



August 27, 2014

Mr. Blake Guillory, P.E.  
Executive Director  
South Florida Water Management District  
3301 Gun Club Road  
West Palm Beach, FL 33416-4680

**Re: Request for Emergency Authorization  
Of Temporary Water Withdrawal from Excess Stormwater from L-31E Canal  
Florida Power & Light Company  
Turkey Point Plant**

Dear Mr. Guillory:

Florida Power & Light Company (FPL) is requesting emergency temporary authorization from the South Florida Water Management District (SFWMD) to access the District's right of way, connect to the L-31E canal, and withdraw excess stormwater (above the 254 cubic feet per second (cfs), required for the CERP Biscayne Bay Coastal Wetlands restoration project) from the L-31E canal north of the Turkey Point Plant to aid in reducing temperature and salinity in the Cooling Canal System (CCS). This CCS is integral to power generation at Turkey Point. The CCS works as a heat exchange for Turkey Point Power Plant Units 1, 3 & 4 cooling the units during the power generation process. As described below this excess stormwater is important for the continued reliable operation of Turkey Point Power Plant. FPL has more than 2 million customer accounts in Miami-Dade and Broward Counties and Turkey Point provides electricity supporting the region. The temporary water withdrawal is not expected to have adverse effects to vegetation, wildlife within the canal system, adjacent lands, L-31E canal, Biscayne Bay or the model lands. The following provides background information supporting this request.

Turkey Point Power Plant Units 3 & 4 operate under a license from the Nuclear Regulatory Commission (NRC). The original operating license included a requirement that the maximum allowed CCS water temperature on the intake or inlet side of Units 3 & 4 cannot exceed 100°F. As described below, during July 2014, numerous factors contributed to higher-than-usual inlet temperatures in the CCS that approached 100°F. Also, during July-August intake temperatures approached 102°F (Attachment A). As a result of engineering analysis demonstrating that the plant could safely operate with the water temperature exceeding 100°F, FPL requested and received temporary approval from the NRC to temporarily deviate from the water temperature requirement as it pursued a permanent change to the plant's operating license. In parallel, FPL submitted and received (August 8, 2014) approval for a License Amendment Request (LAR) that permanently increases the CCS intake water temperature limit from 100°F to 104°F. Should the 104°F temperature limit be exceeded and certain conditions met, the plant's current license requires Turkey Point Units 3 & 4 to commence shut down within 12 hrs, which could impact grid reliability. Although FPL received a License Amendment from the NRC to increase the intake temperature limit in the CCS, the inlet temperature still continues to be high (>100°F during afternoon peaks). The persisting factors that are resulting in the high water temperatures are described below. Our analysis supports that the addition of excess stormwater from the L-31E canal will add much needed water to the CCS, reducing the salinity, increasing the thermal efficiency of the CCS and ultimately reducing temperature. As a result of the temperature increases in the CCS, the Units, at times, have had to operate at capacities lower than 100%.

Florida Power & Light Company

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700 Universe Boulevard, Juno Beach, FL 33408

The continued temperature increase can be attributed to the lack of rain and cloud cover over the past several weeks, as well as the on-going algae, salinity conditions, and multiple days of record breaking electricity demand. During spring and summer 2014, low rainfall and high evaporation are important factors that have increased temperature and salinity in the canals. For example, annual rainfall at Turkey Point is typically between 50-75 inches. In 2013, rainfall accumulation was less than 20 inches at the cooling canals, and, as of the end of May 2014 there had been less than 3 inches at the rain station within the canals. Although we have seen more rain in June and July, overall rainfall has remained low (less than 26 inches compared 40 inches at the Miami Airport during the same timeframe) at Turkey Point. This rainfall shortage and the high evaporation (average 34 MGD) and losses to groundwater (average 12 MGD) have resulted in more water leaving from the system than is being provided from the aquifer or rainfall and ultimately concentrating the salinity in the water.

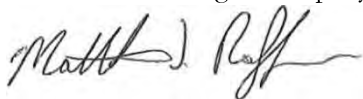
These conditions have also allowed an algal bloom to persist and it is further affecting operations. Our analysis has shown that the higher than normal salinity is a driving factor affecting the canal conditions and our ability to manage the canals we did historically. Currently, the salinity in the CCS is approximately 90 ppt, compared to historic levels of approximately 60 ppt. Effective treatment of the algae will require the salinity to be reduced to bring the dead algae out of suspension, which is also necessary to reduce CCS temperature and, thereby, restore the heat exchange capacity of the canals. For these reasons, there is an immediate temporary need for additional water for the cooling canals. Excess stormwater in the L-31E canal is the best temporary opportunity to reduce the temperature and salinity in the cooling canals and help to offset the high evaporation rate. In addition to the temporary request for excess stormwater from the L-31E canal, FPL requests right of way access to allow for the placement of pipes and pumps to withdrawal and distribute water from the L-31E canal into the CCS and temporary impacts to wetlands.

The project will require 0.33 acres of temporary wetland and surface water impacts - no permanent wetland fill is proposed with this project. Within wetland areas, the pipes are proposed to be installed upon the surface of the substrate without trenching. An excavator will be used to pull pipe segments into place; the excavator will be located upon existing upland access roadways or upon temporary construction matting to minimize wetland impacts (0.05 acres). Please refer to Attachment B for wetland impact drawings. Temporary wetland and surface water impacts will be restored upon completion of the project. In addition to in-situ restoration of temporary impacts, FPL will also purchase 0.18 mangrove mitigation credits from the Everglades Mitigation Bank, equivalent to the amount of functional loss required if the proposed impacts were permanent.

Attached are plans that depict the proposed layout of the system to withdrawal excess stormwater from the L-31E canal (Attachment C). The maximum amount we anticipate temporarily withdrawing is 100MGD, if available. We request authorization to pump 24 hours a day, if the water is available, and at variable rates determined by the SFWMD as based on flow rates at S-20F. We will coordinate with the SFWMD Homestead Field Station and SFWMD's Operations Control Room on a continual basis throughout this temporary operation. Please see Attachment D for the pumping description and expected District requirements. Finally, FPL will receive all appropriate authorizations from Army Corps of Engineers, Florida Department of Environmental Protection (FDEP) and Miami-Dade County.

If you have any questions, please contact me at 561-691-2808 or Stacy Foster at 561-691-7065.

Sincerely,  
Florida Power & Light Company

A handwritten signature in black ink, appearing to read "Matthew J. Raffenberg". The signature is fluid and cursive, with the first name "Matthew" being more prominent.

Matthew J. Raffenberg  
Director, Environmental Licensing and Permitting