UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT COURT OF FLORIDA
Miami Division

Case No.: 1:16-cv-23017-DPG

SOUTHERN ALLIANCE FOR CLEAN ENERGY
TROPICAL AUDUBON SOCIETY INCORPORATED,
and FRIENDS OF THE EVERGLADES, INC.,

Plaintiffs,

v.

FLORIDA POWER & LIGHT COMPANY,

Defendant.

EXPERT REPORT OF EDWARD A. SWAKON, P.E. (Florida)

I have been retained by the Plaintiffs in this matter to offer expert testimony. Pursuant to Fed. R. Civ. P. 26(a)(2)(B), the following is my written report:

OPINIONS

1. The CCS is a significant contributing factor to the water quality violations in the G-II aquifer to the west of the CSS.

From 1998 thru 2017, EAS Engineering, Inc. (EAS) provided environmental consulting services to several clients in South Miami Dade County including, Atlantic Civil Inc. (ACI) and the City of Homestead. From 2004 thru 2017, EAS collected groundwater samples from numerous wells, the majority of which were located South of SW 344 Street, in the Model Lands Basin. In 2010, Earthfx, in cooperation with EAS Engineering, Inc. developed and calibrated a three-dimensional density-dependent groundwater flow/solute transport model for the area surrounding the Atlantic Civil Incorporated (ACI) property as part a cumulative impact assessment conducted by EAS Engineering for ACI.
Simulations show that since its inception, the FPL Cooling Canal System (CCS) has significantly affected the dynamics of freshwater/saltwater in the vicinity of the ACI property. As salinities in the CCS have increased over time, the simulations showed a corresponding westward migration of the freshwater/saltwater interface from the CCS towards the ACI property.

Data analyzed over the years, both collected by EAS and by FPL indicate a significant portion of the G-II aquifer west of the CCS have been contaminated. Data shows the steady western migration of the saltfront in the Model Lands. See Exhibit A Figures 1-6,

2. Despite remedial measure implemented by FPL the saltfront continues to migrate west contaminating more of the G-II aquifer.

Data recently made available to EAS indicates the western edge of the saltfront continues to migrate west. A well monitored by EAS since 2008 became salt intruded in December of 2017. EAS provided the data and notice to the agencies. See Exhibit A Figure 7

3. Remedial methods used to date are not correcting the water quality violation, and proposed use of reuse water may make the conditions worse..

The methods employed by FPL to halt the movement of the saltfront are insufficient. Additional aggressive cleanup efforts are required to correct the existing water quality violations created by the hypersaline water emanating from the Cooling Canal System at FPL's turkey point plant. It is unclear if the proposed addition of reuse water from Miami Dade County's South Dade Wastewater treatment plant is the proper solution to address the existing contamination of the G-II aquifer or whether it will make it worse. The actions by the various regulatory agencies to date, DERM, and FDEP have been insufficient to address the ongoing contamination of the G-II aquifer efficiently.

QUALIFICATIONS

My resume is attached hereto as Exhibit B and contains my qualifications and includes a publications that I have authored.

PRIOR TESTIMONY

During the past 4 years, I have testified and have had my deposition taken in several cases between:

Altantic Civil, Inc. v. Florida Power and Light Company, et al., Case No. 15-1746 (Florida Division of Administrative Hearings, Nov. 2-4, 2015).

COMPENSATION

I am being compensated as follows for my work in this matter: $180.00 per hour.

SIGNATURE

Edward A. Swakon, P.E., President EAS Engineering, Inc.

Exhibit A: Figures

Figure 1: Increasing Conductivity over time at City of Homestead Groundwater monitoring well -01

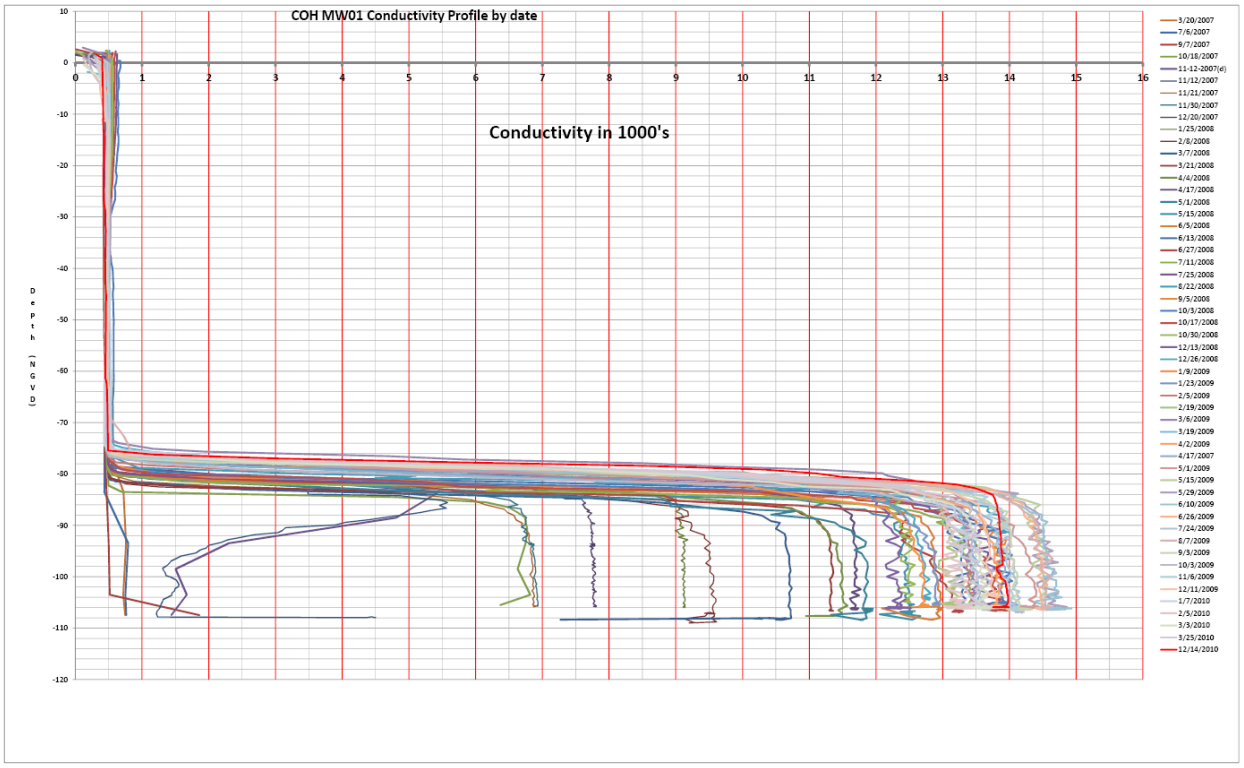


Figure 2: FPL Data showing Hypersaline water 2 miles beyond limit of CCS

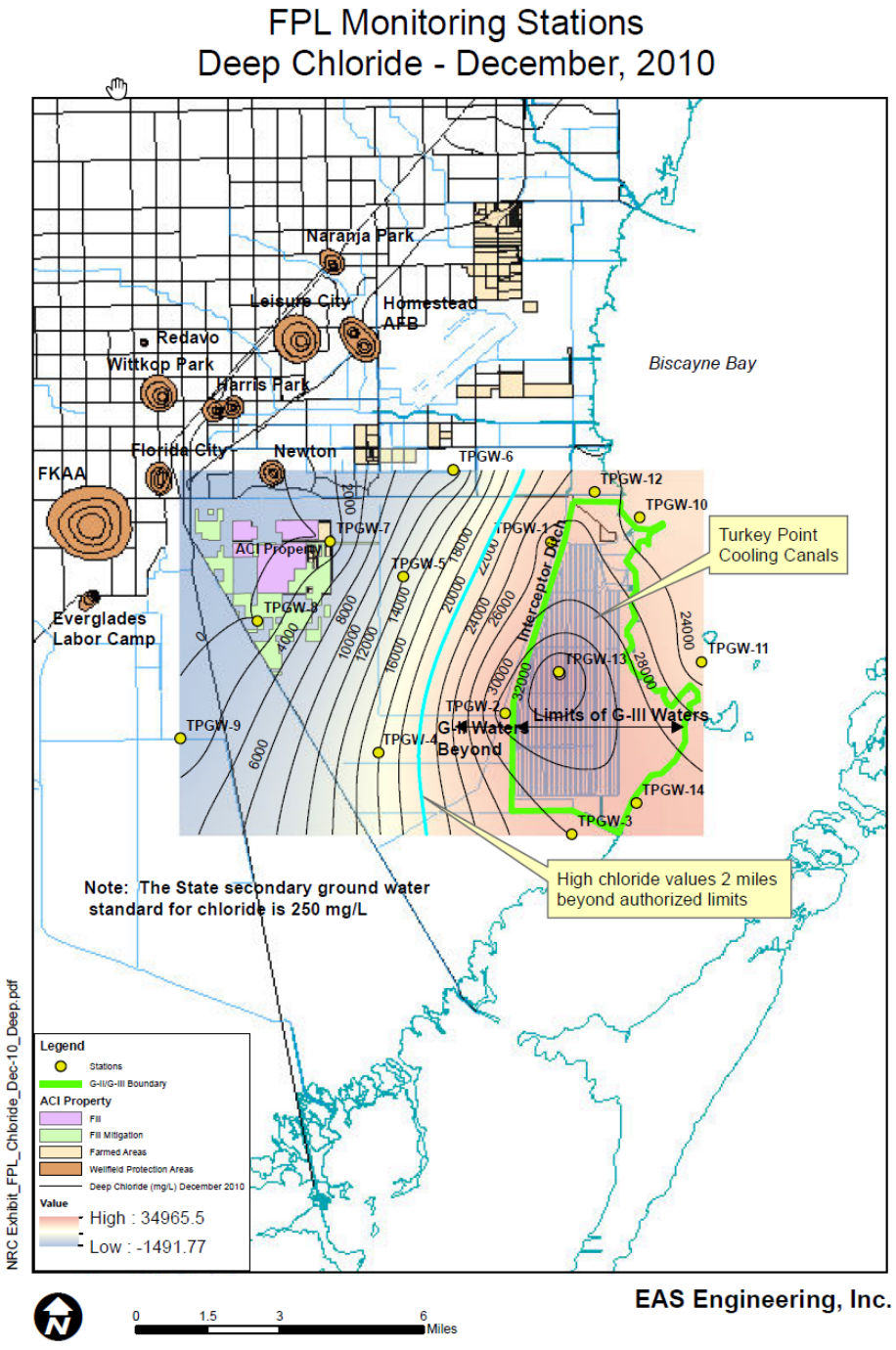


Figure 3: FPL data showing tritium (an indicator of water from the CCS) well beyond the western edge of the CCS.

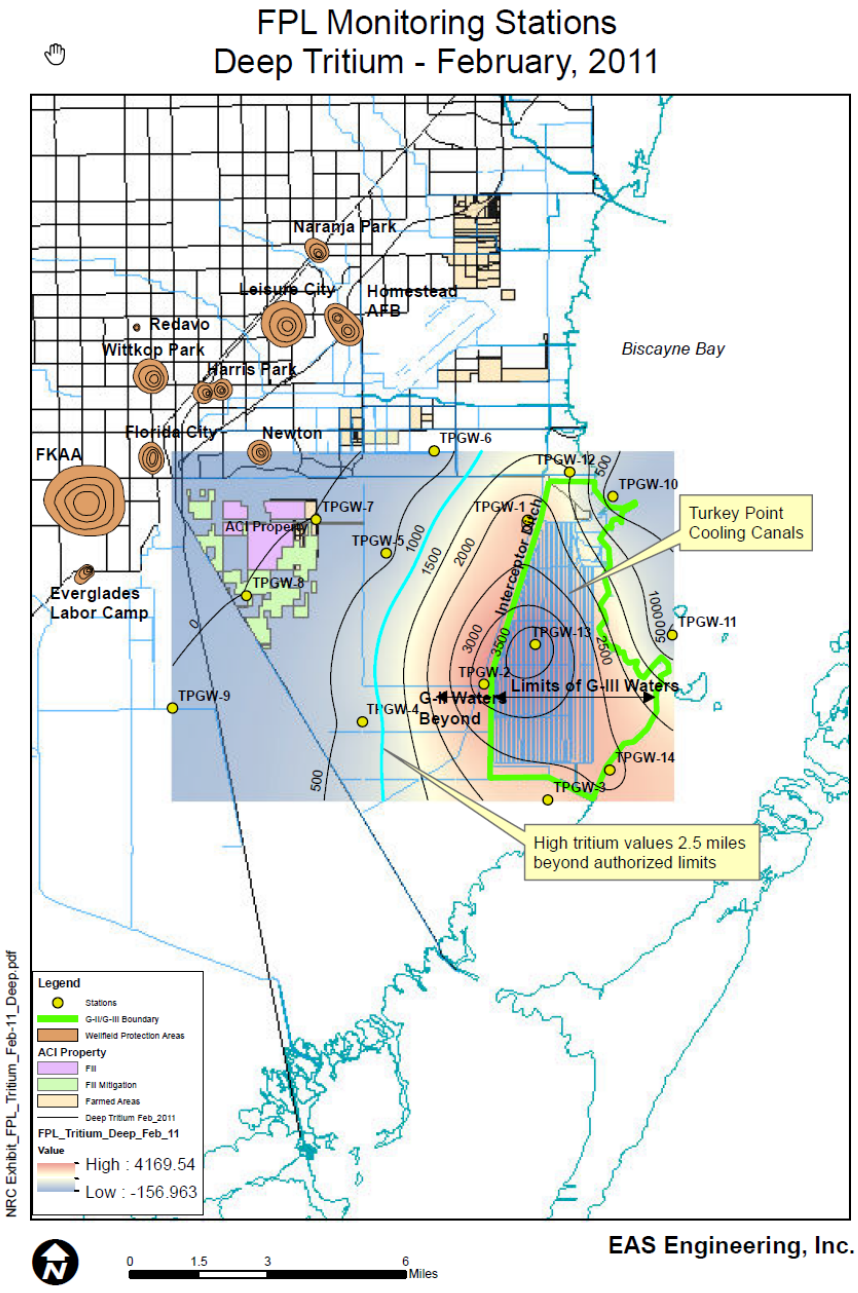


Figure 4: The simulated position of the saltfront with and without the influence of the CCS

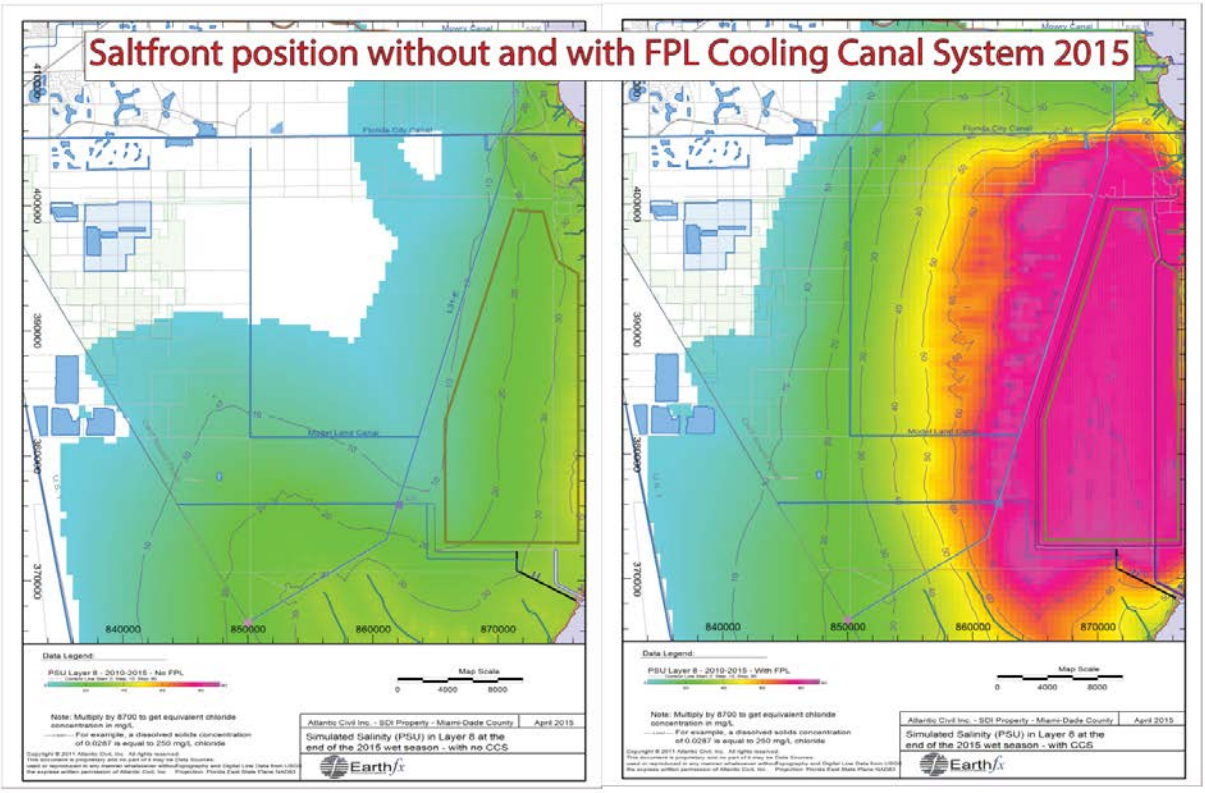


Figure 5: The simulated movement of the leading edge and hypersaline edge of the saltfront between 1998 and 2015.

