

# Workshop Summary

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South Florida Ecosystem Restoration Working Group Sponsored Public Workshop

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## Lake Okeechobee Watershed Project Public Workshop

Indian Riverside Park  
Francis Langford Dockside Pavilion, 2<sup>nd</sup> Floor  
1707 NW Indian River Drive  
Jensen Beach, FL 34957  
August 31, 2016  
9:30 AM- 4:00 PM

### Attendees:

Joe Gilio	Peter Merritt
Butch Vernon	Lawrence Glenn
James Erskine	Jim Moir
Tzufit Boyle	Bill Graf
Rich Budell	Kelsie Timpe
Ed Tamson	Paul Seaver
Warren Falls	Mel Schubert
Bill Musselwhite	Darrell Brand
Terry Gardner	Ernie Barnett
Jose Lopez	Deb Drum
Shannon Bogdanov	Ed Fieldings
Tyler Beck	Ike Crumpler
Irene Kennedy Quincy	Paul Gray
Gary Ritter	Cal Neidrauer
Patty Power	Joyce Zhang
Beth Ross	Douglas Ashley
John Woolschlager	George L. Jones
Bob Verrastro	Gary Jennings
Andrea Dominguez	Mark Perry
Noah Handley	Lesley Bertolotti
David Williams	Scott Thourot
Gayle Ryan	Jeff Sumner
Brittany Bearden	Clay Brown
Tom MacVicar	Pete Quasius
Jim Chrulslu	Matt Alexander
Ted Astolfi	Lisa Kreiger
Yongshan Wan	Rebecca Elliot
Scott Green	Ray Palmer
Nyla Pipes	Greg Langowski
Jason Bessey	Patti Gorman
Phillip D Roland	Amy Castaneda
Stanley Ganthier	Bill Baker
	Andrew West

Bobby C. Billie  
Shannon Larsen  
Melissa Kramer  
Julia Jennison  
Don Davis  
Clell Ford  
Armando Ramirez  
Donatto Surratt  
Tricia Burke  
Roger Williams

Evan Williams  
Kathleen Burchett  
Stephen Davis  
Cecile Piverotto  
Ramon Iglesias  
Allen Stewart  
Susan Davis  
Dawn Shirreffs  
Gretchen Ehlinger

**Welcome and Introductions 10:00 AM, James Erskine, FWC Vice Chair, Allyn Childress, SFERTF, Shannon Estenoz, SFERTF**

Shannon Estenoz provided introductory remarks and explained when the South Florida Ecosystem Restoration Task Force was created in 1996 by Congress it was endowed with the capability to convene stakeholders, and the public in order to coordinate management and policy. In the past we have seen the workshop process provides tremendous feedback, as such we believe that if you are in the room you have a seat at the table. This process is just as much providing the agencies with dialogue and information as it is about discussing amongst yourselves.

James Erskine explained that this workshop will be a mapping exercise, first there are a couple presentations to provide background and information.

**Workshop Procedures and Ground Rules, Allyn Childress, SFERTF**

Allyn Childress provided a brief presentation outlining the workshop process and ground rules. She introduced the various meetings where the public is also welcome to attend and engage agencies regarding the planning process. She encouraged participants to visit the Task Force's website to obtain further information or refer back to any presentations or relevant material as well as sign up for the blog updates by signing up via email at:

<http://www.evergladesrestoration.gov/>

[http://evergladesrestoration.gov/content/lowp/meetings/083116/welcome\\_and\\_groundrules.pdf](http://evergladesrestoration.gov/content/lowp/meetings/083116/welcome_and_groundrules.pdf)

**Lake Okeechobee Watershed Project Purpose, Tim Gysan, USACE, Lisa Aley, USACE**

[http://evergladesrestoration.gov/content/lowp/meetings/083116/lake\\_okeechobee\\_watershed\\_project\\_overview.pdf](http://evergladesrestoration.gov/content/lowp/meetings/083116/lake_okeechobee_watershed_project_overview.pdf)

Tim Gysan provided an overview of the Central Everglades Restoration Project (CERP). First, he outlined the historic movement of water and the current water management system. Next, Tim explained how CERP contains 68 components aimed to restore the system. The Lake Okeechobee Watershed project is focused on CERP components north of Lake Okeechobee, such as a water storage area north of the lake, water quality treatment facilities, and aquifer storage and recovery.

