



**SOUTH FLORIDA WATER MANAGEMENT DISTRICT
WATER RESOURCES ADVISORY COMMISSION**

THURSDAY, DECEMBER 03, 2009, 09:00 AM

Marriott Hotel - Key Largo

103800 Overseas Highway (U.S. Highway 1)

Key Largo, FL 33037

MEETING MINUTES

WRAC Members and Alternates Present:

***Beverly Grady**

Jim Reynolds

***Douglas Bournique**

***Barbara Miedema**

Sara Fain

***Craig Tepper**

Jennifer Conner

Jeff An

Michael DiTerlizzi

Mark Perry

Mike Tammaro

Paul Millar

Pete Quasius

George Jones

Larry Hilton

Albert Perez

Melissa Meeker

Shannon Estenoz, Chair

Scott Benyon

Ray Scott*

James Humble

Al Calloway

Joan Lawrence

Gene Duncan

David Lithgow

***Charles Shinn**

Irela Bague

***William "Chad" Kennedy**

***Kim Taplin**

***Linda McCarthy**

Bill Hammond

Tommy Perry

Charles O'Bern

Shelley Vana

Megan Tinsley

Kevin Powers, Vice-Chair**

*Lake Okeechobee Committee Members; **Chair, Lake Okeechobee Committee

Other Lake Okeechobee Committee Members and Alternates Present:

Mary Ann Martin

Ted Guy

Don Fox

John Winfree

FUTURE PRESENTATIONS:

This meeting:

- **Study Results: Temporary vs. Permanent Forward Pumps at Lake Okeechobee**
- **SFWMD Aquatic Plant Control Best Management Practices**
- **SFWMD C-139 Basin Activities Update**

Previous Meetings:

- **Water Quality Science Issues – FDEP**
- **Policy Issues – Environmental Resources and Consumptive Use Permitting**
- **Impacts of Ad Valorem Revenue Reductions**
- **Status of Loxahatchee River (North Palm Beach CERP) Project**

Item 1. Welcome and Introductions: Chair Shannon Estenoz

***Announcements**

Chair Estenoz welcomed everyone and introduced Monroe County Mayor Sylvia Murphy and City of Hallandale Beach Councilman Keith London. She thanked Jennifer Connor and Allison Higgins, The Nature Conservancy, for arranging the “Python Patrol” training for WRAC members.

***Agenda changes:**

Pursuant to Chapter 120, F.S., Chair Estenoz changed the published WRAC Agenda for good cause as follows: Add Item 10: “Status Report on Rule Development to Reserve Water for the Caloosahatchee Estuary”. She asked attendees to introduce themselves and their affiliation.

***Status: WRAC Issues Workshops on Adaptive Protocols for Lake Okeechobee Regulation Schedule, 2008:**

Chair Estenoz updated the group on the Adaptive Protocols issues workshops and asked if members had comments.

Discussion:

Barbara Miedema: The new schedule operates at a lower level and we don’t agree with the recent pulse releases by the US Army Corp of Engineers (USACE). The new Adaptive Protocol should have predictability and allow staff to make operating decisions without going to the SFWMD Governing Board. Early releases take water that might be needed later during the dry season.

Ray Scott: The role of the local sponsor needs to be clarified. Need to formalize role of local sponsor, how it provides info to the USACE and how the USACE will respond; expect to do this in the Adaptive Protocols workshops.

Melisa Meeker: Had detailed decision matrix in the "WSE" Lake Okeechobee Water Level Regulation Schedule and steps were followed by USACE and SFWMD. Need to have that detail at end of day and give agencies clarification. Need to include water supply and be fair to everyone.

Ray Scott: Today the schedule allows for release of "Up To" 450 cfs, but because of current conditions, SFWMD staff recommended no releases. The USACE made the releases anyway.

Beverly Grady: We are currently in the discretionary zone and the weekly calls are to help stakeholders make those decisions. Thought the workshop participants had agreed to additional modeling by SFWMD to determine the amount of releases (in cubic feet/second – "cfs") to various users for the Spring 2009 releases. This would provide for accountability. This Status Report does not provide enough information.