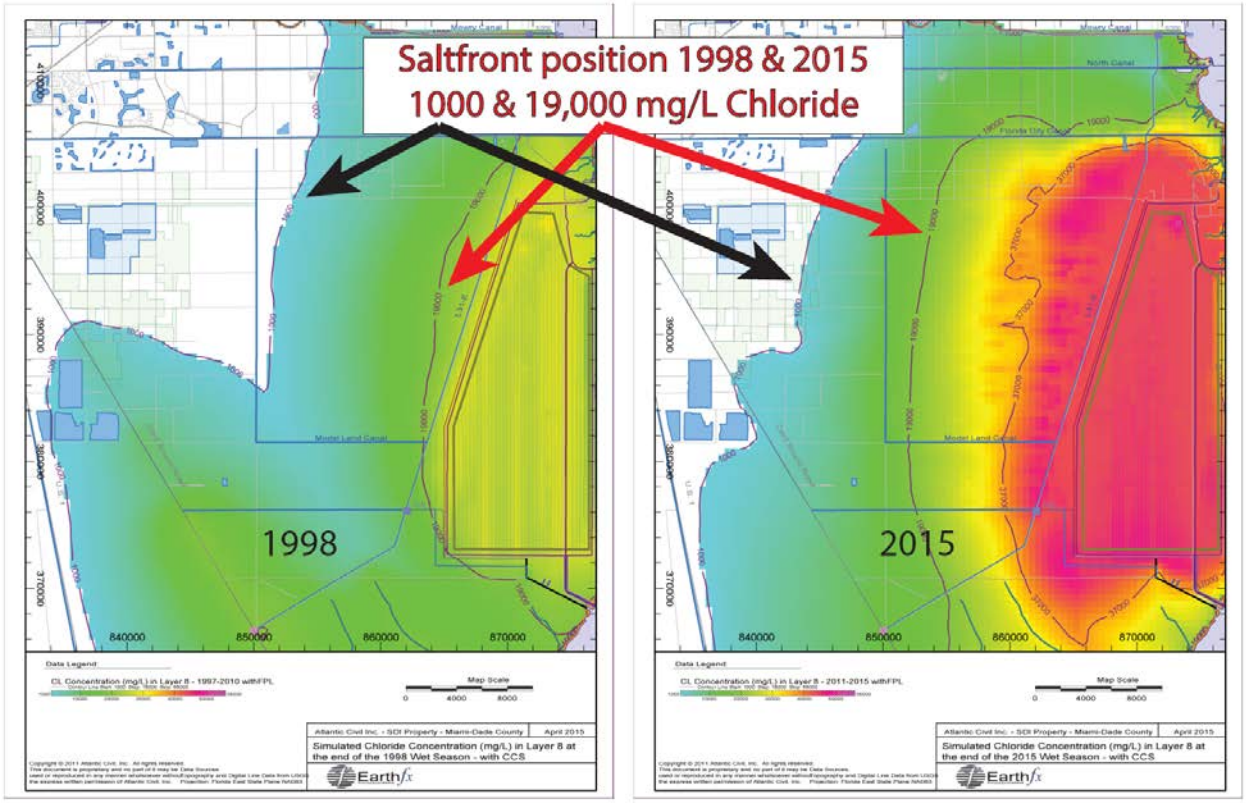


Figure 6 FPL data showing that portion of the contaminated G-II aquifer attributable to water from the CCS by the presence of tritium.

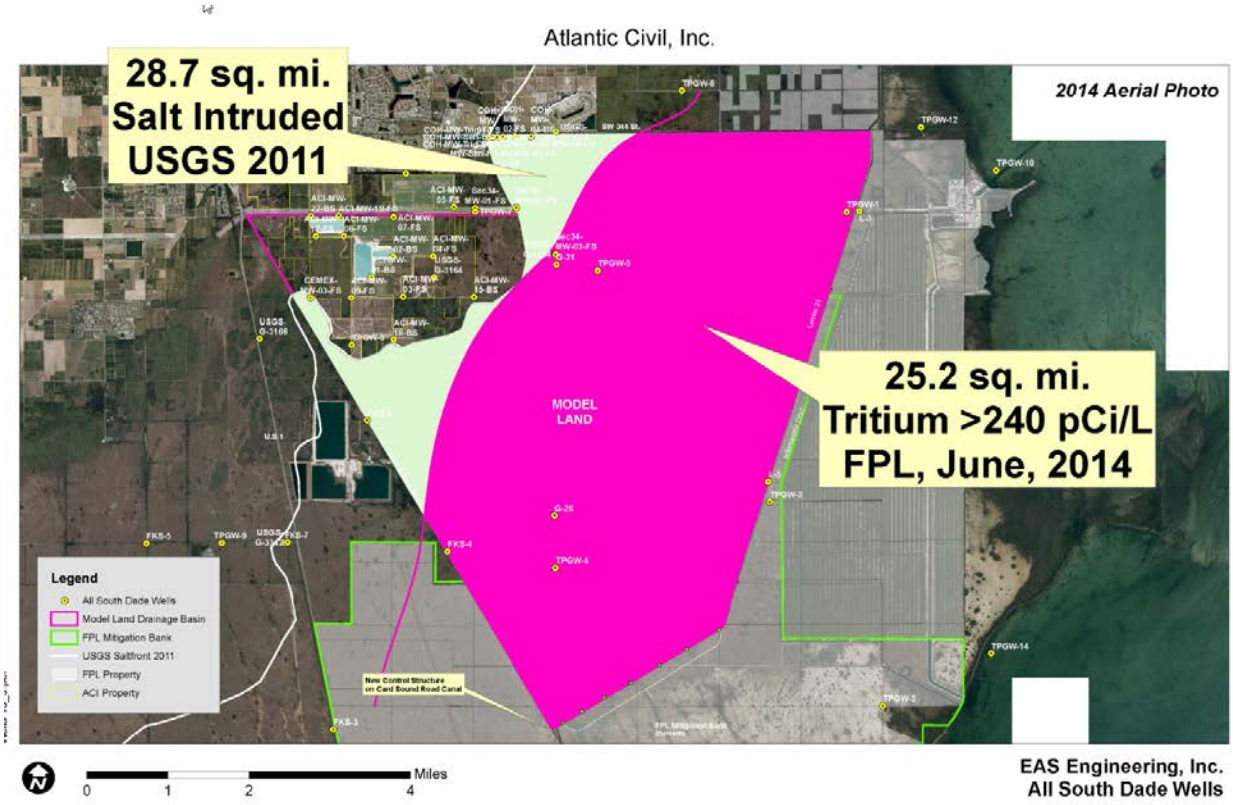


Figure 7: Data provided to EAS Engineering indicating ACI-MW-o5-FS monitoring well (a well which had been fresh for since the start of monitoring in 2007) had become salt intruded.

CONDUCTIVITY PROFILE LOG WELL # ACI-MW-05 FS			
START DATE / TIME: 1/30/2018 11:20 am			
	TEMP	SC	NOTES
DEPTH			5.01' Depth to water
0	21.5	405	
5	22.6	401	
10	23.2	402	
15	23.8	403	
20	24.6	404	
25	24.9	404	
30	24.8	404	
35	24.6	404	
40	24.5	402	
45	24.4	461	
50	24.2	464	
55	24.2	466	
60	24.2	467	
65	24.2	470	
70	24.2	~~467~~ 970	
75	24.1	996	
80	24.1	1444	
85	24.1	1625	
90	24.1	1612	
95	24.1	1614	
100	24.1	1565	
105			

Figure 8: Cover Page of 50 slide powerpoint presentation which contains additional data and exhibits indented to be used.

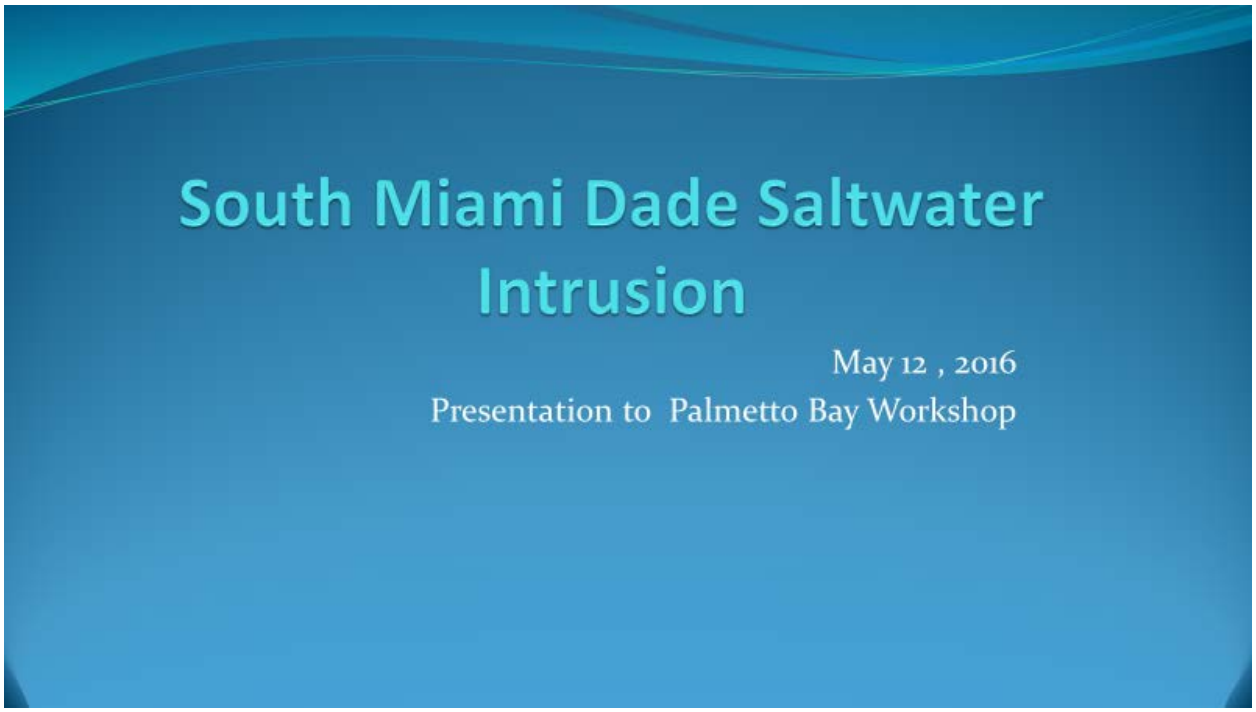


Exhibit B: Curriculum Vitae

Edward A. Swakon, P.E.
President, EAS Engineering, Inc.
55 Almeria Ave.
Coral Gables, FL 33134
305-445-5553 ext. 305

Edward A. Swakon, P.E.
President, EAS Engineering, Inc.
55 Almeria Ave.
Coral Gables, FL 33134
305-445-5553 ext. 305

Education
Purdue University, B.S. in Engineering (Major Water Resources), 1975
University of Miami, RSMAS, M.S. in Ocean Engineering, 1977

Current Status
Mr. Swakon is President of EAS Engineering, Inc., a firm offering comprehensive environmental permitting and engineering services to the South Florida community and the Caribbean. Activities undertaken by Mr. Swakon include assistance to local governments, land developers, attorneys, property owners and others in acquiring the necessary permits from local, state, and federal regulatory agencies. These permits include dredge and fill, coastal and freshwater wetland construction, Florida Department of Environmental Protection coastal construction control line, county and federal flood criteria variances, and other specialized permits. Mr. Swakon also specializes in applied computer modeling of various environmental situations such as waterway flow simulations, flushing studies for existing or proposed marinas, as well as groundwater and saltwater intrusion simulations. Mr. Swakon is familiar with both the Regional Planning Council's Development of Regional Impact (DRI) process and Monroe County's Major Conditional Use process, having worked on both.

Previous Experience
Before forming EAS Engineering, Inc., Mr. Swakon was Director of Environmental Permitting for a local Miami engineering firm. During that time, he personally coordinated all of the environmental permitting assignments for the firm. These activities included preparation of DRIs, numerous applications to local governments, Florida Department of Environmental Regulation and Florida Department of Natural Resources (now FDEP), and the U.S. Army Corps of Engineers. Mr. Swakon has provided services to clients such as Miami-Dade County, the City of Miami, and many local law firms such as Thomson Zeder et al., Greenberg Traurig et al., and Carlos Abbott and Ferro.

Before entering the private sector in 1984, Mr. Swakon was employed by the Dade County Department of Environmental Resources Management (DERM) in 1977, one of the largest and most widely respected local environmental organizations in the country. He served as the Chief of the Water Management Division and was responsible for all tidal and freshwater wetland permitting programs. He was also a key participant in the development of the Biscayne Bay Management Plan and the implementation of the Biscayne Bay Restoration and Enhancement Program. He worked closely with other County departments in securing permits for county projects. He was the coordinator of all the County's efforts regarding beach restoration including the world's largest beach

restoration project, the Miami Beach project and the controversial but much needed Key Biscayne beach project. Finally, his responsibilities included the administration of the County's drainage policies, including the county and federal flood criteria programs, and canal permitting and design.

Mr. Swakon has been retained by Miami-Dade County, the U.S. Justice Department, and private sector attorneys as an expert witness in numerous Florida administrative hearings and federal court proceedings.

Summary

Mr. Swakon has a broad background in all aspects of the environmental regulatory process, having worked for both government and the private sector. He aggressively pursues all assignments with the agencies and is well-respected by their personnel. He has a proven record of success.

Publications

Modeling of Tide and Wind Induced flow in South Biscayne Bay and Card Sound. SeaGrant Technical Bulletin No. 37. 1977.

Organizations

Member, American Society of Civil Engineers
Member, Florida Engineering Society
Past President, Marine Council
Marine Industries Association of South Florida
South Florida Environmental Professionals
American Society for Photogrammetry and Remote Sensing
Previous Second Vice Chair, The Historical Association of Southern Florida
Board of Directors and Past President, Executive Associations of Greater Miami

Hobbies

Woodworking, Golf

Registration

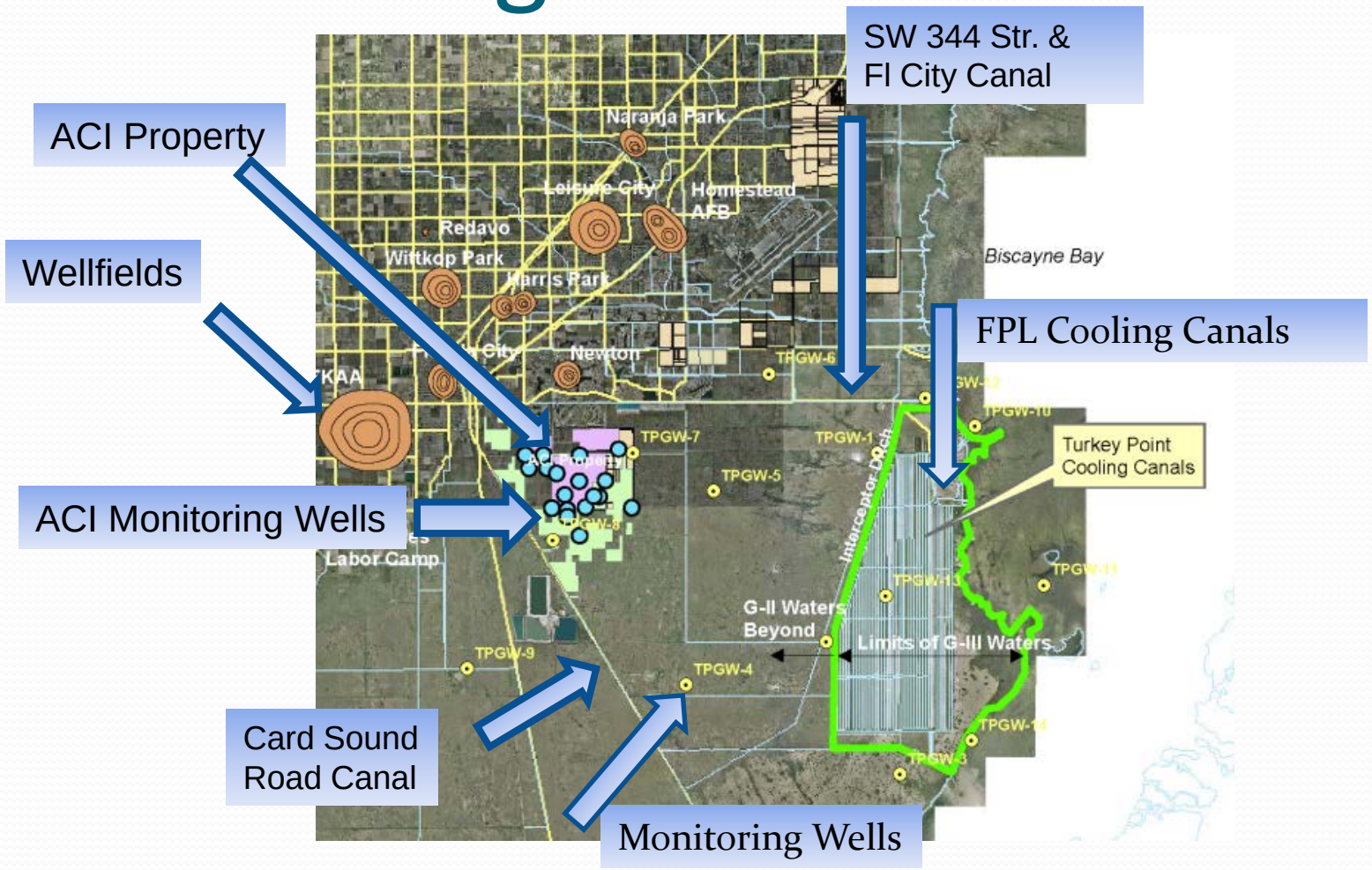
Professional Engineer #31184, Florida, July 1981

