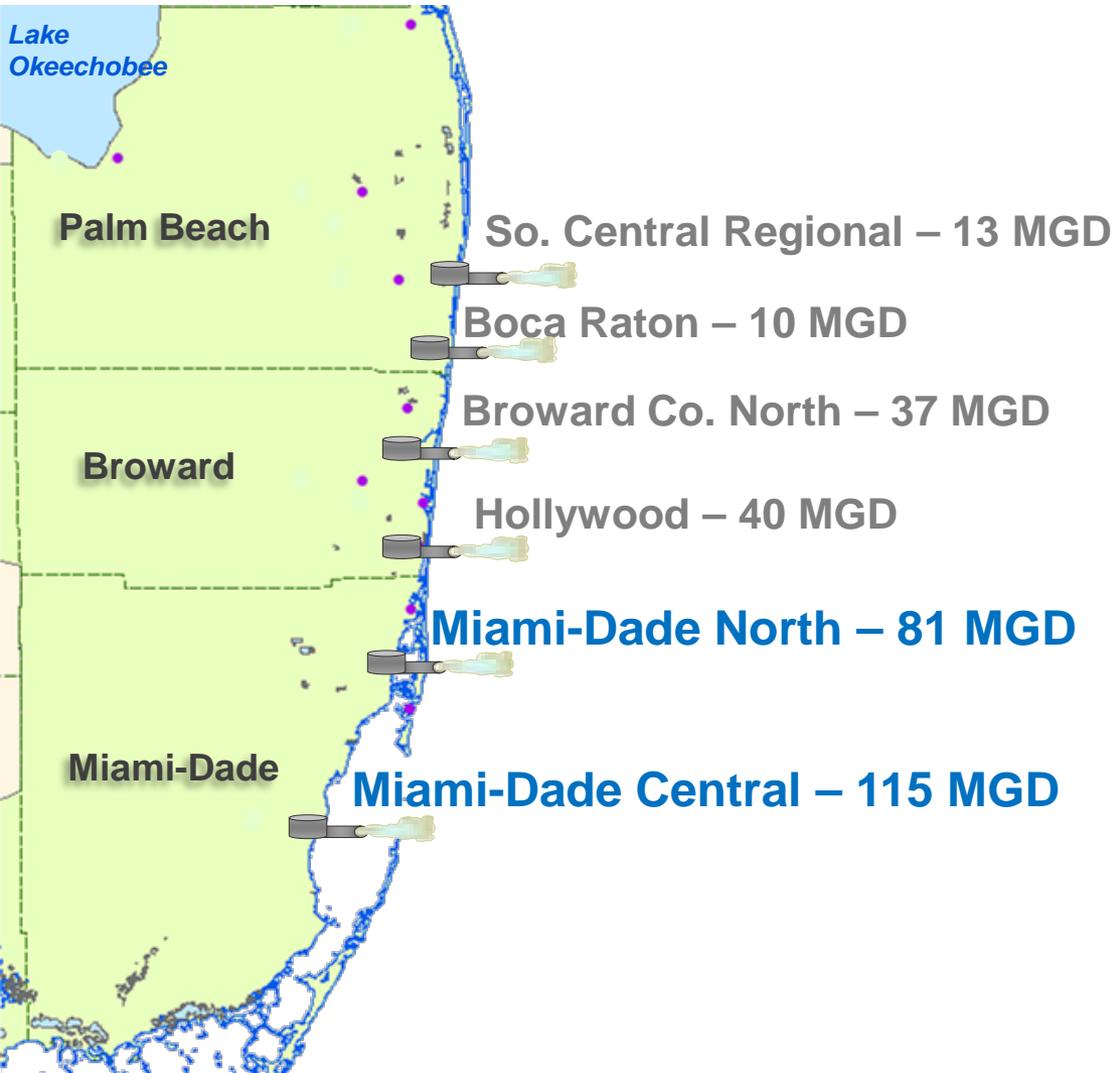
- **Reclaimed water from Miami-Dade County is the primary source for cooling water**
- **Formal agreement between FPL and Miami-Dade to provide reclaimed water 24/7/365**
- **Short-term, back-up supply is from a salty source using radial collector wells**

Reclaimed Water is the Primary Source

- **In the public interest; constitutes a beneficial reuse**
- **Highly reliable source**
- **Up to 90 MGD from Miami-Dade County (MDC) South District Wastewater Treatment Plant**
- **Consistent with MDC meeting SFWMD Consumptive Use Permit conditions**
- **Consistent with MDC meeting requirements of the Ocean Outfall Act**

Ocean Outfall Act

2008 legislation requires utilities with ocean outfalls to reuse 60% of discharge by 2025