Chair Estenoz: Staff will follow up and discuss at next Adaptive Protocols workshop.

James Humble: Who are the stakeholders participating in the weekly phone call with the USACE?

Kim Taplin: Environmental scientists from agencies and non-profit groups participate. The public is invited to participate on the phone call and comment. It is an information gathering phone call.

James Humble: Does it create uncertainty among the users?

Kim Taplin: It helps create an understanding of the new schedule and the present conditions and helps people understand how the lake regulation schedule works and how lake water management decisions are made.

Paul Millar: The stakeholder call is important to get local government and other stakeholder input. Consensus from the call is sent out as a recommendation. The problem is that the last recommendation was reversed and was not sent out to the stakeholders for information. In the past when the decision was reversed it was always passed on to the stakeholders.

Kim Taplin: It is not a decision forum but is an information gathering call. This information is used in the decision making. We do listen to the local sponsors regarding operations on Lake Okeechobee.

Barbara Miedema: The EIS for the Lake Regulation Schedule clearly states that the District shall allocate water for water supply for the users and the

natural system. That is the local sponsor's role. It is the USACE role to make regulatory releases to assure public health and safety and flood protection. We are asking the SFWM D to exert its authority to allocate water.

Item 2. Member Issues.

Chuck Obern: Update on C-139 issues and the new rule making process: Many concerns by landowners about new phosphorous reduction proposals because of economic conditions. Taxes are up, demand is down, revenues lower, and credit is tight. The Governing Board needs to realize the condition landowners are in due to the economic downturn. The L-2/L-3 canal level was lowered when the District over-drained the lower basin. On our land, we tested phosphorous content of rain water and found 78 ppb phosphorus in rainwater. Need to start looking at atmospheric deposition when doing rules and making decisions. At our farm we are treating water to reduce phosphorus. Our water detention enhancement program is showing a 5-30% phosphorous reduction.

Mary Ann Martin: Lake Okeechobee has recovered and needs to be protected. Have issues with chemical over-spraying for aquatic plants. We report boat numbers where contractors are over-spraying as we've been requested to do but nothing is done. In the Indian Prairie basin and the Clewiston Canal, landowners need to eradicate invasive plants before they get into the lake. Mechanical harvesting is a good approach. Needs to be used more. Asked for help from WRAC to find solutions other than chemical spraying.

Don Fox: Water hyacinths don't go away, they reseed. Many changes over the last year including transfer of the Aquatic Plant Control group from DEP to FWC, and lack of federal funding from the USACE resulted in out of control water hyacinths on the lake. For the last two months we have been spraying around 5,000 acres. The hyacinths grow in the bulrushes and mechanical harvesting rips the bulrushes. The Interagency Aquatic Plant Management group hosts a meeting every other month and the public is invited to attend and comment. The next meeting is scheduled for December 16 or 17.

Maryann Martin: Agenda of the Interagency Group is already set and we've asked that the agencies ease up on spraying, especially during fish spawning season.

Chair Estenoz: Need to discuss this in the Lake Okeechobee Committee. The issue is spraying and Best Management Practices (BMPs). Need to look at SFWMD BMPs for possible use on the Lake. Asked that FWC include Maryann Martin in the process. Need to brief the Governing Board

on SFWMD spraying and BMPs.

David Lithgow: This is more than a Lake Okeechobee issue - it is statewide. Since the program moved from DEP to FWC there has been more input and cooperation. Good work going on in the Kissimmee River basin. SFWMD treating small areas of hyacinth growing in midst of bull rush and other natives, and the native plants are doing very well. Need more thought and work on water quality issues re: aquatic plant control, especially on the lakes. Need to keep this on the agenda for the full WRAC.

Jennifer Conner: Thanked the SFWMD and the Florida Congressional Delegation for support on python legislation currently being heard in Congress. Need public support for the legislation because the opposition is very active on this. Thanked Kim Taplin, USACE, for accelerating the USACE review of CERP projects likely to be included in the Water Resources Development Act (WRDA) 2010.

Rick Smith thanked the Nature Conservancy (Jennifer Conner and Allison Higgins) and USGS biologist Robert Rozar, for a successful python training event. WRAC and Lake Okeechobee Committee members and staff from the Florida Keys Aqueduct Authority were trained to identify, catch and bag pythons.

