Water Module 2016

Helping a Lagoon and a River

FAU Jupiter Campus
September 15 & 16, 2016
The Water Module 2016 Agenda

Thursday, September 15 – A Day of Conversations at Florida Atlantic University

9:00 – 9:15 AM Welcome and Description of the Day – Mohammed Ilyas, Dean, FAU College of Engineering and Stan Bronson, Executive Director, Florida Earth

9:15 – 10:15 AM Overview of Central and Northern Palm Beach County
Moderator, Elizabeth Perez, President, Collective Water Resources Paul Linton, SFWMD, Ken Todd, Palm Beach County, Chad Kennedy, FDEP

10:15 – 10:30 AM Break

10:30 – 11:30 AM What’s Happening with the Lake Worth Lagoon?
Moderator, Bill Louda, Research Professor, FAU
Julie Bishop, Palm Beach County ERM, Patrick Painter, City of West Palm Beach, Charlie Isiminger, Florida Inland Navigation District

11:30 AM – 12:15 PM - Where Do We Go from Here?
Moderator: Bill Whiteford, University of Florida, Florida Resilient Communities Initiative (FRCI)
Charlie Isiminger, FIND, and Shelley Vana, PBC Commission

12:15 – 1:30 PM Lunch with Greg Munson, Shareholder, Gunster Yoakley and former General Counsel, Florida DEP

1:30 – 2:30 PM What’s Happening with the Loxahatchee River?
Moderator: /TBA
Beth Kacvinsky, SFWMD and Albrey Arrington, Loxahatchee River District

2:30 – 2:45 PM Break

2:45 – 3:30 PM Where do we go from here?
Moderator: Bill Whiteford, UF FRCI. Aubrey Arrington and Ilan Kaufer, Vice Mayor of Jupiter

3:30 – 4:00 PM Concluding Remarks, Logistics for Friday and Adjourn

Friday, September 16 - A Day of Explorations

8:30 AM – Rendezvous at FAU Jupiter
9:00 - 10:30 AM – Tour of Grassy Waters – Patrick Painter, West Palm Beach
11:00 AM – Tour of the Loxahatchee River from Riverbend Park - Albrey Arrington
12:00 PM -- Lunch at Duffy’s Restaurant
2:30 PM – Tour of Loxahatchee River Center at Burt Reynolds Park, Jupiter
3:30 PM – Adjourn

All presentations are available at http://floridaearth.org and http://floridearth.thewaternetwork.com

Pictures available at http://www.floridaearth.org/index.cfm?fuseaction=photo.gallery&id=17
Discussions of the Water Module

Overview of Central and Northern Palm Beach County

- **Moderator:** Elizabeth Perez, *Collective Water Resources*
- **Panel:** Chad Kennedy, *Florida Department of Environmental Protection*; Ken Todd, *Palm Beach County*; and Paul Linton, *South Florida Water Management District*

- What resources are needed for conservation efforts to have a greater impact?
  - **Chad:** More accurate data through constant monitoring and testing would be very helpful for decision-making at the executive level when trying to understand which water bodies need the most assistance.
  - **Ken:** Funding is the only resource needed at the moment for Central and Northern Palm Beach County. Palm Beach County has a wealth of baseline and testing data to be used in decision-making. The matter is simply getting the funds for data analysis and land purchase as well as funding allocated to a number of smaller projects, to have the greatest impact.
  - **Paul:** Storage within the system is key to continued success in water management. However, the word “management” is slightly misleading, as it gives the connotation of
the illusion of control, in that the Water Management District can only do so much before safety trumps environmental concerns. Thus more storage is needed to accommodate both safety and environmental concerns, and in order to attain this, multiple year funding commitments are needed.

- How could we better fund the water conservation activities?
  - Chad: As stated before, data for decision-makers would be ideal. Very targeted metrics that describe the current situation which a layperson can easily “digest” and understand.
  - Ken: These large conservation projects don’t have to be funded all at once. The same large project can be broken up into three or four small pieces and accomplished that way, given that a long-term commitment of funds is agreed upon prior. Many small projects can have a meaningful effect if done correctly.