South Miami Dade Saltwater Intrusion

May 12 , 2016

Presentation to Palmetto Bay Workshop

Regional Setting



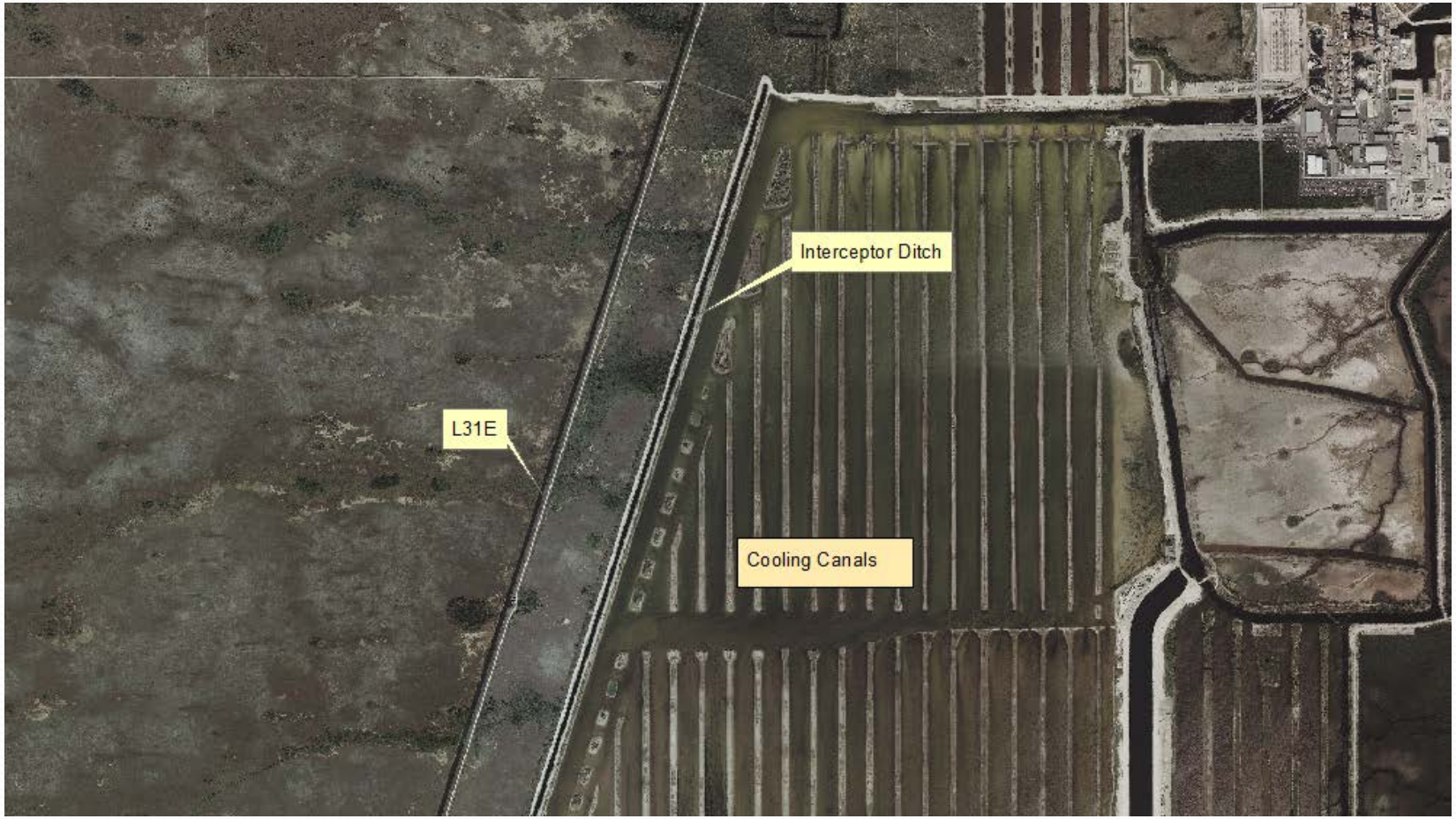
SFWMD – FPL 1983 Agreement (also in 1972 original agreement)

NOW THEREFORE, the parties hereto agree as follows:

A. INTERCEPTOR DITCH SYSTEM

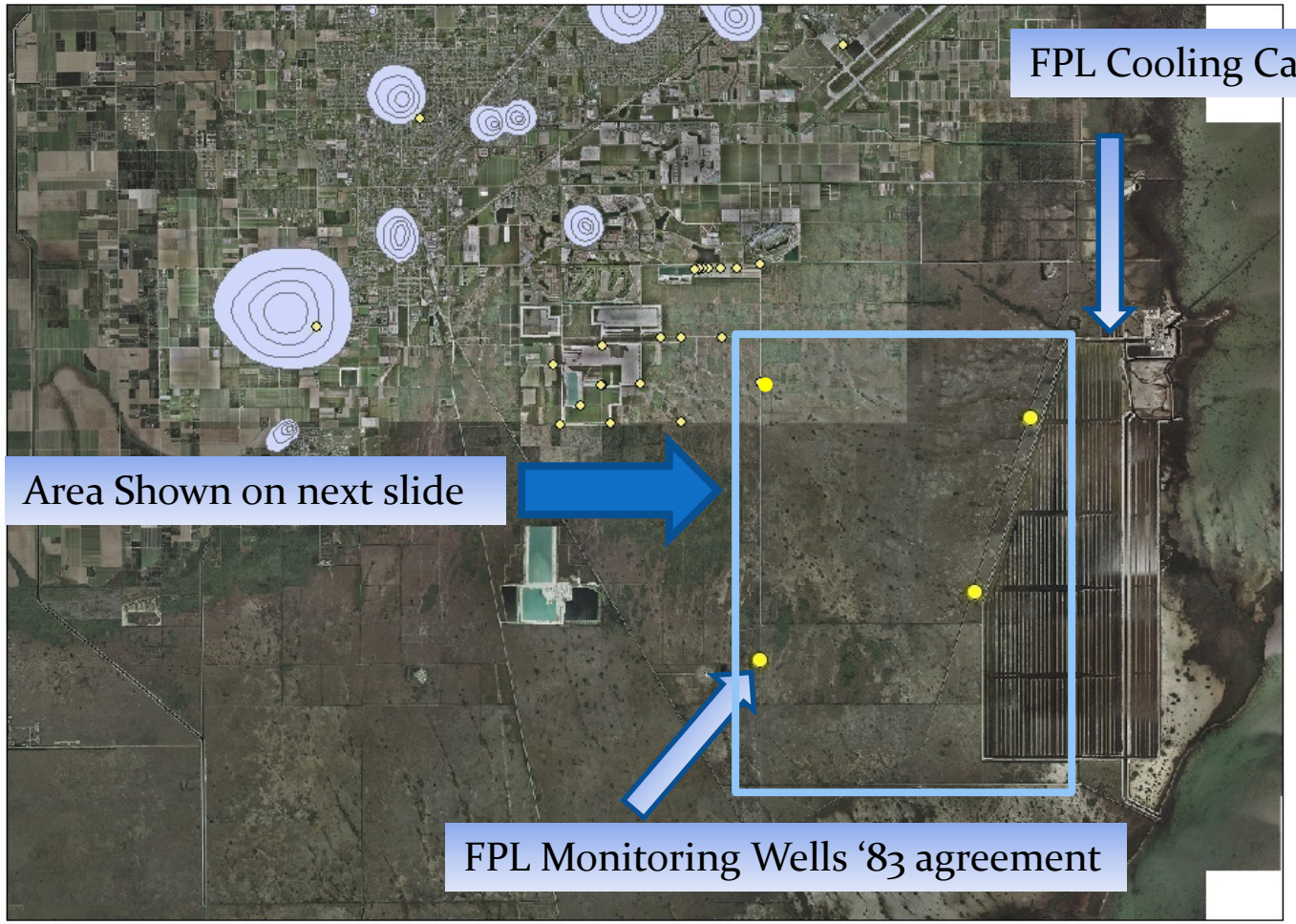
1. FPL and DISTRICT agree that the purpose of the system is to restrict movement of saline water from the cooling water system westward of Levee 31E adjacent to the cooling water system to those amounts which would occur without the existence of the cooling water system.

FPL Cooling Canals & Interceptor Ditch



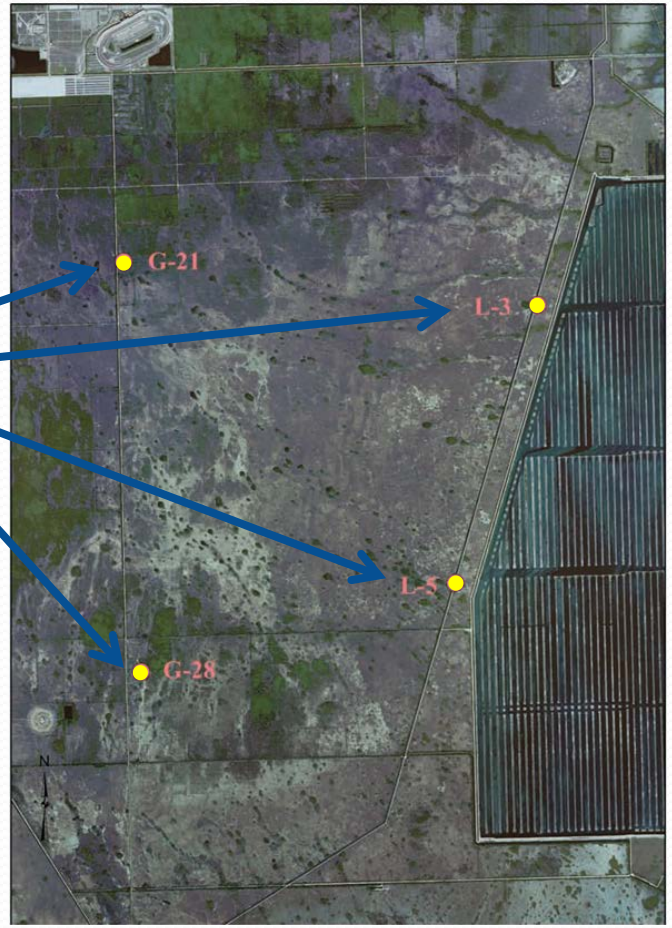
Boundary of Class III Designation

Regional Setting



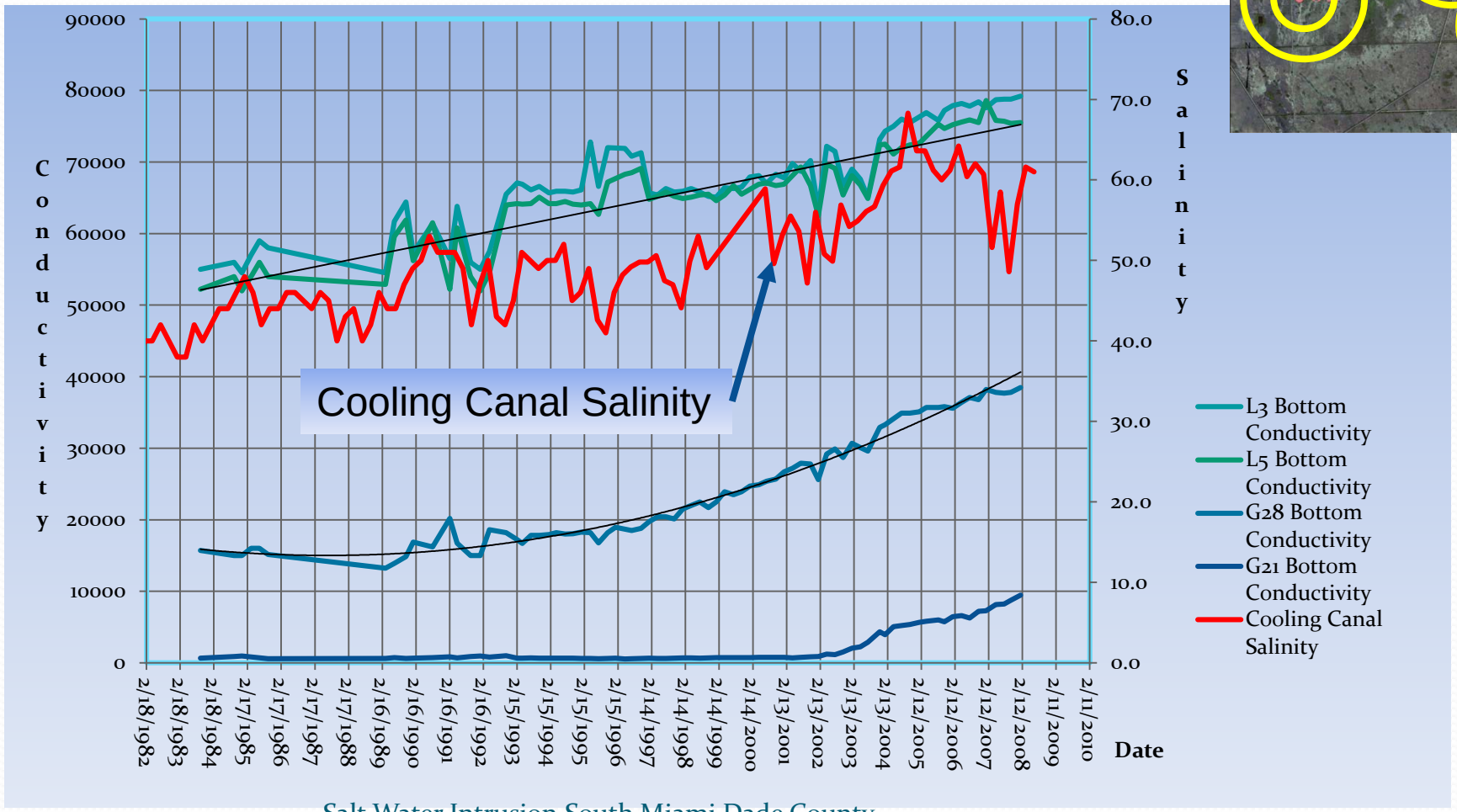
FPL Monitoring Wells 1983 (Early indications of CCS failure)

FPL monitoring wells from 83 agreement



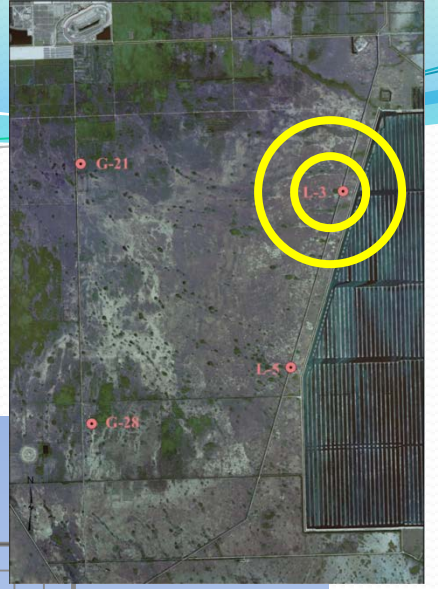
Indication of saltwater intrusion

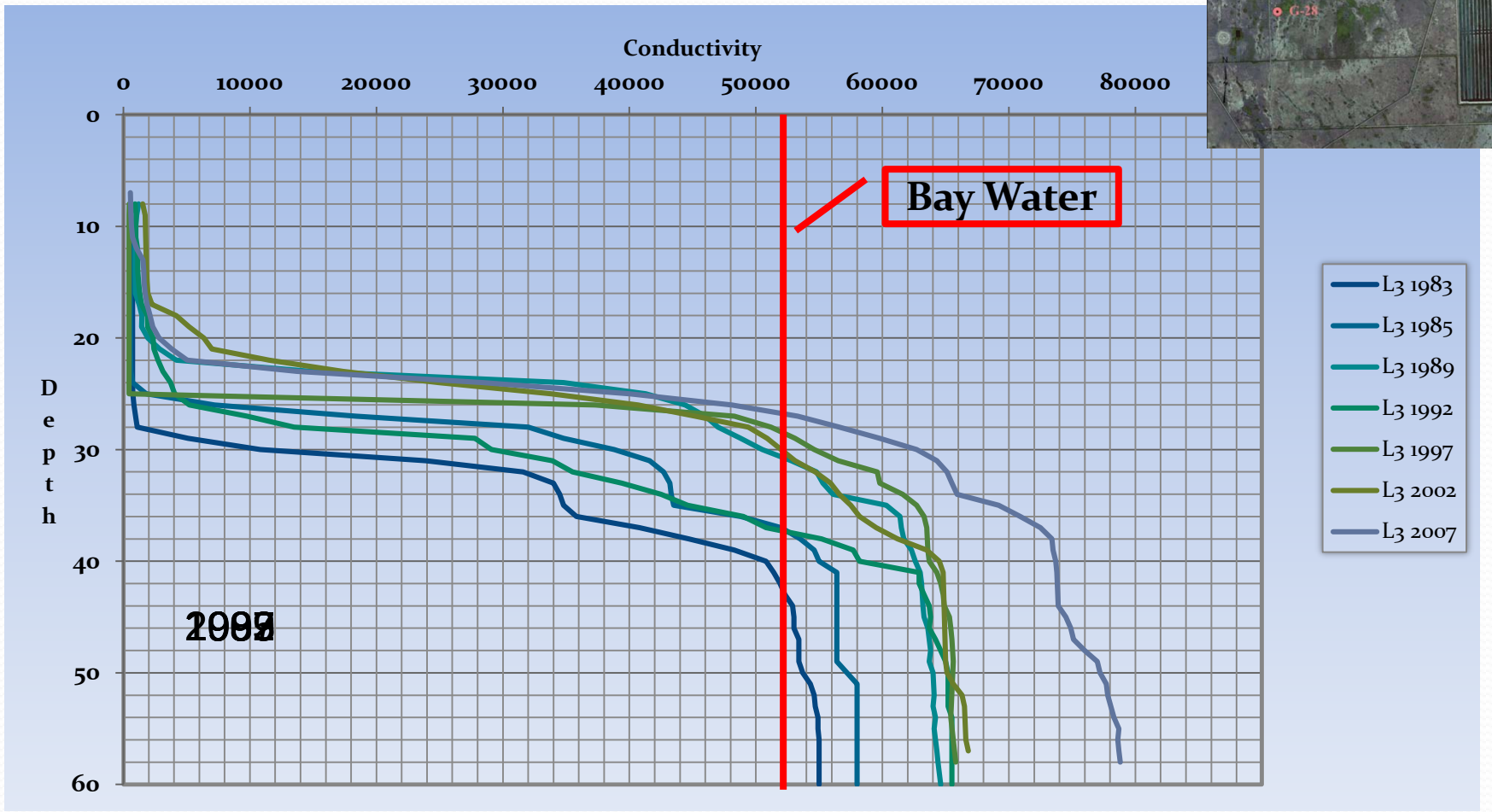
Bottom Conductivity from FPL Data – 68 foot Depth