Sara Fain: Everglades Coalition will support the python legislation. Invited members to the 25th Annual Everglades Coalition Conference, January 7-10, 2010, at PGA National in Palm Beach Gardens, FL. Deadline for registration is December 10.

George Jones: Interested in a full accounting on why C-23 and C-24 projects have been put on the back burner. Chair Estenoz: We'll discuss today. George Jones: Attended a science symposium yesterday and all of the research indicates that the C-23 and C-24 basins are problems for the Indian River Lagoon.

Mark Perry: Yesterday's St. Lucie Estuary science forum will produce summaries that need to be provided to the WRAC. Oyster restoration in the St. Lucie Estuary going very well. Still concerned about Ten Mile Creek and C-44.

Craig Tepper: Need information on in-lake canal dredging, northwest part of Lake Okeechobee. SFWMD (Dave Unsell): Will get with Mr. Tepper and follow up in writing.

Ken Todd: Two years ago the Lake Okeechobee Committee and WRAC discussed the over-spraying on Lake Okeechobee. This issue needs to be

brought back to the table.

Joan Lawrence invited members to the groundbreaking ceremony for the Tamiami Trail Bridge. U.S. Department of the Interior Secretary Ken Salazar will attend.

David Lithgow: Over the last two weekends 1,100 duck hunters enjoyed the Stormwater Treat Areas (STAs). An example of the unmet demand is there were 80 duck hunters waiting for 18 spots on STA-3-4. Additional opportunities will be appreciated. Kissimmee River S-65 structure had been kept at about one foot higher for the last six months thanks to the SFMWD. This has created an expansive marsh upstream of the structure that is used by wading birds and waterfowl. Dry-down began this week.

Don Fox: Lake Okeechobee is in best ecological shape of the decade. The Adaptive Protocols enable refinement of operations based on real time assessment of in lake conditions, and help prevent long term damage to the lake. The lake has resiliency now. We look forward to collaborating with the District and working on more improvements in the Lake.

James Humble: As with the invasive ambrosia beetle and citrus canker declaring something illegal doesn't eradicate it. Exotic invasive species such as the python are here to stay. Adaptive management is the best approach.

Barbara Miedema: Lake water management operations are important for agriculture. Predictability is important and farmers need forecasts or modeling. With the new Lake Okeechobee Regulation Schedule, 2008 (LORS 2008) we know we will be in a water shortage twice as frequently and with three times the severity. The installation of permanent forward pumps was discussed to deliver water to agricultural during those low lake water years. Is this still on the table?

Carol Wehle: Will present results of our study on temporary versus permanent forward pumps at next WRAC meeting.

Bill Hammond: In the early 90's there was a water war. Tommy Strowd would brief the SFWMD Governing Board on a regular basis. There were many extremes and we realized there was flexibility in the middle. We created a committee which resulted in the Adaptive Protocols. Improved coordination of regional water management decisions between the SFWMD and USACE. This has created excellent conditions for agricultural but the estuaries are out of compliance. Completion of the C-43 reservoir will help but we will still be out of compliance. Need to monitor water allocations as lands uses change.

Charles Shinn: The USACE phone call is interesting but very scientific, and scientists are driving this call. We participate on most calls and provide input. However, environmental issues predominate. Agricultural engineers are not part of this call. There is an imbalance and water users not listened to. El Niño event is coming up but not much rain is expected. Agriculture only uses water that we need and is successfully conserving water.

Beverly Grady: The health of the estuaries is extremely important to our economy. Pulse releases are important to the health of the estuaries and are needed at a certain times.

Melissa Meeker: Is there a second call on system operations?

Kim Taplin: Yes. Climate forecasts and lake levels are discussed.

James Humble: Are the calls used for decisions?

Kim Taplin: The call is used for input and viewpoints. The public is invited to call and give input.

Chair Estenoz: The Board should be heard on these issues and we need open discussion with staff. I view this as allocation of risk; different stakeholders have different views on risk.

Gene Duncan: Culverts on Tamiami Trail are blocked. This is not about a bridge: Water needs to move through these culverts to get into Florida Bay.

