

South Dade Coordination Progress Report

3/5/10



Welcome: The purpose of this document is to provide managers and staff with periodic updates on progress being made in the various projects that are covered under the South Miami-Dade Issues Coordination Charter. It will cover updates to project milestones under development of achieved, identify issues, conflicts or challenges that pop up along with executive directions to resolve them, identify upcoming meetings/workshops, and identify sources of information that may be useful to project managers and leads. Attached is the South Miami-Dade Issues Coordination Charter which explains the scope of this initiative. To help keep these updates useful, please send me news and updates about your projects biweekly. Also, feel free to send me any feedback or questions you have on format, content, circulation etc. in order to this reporting more useful to you.

Thanks,
Scott Burns and Pete Kwiatkowski

- **South Dade Coordination Charter**

- **Status update:**

- Attached is the executed South Miami-Dade Issues Coordination Charter. Please take a look at it as it provides detail regarding the scope and responsibilities of this initiative. The project sponsors; Ken Ammon, George Horne, Deena Reppen, and Sheryl Wood are

indicative of the broad scope and general importance of the initiative. The structure of this initiative also presents some PS challenges. The role of the coordinators will be to provide oversight and coordination across the multiple District projects ongoing in south Miami-Dade County, identify potential conflicts, unintended consequences, resource shortfalls and condense and convey those issues to the executive decision makers along with recommendations for resolution. Once direction for resolving issues is defined, the coordinators will communicate those directions across affected projects along with any associated resources (staff/funds etc) as necessary.

- **Upcoming activities:**

- Work on PMP and PS entry. As you plan your work activities for FY 2011, please include time and resources that you will be expending on south Miami-Dade projects listed in the Charter. In some cases, other existing project charters are in place. At this time, we are trying to decide how to distribute work and resources across charters so if you have a question, please email Scott Burns and Pete Kwiatkowski.

- **Implementation of the SFWMD/FPL 5th Supplemental Agreement**



Florida Power and Light operates a surface water cooling canal network in accordance with an Agreement executed with the District beginning in 1972. Changing conditions over time have resulted in amendments to the Agreement. The most recent revisions were adopted by both agencies in

October 2009 (Fifth Supplemental Agreement). Included in this Agreement is an extensive monitor plan (Monitoring Plan) to be constructed and maintained by FPL with the purpose of assessing the extent of influence exhibited by the operation of the cooling canal system on water resources of the District on or beneath adjacent lands and the Bay. The Agreement contains actions to be taken by FPL in the event that the District determines that impacts associated with the cooling canal system do not comport with the provisions of the Agreement.

○ **Status update:**

- FPL has submitted a draft quality assurance protection plan (QAPP, December 15, 2009) for review and approval by the District in accordance with provisions contained in the Monitoring Plan. District staff, representing several areas of expertise, provided extensive review and comments on the draft plan which the FPL team is working to address. Melody Hunt has coordinated the technical team of District and other agency (DERM, DEP and DOI) experts, all of whom have done an excellent job in providing comments that will ensure the data collected will be scientifically sound, reliable and defensible. To ensure defensible monitoring results and quality reporting, all data collected shall meet Chapter 62-160 F.A.C., SFWMD, and FDEP QA/QC requirements.
- FPL has contracted for surface water and groundwater monitor site construction. Steve Krupa has been coordinating efforts to help FPL gain site access agreements and right of way permits from the District along with overseeing the installation of monitor facilities. The site installations are proceeding and are currently on schedule for a monitoring startup date of July, 2010.
- In recognition of broad stakeholder interest, FPL and the District have agreed to make all data collected under the Monitoring Plan available to the public. This has raised several technical challenges in linking spatial and temporal data from many different sources into a single, user friendly, publicly accessible platform updated on a near real time basis. Brian Turcotte, working with a team of District data experts has developed a prototype Google Earth based application that shows promise. Staff are working with FPL to establish data formats and reporting protocols to support this application. Estimates of District staff time for set up and maintenance are being prepared for consideration by the Executive Management Team

○ **Upcoming activities:**

- FPL/SFWMD and other agencies meeting on 2/23/10 to resolve questions associated with District comments on FPL's draft QAPP.

- **FPL Unit 6 and 7 Nuclear Expansion Certification**

FPL has filed an application with the State of Florida Site Certification Board seeking approval to construct and operate two additional nuclear reactors at their Turkey Point site. The District is a commenting agency under the site certification process and a multi-disiplined team of District scientists, regulators and engineers under the oversight and coordination of Sean Sculley are reviewing the application and once it is complete, will prepare an agency report for consideration by the Governing Board prior to transmittal to DEP.