Lisa Aley provided background on the previous tentatively selected plan as the workshop's starting point. The plan includes reservoirs, storm-water treatment areas, Lake Istokpoga regulation schedule, Paradise Run wetland restoration and recreation features. While the project plans are 10 years old, they would like to update the plan to include new information and technologies that were not previously available. The Lake Okeechobee Watershed project's purpose is to improve the quantity and timing of water entering Lake Okeechobee as well as the northern estuaries, improve regional water management and operational flexibility to benefit overall Everglades ecosystem restoration and to restore wetland habitat within the project area and Lake Okeechobee.

Lisa identified the following problem statements, objectives and management measures:

Problem statements within Lake Okeechobee, Northern Estuaries and the Watershed include:

- Decreased aquatic and wildlife habitat within Lake Okeechobee due to extreme high and low water levels.
- Changes in the quantity, quality, timing and distribution of fresh water flows to estuaries leading to abnormal salinity fluctuations.
- Substantial reduction in the spatial extent and functionality of wetlands
- Degraded habitat for fish and wildlife throughout the study area, resulting in smaller less diverse wildlife populations.

The Objectives to address the problem statements are as follows:

- Improve the quantity and timing of discharges from Lake Okeechobee to benefit the salinity regime and the quality of oyster and SAV habitat in the northern estuaries.
- Increase aquatic and wildlife habitat within Lake Okeechobee by stabilizing water levels.
- Increase the spatial extent and functionality of wetland habitat in the watershed.

The plan focuses into water storage, to increase aquatic and wildlife habitat as well as storage and operational flexibility, and wetland restoration to increase the spatial extent of aquatic habitat and improve natural storage and filtration to achieve these objectives.

Management measures to achieve the objectives include:

- Above ground reservoirs
- Aquifer recharge storage and recovery (ASR) - approximately 80 wells have been located and identified as possibly being included in project.
- Wetland/ floodplain restoration

Lisa explained the Lake Okeechobee Watershed project provides opportunities such as increasing the water management operational flexibility, reconnecting and restoring the functionality of fragmented wetlands, as well as reducing high volume discharges from Lake Okeechobee. However, there are constraints to take into consideration such as compliance with all Federal, State and local laws, regulations and policies, maintaining navigability to the lake and within the watershed as well as operating within the existing flexibility of Lake Okeechobee Regulation Schedule.

Tim Gysan outlined the anticipated schedule for the project, essentially the Corps has 3 years to complete this study and must then sign and submit the study to Congress for authorization. In the interim there are several milestones, within the first 90 days the Corps needs to have an initial array of alternatives developed, then develop a tentative selected plan within 18 months.

### **Workshop Activity: Participatory Mapping Exercise, Allyn Childress, SFERTF**

Allyn outlined the instructions for the mapping exercise. Participants are provided with a map of the project area as well as a configuration summary sheet to detail their map illustrations. Participants were asked to utilize the key of symbols provided and summarize their suggestions via the summary sheet as well as name their map.

### **Questions**

**Kim Taplin** had a question regarding aquifer storage, she wanted to know the difference between aquifer storage and recovery and deep well injection?

**Response:** Aquifer storage and recovery involves putting treated water into the upper Floridian aquifer, and allows for water to be recovered for later use, however deep well injection is much like a one way street where water is disposed into the boulder zone but not recovered.

The Participants then broke out into groups for the mapping exercise.

### **Presentation of Results**

#### **Pete Quasius- Move Water up Down South**

The group sought to address how to provide more water management options so that we can move good clean water south. The group's plan involved providing additional water to Fisheating Creek. Incorporating water storage in Nubbin Slough, and back pump water from Lake Okeechobee into Nubbin Slough. Create a littoral zone on spoil islands to help manage water west of the lake and to work in conjunction with the Western Everglades Planning Project. Pete Quasius proposes deep well disposal as a temporary measure to utilize in the interim to dispose of excess water, however once infrastructure is in place to move water south he does not foresee the necessity to continue its use unless emergency situations arise.

#### **Ernie Barnett- Estuary Discharge Reduction Option**

The group's overarching goal was to develop a strategy to reduce estuary discharges. A key element to the group's plan is deep well injection to eliminate discharges to the estuaries. If the deep injection wells and aquifer storage and recovery wells are collocated the combination could create a third outlet from the lake. The group supports the implementations of deep well injections and suggests expanding spatial wetlands.

#### **Ed Tamson- Kitchen Sink**

The group recognizes that the area of the state where the headwaters are located is an area of rapid growth. The group's suggestions include water storage, wetlands and reservoirs built on existing lands as well as exploring some land purchases. The group would like to see the project

tie into the Kissimmee River Restoration project to connect and expand the wetland restoration. Next, the group approached the idea of moving water south via moving water north through the northeast via the headwaters of the St. Johns River. The group stressed making reservoirs recreationally friendly and to also take into consideration a maintenance schedule. Finally, the group is concerned about the poor water quality in Taylor Creek Slough, they propose wetlands in this area to filter water and possibly a deep water well. Ultimately they would like to control the water going into Lake Okeechobee and improve water quality.