Indication of saltwater intrusion

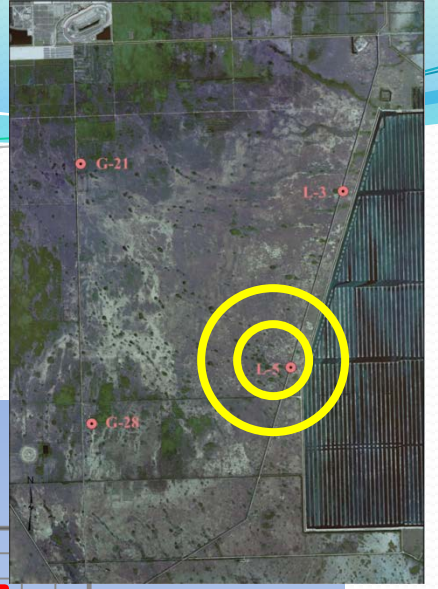
Conductivity profiles from FPL Data

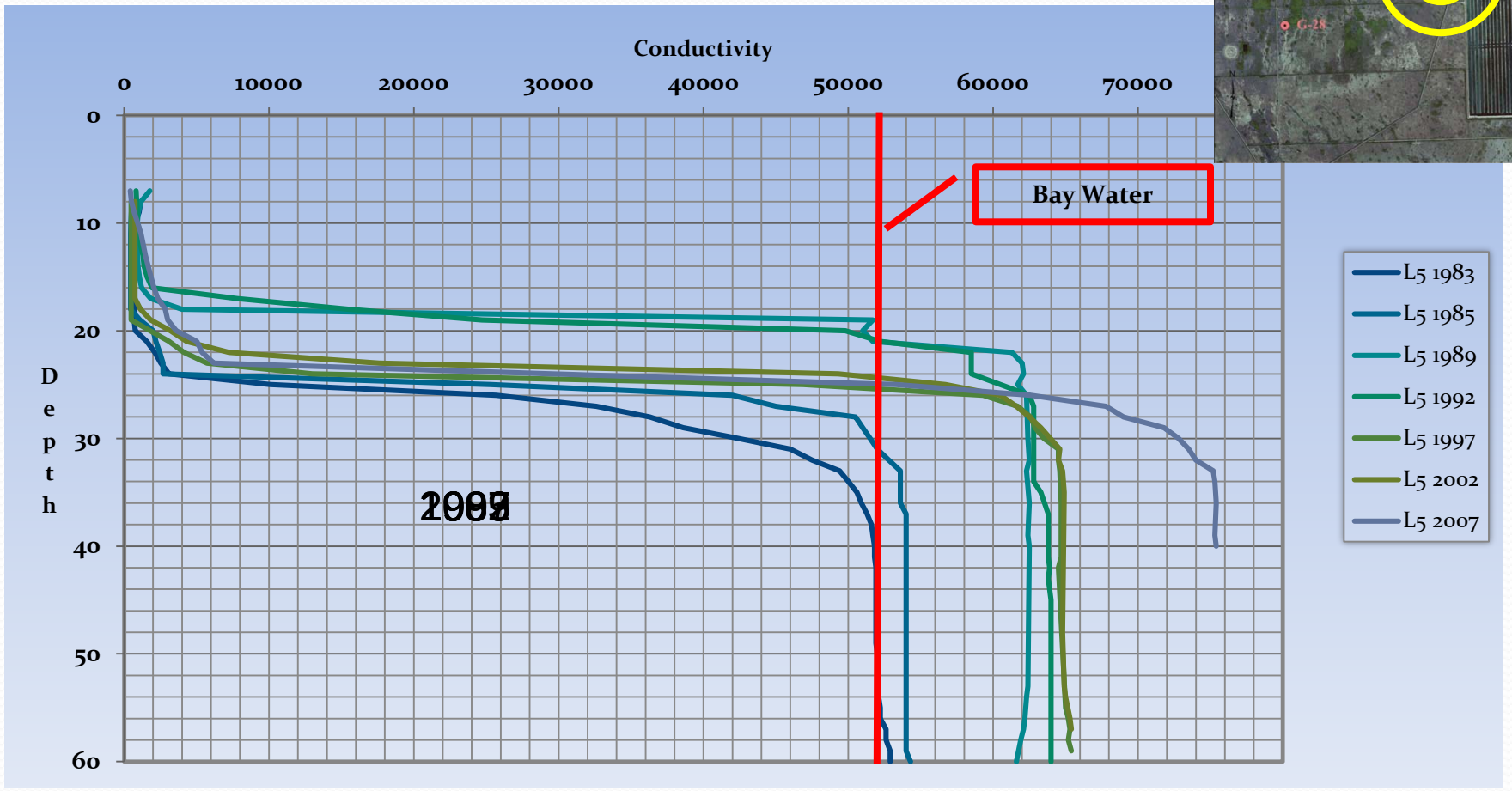




Indication of saltwater intrusion

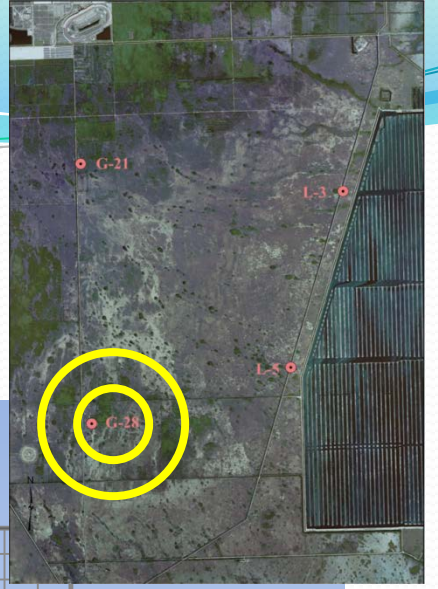
Conductivity profiles from FPL Data

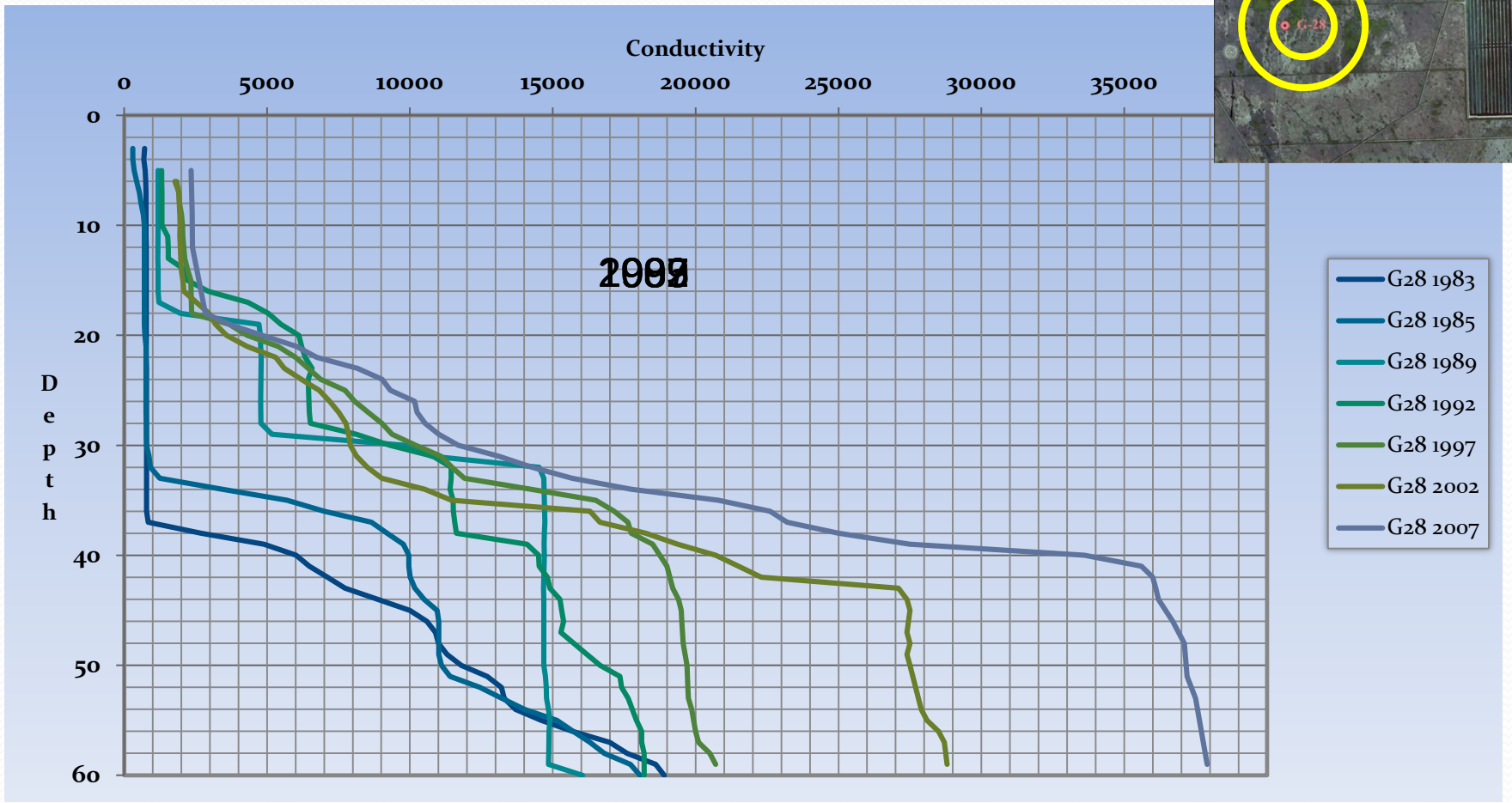




Indication of saltwater intrusion

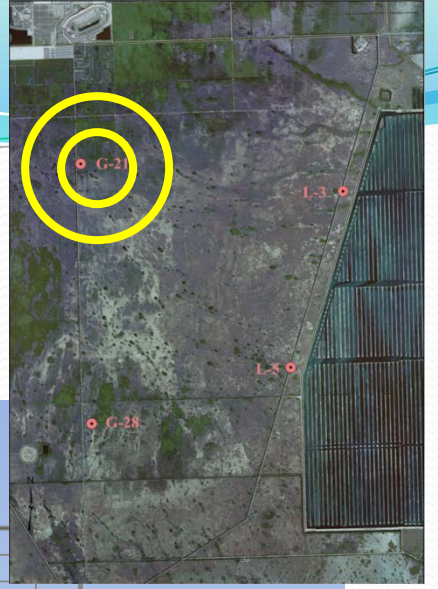
Conductivity profiles from FPL Data

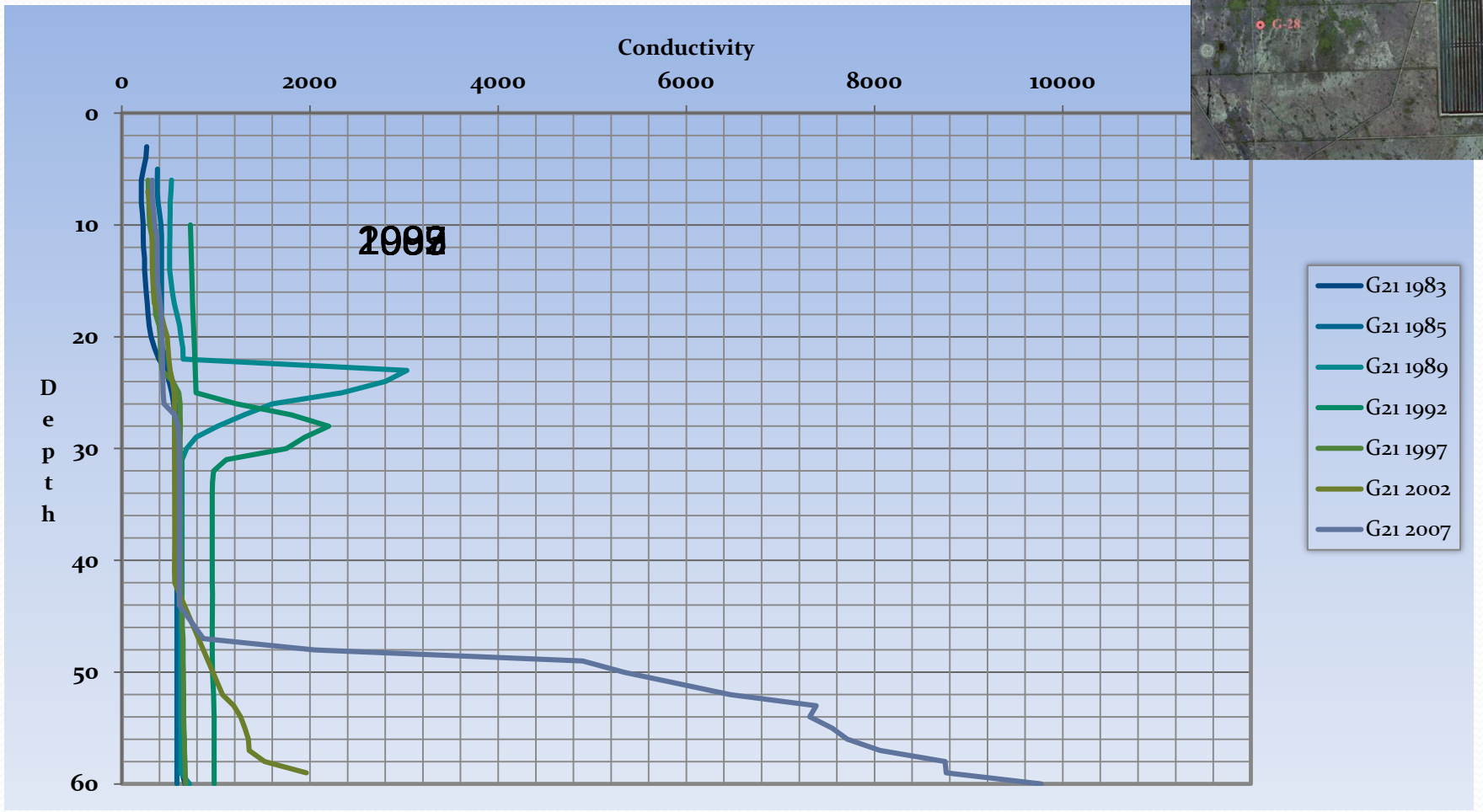




Indication of saltwater intrusion

Conductivity profiles from FPL Data





SFWMD 5th Supplement - 2009

SFWMD recognized problem at the time the 5th supplement was approved

MEMORANDUM

Current analysis from sources, in addition to the data derived from the 1983 monitoring regimen, indicates movement of CCS water to the west. Through the DEP administrative approval process for the 2008 Uprate, the DEP, the District, and Miami-Dade County consolidated efforts to require FPL to develop a revised and more comprehensive monitoring plan to be incorporated into a fifth amendment to the original 1972 agreement between the District and FPL. The revised monitoring plan requires full delineation of the extent of movement of water from the CCS in groundwater and surface water in all directions, not just westward, and requires monitoring for the CCS's impacts to surrounding ecology as well.

Staff recommends approval of a Resolution of the Governing Board of the South Florida Water Management District approving the Fifth Supplemental Agreement between Florida Power and Light Company and the South Florida Water Management District for the purpose of governing the rights and obligations of the parties concerning the operation and monitoring of the cooling canal system for Florida Power and Light Company's power generating plant at Turkey Point in Miami-Dade County.

SFWMD 5th Supplement - 2009

FIFTH SUPPLEMENTAL AGREEMENT

BETWEEN
THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT

AND

FLORIDA POWER & LIGHT COMPANY

THIS AGREEMENT is made and entered into this ____ day of _____, 2009, by and between FLORIDA POWER & LIGHT COMPANY ("FPL") and SOUTH FLORIDA WATER MANAGEMENT DISTRICT ("DISTRICT") (and collectively referred to as "the Parties").

WITNESSETH

1. WHEREAS, FPL and the CENTRAL AND SOUTHERN FLORIDA FLOOD CONTROL DISTRICT, (the "CSFFCD"), predecessor to the DISTRICT, entered into an agreement dated February 2, 1972, hereinafter referred to as "Original Agreement", governing rights and obligations of the Parties concerning the construction, operation and monitoring of the cooling canal system for FPL's power generating plant at Turkey Point in Miami-Dade County, Florida; and

2. WHEREAS, the Original Agreement has been supplemented and amended on four separate occasions; the First Supplemental Agreement having been executed on October 21, 1974; the Second Supplemental Agreement having been executed on August 14, 1975; the Third Supplemental Agreement having been executed on September 10, 1976; and the Fourth Supplemental Agreement having been executed on July 15, 1983 (the "1983 Agreement") and the Original Agreement together with the four Supplemental Agreements are hereinafter collectively referred to as the "Prior Agreements"; and

3. WHEREAS, the 1983 Agreement superseded the previous agreements. The 1983 Agreement provides that the purpose of the interceptor ditch system, which is part of the overall cooling canal system as depicted on the map attached hereto as Exhibit "A", made a part hereof, and located between the most westward cooling canal and Levee 31E, is to restrict movement of saline water from the cooling canal system westward of Levee 31E adjacent to the cooling canal system to those amounts which would occur without the existence of the cooling canal system; and

4. WHEREAS, the "cooling canal system," as referred to in this Agreement, is also referred to in Prior Agreements and related documents as the "cooling water system" and "cooling system;" and

5. WHEREAS, under the Prior Agreements, including the 1983 Agreement, FPL

has had continuing obligations to monitor for impacts of the cooling canal system on the water resources of the DISTRICT in general and on the DISTRICT'S facilities and operations in particular and to implement new operating criteria and/or engineering measures if the objectives of the 1983 Agreement are not being met.

6. WHEREAS, under the 1983 Agreement, those monitoring obligations include determining whether saline water has moved westward of Levee 31E; and

7. WHEREAS, as reasonable assurances for the DISTRICT's recommendation of approval of FPL's 2008 Uprate of Turkey Point Nuclear Units 3 and 4 ("Uprate Project"), FPL submitted information concluding that its operation of the interceptor ditch prevents seepage from the cooling canal system from moving westward of Levee 31E thereby maintaining fresh or potable water west of the interceptor ditch (FPL Turkey Point Units 3 and 4 Uprate Application, 2008, section 2.3.4.1); and

8. WHEREAS, based on FPL's assurances in the 2008 Uprate Certification application, the DISTRICT recommended approval of the Uprate Project conditioned on imposition of the consolidated three agency Condition of Certification X in the Power Plant Site Certification for the FPL Turkey Point Plant Units 3 and 4 Nuclear Power Plant Unit Combined Cycle Plant # PA 03-45 ("Certification"), requiring FPL to execute a SFWMD approved Fifth Supplemental Turkey Point Agreement ("Fifth Supplemental Agreement" or "Agreement") and to revise FPL's monitoring obligations for incorporation into the Agreement in a revised monitoring plan; and

9. WHEREAS, the DISTRICT'S evaluation of recent monitoring data indicates that the interceptor ditch may not be effective in restricting the movement of saline water westward from the cooling canal system; and

10. WHEREAS, as a necessary first step in evaluating existing conditions and, if necessary, identifying potential solutions to abate, mitigate, or remediate the movement of saline water and other water quality and ecological impacts from the cooling canal system, a full delineation of any historical and current ecologic, surface water and groundwater impacts, including, but not limited to, delineation of impacts westward of the Levee 31E and eastward of Turkey Point into Biscayne Bay, from the operation of the cooling canal system since 1972, as well as potential for future impacts of the cooling canal system, is needed; and

11. WHEREAS, FPL, the DISTRICT, Florida Department of Environmental Protection ("DEP"), and Miami-Dade County Department of Environmental Resource Management ("DERM") developed a revised monitoring plan, the Turkey Point Plant Groundwater, Surface Water, and Ecological Monitoring Plan (the "2009 Plan"). The 2009 Plan is attached hereto as Exhibit "B" and made a part hereof; and

12. WHEREAS, the 2009 Plan identifies monitoring for the purpose of delineating current ecologic, surface water and groundwater impacts, from the operation of the cooling canal system on the water resources of the DISTRICT in general and the

SFWMD 5th Supplement - 2009

facilities and operations of the DISTRICT, including, but not limited to, delineation of impacts westward of the Levee 31E and eastward of Turkey Point into Biscayne Bay, and to assess whether mitigation, abatement, and other remedial measures would be necessary; and

NOW THEREFORE, for good and valuable consideration as set forth herein, the Parties hereto agree as follows:

I. RECITALS and EFFECTIVE DATE OF THIS AGREEMENT

The above recitals are true and correct and incorporated herein as a material and integral part of this Agreement. The Effective Date of this Agreement shall be the last date the Agreement is signed by the Parties.

