

**From:** Steven Schoedinger  
**To:** [TurkeyPoint34SLREIS Resource](#)  
**Cc:** [Burton, William](#)  
**Subject:** [External\_Sender] Docket NRC-2018-0101 - Scoping Comments on Florida Power & Light's Subsequent License Renewal Application for Turkey Point Nuclear Generating Station's Reactor Units 3 & 4  
**Date:** Thursday, June 21, 2018 11:56:17 PM  
**Attachments:** [Mia Beach Reso\\_re - FPL Discontinue use of CCS 2017 F.A. 3.16.2017.pdf](#)  
[Mia Dade TPP 3 & 4 resolution 07-16.pdf](#)  
[ORCA Ltr to County, TPP 3 & 4 CCS Resolution.pdf](#)  
[FKAA TPPP ltr to BOCC 01-2017.pdf](#)

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Dear Ms. Ma and Mr. Burton:

Attached for U.S. Nuclear Regulatory Commission staff review and consideration are 4 PDFs comprising resolutions passed and correspondence sent in the past 3 years by Florida Keys Aqueduct Authority, Miami-Dade County, FL , City of Miami Beach, FL and Ocean Reef Community Association, Key Largo, FL

These publicly-recorded documents (1) condemn the water pollution emanating from the FPL TPPP 46 year old open canal reactor cooling water system, (2) support the decommissioning of same open cooling canal system before 2032, and (3) support constructing new mechanical draft cooling towers as soon as possible before the 2032 operating license renewal for the existing nuclear reactors #3 and #4.

The action taken by these organizations is significant and pertinent to Docket # NRC-2018-0101 Scoping Comments Phase of the Florida Power & Light's Subsequent License Renewal Application for Turkey Point Nuclear Generating Station's Reactor Units 3 & 4.

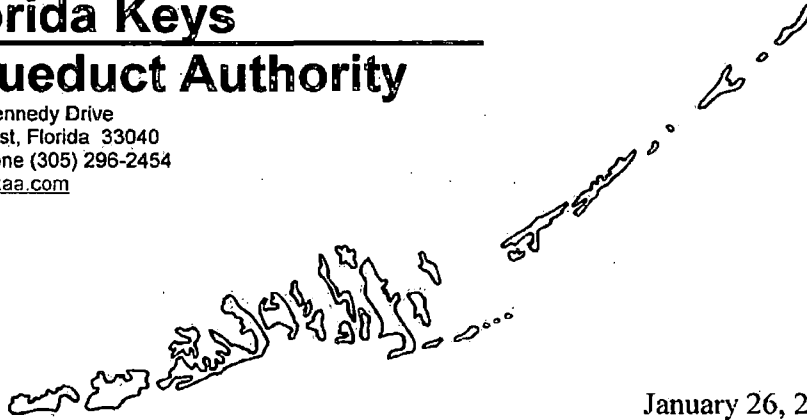
Sincerely,

Steven R Schoedinger, P.E.  
Chair, Water Resources Committee  
North Key Largo Utility District  
58 Anchor Drive, Unit B  
Key Largo, FL 33037



# Florida Keys Aqueduct Authority

1100 Kennedy Drive  
Key West, Florida 33040  
Telephone (305) 296-2454  
[www.fkaa.com](http://www.fkaa.com)



J. Robert Dean  
Chairman  
District 3

Richard J. Toppino  
Vice-Chairman  
District 2

David C. Ritz  
Secretary/Treasurer  
District 5

Antoinette M. Appell  
District 4

Cara Higgins  
District 1

Kirk C. Zuelch  
Executive Director

January 26, 2017

Board of County Commissioners  
Monroe County  
1100 Simonton Street  
Key West, FL 33040

Re: Florida Power and Light

Dear Commissioners:

The Florida Keys Aqueduct Authority Board of Directors requests your support in opposition to Florida Power and Light's (FPL) application to construct and operate two new nuclear plants at their Turkey Point facility. I have attached the letter from our Board to the U.S. Nuclear Regulatory Commission (NRC) and a Resolution from the City of Key West in opposition to the FPL application.