Sara Fain: The road stops the water from going south. If you keep water low it can't go uphill. We are managing the system this way. Tamiami Trail is a dam that needs to be removed. We need more water to Everglades National Park and Florida Bay and the bridge is the right step.

Item 3. South Florida Water Management District/Monroe County Activities Update: Tom Genovese, Director, Florida Keys Service Center, Intergovernmental Programs Dept., Regulatory and Public Affairs, SFWMD.

Chair Estenoz introduced the Honorable Sylvia Murphy, Mayor, Monroe County who welcomed the group to the Florida Keys and thanked the SFWMD for support of Monroe County's stormwater cleanup programs, Lake Okeechobee protection and other projects. She briefly explained the status of the Florida Keys Area of Critical State Concern program. No questions or discussion.

Item 4. Lake Okeechobee Committee Items:

***Water Conditions Summary: Matahel Ansar, Deputy Director, Operations Control and Hydro Data Mgt. Dept., Operations and Maintenance, SFWMD.**

Discussion:

Barbara Miedema: In the position analysis do you include estuary releases? And in the beneficial use zone releases do you include estuary releases?

SFWMD (Ansar): Base flow releases are included in the position analysis in the sub band to 450 cfs at S-79, and 200 cfs in the Caloosahatchee.

Barbara Miedema: What about the beneficial use zone releases?

SFWMD (Ansar): Releases are made according to the levels provided for in the Lake Okeechobee Regulation Schedule, which at present is 0. The impact is not that significant and it doesn't change the prediction that much.

Chad Kennedy: Water levels in STA-5: Some cells are drying out and have heard STA-1, East may also be dry.

SFWMD (Ansar): STA-3-4 is in better shape after last week's rainfall. It is at the target level and we are not doing any releases. The other STAs are between minimum and target levels.

Chad Kennedy: Are they receiving any water?

SFWMD (Ansar): Yes we did minor releases to bring water up to the target level, however some are at still at minimum levels.

Mark Perry: What determines when and how much goes to the south?

SFWMD (Ansar): Level of water in the canals. We maintain the canals between 10' and 11'. When they go below 10' we make releases. Farmers have issues with pumping water out of the canals at that level. Some of the water goes to other users besides the Everglades Agricultural Area.

Lake Ecology Update and Lake Okeechobee Burn Plan: David Unsell, Director, Lake Okeechobee Division, Restoration Sciences Dept., Everglades Restoration and Capital Projects, SFWMD

Discussion:

Chad Kennedy: Is Forestry giving the SFWMD any latitude on the burn plan?

SFWMD (Unsell): Not that I know of. We still need to complete each burn by the end of the controlled burn day. The lake is divided into 7 segments so

we can better comply with this condition.

Mary Ann Martin: Areas in South Bay and Belle Glade need to be burned but the issue is smoke management. Can we section off the lake for burning as sugar does with their burning?

SFWMD (Unsell): We'll look into this.

Mary Ann Martin: Mud pockets: Why can we not dredge them? It would remove the phosphorus and nitrates.

SFWMD (Unsell): We are still evaluating that but the problem continues to be disposal of dredge spoil material.

Melissa Meeker: Have seen a demonstration project where sand is layered over the muck, especially in deeper holes. Appears to be successful (West Palm Beach project). SFWMD needs to evaluate as an option. Would probably work well on the mud pockets.

SFWMD (Unsell): Have seen the demonstration. Carol Wehle asked that Ms. Meeker forward the information.

David Lithgow: United Water Fowlers endorses the burn program. It has been very successful.

Item 5. S-9 Basin Update: Tommy B. Strowd, P.E., Assistant Deputy Executive Director, Everglades Restoration and Capital Projects, SFWMD

Discussion:

Chad Kennedy: This is a great initiative. Would like to see the cost savings from reduction in pumping costs and the numbers on phosphorus reduction.

Gene Duncan: You went from 21 ppb to 16 ppb. What are the plans to comply with the 10 ppb standard?

SFWMD (Strowd): A primary goal of the Long Term Plan to Achieve Water Quality Standards for this area is to divert water away from the Water Conservation Areas (WCAs) and thereby reduce phosphorous loading.