II. OBLIGATIONS OF THE PARTIES

(A) INTERCEPTOR DITCH SYSTEM OPERATION

1. FPL shall operate the interceptor ditch system to restrict movement of saline water from the cooling water system westward of Levee 31E adjacent to the cooling canal system to those amounts which would occur without the existence of the cooling canal system.

2. The operating criteria and procedures for the interceptor ditch system have been established by FPL in the 1983 Agreement as the manual designated "THE THIRD REVISED FLORIDA POWER & LIGHT, COMPANY, TURKEY POINT, FLORIDA, INTERCEPTOR DITCH OPERATION PROCEDURES" (Interceptor Ditch Operation Procedures). These criteria and procedures are attached hereto as Exhibit "C" and made a part hereof. The Parties shall revise these procedures within six (6) months from the effective date of this Agreement.

3. FPL shall operate the interceptor ditch in accordance with the Interceptor Ditch Operation Procedures subject to the provisions of Paragraph II(D)., herein, which may require revision of such operations.

4. Revisions to the Interceptor Ditch Operation Procedures as may be proposed by FPL and agreed to by the Executive Director of the District or his/her designee may be accomplished by letter, for incorporation into Exhibit C without having to amend this Agreement.

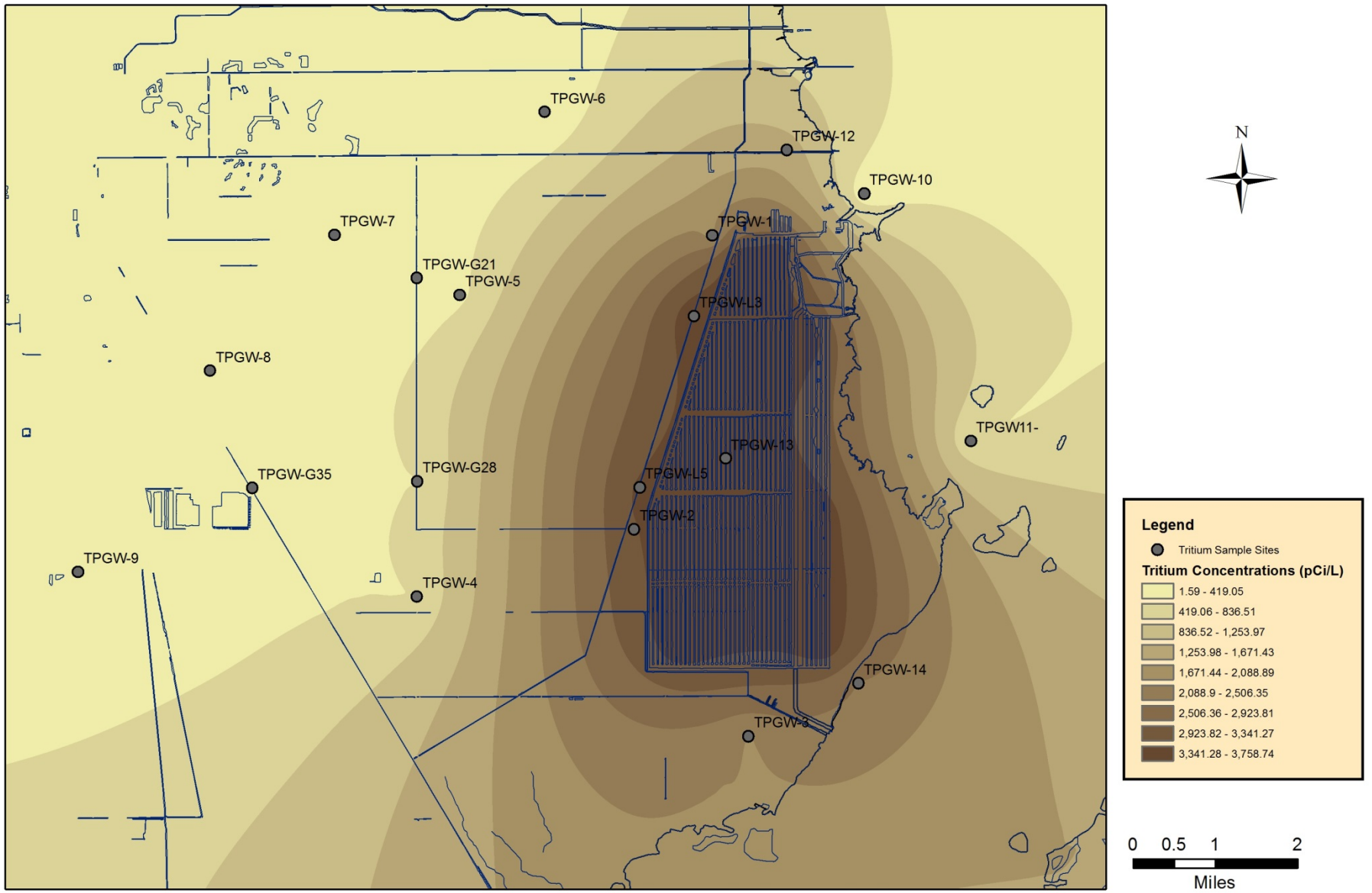
5. FPL shall maintain pump operation logs in a mutually acceptable form for each interceptor ditch pumping installation and electronically transmit such pump

Page 3 of 11

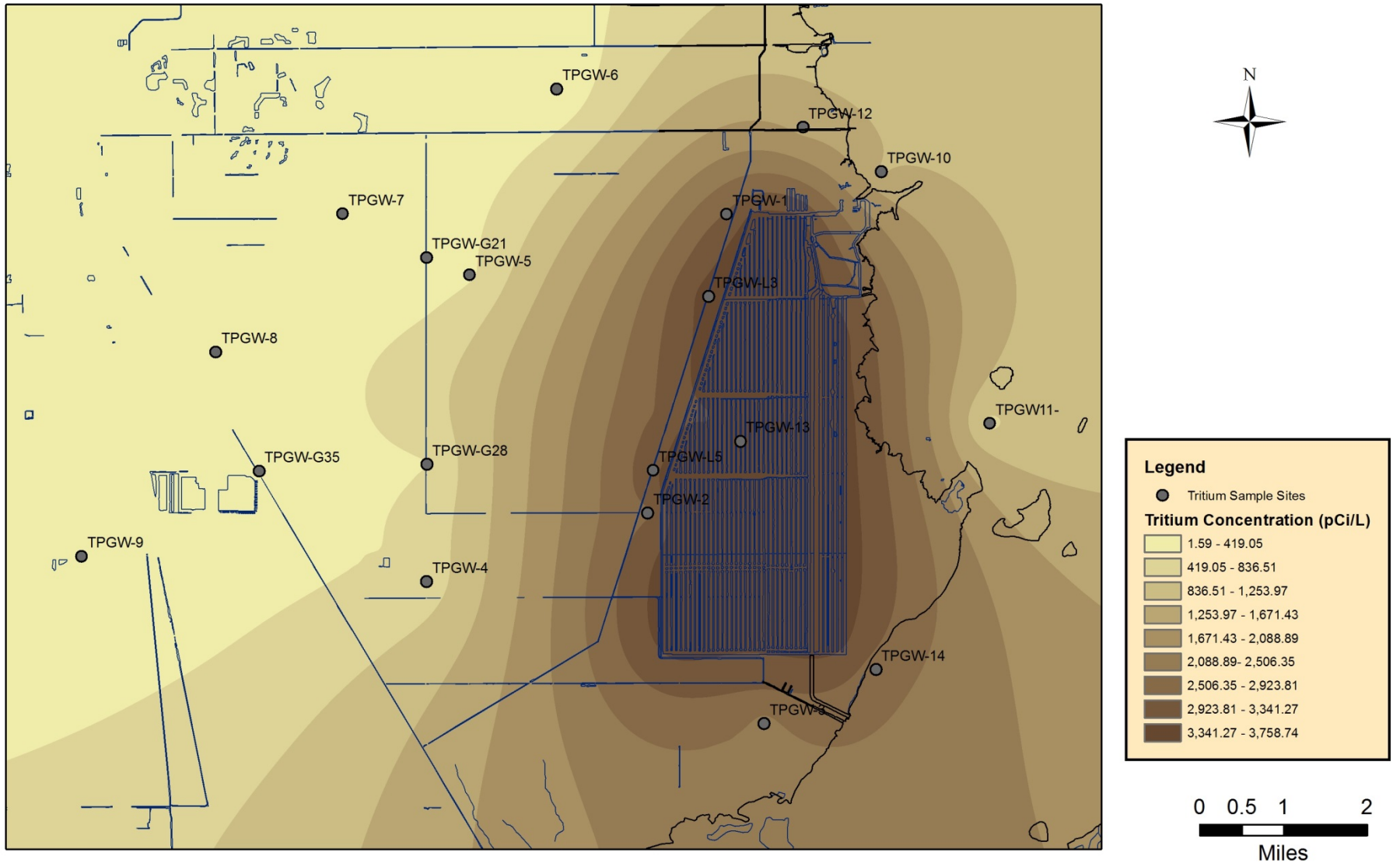
FPL 5th supplement monitoring locations

Figure 1.1-1. Locations of Groundwater Monitoring Stations.

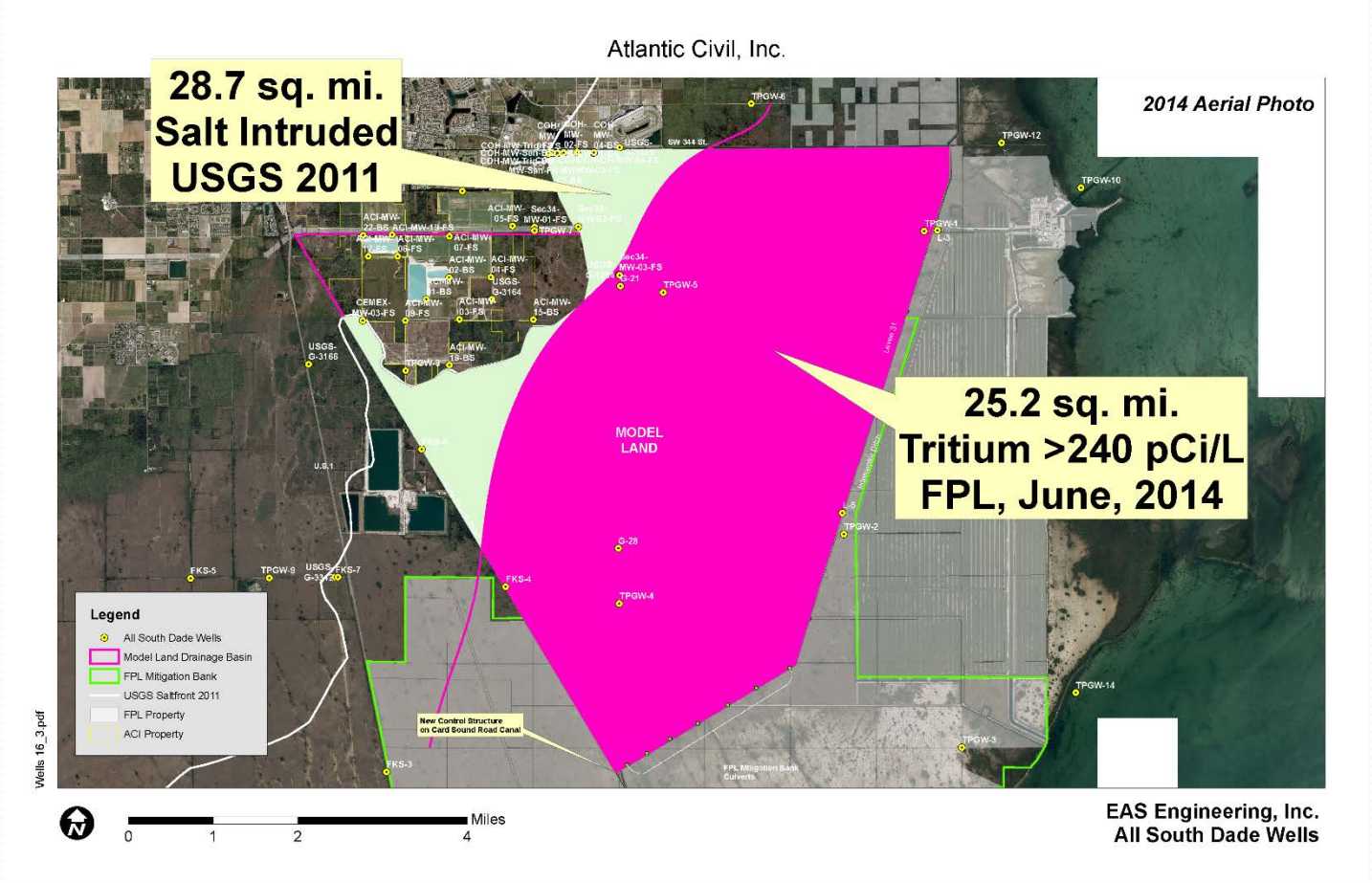
Contours Based On Deep Well Tritium Results From the June 2011 Quarterly Sampling



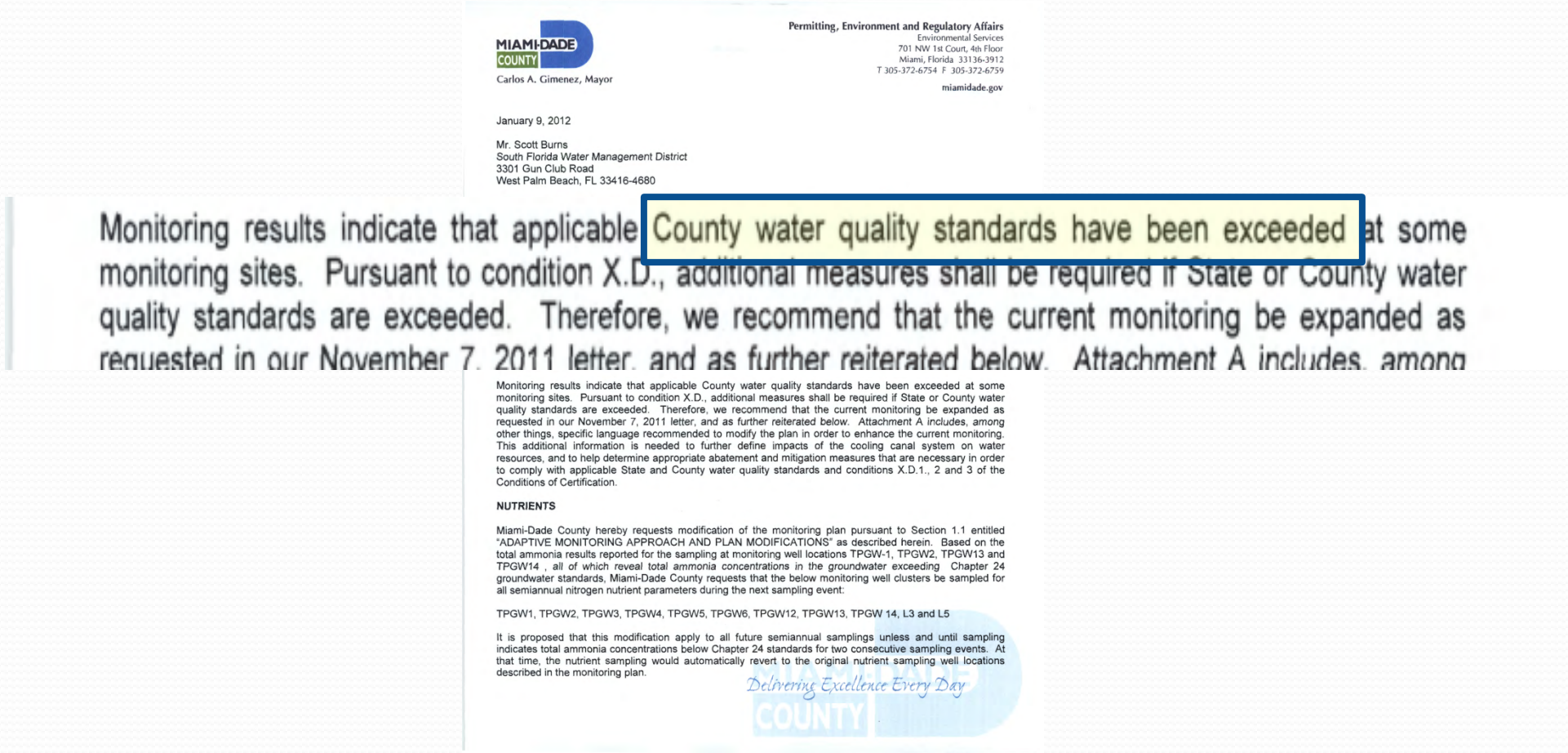
Contours Based On Deep Well Tritium Results From the March 2013 Quarterly Sampling



Influence of CCS Water from FPL Data



Water Quality Standards Violated from Cooling Canal System



MIAMI-DADE COUNTY
Carlos A. Gimenez, Mayor

Permitting, Environment and Regulatory Affairs
Environmental Services
701 NW 1st Court, 4th Floor
Miami, Florida 33136-3912
T 305-372-6754 F 305-372-6759
miamidade.gov

January 9, 2012

Mr. Scott Burns
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33416-4680

Monitoring results indicate that applicable County water quality standards have been exceeded at some monitoring sites. Pursuant to condition X.D., additional measures shall be required if State or County water quality standards are exceeded. Therefore, we recommend that the current monitoring be expanded as requested in our November 7, 2011 letter, and as further reiterated below. Attachment A includes, among

Monitoring results indicate that applicable County water quality standards have been exceeded at some monitoring sites. Pursuant to condition X.D., additional measures shall be required if State or County water quality standards are exceeded. Therefore, we recommend that the current monitoring be expanded as requested in our November 7, 2011 letter, and as further reiterated below. Attachment A includes, among other things, specific language recommended to modify the plan in order to enhance the current monitoring. This additional information is needed to further define impacts of the cooling canal system on water resources, and to help determine appropriate abatement and mitigation measures that are necessary in order to comply with applicable State and County water quality standards and conditions X.D.1., 2 and 3 of the Conditions of Certification.