The Authority's letter to the NRC goes into detail explaining the reasons for our opposition; however, the following is a brief summary:

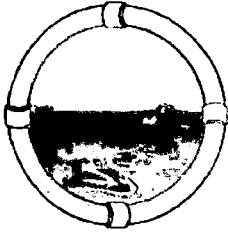
1. FPL has been out of compliance with the operating requirements of the cooling canal system for years and has only now addressed the problem after enforcement was initiated by Florida Department of Environmental Protection and Miami-Dade County. Our Board's position is clear: fix the problem created before expanding the facility.
2. The closed cooling canal system in a subtropical environment is unique among nuclear plants. Most plants use cooling towers or direct sea water pass-through systems. The cooling canal system at Turkey Point hasn't worked properly and agency, university and private sector experts are concerned that FPL will not be able to restore the aquifer to pre-existing conditions and eliminate the existing high salinity plume that threatens our fresh water supply. Our Board, therefore, has suggested to the NRC that cooling towers, which do work, be built to replace the failed cooling canal system.

We appreciate your support of the Authority's position which we believe best protects the water supply for the Florida Keys.

Sincerely,

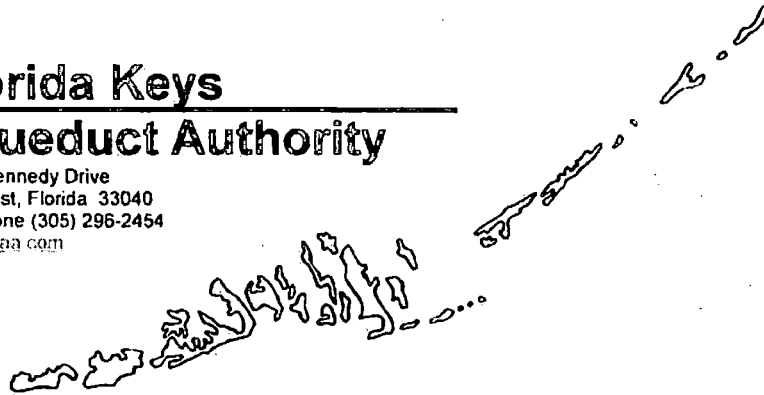
Kirk C. Zuelch  
Executive Director

cc: Roman Gastesi  
Bob Shillinger



## Florida Keys Aqueduct Authority

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District 2

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Executive Director

December 29, 2016

Annette L. Vietti-Cook, Secretary  
US Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

RE: DOCKETS 52-040 AND 52-041

Issuance of Combined Licenses for FPL's Turkey Point Units 6 and 7

Dear Secretary Vietti-Cook:

This letter is to present issues for consideration at your Evidentiary Hearing on February 9, 2017 regarding the application to construct and operate two new nuclear plants in southeast Miami-Dade County. The Florida Keys Aqueduct Authority is an Independent Special District of the State of Florida with the responsibility of supplying the entire group of islands known as the Florida Keys with drinking water from the Class I Biscayne Aquifer located in southeast Miami-Dade County. Our Board of Directors is appointed by the Governor of the State of Florida and has directed staff to prepare this letter in accordance with your correspondence, dated December 8, 2016.

For more than a decade, Florida Power & Light Company (FPL) has been out of compliance with operating requirements of its cooling canal system (CCS). The salinity values in the CCS have risen to concentrations higher than found in seawater. These high concentrations were not contained to acceptable levels as required by FPL's interceptor canal, and as a result, hypersaline conditions have migrated more than two miles beyond FPL's property and a plume of hypersaline has contaminated a large portion of the Biscayne Aquifer. This hypersaline plume and its influence on the movement of saline water as much as four miles westward toward critical drinking water supplies has been an issue that FPL has ignored for years. In 2014, the CCS temperature increased above the permitted range and emergency provisions were granted to allow higher operating temperatures and to tap into unpermitted surface water supplies to reduce temperatures. The CCS experienced increased salinity, regulated nutrients, and other constituents during this emergency. It was later determined, that the CCS had not been properly maintained for many years resulting in sediment accumulation that limited the volume of cooling water and restricted the water flow regime between the canals and the groundwater below and adjacent to the CCS. The primary impact to the Florida Keys from the failure of FPL to conduct the operation of its plant appropriately is to have put at risk the source of all the potable water we provide to our customers. If our wells, which are located approximately ten miles from the FPL plant, are contaminated by the FPL created high salinity plume, the entire water supply to the Florida Keys is gone.