Mark Perry: Will that meet the 10 ppb requirement when completed? And are the Memos of Agreement and BMPs still in effect?

Chair Estenoz: The work in Southwest Ranches is consistent with the water quality standards we have to meet. Western Broward was hit badly this year. Southwest Ranches has flooding concerns because they don't have a secondary drainage system. This was causing water quality issues. Criteria

were changed but we are under an operating permit for S-9. We are trying to find solutions for the Everglades and the S-9 basin.

Item 7. Comprehensive Everglades Restoration Plan Projects Update and Projects for Possible Inclusion in WRDA, 2010: Kimberley Taplin, Deputy for Restoration, South Florida, U.S. Army Corps of Engineers, Jacksonville District

Discussion:

Paul Millar: It's ironic that we're so close to getting projects accomplished but the funding is drying up. The FY2010 budget includes only \$100,000 for the C-44 Reservoir but there is no mention about why.

USACE (Taplin): According to USACE policy, project funding must be appropriated in order to begin construction.

Chair Estenoz: Money is drying up but there is an advantage: Construction bids are coming in 50% lower than average.

Mark Perry: Ten Mile Creek: is the cap on "Critical Projects" expected to change?

USACE (Taplin): We have a statutory cap. This is what the Post Authorization Change Report is for. We are waiting for Congress to approve.

Mark Perry: WCA Decpartmentalization (Decomp) only includes the Miami Canal. Are the L-67 A and C Canals included?

USACE (Taplin): Yes. Expect to begin Decomp in 2018.

Melissa Meeker: Can the C-44 Reservoir project be bid out now that the \$100,000 appropriation has been made?

USACE (Taplin): Need a special exemption to bid out the project. It is USACE policy not to go to bid until the full amount is awarded.

Chair Estenoz: The \$100,000 is a foot in the door and it means that next year in WRDA 2010 we can get full funding for construction. If WRDA funding is appropriated, can you go to bid immediately? USACE: Yes that is the schedule.

Georg Jones: Thanked Ms. Taplin. Has other questions but will ask separately.

Gene Duncan: Understand the USACE can't tell the SFWMD to do something. EAA reservoir was approved by congress. By what authority

can you stop a Project Implementation Report when it was approved by Congress? How can the USACE stop planning?

USACE (Taplin): Ten initial projects were conditionally authorized by Congress when the CERP passed in 2000 and this was one of those. However, it does not make sense to proceed with planning for an uncertain project; putting it on pause to resolve the uncertainties.

Irela Bague: Appreciate the SFWMD and USACE moving C-111 Phase 1 and Biscayne Bay Coastal Wetlands forward. Happy to see those in WRDA, 2010.

Mary Ann Martin: Any locks in the Lake Okeechobee Waterway to be closed for maintenance in 2010?

USACE (Taplin): Completing the Manatee pass gates and there might be some minor work, don't have the schedule but will provide it to you. All major work is done.

Sara Fain: Thanks to all involved. We appear to now have momentum going forward and it's important to continue to support projects being planned and going forward.

Chair Estenoz: Thanks to Kim Taplin for the effort. Means a great deal to have you co-located at the SFWMD. We appreciate the momentum.

Lunch: 12:15 - 12:45

Item 8. Aquifer Storage and Recovery Briefing: Robert Verrastro, Lead Hydrogeologist, Project Coordination Div., Policy and Coordination Dept., Everglades Restoration and Capital Projects, SFWMD

Discussion:

Barbara Miedema: How many years can water be stored and what is the recovery percentage?

SFWMD (Verrastro): The systems that have operated the longest can carryover multiple years and the recovery efficiency can be over 60%.

Gene Duncan: Are you using chlorine in any ASR wells and are there problems with chemical byproducts of chlorine use?

SFWMD (Verrastro): No and no.

Don Fox: How many cfs are we getting from the wells? What is the diameter

of the intake pipe and the intake pipe elevation at the C-38 canal?

SFWMD (Verrastro): The CERP plan was for 5 million gallons per day (mgd) wells. A 5 mgd well is about 15 acre feet/day. Pipe diameter is 2 feet. And intake pipes are placed 3 feet below lowest water level, approximately about 8 or 9 feet.