### **David Williams- Just Do It**

The group's concept makes use of the technology already in place, the three options are to store, treat and inject water. The group would like to increase water storage, decrease discharges to the estuaries and improve wildlife habitat. The group suggests to develop conservation easements, and create a littoral zone east of Lake Okeechobee as well as shallow reservoirs on purchased lands.

### **Noah Handley- We Make it Better**

The focus of the group was to collocate aquifer storage and recovery, deep well injections and surface storage capitalizing on existing land in ownership. The focus would be to keep storage and wells close to Lake Okeechobee to mitigate discharges to the estuaries. Regarding wetland restoration, the group believes there is a fair amount of restoration in Fisheating Creek and Indian Prairie underway.

### **Mark Perry- Not Enough/ Tired of Talk**

The group stressed that timing and distribution of water need to be considered, not just in the project area but also North of Lake Okeechobee, the Kissimmee, and the upper chain of lakes. The Upper Chain and Lake Kissimmee schedules should be revised. The group identified a need for 900,000 thousand to 1.2 million acre-feet of storage north of lake. Previous projects channelized the water to enter Lake Okeechobee faster, but we also need to treat the water quality before it comes into the Lake. The yellow book calls for a reservoir, we believe it may require a smaller reservoir and deep well injection to accomplish the goals and suggest dispersing aquifer storage and recovery sites and deep well injection sites, as well as exchanging lands to create a deep reservoir site.

### **Clell Ford- SCSTA Plan**

The group's main concern was timing and storage of water north of Lake Okeechobee. The group examined public lands and believes it will be adequate without purchasing additional land. The group proposes deep water reservoirs along the Kissimmee River with aquifer storage and recovery wells to capture water as it exits the Kissimmee. Next, increase storage along the Kissimmee by building a wetland reservoir in the S69 basin east of Indian Prairie, as well as a shallow reservoir east of Lake Istokpoga to impound water and aquifer storage and recovery wells to reduce estuary flows.

- **Question:** you mentioned having 1.25 million acre-feet of storage north of the project area, did you include it on your map?
- **Response:** No, we wanted to adhere to the boundaries already set forth and the total lands already included in the project area.

### **Steve Schubert- Optimist Club**

The group encourages a restart of this project, as the land has changed in the last 15 years, and discourages jumping into the middle of the process. The group noted that each sub-basin is unique and should be examined independently, the group also identified features absent from the provided maps, for example, the treatment system in Taylor Creek. The group proposes to begin utilizing features already in place. The storm-water treatment area in Taylor Creek does not have sufficient water to operate year round, the group proposed addressing this issue by use of an aquifer storage and recovery well to bring water during the dry season. The group proposed a shallow reservoir in the upper part of Taylor Creek. The group recognized storm-water in the eastern part of the basin that currently goes south, and proposed diverting the water through Taylor Creek and into the upper water-shed. In Indian Prairie the group proposes to connect the lands owned and create a large mosaic of shallow and deep reservoirs achieving wetland restoration. Lake Istokpoga is about 26,000 acres and could potentially store the water needed creating flexibility in an area that straddles the 2 basins (Kissimmee and Indian Prairie). There are opportunities available in Fisheating Creek to explore. The group was concerned about aquifer storage and recovery along the Kissimmee River, as it might affect spawning fish and impact the fisheries.

- **Question:** What WRPs (water reserve program) and WREs (water reserve enhancement) were you referencing?
- **Response:** Wetland reserve program and the wetland reserve enhancement. The U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) offers 30-year easements similar to CERP easements where ranchers are able to keep cattle but at a lower density and are paid restore wetlands on their property.
- **Question:** James Erskine inquired about going back to review the WRPs, should the project managers look to see if there is additional management options from the beginning?
- **Response:** No, following the original process 10 years ago we were asked to identify the hydric soils and determine where wetlands could be restored. In 15 years the landscape has changed, and some lands have already been restored as part of other projects. Taking this into account, we should start with today's landscape and determine options for areas that are not restored.

### **Kelsie Tiempe- The Magnificent 5**

The group focused on surface water north of Lake Okeechobee and improving wetland habitat. The group proposes a deep reservoir north of the lake in Indian Prairie, connecting the polygons of public land via canals. Finally the entrance of canals would go to the estuaries which would have accompanying deep water wells.

