SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)
WATER RESOURCES ADVISORY COMMISSION (WRAC)
2012 LOWER EAST COAST WATER SUPPLY PLAN UPDATE

Thursday, September 27, 2012, 1:00 PM

SFWMD Headquarters, B-1 Auditorium
3301 Gun Club Road
West Palm Beach, FL 33406

MEETING SUMMARY

Item 1. Welcome and Opening Remarks - Dean Powell, Bureau Chief, Water Supply

Mr. Dean Powell opened the workshop and welcomed participants. He noted that the October WRAC meeting will cover a few of the topics being discussed in the meeting today including the MFL priority list and Central Everglades Planning Project (CEPP).

Item 2. Overview of Today's Agenda - Mark Elsner, Section Administrator, Water Supply Development

Mr. Mark Elsner stated that the Lower East Coast Water Supply Plan is scheduled for completion in early 2013. He noted that one additional workshop is anticipated to discuss the plan prior to its finalization. Mr. Elsner reviewed the goals for the 2012 LEC Water Supply Plan Update and the objectives for the region's natural systems.

He introduced guest speaker Ms. Jane Graham, Esq., with Audubon of Florida.

Item 3. "Protecting our Treasured Ecosystems for Our Economy, Future, and Way of Life" - Jane Graham, Esq., Everglades Policy Associate, Audubon of Florida

Ms. Graham thanked the District for inviting Audubon to speak at this workshop. She noted that many non-governmental organizations and environmental advocacy groups, including some participants in the room, have been engaged and working with the District for many years. During her presentation she reviewed the status of ecosystems within the LEC planning area including:

- Lake Okeechobee
- WCAs and Everglades National Park
- Biscayne Bay
- Florida Bay
- Loxahatchee River

- Caloosahatchee and St. Lucie Rivers and Estuaries –outside of LEC planning area but are impacted by Lake Okeechobee releases and are thereby connected to water supply planning in the LEC.

She reviewed the benefits of ecosystem restoration to the region's economy. She gave the example of a study on SFRestore that quantifies the economic benefits of Biscayne Bay ($7.5 billion income to Florida residents in 2004). She noted that money spent on Everglades restoration projects has an estimated 4:1 return on investment. Audubon wants to see meaningful efforts on the MFL Prevention and Recovery Strategies. Ms. Graham asked "How can the LEC Plan update help protect these ecosystems?", and followed with a series of recommendations from Audubon of Florida. Recommendations included:

- Update rules involving MFL, water reservations, and restricted area allocation rules.
- Enhance operational procedures for South Dade Agricultural Drawdown, Lake Okeechobee, and Loxahatchee River.
- Improve water shortage water shortage strategies to ensure that the environment is protected during droughts.
- Make water conservation a priority and provide a progress report on the 2008 Water Conservation Plan. Utilize conservation rate structures to save water.

Questions/comments for Ms. Graham included:

- *Is the group going to have any presentations by wildlife biologists to discuss potential impacts at species level?* This type of presentation is not planned.

- *There is a lack of an enforcement mechanism for unnecessary or prohibited irrigation done by automated irrigation systems in the urban environment, even on government owned property.*

- *Regarding south Dade agricultural canal drawdown: This process drains the basin in the winter, when water is needed for Biscayne Bay. Is the LEC Water Supply Plan a place where we can address our concerns about this area?* The Plan will not but there is a South Dade Team whose efforts will be incorporated into the plan.

- *Have the MFLs identified in the 2005 plan for Loxahatchee River been implemented?* Yes, MFLs have been established for the Loxahatchee River as well as a recovery strategy and a restricted allocation area rule for that covers the watershed.

- *How can the SFWMD really plan well without knowing what the needs of the natural system are?* These are being addressed in the Central Everglades Planning Project.

- *The District needs to focus on establishing more MFLs and reservations, especially since they are based on the environment's water needs.* It is important to note that the regional water availability rule has driven utilities to develop alternative water supplies, primarily increased reuse and use of the Floridan aquifer, and increased water conservation. This rule has worked regionally to protect water rather than establishing individual water reservations to protect water for environmental needs.