Miami-Dade ocean outfall: 196 MGD

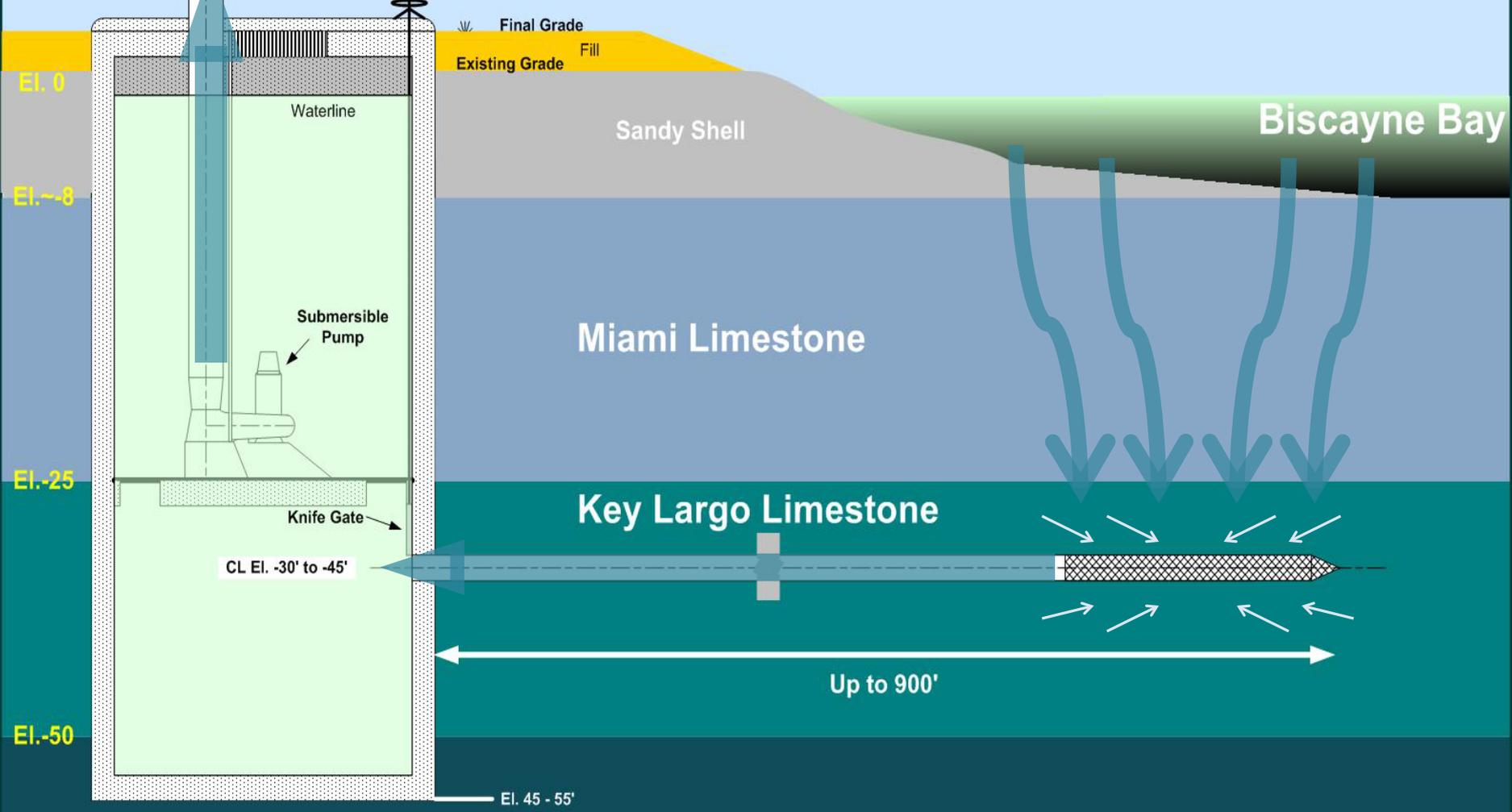
Required water reuse: 117 MGD

FPL agreement for reuse: up to 90 MGD

Short-term Back-up Supply: Radial Collector Wells

- **Each of the 4 radial collector wells (RCW) consists of a central collector (caisson), pumps and up to 12 laterals (horizontal wells)**
- **Caissons would be located on the Turkey Point Peninsula**
- **Lateral wells would be 25 – 40 feet below the bottom of Biscayne Bay and up to 900 feet long**
- **Expected use is infrequent**

Pumping Activities At Equilibrium



Fort Thompson Formation

Turkey Point 6 & 7 Radial Collector Well - Conceptual Layout

Not To Scale - For Illustrative Purposes Only

Radial Collector Wells

Concerns

- Prolonged operation may affect Biscayne Bay Coastal Wetlands (BBCW) CERP project performance
- Prolonged operation may induce movement of nutrients from hypersaline plume below cooling canal system into Biscayne Bay
- Induced downward movement of Biscayne Bay water may impact seagrass community, aquatic biota

Conditions

- Conduct a performance test of a radial collector well
- Conduct environmental monitoring (seagrasses, macroalgae, benthic resources)
- Limit operation to no more than 60 days in any 12-consecutive month period
- Emergency withdrawals require SFWMD approval

Roadway Improvements

Concerns

- New FPL bridge on SW 359th Street will cross SFWMD L-31E levee and borrow canal
- Roadway improvements will be perpendicular to CERP Biscayne Bay Coastal Wetlands Phase II project flows

Conditions

- Bridge shall be a free span without pilings in the canal
- FPL shall coordinate with SFWMD to avoid inconsistencies between FPL project and SFWMD ecosystem restoration projects

Water Pipelines

Concerns

- Reclaimed water pipeline corridor includes SFWMD L-31E right-of-way
- Reclaimed water pipeline must cross SFWMD canals
- FPL will convey pipelines to Miami-Dade County

Conditions

- Prohibition of long segments of parallel reclaimed water pipeline runs within SFWMD right-of-way
- Reclaimed water pipeline crossings of SFWMD canals shall be subaqueous
- Miami-Dade County will be required to comply with the limitations and conditions of the Certification upon transfer.

Resolution

A RESOLUTION OF THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT TRANSMITTING AN AGENCY REPORT TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION FOR FLORIDA POWER & LIGHT COMPANY'S TURKEY POINT UNITS 6 & 7 POWER PLANT AND ASSOCIATED NON-TRANSMISSION FACILITIES; PROVIDING AN EFFECTIVE DATE.