After these FPL failures were discovered, both the State of Florida and Miami-Dade County found FPL in violation of their operating conditions. Both the State and Miami-Dade County filed regulatory and permit violations against FPL. FPL entered into Consent Orders with both entities rather than contest the violations in court. The primary element of both orders is to reduce the salinities in the groundwater aquifer which have been contaminated by FPL. Secondary impacts include nutrient loading from the CCS into Biscayne Bay. Because of the magnitude of these problems and the sensitivity of adjacent, environmentally-sensitive areas, the improvements will take many years to achieve even under favorable conditions.

There are serious concerns expressed by agency, university, and private sector experts that the plan proposed by FPL to fix the hypersaline problem is based on assumptions and analyses that are incorrect and/or inadequate and therefore will not provide the needed scope, capacities, and cost commitments to bring the aquifer back to pre-existing conditions.

Past and current operational issues caused by FPL have led to the environmental degradation of a sole-source aquifer and Biscayne Bay. FPL had shown little interest in dealing with these unpermitted consequences of its operation until enforcement action was taken. Even with consent orders in place, there is no clear evidence that FPL can resolve the issues they have caused by using the CCS over many years nor can they prove that the CCS is still a viable option to handle thermal loads from the existing nuclear reactors.

FKAA believes that the existing damage to the local environment must be fully reversed before FPL is granted any additional increase to thermal load capacity at its Turkey Point power plant. It makes no sense to allow this expansion when FPL has such a poor track record operating the existing system.

FKAA also requests the USNRC require cooling towers be built for use with the existing operation and the closure of the existing CCS. Once built, the towers would alleviate the thermal loads being imposed by the CCS, leading to recovery of the Biscayne Aquifer and Bay with proven technology.

We appreciate the opportunity to provide these comments to your Commission. If there are any questions regarding our comments, please let me know at your earliest convenience.

Sincerely,

  
Kirk C. Zurek  
Executive Director

cc: J. Robert Dean, FKAA Board of Directors  
Antoinette M. Appell, FKAA Board of Directors  
David C. Ritz, FKAA Board of Directors  
Cara Higgins, FKAA Board of Directors  
Richard J. Toppino, FKAA Board of Directors

George Neugent, Monroe County Commissioner  
David Rice, Monroe County Commissioner  
Danny Kolhage, Monroe County Commissioner  
Heather Carruthers, Monroe County Commissioner  
Sylvia Murphy, Monroe County Commissioner  
Roman Gastesi, Monroe County Administrator

RESOLUTION NO. 17-033

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF  
KEY WEST, FLORIDA, OPPOSING THE APPROVAL OF  
ADDITIONAL REACTORS FOR FLORIDA POWER AND LIGHT  
(FPL) AT TURKEY POINT NUCLEAR POWER PLANT;  
PROVIDING FOR AN EFFECTIVE DATE

WHEREAS, FPL has requested to be granted the right to construct two new nuclear reactors at their Turkey Point facility; and

WHEREAS, the past operations of said nuclear facility by FPL has resulted in the creation of a large saltwater plume which threatens the Florida Keys and Key West with loss of its fresh water supply drawn from wells in the Biscayne Aquifer; and