- *From a utility's perspective the infrastructure may not be sufficient for delivering all irrigation water during 2-4 hour windows with 2-day watering.*

- *The District was encouraged to deal with the environmental issues and to incorporate all work that has been done since the last Plan.*

- *There is a perception that there is slippage on the establishment of additional MFLs. The District must truly understand the needs of the natural system, not just the level of significant harm (MFLs).* In this plan, we are focusing on the statutory requirements. CEPP is looking at the needs of the natural system and that information will be incorporated into the next plan. Development of additional MFLs will be considered, and identified in annual priority lists.

- *Biscayne Bay is not within the scope of the CEPP process. The reservation rule that is being developed currently protects water associated with the CERP Biscayne Bay Coastal Wetlands Project -Phase I.*

Item 4. Changes since the 2005-2006 LEC WSP- Mark Elsner

Mr. Elsner explained the changes that have occurred in the Lower East Coast region since publication of the last LEC Water Supply Plan in 2005-2006. He noted that these many disparate changes since 2005-2006 have not been analyzed comprehensively to date. Highlighted regional changes since 2005-2006 included:

- Lake Okeechobee: Lake Okeechobee's regulation schedule changed with the adoption of the 2008 Lake Okeechobee Lake Regulation Schedule (2008 LORS). The lake is managed at generally lower levels now. Adaptive protocols have been updated to work with the new lake schedule.

- Systems and Operations: Changes include ERTP WCA-3A schedule, STA expansions, restoration strategies for regional water quality planning, and sea level rise.
- New Rules: Several minimum flows and levels (MFLs) have been established in the LEC. There has been a transition in priorities from MFLs to reservations and restricted allocation area rules.
- Water Supply Projects: Public water supply demand projections are lower in the 2012 LEC WSP relative to the 2005-2006 LECWSP. Forecasted water demands have decreased. Water conservation has resulted in lower per capita use, and it appears a water conservation ethic is developing as a result of conservation messaging and efforts, droughts, water shortage restrictions, and economic downturn over the last seven years.

Mr. Elsner concluded his presentation with an overview of the stakeholder process and modeling activities that will provide a comprehensive analysis and basis for the 2017 LEC Plan.

Questions/comments included:

- *Referring to the slide "PWS Demand Projections", the projected demands in each plan seem to be higher than what was actually used. The 2010 usage is only 3 MGD greater than 1995 usage.* Water conservation has resulted in lower per capita use, and it appears a water conservation ethic is developing as a result of conservation messaging and efforts, droughts, water shortage restrictions and economic downturn over the last seven years.

- *MFLs have been established, but how do we now provide comprehensive protection for the environment? Specifically, how will the LEC Plan deal with examples of water wasted for unnecessary irrigation in developed areas?* Conservation is incorporated in the LEC Plan. Also SFWMD is participating in the state-wide process called CUPCon (Consumptive Use Permitting Consistency). In this process, a consistent conservation method (to be incorporated into permitting regulations) is being developed. These efforts will be included in the Plan.

- *How are the LEC Plan agricultural demands projections developed? Is there the equivalent of BEBR? Where is the growth coming from?* Unfortunately, there is no BEBR equivalent. The projections are developed with input from a variety of sources including FDACS (Florida Department of Agriculture and Consumer Services), Florida Farm Bureau, agricultural stakeholders, US Department of Agriculture, other agencies, and economic indicators. Growth will likely come from new citrus, biofuels, and a migration of some crops, such as berries, from other parts of the state.