- Expound upon Paul’s “Illusion of Control” comment.
  - Paul: The ability to hold water within the system is much harder to attain than it would seem. As stated before, safety concerns sometimes trump environmental concerns, which lead to simply discharging or moving the water as the only options.
  - Chad: Lake Okeechobee fills up with water six times faster than we have to ability to drain it, thus posing a safety problem of the lake becoming too full and threatening residents in the surrounding areas.
  - Ken: The Hoover Dike surrounding the lake is in need of repair, and the SFWMD is addressing that. However, if the water in the lake becomes too high, safety does become an issue. Not to mention, many groups and stakeholders have a say in the operation of the water management system, so there is no one group who has “control”.

- What is a Reasonable Assurance Plan?
  - Chad: The RAP is a way for DEP to help impaired water bodies meet their Total Maximum Daily Load (TMDL) in order to restore the water body by collecting data to form a TMDL and developing projects to meet that and other requirements. However, the Legislature needs to fund the program further in order for it to flourish.
  - Ken: Local governments need to match the funds put forth by the state so to amplify the impact of the projects and program.

- How can we better educate the masses about our watershed problems?
  - Ken: Simply by spread the facts of the problems and helping people to understand the restraints of the system, I believe people will better understand the issues.
  - Chad: Misinformation must be struck down. The whole situation has to be taken into account, and not just looked at through various geographic “silos”.
  - Paul: The limitations/restraints of the system are there, and they have to be addressed. Safety is the primary factor when it comes to any decisions, and people have to understand that. Only after safety is addressed can we work on the environmental concerns. The Media also have inaccurate information and accurate resources are available.
What can young people do to have a good career in the environmental field?

- **Ken:** Follow your passion, wherever it takes you. Be prepared.
- **Paul:** Understand the people you work with, like their strengths and weaknesses. A good team is invaluable when it comes to problem-solving. Also, interdisciplinary work is always a plus moving forward.
- **Chad:** Don’t underestimate the power of social relationships and good moral character.

**What’s happening with the Lake Worth Lagoon?**

- **Moderator:** William Louda, *Florida Atlantic University*
- **Panel:** Julie Bishop, *Palm Beach County Environmental Resource Management*; Patrick Painter, *City of West Palm Beach*; Charlie Isiminger, *Florida Inland Navigation District*

  - What happens with entombment of muck in the Lake Worth Lagoon? Does it give off nutrients under duress?
    - **Julie:** Large deposits of muck are capped with 12-18 inches [AC1] of sand, and they have been monitored and hold the muck, even under storm conditions.

  - How does capping the muck compare with dredging, in an environmental sense?
    - **Julie:** Capping (versus dredging) places a submerged sand cap at an elevation that reaches in the photic zone, to support submerged aquatic vegetation. To increase diversity, we construct to intertidal elevations to support estuarine species.

  - What are the effects of discharges from Lake Okeechobee on the oyster beds within the lagoon?
    - **Julie:** The oyster beds can sustain high water and nutrient levels in short spurts, however, long-term releases (3 weeks) can cause degradation.

**Where to go from here in the Lake Worth Lagoon?**

- **Moderator:** Bill Whiteford, University of Florida, Florida Resilient Communities Initiative
- **Panel:** Charlie Isiminger, *Florida Inland Navigation District*; Shelly Vana, *Palm Beach County Commission*

  - What should we do?
    - **Charlie:** Palm Beach County has the data needed for action. Now, while funding is the main issue, the land space needed to accommodate all of this storage is also a limiting factor. Build partnerships.
    - **Commissioner Vana:** The stakeholders need to understand the trade-offs associated with these discussions, and the solutions must be
people-driven and based in reality. There is no simple solution to a complicated problem. One real solution to a portion of our water issues is septic tank elimination. While it is not glamorous, it will be effective in removing a percentage of the nutrient loads entering our water bodies.

- **What small projects can “get the ball rolling”?**
  - **Charlie:** Alternative funding models such as Mitigation/Conservation Banking are successful in protecting large swaths of land. It is possible that these same models could be applied to aquatic and estuarine environments to protect them further.
  - **Commissioner Vana:** Water Farming, Septic Tank Elimination, xeriscape yards/landscaping and eliminate lawns, low impact design of city spaces, to name a few. There are many ways to get the ball rolling, and we are already doing some of them.

- **Ernie Cox, Ken Todd, and Jeff Koons will come up to share their view of the big picture and how they think we should proceed.**
  - **Ernie:** Engaging the private sector is essential to progressing on these projects, through Public-Private Partnerships.
  - **Ken:** The current Locally-Preferred plan with the Army Corp of Engineers should be pushed and supported, as it is the best way to solve the current water issues.
  - **Jeff:** There is plenty of water and land to go around. We as the population need to drive change and adaptation to our water issues.