Bill Hammond: Marco Island was our first ASR well, it has worked beautifully. My concerns are the viruses, heavy metals, microorganisms, and public health issues as the injected water moves closer to potable water sources. There is concern about possible comingling of waters with the Floridan Aquifer. I am glad we are doing an eco-toxicology study. Caloosahatchee water is out of compliance so the recovered raw water from ASR there would have a number of potential issues.

SFWMD (Verrastro): The middle Floridan Aquifer is attractive because it buffers from the shallow Floridan. Most utilities tap into the shallow Floridan.

Scott Benyon: What was an optimal well at 5 mgd is now a 10 mgd well - what changed the dynamic?

SFWMD (Verrastro): Nature, the local conditions at each well site and what you find during construction. If you drill into a fossilized part of the aquifer, it can make the difference. That is what makes some wells perform better than others. When we drilled test wells in the Caloosahatchee and C-43/Berry Groves areas the Floridan aquifer was a pocket of sand. ASR won't work at those specific sites.

Chair Estenoz: Given those considerations are you comfortable with your cost estimate on the 1- 200 ASR wells based on the design and data from the Hillsboro well? Regarding the issue of disinfection and capacity, you are assuming that the price hasn't gone up.

SFWMD (Verrastro): The assumption was based on a 5 mgd well. We don't anticipate higher capacity ASR wells around Lake Okeechobee.

Chair Estenoz: The assumption is that the one well is giving you enough information on the possibility of 200 wells in the future.

Mark Perry: There are many concerns about ASR regional impacts, especially 200 wells north of the Lake. Concerns include water quality and every well is different because of the Florida's geology. There are 200 Class One wastewater injection wells in South Florida and because of upwelling problems there are concerns about migration and contamination

of the Middle Floridan. Of the 42 wells monitored by the United States Geological Service (USGS), 18 had a migration problem. For the 200 ASR wells at 5 mgd it would take about 152 days to lower the lake by 1'. A plan 6 Flow-way can lower the lake 1' in 42 days. The cost of operations and maintenance is still being calculated. ASR appears too expensive for the amount of storage.

SFWMD - Carol Wehle: Want to ensure that everyone understands SFWMD is not recommending construction of 200 ASR wells north of the lake. We are planning on a mix for Everglades Restoration. We need to continue to explore the technology of ASR together with River of Grass project planning.

Albert Perez: What are the contributing factors for the reduction of phosphorus?

SFWMD (Verrastro): Initial reduction is probably mechanical and from dilution. We need to keep analyzing the data to see if there is a biological component also.

Hon. Noel Chandler: The Taylor Creek well, is it in salt water? And what is the blue pipe across the levee?

SFWMD (Verrastro): The Taylor Creek site is brackish water. In the area of Paradise Run the blue pipe is an exploratory well we drilled. We had very good results. That project did not get any funding for this year and currently it is on hold.

Paul Millar: Agreed that ASR wells should be kept as part of a mix because of operating expenses. The Caloosahatchee wells kept collapsing. Of the 5 wells only two are working. The sites have to be chosen correctly.

SFWMD (Verrastro) We always build an exploratory well.

Chad Kennedy: Have horizontal wells at the bottom of canals been considered?

SFWMD (Verrastro): At the Seminole Brighton Reservation we are looking at bank filtration, where the bank sediments filter water to be sent down. There is technology to drill horizontally under canals. Those are different methods that need to be explored.

Chad Kennedy: Relative to pumping, what is the cost of UV treatment is it 50%?

SFWMD (Verrastro): The Floridan is artesian and we have to push the

water into it. When recovering water from the well, the artesian head of the well will do the work for us.

Chuck Obern: What happens to the water you displaced?

SFWMD (Verrastro): The receiving water is pushed out about a mile around the well, and moves slowly to the ocean.

Ray Scott: How are the UV and filtration systems set up? Can you treat as fast as you can pump down? Is there a limitation?

SFWMD (Verrastro): Water is pumped through a sand filter with the capacity to filter 5 mgd, it then goes through 3 UV light units and by the time it leaves, it meets the standard for drinking water. Kissimmee has a set of screens, a rate of 5 mgd, and two UV units.