## **Commissioner Fielding- Save the Estuaries**

The main message from the group is the project's objectives are too modest. The group would like to stop releases to the St. Lucie River, they believe to accomplish this, 1 million acre-feet of storage and reservoirs are needed. The group is hesitant to utilize deep well injection because it draws water out of the system permanently and given the worldwide demand for water it would be wise to keep the water for future water needs as we currently do not know what they might be. The group proposes to utilize public land for storage and plant 200 square miles of vegetation to improve water quality. Storage north of Lake Okeechobee would be ideal as it would be accessible to the Kissimmee River and Lake Okeechobee. Lake Istokpoga and Taylor Creek could also provide additional acre-feet as a reservoir. The 3 main points the group wanted to impart is 1) if we do not put it in the plan there is no hope that it will be funded, 2) we can only send clean water south and 3) reservoirs are useful.

- **Question:** What was the logic behind the 200 square miles of littoral zone?
- **Response:** A filter is needed to filter out pollutant, growing plants to establish the filter would address this.
- **Follow-up Question:** Where is the benefit for the littoral zone? Is it an interim benefit, how does it fit into your goal of stopping releases?
- **Response:** We view it as a permanent benefit regardless of what happens with the St Lucie.
- **Question:** With the rising and falling lake levels would that affect the creation of a littoral zone?
- **Response:** Certainly, it would be more resilient, the plants are resilient.

## **Ted Astolfi- Tribal Council**

The group saw an opportunity for deep water reservoir and aquifer storage and recovery within Lake Istokpoga. The group also proposes enhanced wetland expansion, as well as utilizing the southern area of Taylor Creek, there are fluctuations in the flows which could be advantageous. North of Lake Okeechobee the group suggests connecting the pieces of land, adding aquifer storage and recovery as well as a littoral zone near C-44 and water islands for filtration. This will provide recreation, habitat as well as improve water quality

## **Joe Gilio- Store Flex Plan**

The group proposes a deep well injection in Taylor Creek to improve water quality. Aquifer storage and recovery should be collocated with reservoirs. Then, along the southern portion of the Kissimmee the river should be restored and the ditch backfilled. The group also suggests restoring the existing wetlands and flood plains as well as the northern area of the Kissimmee. Next, utilize a combination of shallow and deep reservoirs and create a littoral zone on the eastern side of the lake. Finally, the group suggests to improve water quality with plant submerged vegetation and to de-muck the lake.

## **Nyla Pipes- Part of the Solution**

The group stressed the lack of water storage in the system. They propose deep water reservoirs to address the lack of storage. The group suggests acquiring and utilizing the land area where the Kissimmee empties into Lake Okeechobee.

### **Bobby C. Billie- Restoring the Natural Flow**

Bobby Billie opened by explaining that you cannot discuss water quantity without addressing the quality. The group believes it is time to take lands in the Everglades Agricultural Area back to use for water storage and treatment. In regards to areas north of Lake Okeechobee the group believes eminent domain and sacrifice will need to be invoked in order to clean the water and protect the estuaries, patches of wetland will not adequately address the issues. Since Lake Okeechobee has been diked we need to restore the watershed, one area would be Indian Prairie. The group pressed the importance of protecting and connecting the land with the same reverence given to protecting homeowners from flooding.

Another concern is the phosphorous in the system, the group suggests removing or recovering the phosphorous rather than adding more to Lake Okeechobee. This could potentially become a new industry and lead to job creation. The group outlined some suggested treatment systems to take water out of the lake and improve water quality. Taylor Creek could benefit from water treatment as there is a phosphorous problem in that area. The group encourages the Corps to investigate technology that recovers phosphorous.

Finally, the group encourages littoral zone development and shallow water reservoirs as they fear deep reservoirs will become nutrient laden like Lake Okeechobee. The group is wary of long term deep well injection usage, however recognizes the potential for short term uses.

- **Question:** On your map in the area of Fisheating Creek you've written "do not touch", why is that?
- **Response:** It is already connected and we did not want to create any new structures in this area.
- **Question:** Exportation of phosphorous? Are we talking about exporting it out of the watershed complex?
- **Response:** Yes. This could become a new industry.

For more information, or detailed viewing of the mapping exercise please visit:

<http://evergladesrestoration.gov/content/lowp.html>.

### **Closing Comments and Adjourn, Shannon Estenoz, SFERTF, James Erskine, FWC, Vice Chair**

Shannon Estenoz expressed gratitude to all participants for their efforts. There may be another workshop however the dialogue should continue. Shannon reminded attendees to visit the website: [evergladesrestoration.gov](http://evergladesrestoration.gov) and sign up for blog updates and notifications for upcoming meetings. The materials from today's workshop will be gathered and available through the website.

The meeting adjourned at 3:00 PM.