NUTRIENTS

Miami-Dade County hereby requests modification of the monitoring plan pursuant to Section 1.1 entitled "ADAPTIVE MONITORING APPROACH AND PLAN MODIFICATIONS" as described herein. Based on the total ammonia results reported for the sampling at monitoring well locations TPGW-1, TPGW2, TPGW13 and TPGW14 , all of which reveal total ammonia concentrations in the groundwater exceeding Chapter 24 groundwater standards, Miami-Dade County requests that the below monitoring well clusters be sampled for all semiannual nitrogen nutrient parameters during the next sampling event:

TPGW1, TPGW2, TPGW3, TPGW4, TPGW5, TPGW6, TPGW12, TPGW13, TPGW 14, L3 and L5

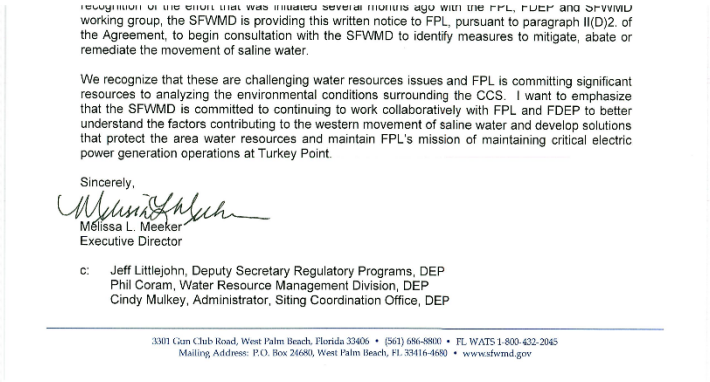
It is proposed that this modification apply to all future semiannual samplings unless and until sampling indicates total ammonia concentrations below Chapter 24 standards for two consecutive sampling events. At that time, the nutrient sampling would automatically revert to the original nutrient sampling well locations described in the monitoring plan.

Delivering Excellence Every Day

SFWMD to FPL – Fix CCS

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Based on technical evaluation of all available information, the SFWMD has determined that saline water from FPL's Turkey Point Power Plant cooling canal system (CCS) has moved westward of the L-31E Levee in excess of those amounts that would have occurred without the existence of the CCS and has moved into the water resources outside the plant's property boundaries. With recognition of the effort that was initiated several months ago with the FPL, FDEP and SFWMD working group, the SFWMD is providing this written notice to FPL, pursuant to paragraph II(D)2. of the Agreement, to begin consultation with the SFWMD to identify measures to mitigate, abate or remediate the movement of saline water.



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We recognize that these are challenging water resources issues and FPL is committing significant resources to analyzing the environmental conditions surrounding the CCS. I want to emphasize that the SFWMD is committed to continuing to work collaboratively with FPL and FDEP to better understand the factors contributing to the western movement of saline water and develop solutions that protect the area water resources and maintain FPL's mission of maintaining critical electric power generation operations at Turkey Point.

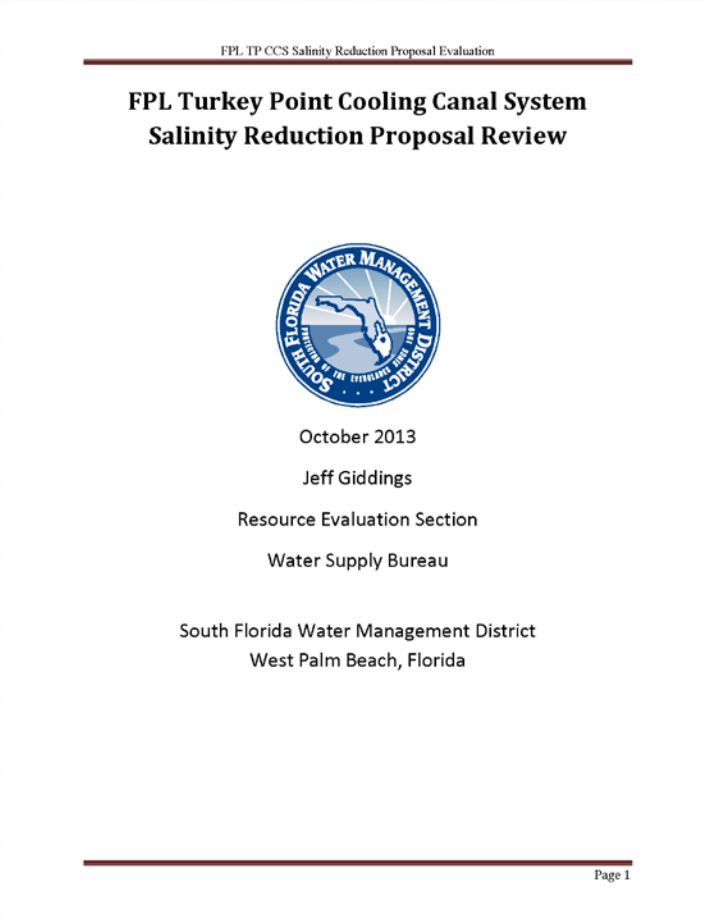
Sincerely,

Melissa L. Meeker
Executive Director

c: Jeff Littlejohn, Deputy Secretary Regulatory Programs, DEP
Phil Coram, Water Resource Management Division, DEP
Cindy Mulkey, Administrator, Siting Coordination Office, DEP

3301 Gun Club Road, West Palm Beach, Florida 33406 • (561) 686-8800 • FL WATS 1-800-432-2045
Mailing Address: P.O. Box 24680, West Palm Beach, FL 33416-4680 • www.sfwmd.gov

SFWMD evaluation of FPL proposed solution (Add 14 MGD from Floridian Aquifer)



FPL TP CCS Salinity Reduction Proposal Evaluation

FPL Turkey Point Cooling Canal System
Salinity Reduction Proposal Review

October 2013

Jeff Giddings

Resource Evaluation Section

Water Supply Bureau

South Florida Water Management District
West Palm Beach, Florida

Page 1

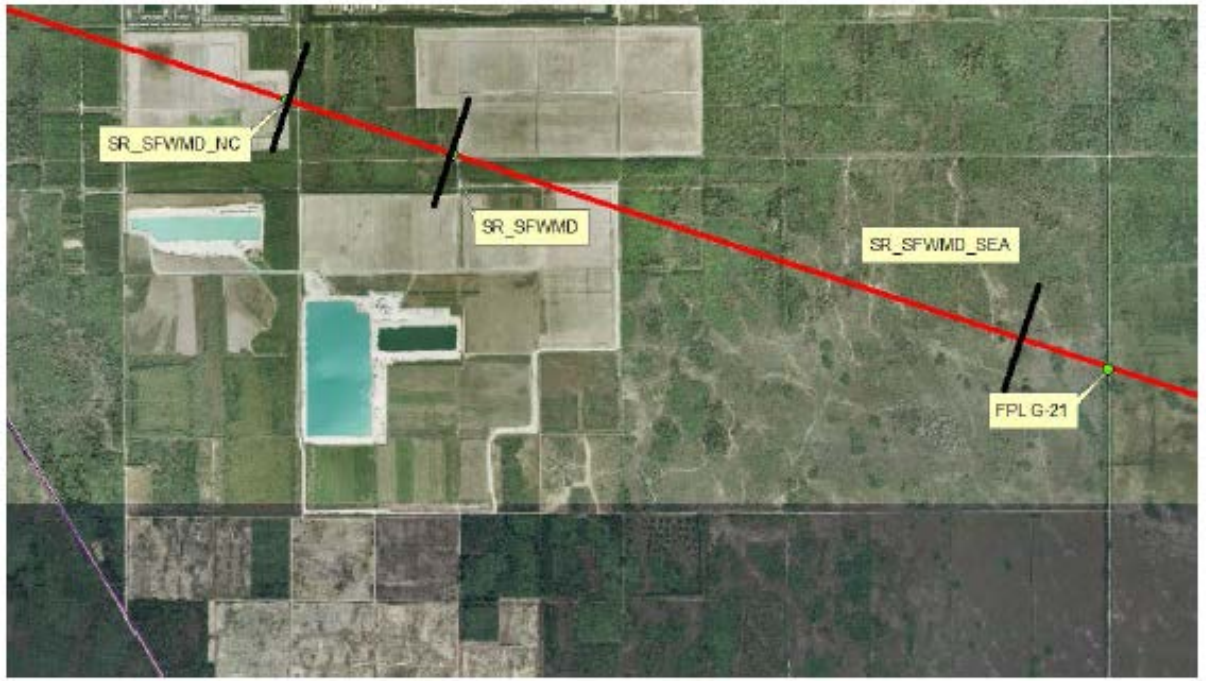


Figure 17. The position of the saline interface (10,000 mg/l TDS) at the base of the Biscayne Aquifer for the future SFWMD simulations.

Figure 17 provides the location of the interface at the base of the Biscayne aquifer for these future simulations. When the 14 md of Floridan aquifer water is added to the CCS, the position of the saline interface (**SR_SFWMD**) is seaward of the predicted position of the interface if it was not added (**SR_SFWMD_NC**). This suggests that the addition of the 14 mgd of Floridan aquifer water would have a net benefit to the Biscayne aquifer if implemented compared to existing conditions and operations. However, the proposal does not fully mitigate the last 40 years of the CCS operating at sea level to

FDEP Administrative Order

- Issued Christmas eve 2014
- Only required 14 MGD of water from Floridian Aquifer
- Challenged by ACI; DERM Tropical Audubon & City of Miami
- Would have legally memorialized existing plume

- Is this proactive?

Administrative Order DOAH Hearing

- Judge Cantor finds:
  - CCS primary cause of the (western)movement of the saltwater/freshwater interface
  - The dense hypersaline plume is pushing the (historic) saline water out in front of it.
  - Pollution will continue
  - The testimony of DEP administrator lacking credibility in stating that DEP has been unable to determine a specific groundwater quality violation.

Administrative Order DOAH Hearing

- Judge Cantor finds:
  - the CCS has a hypersaline discharge to groundwater which is contributing to saltwater intrusion, making less fresh/potable water available for the environment and existing legal users.
  - **"the record evidence and applicable law indicate FPL is in violation of the minimum criteria for groundwater in rule 62-520.400."**

DERM Consent Agreement

- DERM withdrew from AO DOAH hearing and issued NOV and entered into Consent agreement 10-7-2015.
- Requires freshening like AO – Adds extraction wells
- Submittal of extraction well plan and model – DELAYED
- DERM states not intended to stop western movement

- What actions are FPL willing to add to stop the western movement immediately?

ACI Evaluation of remedial options proposed by FPL

- Used existing 3d model (FPL still doesn't have one)
- The two "solutions" individually or together
- Do NOT stop the western movement of the saltfront for years to come!
- Solution do exist to stop the western movement - TODAY

FPL Planned in 2010 to Stop the front

Feasibility Study to Assess Engineering Options for Stopping Westward Migration of Saline Water and Decreasing Cooling Canal System Concentrations, Turkey Point Plant, Florida

And Did NOTHING!

August 11, 2010

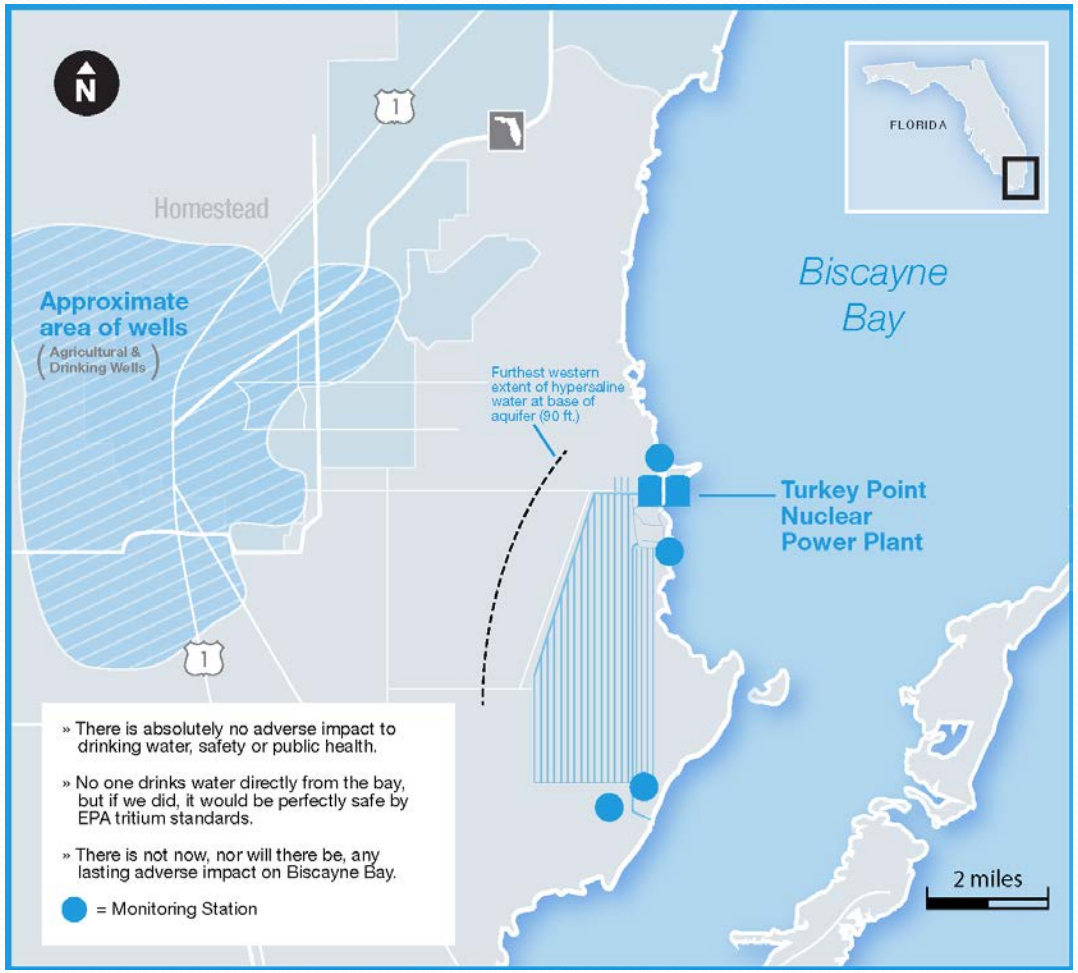
Prepared for:

Florida Power & Light Company
Juno Beach, FL

Prepared by:

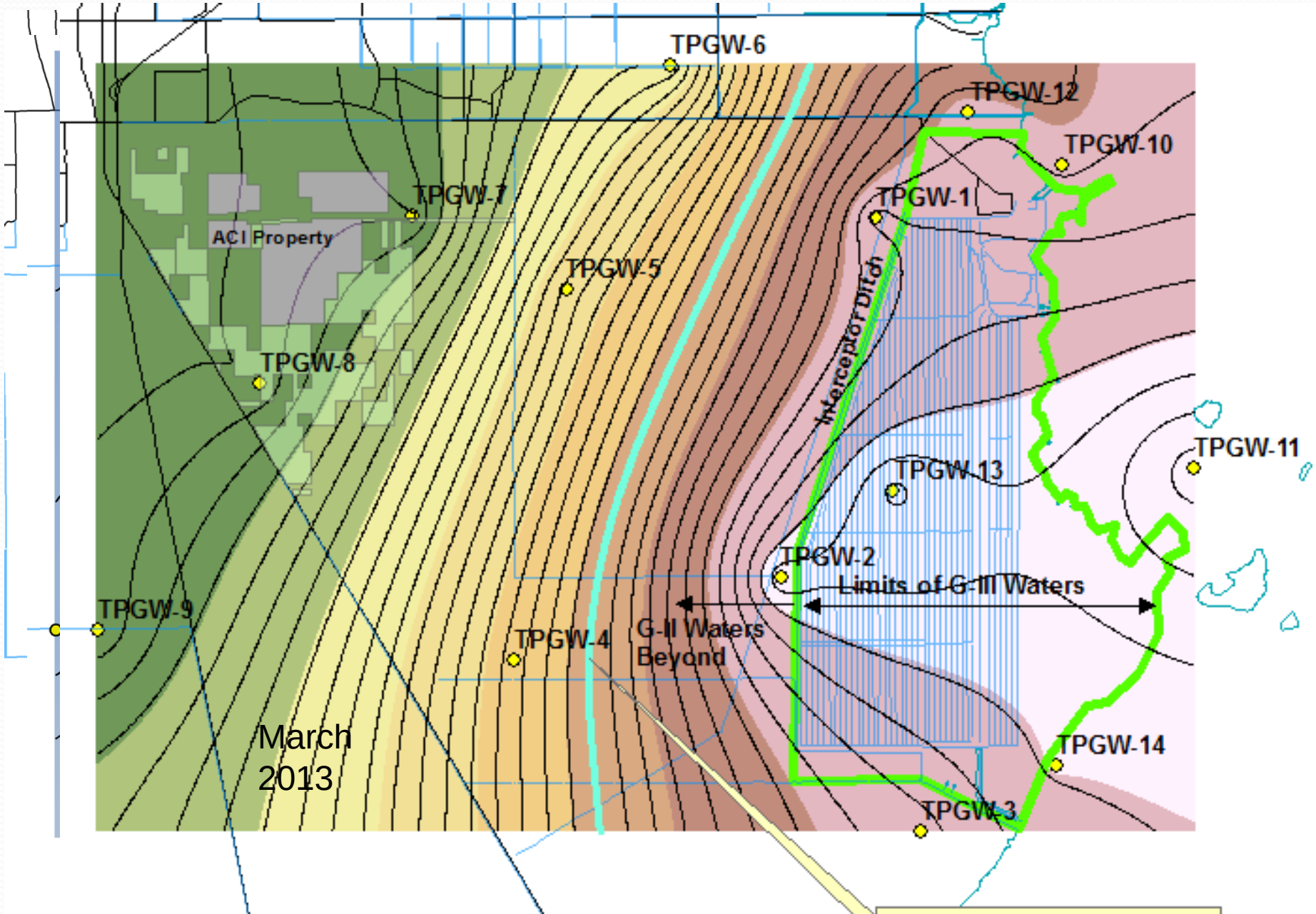
GeoTrans, Inc.
1080 Holcomb Bridge Rd, Bldg 100, Suite 190
Roswell, GA 30076