Ray Scott: If the treatment capacity is 5 mgd, how do you jump up to the 10 mgd well?

SFWMD (Verrastro): Right now we will pump only 5 mgd at a time, but if it has the capacity to pump 10 mgd we will build in the treatment capacity to handle that amount.

Item 9. Climate Change Impacts on South Florida: Jayantha Obeysekera, Director, Hydrologic & Environmental Systems Modeling Dept., Everglades Restoration and Capital Projects, SFWMD

Discussion:

Jennifer Conner: Congratulations to the District for the White Paper and for moving in this direction. TNC is encouraged by use of the Miami- Dade sea level rise projections. Agree that we need more data. Concerns and recommendations: TNC scientists think the use of a 50 year planning horizon is too conservative. A more dynamic approach would use multiple horizons The report divorces climate change projections from implementation. Need to begin implementing solutions. There was minimal discussion about CERP project impacts and impacts on fish and wildlife habitat. We understand the SFWMD is concentrating on water resources.

SFWMD - Carol Wehle: This is a draft. When presented to the Governing Board we received direction on targets, retrofitting coastal areas, etc. Anticipate we will workshop this over the next two years. The Governing Board wanted the report to be brought to WRAC for discussion.

Chair Estenoz: The Governing Board direction is to determine how climate change fits into the SFWMD mission and ensure staff focuses on recommendations about how climate change may impact water resources.

Need agreement throughout the region on numbers: who is convening the conversation? We have different local, regional and state groups that need to work together. We need to keep this issue in front of the WRAC so the members stay current on these issues and informed recommendations can be made to the Governing board. This will be an item for discussion on the combined WRAC/Governing Board meeting agenda.

Commissioner Vana: Working separately is not wise. Need to get the groups that are working together to create parameters.

Chair Estenoz: We already have WRAC members that belong to different climate task forces. This is the logical place to have this conversation.

Joan Lawrence: I have been talking to the South Florida Ecosystem Restoration Task Force and a workshop with these groups would be a great idea.

Chair Estenoz: The SFER Task Force is also looking for a coordinated effort.

Jennifer Conner: Federal climate legislation will emerge from the Senate. Any regional information we have should be provided to our Senators. Water supply is one of their primary concerns.

Scott Benyon: Need to assess probabilities of the impacts. It will help decision makers.

SFWMD (Obeysekera): We understand that the science needs to be updated when there are new findings. Sea level rise projections based on historical trends should be the minimum expected. We agree there is a need to estimate the probabilities associated with sea level rise estimates higher than what is shown by the historical trend. We are looking at other areas such as Australia, to see how we can apply the latest techniques to our region.

Mark Perry: I agree with this process, let the science continue because it allows review and comment on the information. This will be on ongoing agenda item. I agree we need to get our Senators involved. Florida is very vulnerable to climate change impacts.

Item 10. Status Report: Initiate Rule Development to Reserve Water for the Caloosahatchee Estuary - Tommy Strowd, Assistant Deputy Executive Director, Everglades Restoration and Capital Projects, SFWMD

Discussion:

Ray Scott: The C-43 Reservoir Project Implementation Report (PIR)

identified two volumes of water reservations. Has a decision been made on which of those two amounts will be reserved?

SFWMD (Strowd): Not yet. The issue exists and we are working through the technical details.

Beverly Grady: The C-43 PIR was completed in November, 2009. Is there water identified in the PIR for water reservation? From what sources?

SFWMD (Strowd): From the reservoir, local basin run-off and other sources.

Chair Estenoz: It is a requirement of the PIR to identify those sources of water. It is a WRDA, 2010 requirement.

SFWMD (Strowd): It needs to be specified in order to move forward with the project.

Bill Hammond: Big concern of Caloosahatchee stakeholders is where will the additional water come from? There is storage in the basin that has not been used or credited. There are also concerns about Environmental Resource permits as land uses change.

Chair Estenoz: Asked for consensus for a January 6 meeting at headquarters for the next meeting.

Item 11. Adjourn: 2:40 p.m.