WHEREAS, the Florida Keys Aqueduct Authority (FKAA), the Florida Keys sole supplier of fresh water, has gone on record opposing the granting of the required permit to erect two new reactors at the Turkey Point Nuclear facility, because FKAA's wells are located within 10 miles of the high salinity plume which exists as a direct result of said facility operations having taken inadequate environmental measures to guard against the possible degradation, past and current of the Keys water supply; and

WHEREAS, the Florida Department of Environmental Protection (FDEP) has found that the past and present operation of said nuclear facility to be in violation of State rules and requirements of the permits for operation granted them; and

WHEREAS, the FDEP and FPL have worked out a settlement over these violations, which calls upon the utility to reverse and eradicate the flow of this plume; and

WHEREAS, there is serious concern that the required eradication could be accomplished within the next 10 years, if at all; and

WHEREAS, there is concern that the addition of more reactors will only acerbate the efforts to eradicate the dangerous plume and further jeopardize efforts to eradicate the plume, leading to the eventual loss of a fresh water supply for over 87,000 residents of the Florida Keys, and the important military installations located there.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF KEY WEST, FLORIDA AS FOLLOWS:

Section 1: That the United States Nuclear Regulatory Commission is hereby requested to deny the application of Florida Power & Light Company to construct additional nuclear reactors at its Turkey Point Nuclear Power Plant, until the saltwater plume is completely eradicated and no longer poses a danger to the fresh water supply provided by the Biscayne Aquifer, from which the Florida Keys and its 87,000 residents and military installations receive their supply of fresh water.

Section 2: That the City Commission additionally requests that the United States Nuclear Regulatory Commission not permit the addition of any more reactors, unless and until the electric utility

can demonstrate scientifically that its canal cooling system is a viable method to handle thermal loads from its existing reactors.

Section 3: That this Resolution shall go into effect immediately upon its passage and adoption and authentication by the signature of the Presiding Officer and the Clerk of the Commission.

Passed and adopted by the City Commission at a meeting held this 18th day of January, 2017.

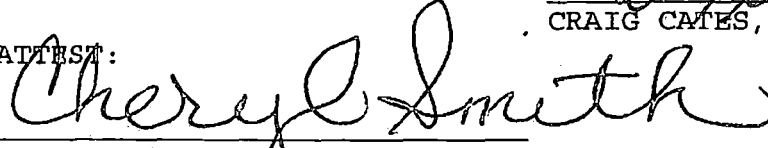
Authenticated by the Presiding Officer and Clerk of the Commission on 18th day of January, 2017.

Filed with the Clerk on January 19, 2017.

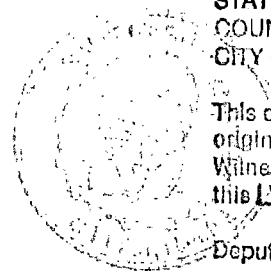
Mayor Craig Cates	<u>Yes</u>
Vice Mayor Clayton Lopez	<u>Absent</u>
Commissioner Sam Kaufman	<u>Yes</u>
Commissioner Richard Payne	<u>Yes</u>
Commissioner Margaret Romero	<u>Yes</u>
Commissioner Billy Wardlow	<u>Yes</u>
Commissioner Jimmy Weekley	<u>Yes</u>

  
CRAIG CATES, MAYOR

ATTEST:

  
CHERYL SMITH, CITY CLERK

STATE OF FLORIDA  
COUNTY OF MONROE  
CITY OF KEY WEST



This copy is a true copy of the original on file in this office. Witness my hand and official seal this 19<sup>th</sup> day of January, 2017

Deputy City Clerk

By 

RESOLUTION NO. \_\_\_\_\_

**A RESOLUTION OF THE MAYOR AND CITY COMMISSION  
OF THE CITY OF MIAMI BEACH, FLORIDA, SUPPORTING  
EFFORTS TO SEEK A COMMITMENT FROM FLORIDA  
POWER & LIGHT TO DISCONTINUE THE USE OF THE  
COOLING CANAL SYSTEM AT THE TURKEY POINT  
NUCLEAR POWER PLANT AS SOON AS POSSIBLE.**