**What’s happening with the Loxahatchee River?**

- **Moderator:** Stan Bronson, *Florida Earth Foundation*
- **Panel:** Beth Kacvinsky, *South Florida Water Management District*; Albrey Arrington, *Loxahatchee River District*

  - **What are the positives and negatives of a local stakeholder approach, like the Loxahatchee River District has taken, as opposed to a Reasonable Assurance Plan from the FDEP?**
    - **Albrey:** All of the stakeholders have been proactive and engaged so far, always coming to consensus with the others on our board. However, if this consensus were to ever fall apart, a Reasonable Assurance Plan would fail and the TMDLs process would take over.

  - **Are there concerns about the Lake Okeechobee nutrient loads making their way into the river?**
    - **Beth:** As of now, there is no direct route from Lake Okeechobee to the Loxahatchee River, so there is no concern yet. However, methodology and procedures can be developed to combat that if it does.

**Where do we go from here with the Loxahatchee River?**
Moderator: Bill Whiteford, University of Florida, Florida Resilient Communities Initiative
Panel: Albrey Arrington, Loxahatchee River District; Ilan Kaufer, Vice Mayor of Jupiter

- What can stakeholders do to get involved?
  - Albrey: All of the meetings where decisions take place are open to the public. Transparency is key in government and the public should take advantage of that.
  - Ilan: Stakeholders should talk with elected officials and those officials should disseminate factual, unbiased information to their constituents.

- What do you see happening with these issues in the near future?
  - Albrey: Moving forward, funding for these environmental projects must be seen as an investment in the community, because the public are the ones that benefit the most from these solutions.
  - Ilan: Incremental change is the most common way change occurs and things get done, not by simply electing a new official every term. No matter who is in the office, the problems and the time it takes to solve them are still the same. There are no “one-off”, simple solutions to these issues.

- How do you balance various interests and trade-offs in decision-making?
  - Ilan: In any decision, the most current and accurate information is critical in forming a sound solution. However, sometimes the best information comes from public input/feedback, so open communication is very important as well.
  - Albrey: Over the years, the Loxahatchee River District has made decisions based on long-term outlooks and interests. So in that same vein, I try to make decisions that look and feel right with the long-term goals the community has.

- How does the Federal government affect local government?
  - Ilan: The Federal government can be very effective when it comes to writing matching grants and allocating funds in spending bills. Not to mention, the local US Representative can help to influence federal agencies and facilitate solutions to problems that would otherwise go unresolved.
  - Albrey: The bureaucratic process of the federal government can be very slow and costly for local projects. The Comprehensive Everglades Restoration Plan is a good example; though it has helped the region with its many environmental problems, it is a slow process which can be costly at times.
Florida Earth Programs in 2016-17

**Florida – December 14-15, 2016**
Florida Earth is bringing the Sustainable Water Resources Roundtable to Florida. SWRR is a federal advisory committee that is a subgroup of the Advisory Committees on Water Information. The SWRR meeting, which is open to the public, will be hosted by Florida Gulf Coast University and will use the Babcock Ranch project as a case study for creating sustainable water resources. Agenda and registration is at [http://floridaearth.org/swrr2016](http://floridaearth.org/swrr2016).

**The Ag Module 2017 – March 16-17, 2016**
In partnership with the University of Florida, Florida Earth will present its tenth ag module that highlights agriculture and its relationship to environment. Agenda and registration will be at [http://floridaearth.org/agmodule2017](http://floridaearth.org/agmodule2017).

**The UNESCO-IHE Florida Program – May 22-June 7, 2017**
The 12th class of the UNESCO-IHE Florida program will be in Florida to continue their graduate education in Hydroinformatics and flood risk management. The 2017 class will add to the 286 alumni from over 50 countries that have completed the program. Get involved in this dynamic program by going to [http://floridaearth.org/unesco-ihe2017](http://floridaearth.org/unesco-ihe2017).

With over 130 alumni from all over the US, USNC Pro brings delegates to the Netherlands to explore Dutch expertise in water management, infrastructure and resilience. Agenda and registration can be accessed at [http://floridaearth.org/usncpro2017](http://floridaearth.org/usncpro2017).

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