Map from FPL website



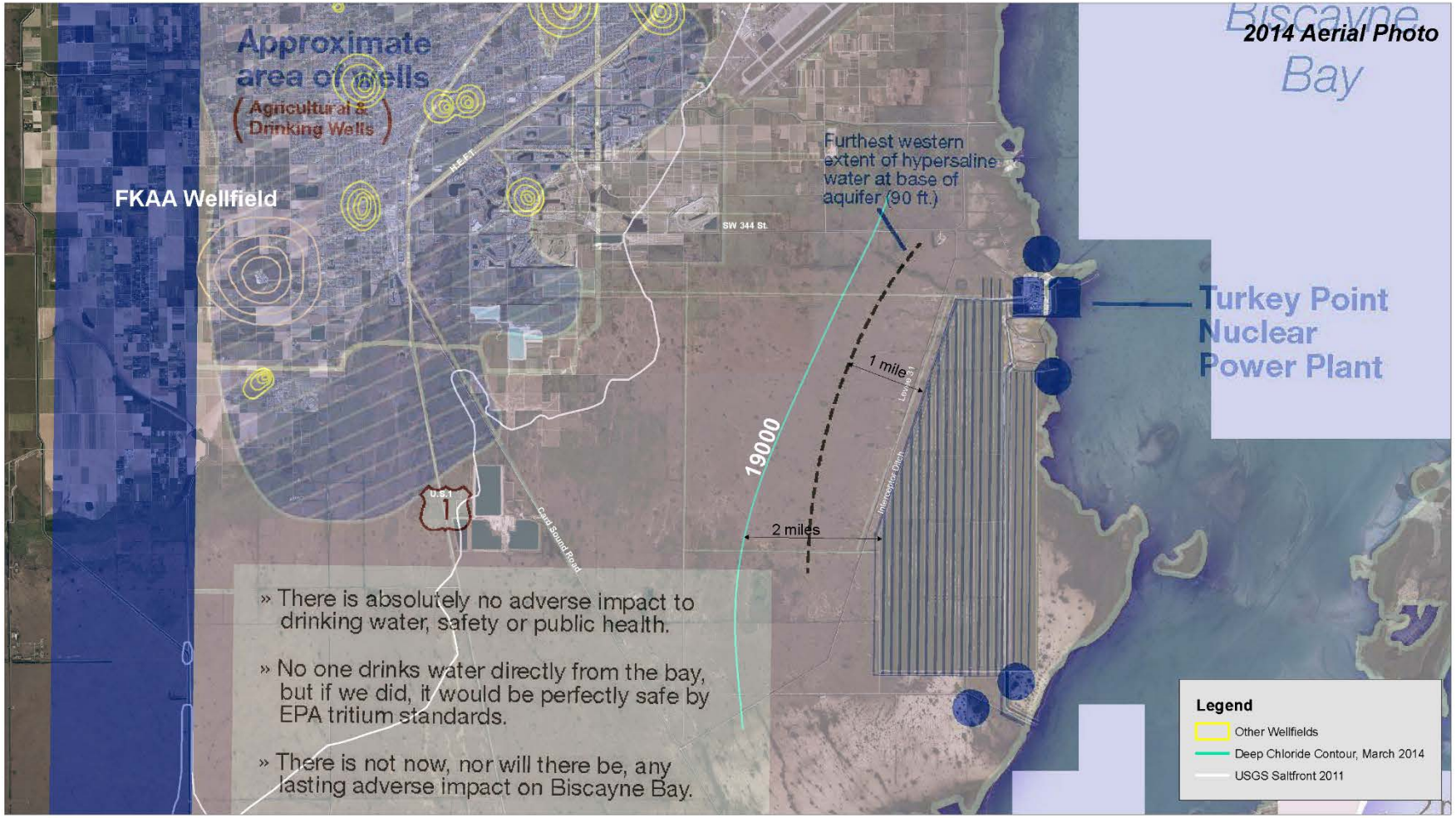
Data from 5th Supplement

Chloride Deep-Depth



FPL Graphic not accurate

Atlantic Civil, Inc.

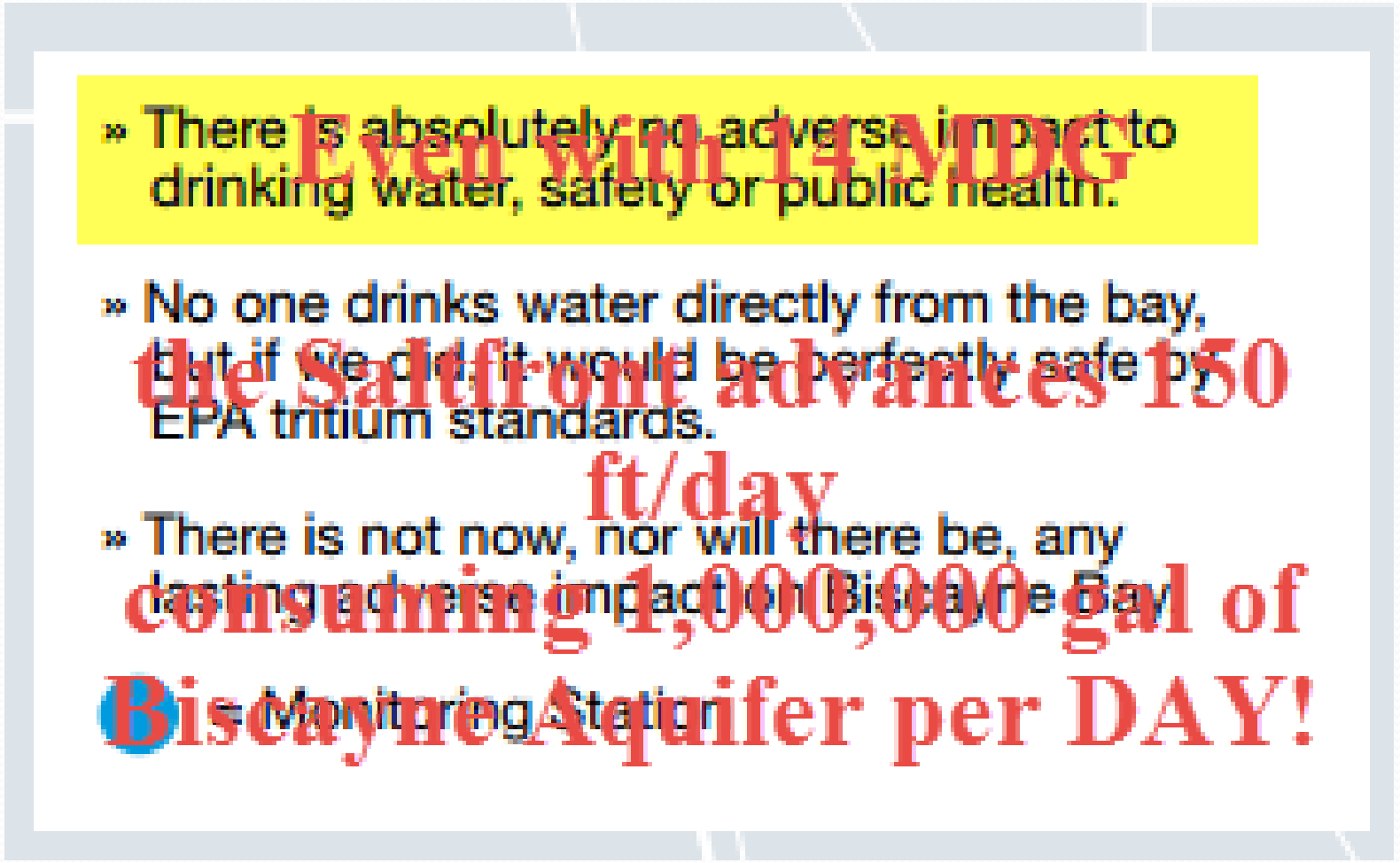


Wells 19a.pdf

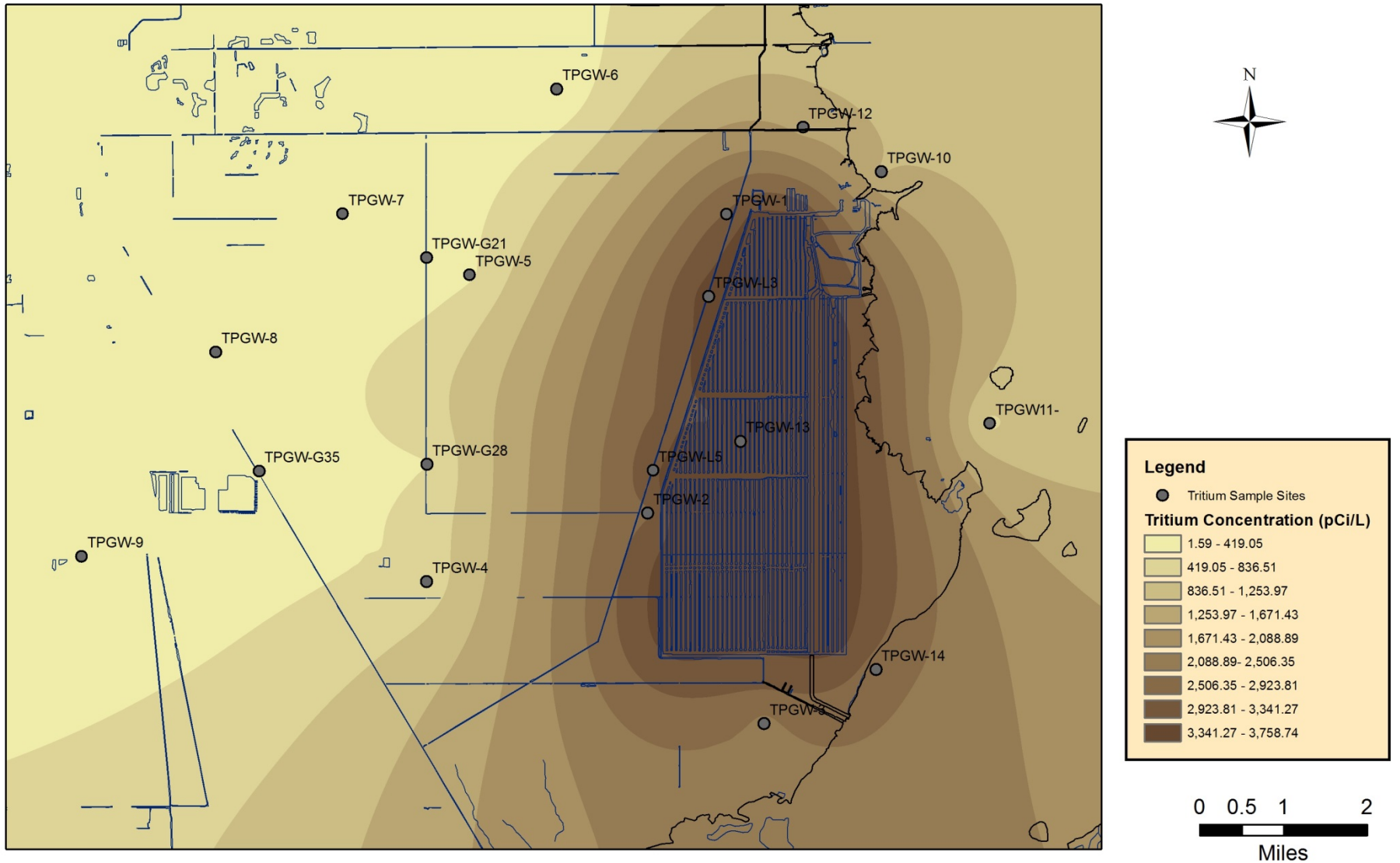
0 1.25 2.5 5 Miles

EAS Engineering, Inc.
FPL Regional Map

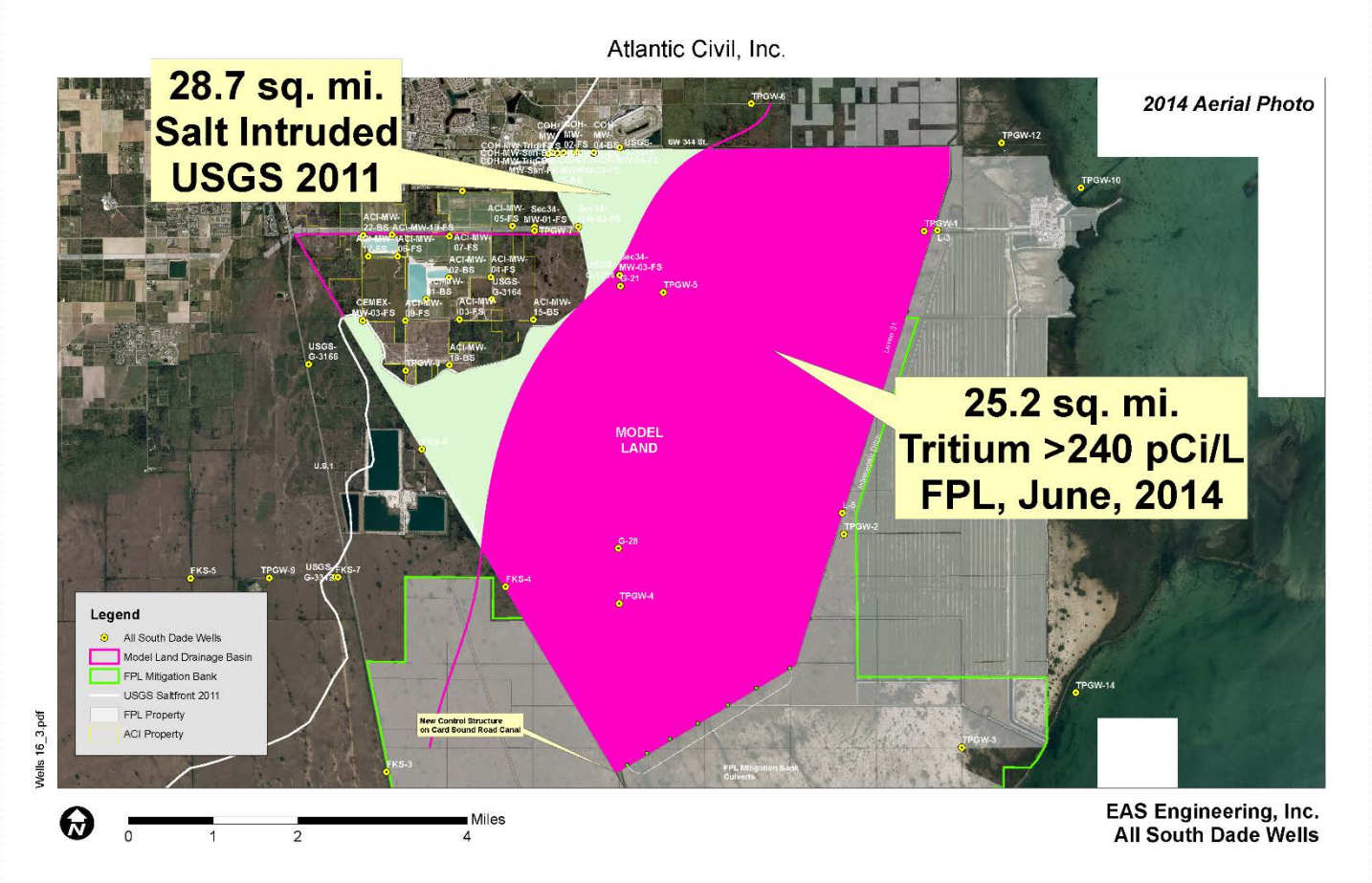
FPL “fact” not correct!



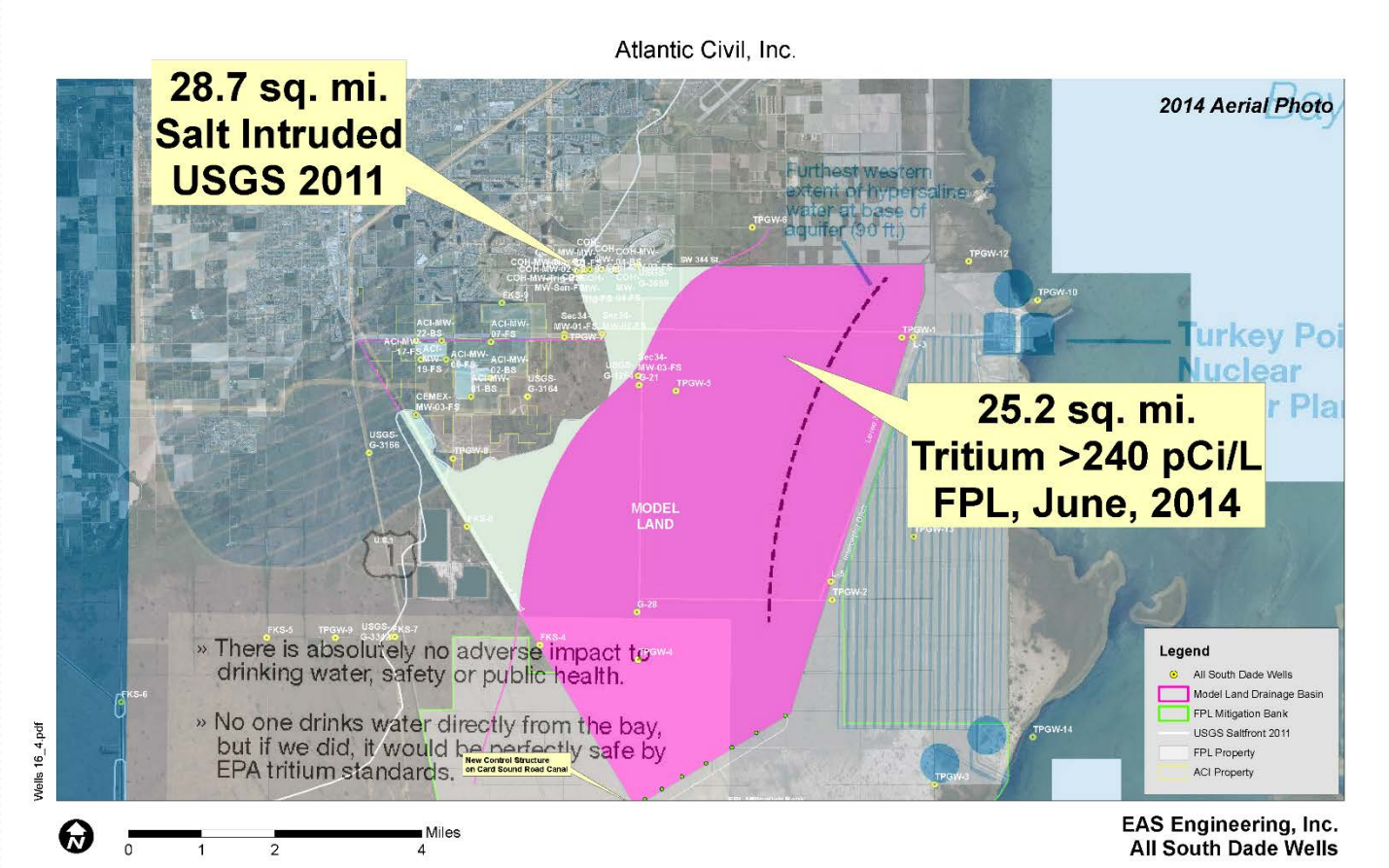
Contours Based On Deep Well Tritium Results From the March 2013 Quarterly Sampling