**WHEREAS**, the Florida Power & Light (FPL) Turkey Point Nuclear Power Plant, located in south Miami-Dade County, utilizes a cooling canal system which consists of a network of approximately 5,900 acres of unlined canals; and

**WHEREAS**, FPL's Turkey Point Nuclear Power Plant is the only facility in the world that uses a cooling canal system instead of mechanical draft cooling towers; and

**WHEREAS**, water from this cooling canal system communicates with the surrounding groundwater, and long-term monitoring data has shown that a hypersaline plume of water from the cooling canals has been migrating into and contaminating the groundwater beyond the boundaries of the cooling canals; and

**WHEREAS**, FPL has a license from the federal government to operate the Turkey Point Power Plant units that use the cooling canal system until 2033; and

**WHEREAS**, Miami-Dade County took action to address this issue, including, but not limited to, issuing a Notice of Violation in 2015 to FPL for certain water quality violations in the groundwater and requiring, through an administrative consent agreement, that FPL take certain remedial actions to retract and contain the hypersaline ground water plume; and

**WHEREAS**, at that time, the issues were focused on the westward migration of the hypersaline groundwater plume from the cooling canals; however, more recent water quality sampling has detected levels in excess of water quality standards in certain surface water locations in or connected to Biscayne Bay, adjacent to and east of the cooling canal system; and

**WHEREAS**, on May 11, 2016, the Mayor and City Commission of the City of Miami Beach passed and adopted Resolution No. 2016-29405 regarding FPL's violation of State water quality standards in the operation of its cooling canal system and urged the Florida Department of Environmental Protection to take action to protect the residents of southeast Florida from the hazards of saltwater intrusion into the Biscayne Aquifer and Biscayne National Park; and

**WHEREAS**, the Biscayne Aquifer is an important natural resource which supplies fresh drinking water to millions of South Florida residents and is vital to irrigation and to Florida's marsh and wetland communities; and



**WHEREAS**, the Mayor and City Commission of the City of Miami Beach join Monroe County in seeking a commitment from FPL to discontinue the use of the cooling canal system in favor of a more modern mechanical draft cooling tower system that would remove all future interactions with groundwater and make use of Miami-Dade County's reuse water.

**NOW, THEREFORE, BE IT DULY RESOLVED BY THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA**, that the Mayor and City Commission hereby support efforts that seek a commitment from FPL to discontinue the use of the cooling canal system at the Turkey Point Nuclear Power Plant as soon as possible.

**PASSED AND ADOPTED** this 22<sup>nd</sup> day of March, 2017.

**ATTEST:**

\_\_\_\_\_  
Philip Levine, Mayor

\_\_\_\_\_  
Rafael E. Granado, City Clerk

APPROVED AS TO  
FORM & LANGUAGE  
& FOR EXECUTION

*Joe A. Sente* for 3/16/17  
\_\_\_\_\_  
City Attorney                      Date

Dear County Commissioners,

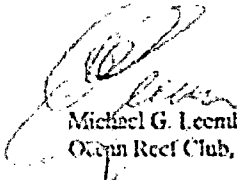
The Florida Power & Light canal system at Turkey Point Nuclear Power Plant has been, and continues to be, a concern to the residents of the Ocean Reef Community. This cooling canal system interacts with the surrounding groundwater; long-term monitoring data has shown that a hypersaline plume in the water has been migrating toward the drinking water beyond the boundaries of the cooling canal and is now entering the surface waters of Biscayne National Park.

We are very concerned about recent discoveries relating to the impacts on Biscayne Bay and believe it is time to discontinue the use of the cooling canal system in favor of cooling towers.

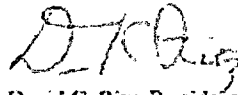
Coincidentally, Miami-Dade County has a need to utilize their reuse water in order to eliminate water quality problems caused by their sewage system. Now is the time to solve these two major environmental issues by building cooling towers and utilizing reuse water.