- *Do you have a map showing where the projected increases in irrigated areas are given that decreases are expected in areas like Monroe and Broward counties?* The area is mostly Palm Beach County. You can refer to draft Appendix A of the LEC WSP: http://my.sfwmd.gov/portal/page/portal/xrepository/sfwmd_repository_pdf/lec_app_a_demands_external_draft_062012.pdfthat details agriculture projections

Item 5. Evaluating Effects of Demand on the Natural System – Jose Otero, Section Leader, Hydrologic &Environmental Systems Modeling, SFWMD

Mr. Otero gave an overview of proposed modeling in support of the LEC Plan. The modeling objective is to assess the differences in existing system conditions with 2010 water supply demands compared to demands expected at the year 2030. The South Florida Water Management Model (SFWMM) is being used in this effort. The period of record for the climate data used in the model includes the years 1965-2005. The model represents existing infrastructure. Future restoration projects are not represented in this modeling effort, but may be included in subsequent modeling investigations. Mr. Otero explained the assumptions and data that will be used in the modeling effort.

Questions for Mr. Otero included:

- *How do the water needs for the STAs (stormwater treatment areas) fit into the modeling? Are the future STAs included?* A 0.5 foot deep maintenance water level is included for existing STAs as a demand. Future STAs are not included in these simulations.

- *Regarding the agricultural water demand assumptions slide, where can we find more information on agriculture locations, numbers, etc.?* More information on demands can be found in the LEC Water Supply Plan Chapter 2 and Appendix A. Refer to this link: http://my.sfwmd.gov/portal/page/portal/xrepository/sfwmd_repository_pdf/lec_app_a_demands_external_draft_062012.pdfthat details agriculture projections

- *For PWS, recommend use of the permitted amounts rather than actual pumpage. When the economy picks up, or without goal-based conservation goals used in planning, we could see water demands move higher.*

- *Is the modeling approach right? The existing STAs are in the model, but other CERP projects could be operating by 2030 so how do you account for these potential water needs? Could you include a "fudge factor" for allocating the*

demand at least one of those projects? Our approach is to see how the changes in demand would affect the results. CERP Projects, such as CEPP results and recommended plans, could be incorporated into the Comprehensive Analysis to be completed before the next plan.

- *How are natural system demands, that haven't been captured in MFLs, accounted for? There is a concern that if natural system demands aren't captured by rule or MFL that they may be under estimated.* There are no specific demands for these areas but the modeling does take into account Restricted Allocation Area rules. Additionally, we will compare the modeling results to the standard suite of performance measures that address the needs of the natural system.

- *If you find demands "not met" for natural system or utilities, will projects be proposed?* The results of this focused and limited modeling will serve as input to the comprehensive analysis that will occur after this Plan Update and prior to the next plan update in 2017.

- *Do you keep track of gain and loss of wetlands and its related effects on aquifer recharge?* No, in this modeling effort the only input that changes is water supply demands. Future modeling scenarios (in the Comprehensive Analysis) may investigate those factors, but this modeling is to assess the impact of just the change in water demands.

- *Where can we access the modeling effort in detail, especially with regard to review of performance measures?* The modeling is still under development. At the next meeting we will present any significant results and we'll make it available.

Item 6. **Previously Identified and Future projects for the System – Dean Powell**

Mr. Powell gave a high level overview of water supply projects that have been constructed or proposed for, the benefit of the natural system. The highlighted areas included:

- Lake Okeechobee: There is a MFL recovery strategy in place for Lake Okeechobee. Implementation of the 2008 LORS led to the Lake transitioning from a MFL water body in prevention to a water body in recovery. Storage projects north of Lake Okeechobee are part of the recovery strategy.

- Everglades: Many components of the Modified Water Deliveries to Everglades National Park (conveyance features, seepage control features, and mitigation

features) have been completed. The Central Everglades Planning Project is underway. The Everglades MFL recovery strategy includes the Modified Water Deliveries, planned CERP projects, and implementation of the Restricted Allocation Area Rule for the Everglades and Loxahatchee River.

- NW Fork of Loxahatchee River: A MFL recovery strategy is in place with elements including use of L-8 reservoir in the interim until the proposed Mecca project is ready.

- Prevention strategies are in place for the Biscayne Aquifer and Northeastern Florida Bay. A Floridan aquifer model has been developed. The District is currently addressing peer-review comments. The model should be ready before the next plan update.

Questions for Mr. Powell included:

- *The current Lake Okeechobee MFL recovery strategy has four points not three as presented here; the water shortage rules are missing. Does that omission represent a change in policy?* We are not proposing changes to the elements of the MFL recovery strategy.