- **Status update:**

- A second round of sufficiency questions were compiled and edited into a final draft which was mailed to DEP 1/6/10 and officially submitted to FPL by DEP on 1/13/10. Based on the extent of effort needed by FPL to address the comments, FPL has requested additional time to respond.
- A meeting was held between District and FPL technical staff to discuss District questions/comments on FPL models used to assess potential impacts of proposed elements of the Unit 6 and & application. FPL will address our questions in their second sufficiency response.

- **Upcoming activities:**

- Waiting for FPL's response to second sufficiency questions.

- **South Dade Agricultural Drawdown Study**



The South Dade Ag Study was initiated at the request of stakeholders who had concerns that the long standing practice of operating District canals in order to provide drainage to row crops may be lowering groundwater with unintended consequences (saltwater intrusion in the Biscayne aquifer, reduced fresh groundwater seepage beneath Biscayne Bay). A series of stakeholder meetings have been held to discuss the practice, collect data on land use, water levels and canal operations during the 2009/2010 growing season, and to discuss options and alternatives to meet the multiple objectives of the area. Hydrologic data collected during the 2009/2010 growing season will be statistically analyzed to identify relationships between canal stages and groundwater stage responses in temporal and special terms. The results of this analysis will be used to better quantify the area of influence and magnitude of canal operations on groundwater stages and surface water discharges to the Bay. The data will also be used in conjunction with groundwater flow models (LECSR) to evaluate impacts of alternative management options in the area.

- **Status update:**
 - Stakeholder status update meeting held on 1/22/2010
 - Ongoing canal stage and groundwater data collection continuing
 - Contracting for statistical services
 - Work on 2009/2010 operations documentation underway
- **Upcoming activities:**
 - Stakeholder meeting to be scheduled for April 2010

- **Rock Mining Permit Coordination**



Rock mining in South Miami-Dade County represents some unique challenges with regards to the potential impacts to CERP project hydrology and the orientation of the coastal saltwater interface. These technical issues are further complicated by the fact that several different agencies issue permits for mining activities (SFWMD, DEP, M-D DERM, and USACOE). Currently, criteria regarding setback distances and depth of excavation as they relate to CERP projects and saltwater migration in groundwater is not uniformly addressed among the regulatory agencies. In addition, sea level rise has the potential to cause saltwater to move into retired mining pits exposing shallow strata in the aquifer to saltwater intrusion. Activities associated with this element of the south Miami-Dade Charter are geared towards developing consensus among the regulatory agencies on permitting strategies to protect the water resources from unintended impacts of mining and to provide technical support to District ERP permitting. Technical support is also provided in support of the District associated with legal actions filed by Atlantic Civil.

- **Status update:**
 - Analysis of potential saltwater intrusion associated with Atlantic Civil permit modification request ongoing

- Meeting between District Staff and DERM permitting staff was held on 2/3/2010 to discuss Miami-Dade permit practices as they relate to saltwater migration potential.
 - **Upcoming activities;**
 - Meeting to be scheduled with DERM, DEP, SFWMD, and USCOE mining permit staff to develop consensus guiding principle to consider when permit mines in coastal Miami-Dade County
- **Card Sound Road/Florida Cities Canal Structures**



The Card Sound Road Canal is the result of fill excavations associated with the construction of Card Sound Road connecting the City of Homestead to Florida Keys. The Canal does not directly provide drainage to the City of Homestead as it dead ends at the confluence of Card Sound Road and US 1. It also doesn't act as an outfall for the L-31E Canal or the Model Lands canals (which discharge to the east via S-20 structure). What it does is provide drainage to the Model Lands via groundwater seepage from the east and surface water/groundwater from the west (the west side of the canal is at ambient land surface with no berm). The Card Sound Road Canal was not historically controlled, allowing tidal migrations of salt water from the Bay to freely move several miles inland. Over the years, Plans have been made to construct water control features in the canal to

reduce the drainage of wetlands and limit the tidal encroachment of saltwater. The first such structure is the FPL Mitigation Bank Structure which is currently under construction. It is located adjacent to where the L-31E Canal dead ends at Card Sound Road. FPL is constructing this structure pursuant to a condition of the Everglades Mitigation Bank Permit to improve the hydrology of Model Lands wetlands. A second structure, proposed by Miami-Dade County, is slated for construction two miles to the south of the FPL structure to future limit the migration of saltwater and to improve the hydrology of County owned wetlands adjacent to the proposed structure. The ERP permit for this second structure is currently under review at the District.