Influence of CCS Water from FPL Data



FPL misleading information



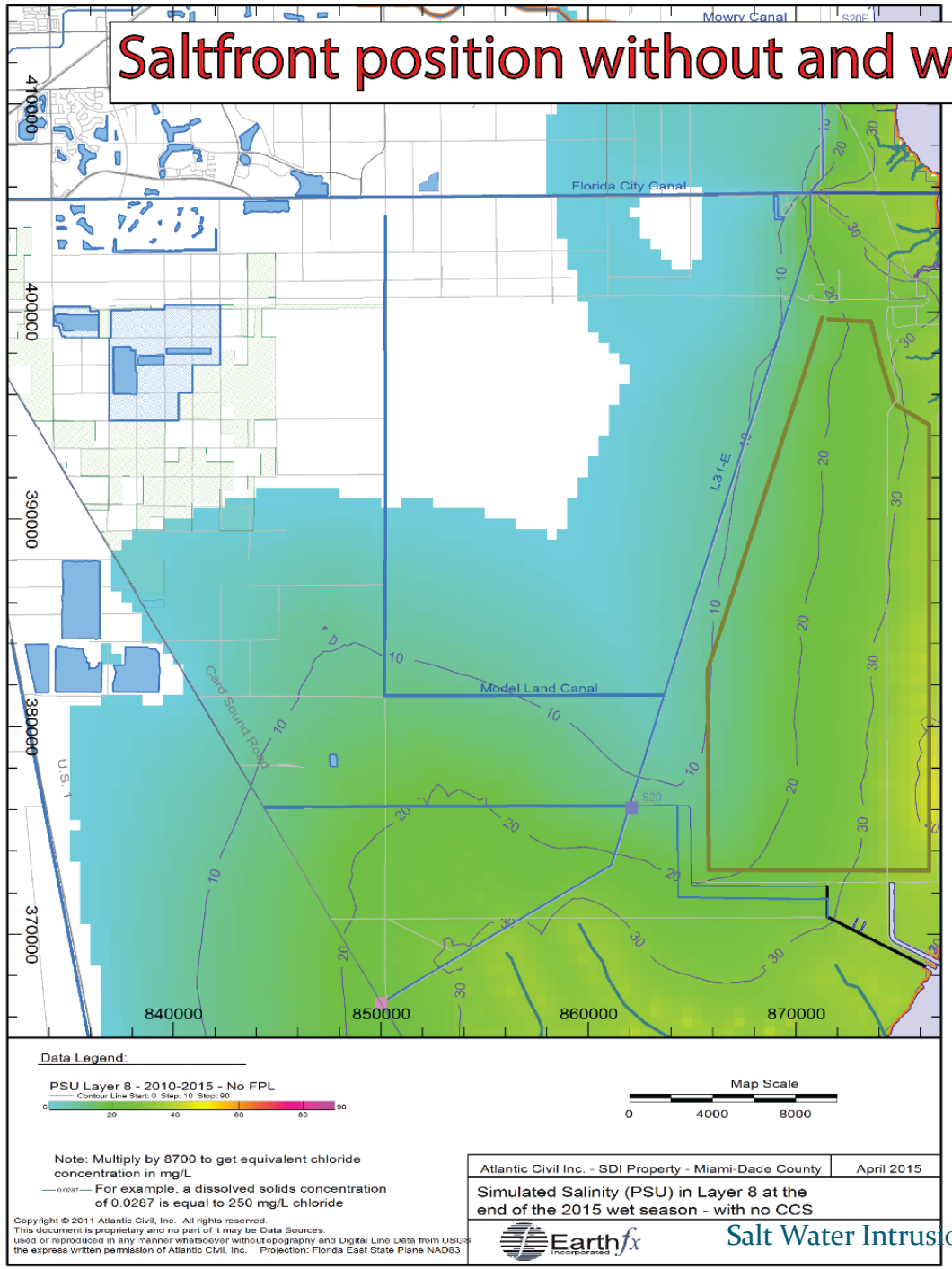
SFWMD – FPL 1983 Agreement (also in 1972 original agreement)

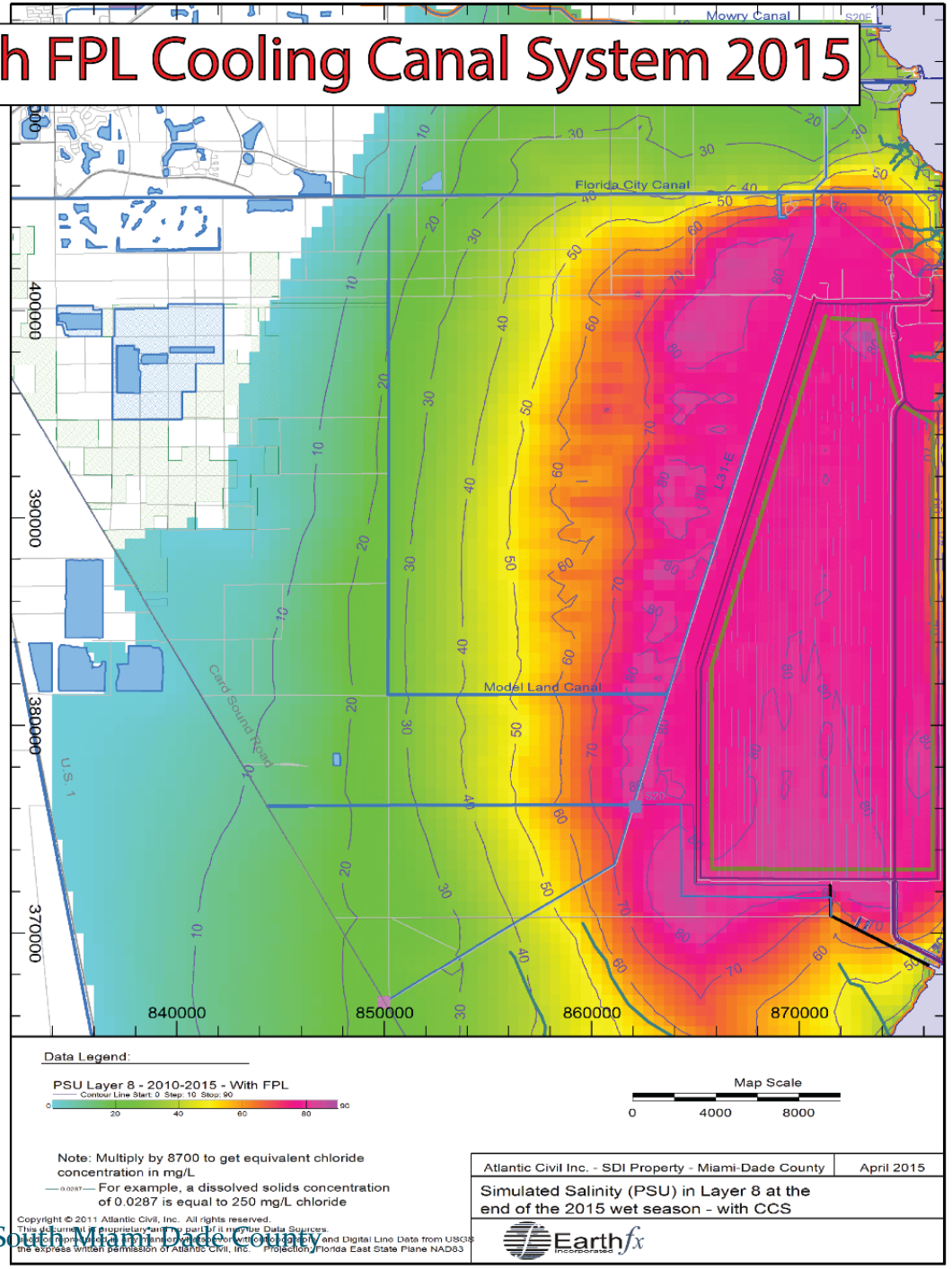
NOW THEREFORE, the parties hereto agree as follows:

A. INTERCEPTOR DITCH SYSTEM

1. FPL and DISTRICT agree that the purpose of the system is to restrict movement of saline water from the cooling water system westward of Levee 31E adjacent to the cooling water system to those amounts which would occur without the existence of the cooling water system.

Saltfront position without and with FPL Cooling Canal System 2015





Other FPL Issues

- Water Management
  - 3 Marine wells (45 MGD)
  - Canal dredging
  - Slurry walls
  - Extraction wells on east side for Ammonia
- Mitigation Bank Operation
- NPDES

FPL Myth 1 – CCS stabilized

- Why now?
- What's FPL's definition of "stabilized".
  - The way it was "stabilized" for the last 40 years when salinity went from <34PSU to almost 100 PSU in 2015?
- The 14 MGD from the Floridian isn't being used yet.
  - If it's "stabilized why do we need the 14 MGD?

FPL Myth 2 – The Miami Dade consent agreement is the answer

- Fact: The saltfront does not stop moving west for many years.
- FPL has NO model to evaluate any proposed solutions. So how do they know?
  - FPL has asked for a 6 week delay in even submitting the 1st run of any model they have created.
  - If FPL was truly concerned about the CCS they should have developed a model years ago. They did not!

FPL Myth 3 – SFWMD Canal operations are to blame

- Groundwater elevation in the western Model Lands basin have been stable for at least the 30 years.
- FPL's own mitigation bank operations in the eastern Model Lands basin have allowed for large quantities of water to be moved into the CCS and discharged to the coast.
- DERM consent agreement requires FPL to raise the elevation of its mitigation bank culverts.

Myth 4 – FPL is cleaning up the pollution it caused to the Bay

- NO agency has evaluated the proposed “fix”.
  - Not DERM, FDEP EPA
  - Health Department issued well permit
- If discharged into CCS additional pollution being sent West!
- If discharged into existing disposal well, where will discharge from DERM CA extraction wells go?
- How does FPL know there will be no long term impacts to the Bay? The same way they said for years the CCS wasn’t causing a problem to the Biscayne Aquifer!

Ask these questions of FPL

- Why didn't you do anything in 1983 when the data showed the CCS was failing.
- If you didn't know it was failing then, when did you know?
- Why haven't you done anything since 2010 when you had your consultants evaluate options to stop the front from moving?
- With your proposed solutions when will the saltfront stop moving west. How long? How do you know?
- When will the 25 SQ. Miles of pollution to the Biscayne Aquifer be cleaned up? How long? How do you know?

What don’t we want from FPL

For FPL to claim the fix is too costly.

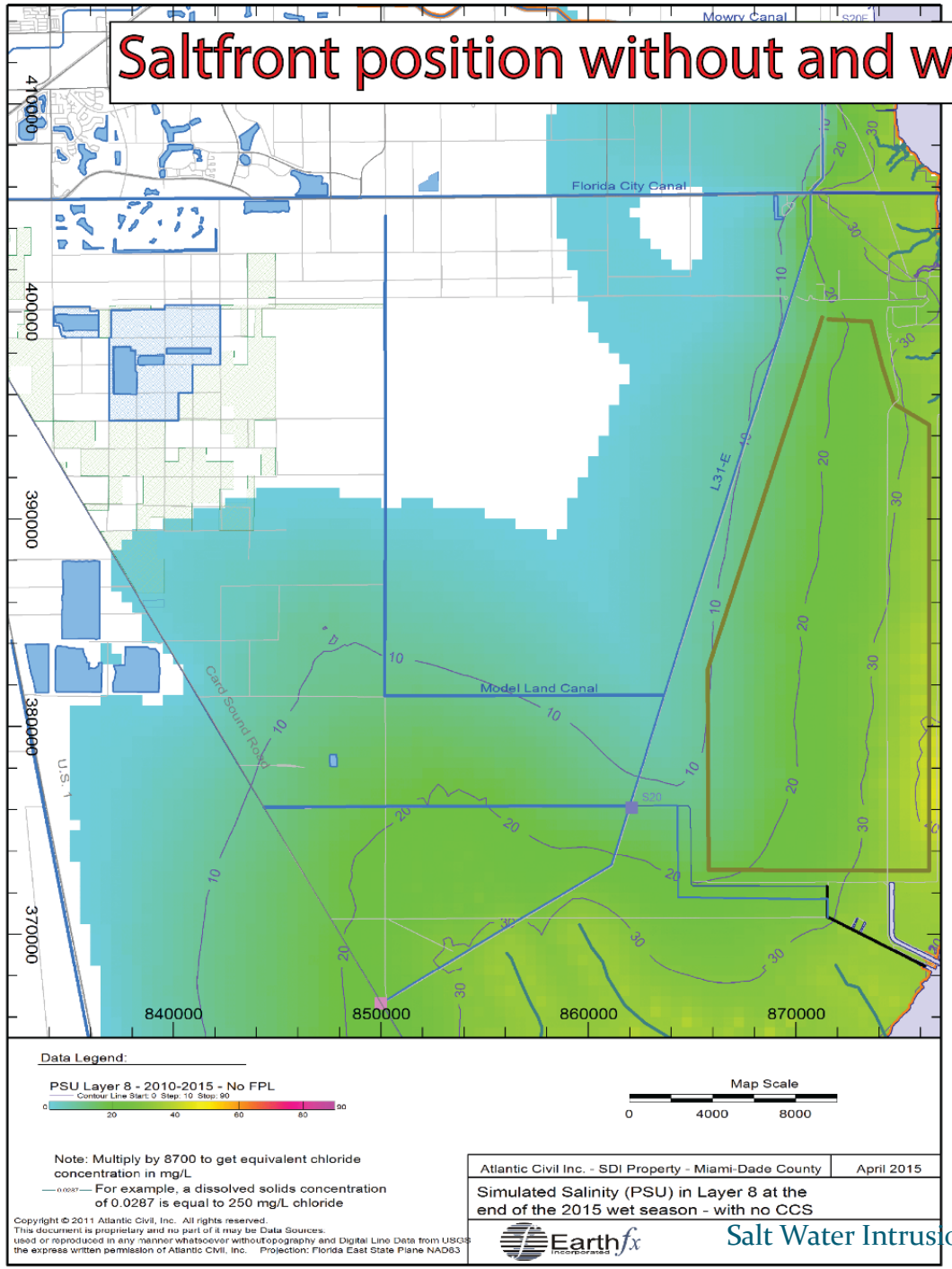
To continue to claim everything is OK – It’s NOT

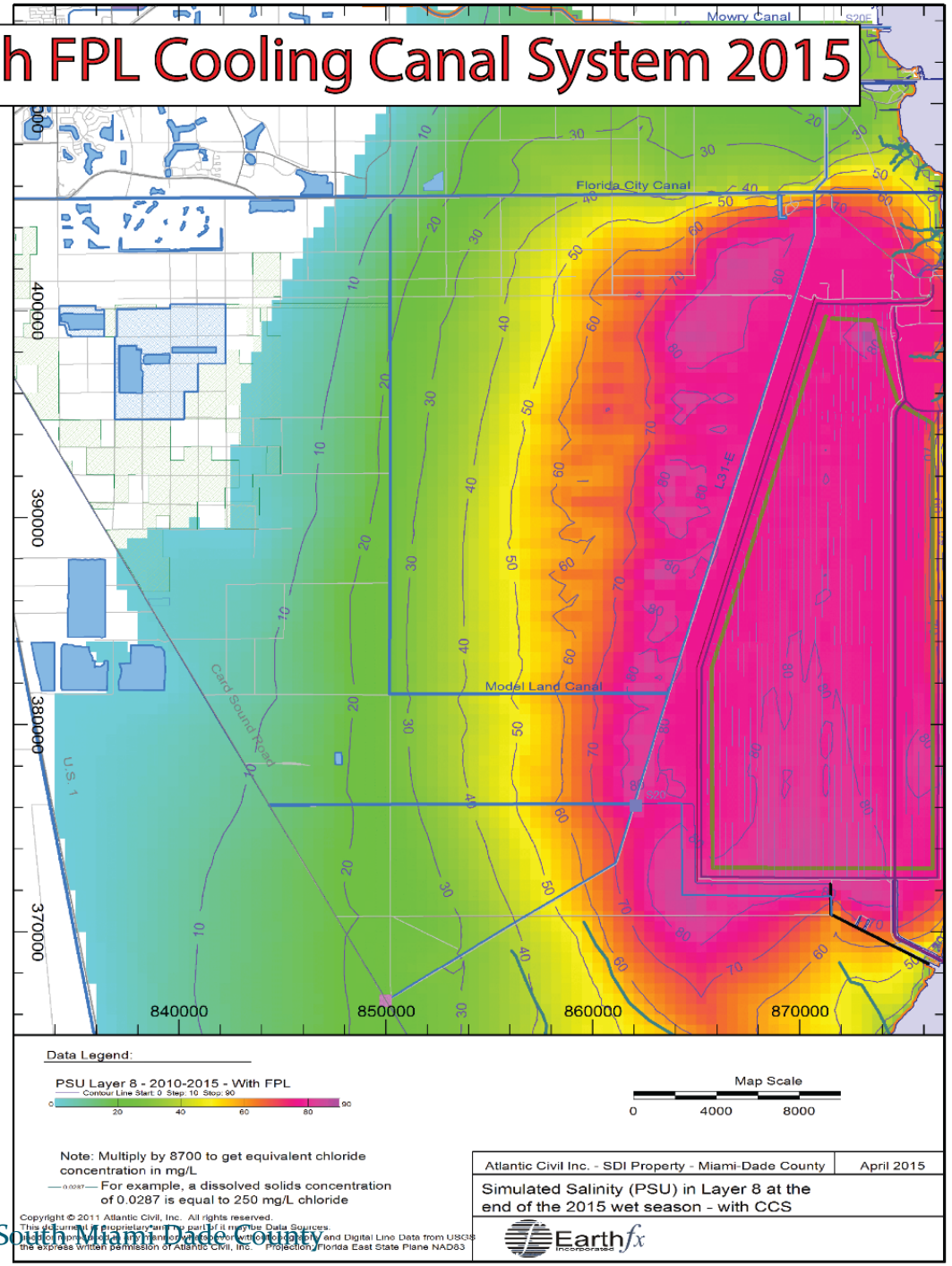
What do we want from FPL

- For FPL implement measures that will immediately stop the western movement of the saltfront
- For FPL to remove all pollution from the Biscayne Aquifer attributable to the CCS (tritium above 20)
- Return the saltfront to a position as it would be if the CCS were not there.
- Accurately and comprehensively identify ALL modifications made to the CCS and to provide assurance additional negative impacts don't occur from there cumulative impacts.

FPL must be held accountable

Saltfront position without and with FPL Cooling Canal System 2015





Questions?