We encourage the Monroe County Board of County Commissioners to adopt the attached proposed resolution supporting these efforts. We greatly appreciate your attention to this matter.

Sincerely,



Michael G. Lecumbuis, President  
Ocean Reef Club, Inc.



David C. Ritz, President  
Ocean Reef Community  
Association, Inc.

27 Ocean Reef Drive Suite 200  
Key Largo Florida 33037 Phone (305) 867-2871



Final Resolution  
Monro...).docx

**TITLE**

**RESOLUTION SUPPORTING EFFORTS TO SEEK A COMMITMENT FROM FLORIDA POWER & LIGHT COMPANY TO DISCONTINUE USE OF THE COOLING CANAL SYSTEM AT THE TURKEY POINT POWER PLANT**

**BODY**

WHEREAS, the Florida Power & Light's (FPL) Turkey Point Power Plant, located in south Miami-Dade County, utilizes a cooling canal system which consists of a network of approximately 5,900 acres of unlined canals no other system of its kind operating anywhere in the world; and

WHEREAS, water from this cooling canal system interacts with the surrounding groundwater, and long-term monitoring data has shown that a hypersaline plume of cooling canal water has been migrating in the groundwater, beyond the boundaries of the cooling canals, contaminating drinking water to the west and entering the surface waters of BNP to the east; and

WHEREAS, Miami-Dade County Department of Environmental Resources Management (DERM) and the Florida Department of Environmental Protection (DEP) have taken some action in response to violations of water quality standards including, but not limited to, issuing a Notice of Violation in 2015 to FPL for certain water quality violations in the groundwater, and requiring, through an administrative consent agreement, that FPL take certain actions to retract and contain the hypersaline groundwater plume; and

WHEREAS, at that time, the issues were focused on the hypersaline groundwater plume migrating west of the cooling canal system; and

WHEREAS, more recent water quality sampling detected exceedances of State and Miami-Dade County water quality standards in surface water locations in and connected to Biscayne Bay, adjacent to and east of the cooling canal system; and

WHEREAS, this Board, as well as residents of this County and members of the general public, are concerned about these recent discoveries and the impacts on Biscayne Bay, and such discoveries further highlight the challenges posed by the continued operation of the cooling canal system; and

WHEREAS, FPL has a license from the federal government to operate the Turkey Point power plant units that use the cooling canal system until 2033; and

WHEREAS, the County is seeking a commitment from FPL to discontinue the use of the cooling canal system in favor of efficient, commonly-employed technology such as cooling towers; and

WHEREAS, information and analysis recently made available to the County suggests that the use of mechanical draft closed-cycle cooling towers combined with the elimination of cooling tower wastewater discharges (through the Zero Liquid Discharge (ZLD) system), represents the best available technology for eliminating the water quality problems being caused by the Turkey Point cooling canal system and would remove all interactions with the aquifer and make use of Miami Dade County reuse water; and

WHEREAS, FPL will spend a minimum of 50 Million Dollars a year for over at least a ten-year period for remediation alone and it is unclear if the extraction wells proposed will have a negative impact on the surrounding environment, while this technology could be completed in a more timely and affordable manner; and

WHEREAS, this technology can be used beyond 2033 if needed for a variety of energy generation technologies that FPL might pursue and can reduce harm to the surrounding environment and water supply in comparison to the failing cooling canal system; and

WHEREAS, current plans for remediation that DEP and DERM have proposed and FPL is operating under will not address the interactions with the Aquifer and Biscayne Bay alone; and

WHEREAS, this Board wishes to express its support for the Miami Dade County Mayor's efforts to obtain such a commitment from FPL,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MONROE COUNTY, FLORIDA, that this Board supports the efforts by Miami Dade County and the Environmental community to seek a commitment from Florida Power & Light to discontinue the use of the cooling canal system at the Turkey Point Power Plant as soon as possible, in favor of cooling towers.

Mia Dade TPP 3 & 4 resolution 07-16.pdf was submitted as a password protected document and could not be opened and added to this Adobe file.

7/5/2018