- *There is currently an effort for a reservation for the Biscayne Bay project. Can there be a placeholder for a broader reservation for Biscayne Bay?* The District will have a presentation on the next MFL priority list at the WRAC and Governing Board October meetings. That will be an opportunity for stakeholders to participate.

- *A review of the previous water body priority list revealed that things were moved on or off the list. Perhaps when things are removed or added there could be an explanation given so that things don't just disappear without explanation. Biscayne Bay was previously on the MFL priority list and now it is not*. It is important to remember that the same staff works on MFLs. Additional projects cannot be added until previous ones are completed. The District looks to focus on areas at risk from increased water use.

- *Is the eastern part of the C-111 spreader canal project (Phase II) still part of the Everglades MFL recovery plan?* Yes.

- *In some cases the MFLs have been met due to fortuitous rainfall rather than great planning. Is there a movement toward recreating natural systems that do not require monitoring and maintenance?* Given that we have over 7 million people living in South Florida that depend on water management infrastructure,

we are unable to create autonomous natural systems. Additionally, there are impacts the District can't control; Lake Okeechobee is now in a recovery because of the USACE Lake Okeechobee schedule that was implemented in 2008.

- *Congratulations in building a model of the Floridan Aquifer. What are the boundaries and can it be made available to utilities?* The model covers Indian River County to Monroe County and will be available to stakeholders when it is completed.

Item 7. **Public Comment**

- *Sierra Club does not support the ASR intensive approach, but favors use of wetlands to filter and recharge aquifers instead. ASR systems have issues with arsenic and are energy intensive. Preservation of wetlands should be the priority.*

- *Following up on an earlier demand projection question. Why was there only a 3 MGD increase in PWS use over about a 15 year period in the past and now the projections is for about a 100 MGD increase by 2030?* These kinds of changes can be hard to pinpoint. There was a reduction in irrigation due to policy/rule change and those kinds of efficiency gains may be onetime events rather than a trend that can be expected to continue. Utilities have been promoting conservation.

- *Need goal based conservation efforts to be incorporated into the water supply plans to ensure that any conservation gains that have occurred in the last 5 years do not disappear as underlying conditions change.* We may get strong direction on that as part of the CUPCon process.

- *Pricing of water can affect its usage.*

- *Are comments that have been received on earlier draft chapters available for review?* Not currently, but we can post the comments to the webpage: http://www.sfwmd.gov/portal/page/portal/xweb%20-%20release%203%20water%20supply/lower%20east%20coast%20plan

Item 8. **Wrap Up and Next Steps - Robert Verrastro, Lead Hydrogeologist, Water Supply Development, SFWMD**

Mr. Verrastro reviewed the comments on Chapters 1 & 2 and Appendices A & F received from Audubon of Florida and from Florida Department of Agriculture and Consumer Services. He noted that within the next few weeks drafts of Chapters 5 & 6 and

Appendices C, D, E will be distributed. Within the next couple of months, it is anticipated that drafts of Chapters 3 & 4 and Appendices B & G will be released. When these drafts are available, a notification will be sent out via email and posted on the web. Mr. Verrastro noted that the next WRAC Issues workshop will most likely be held in January 2013.

Questions/comments for Mr. Verrastro included:

- *When will the modeling be done and will the results be included in the Plan?* As discussed today, we are in the review process now with release of modeling results anticipated in November or December of 2012. "News worthy" results will be presented at our next LEC Plan meeting. The modeling documentation will be included in an appendix of the report.

- *When will the water budgets for the Flow Equalization Basins be available?* We have them now, but they are not incorporated in the current modeling process since this project is not included in the modeling.

- *What protections will be afforded to existing users affected by the flow equalization basin on the A-1 site? Resortation Strategies is not a CERP project covered by federal saving clause.* Correct. CEPP is looking at protection for water for the natural system and is a part of CERP, which is covered by federal law.

Adjourn The meeting adjourned at 4:07 PM.