The Florida Cities Canal is located along the northern extent of the Model Lands and provides drainage to agricultural and urban lands within the City of Homestead. Surface and groundwater collected in this canal discharge to tide through the operable structure S-20F. Consideration is being given for the placement of a water control structure in the eastern end of the Florida Cities Canal to aid in providing freshwater flows to the Model Lands and improve fresh groundwater recharge along the coast.

- **Status update;**
 - FPL water control structure currently under construction.
 - M-D proposed structure under permit review at SFWMD
- **Upcoming activities;**
 - Develop an operation agreement with FPL for the new Card Sound Rd Structure to ensure operations in conjunction with S-20
 - Working to assign an inter-agency project study team to evaluate proposed structure on the Florida Cities Canal.

- **Public Water Supply Wellfield Monitoring and Compliance**



Several public water supply wellfields serving thousands of citizens in south Miami-Dade, are located within the study area, all are near saline groundwater. Over the years, safe yield allocations and alternative water supply sources have been established for these wellfield through regulation and alternative water supply funding grants. Each utility is required to measure their pumpage and monitor groundwater conditions across the area of influence of their wellfield and report progress on developing required alternative supplies on a prescribed schedule related to the projected growth rate in their service area. Alternative supplies include reclaimed water, Floridan aquifer desalinization, and wellfield relocation. Water conservation is also an integral part of protecting the wellfields. The District's Regulatory Compliance section collects data from the wellfields which is evaluated to determine if the wellfield will remain sustainable into the future. Resources are directed through the South Dade Coordination project to aid in the analyses and develop strategies to deal with potential saltwater intrusion.

- **Status update;**
 - Florida Keys Aqueduct Authority (FKAA), which provides potable water to the Keys, began operations of their new 6 mgd Floridan Aquifer Reverse Osmosis plant. This plant will be used to meet all increased demands over the safe yield of the Biscayne aquifer (19 mgd) as well as reduce demands on the Biscayne production wells during dry times. The District contributed funding for this alternative supply.
 - Chloride levels in the eastern sentinel monitor wells associated with the FKAA's Biscayne wellfield, which increased during the recent prolonged drought are stabilized and declining in response to improved rainfall patterns
- **Upcoming activities;**
 - Florida Cities and City of Homestead compliance issue identification

- **CERP Project Status/ Water Resource Protection Rule Development**



Two major milestones were achieved with the groundbreaking of the C-111 West Spreader Project (January, 2010) and initiation of construction at the Biscayne Bay Coastal Wetlands Rehydration Project Phase I (Deering Estate; March, 2010 and L-31E culverts; January, 2010). Both of these are expedited projects with the objectives of enhancing the freshwater hydrology along the coastal reaches of southern Miami-Dade County. The construction activities associated with the initial phases of these projects are expected to be completed by the spring of 2011. Work continues on the next phase of the projects with our federal partners as we finalizing the PIR and conceptual design contracts.

In addition, to project construction, the District must protect the project benefits by ensuring that the water needed for the natural system will not be allocated away. Rules regulating the use of water have been and will be developed to continue to protect project water for the natural system. Rule that protected Everglades water from further use back in 2006 are being used to protect the project waters associated with the C-111 project while staff is working with stakeholders to identify rules to protect existing beneficial freshwater inflow to Biscayne Bay as well as the project waters associated with the Biscayne Bay Coastal Wetlands Projects. These are technically complex rules that consider competing estuarine biologic responses to salinity levels which are evaluated with coupled surface and groundwater hydrodynamic models, all of which are reviewed by national experts for scientific efficacy.

- **Upcoming activities;**
 - L-31E Culvert installation complete; May 2010
 - Deering Estate Flow-way groundbreaking; May 2010
 - Deering Estate Flow-way construction complete; May 2011
 - Draft BBCW PIR; April 2010 (Project Delivery Team meeting 3/9/10)
 - C-111 SC Final PIR; June, 2010
 - Spatial and temporal analysis of Biscayne Bay salinity data; May 2010
 - Stakeholder meeting to discuss status of technical analysis and technical approach for Biscayne Bay rules; May, 2010

- **South Miami-Dade Outreach**



With the wide range of interests in south Miami-Dade issues at the local, county, state and federal levels, a critical component of this project is outreach and information sharing. An outreach plan is being developed to provide all participants the opportunity to become involved with the process, access data and information at all levels of detail, and to check on the status of projects or conditions of the water resources. This effort will involve web design and maintenance, media releases, meeting notices and unprecedented access to real-time as well as reports and geophysical data through a new database application being developed for this application. It is anticipated that by providing all interested parties with access to up to date information, everyone will be able to work form a common source of knowledge enabling complex projects to move forward with the public's confidence.