

WORKSHOP REPORT

Workshop Eleven

April 10, 2014

8:30 – 4:00pm

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Hosted by
Orlando Utilities Commission, Orlando, Florida

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Executive Summary

The Florida Water and Climate Alliance (FloridaWCA) brings together interested stakeholders (public water supply utilities, local governments, water management districts and academic institutions) to increase the relevance and usability of climate change and variability data and tools to the specific needs of public water supply utilities and resource managers and planners. Initiated in 2010 by the UF Water Institute, in partnership with the Southeast Climate Consortium (SECC), Florida Climate Institute and the UF IFAS Center for Public Issues Education, six major public water supply utilities and three water management districts, the group continues to expand. Detailed information on the FloridaWCA is available the [FloridaWCA website](#).

This is a report of the eleventh workshop of the Florida and Water Climate Alliance ([all workshop reports are available on line](#)) (See Appendix 1 for participant list).

Workshop Outcomes included:

1. Participants who have not yet responded to the Survey that was sent out before the meeting were encouraged to respond to help us obtain useful information for moving forward with FloridaWCA group building and sustainability. **FloridaWCA SURVEY** (contact: Tracy Irani) https://ufl.qualtrics.com/SE/?SID=SV_1LzPsugMDfOx8AR
2. There has been a proposal put forward for FloridaWCA coordination efforts to work with SLR group made up of 5 WMDs and DEP, and there will be a meeting on April 23rd potential (contact: Mike Cullum)
3. A group volunteered to meet to plan appropriate steps on Sustainability of FloridaWCA and strategic planning including the potential of planning a larger strategic planning meeting. Volunteers included Wendy Graham, Alison Adams, Mike Cullum, Kevin Morris, Rob Teegarden, and Carolyn Cox. (contact: Lisette Staal) Several suggestions for SUSTAINING FloridaWCA were mentioned that should be explored, among other things, during the discussion:
 - What Florida Climate Institute provides that may help support FloridaWCA as a network. One key area was for FCI to be able to provide a data repository and provide support for networks like ours through the LBR under consideration.
 - Find out what network of networks or similar groups are out there at local scale that would be good to connect with or learn more about
 - Outreach— take our story on the road -travel to different sites for meetings –
 - Find resources for coordination of FloridaWCA.
 - How can we connect with Partners (FCI, etc.) and maximize mutual benefits
 - Understand FLoridaWCA participant specific motivations (want are you getting out the FloridWCA) and how can we serve the group
 - Share/Provide what we have that makes us unique---projections at a time and Local scale for Florida.
4. Agreed on another workshop – planning for the next FloridaWCA workshop sometime in the next Quarter - August/Sept? (contact: Lisette Staal)

Detailed Summary of Workshop 11:

Florida Water and Climate Alliance (FloridaWCA), Workshop Eleven Thursday, April 10, 2014, 8:30 – 4:00pm

Background, Goals and Objectives:

Overall Working Group Goal: Unfold the need for, and enhance the usability of, climate change and variability data and tools in the planning and operations of Florida's public water supply utilities

Overall Goal of Workshops: The goal of each of the workshops is to create spaces for discussion, sharing and capturing knowledge from the multiple perspectives and contexts of tool providers, users, and ultimately policy makers that will contribute to increased relevance and usability of climate and sea level rise data and tools for water managers in Florida.

Specific Workshop Eleven Objectives:

1. Create an environment for sustaining the learning community, sharing information and networking.
2. Discuss proposal opportunity to enhance relevance and application of NASA and other data products.
3. Experience and discuss tools of communication useful to convey science to decision makers.
4. Learn about and explore partnership opportunities with the Florida Climate Institute
5. Sustaining the FloridaWCA network.

Session 1: FloridaWCA – Introductions, where we are, what's new?

Wendy Graham, Director of the Water Institute, welcomed the participants. Lisette Staal provided a [presentation setting the context](#) for the FloridaWCA workshop, introduced the workshop agenda and objectives (see APPENDIX 2 for detailed agenda), and facilitated an introduction activity to provide opportunity to share what has been happening with the participants between meetings. She asked all the participants to write at least 1 thing that they had done related to FloridaWCA since the last meeting. Each person wrote their responses on different colored cards depending on their type of institutional affiliation (Academic, Utility, WMD and other). Responses indicated a high level of activity including presentations, proposals, and collaboration that was occurring between meetings (see Appendix 3 for specific responses to this activity).

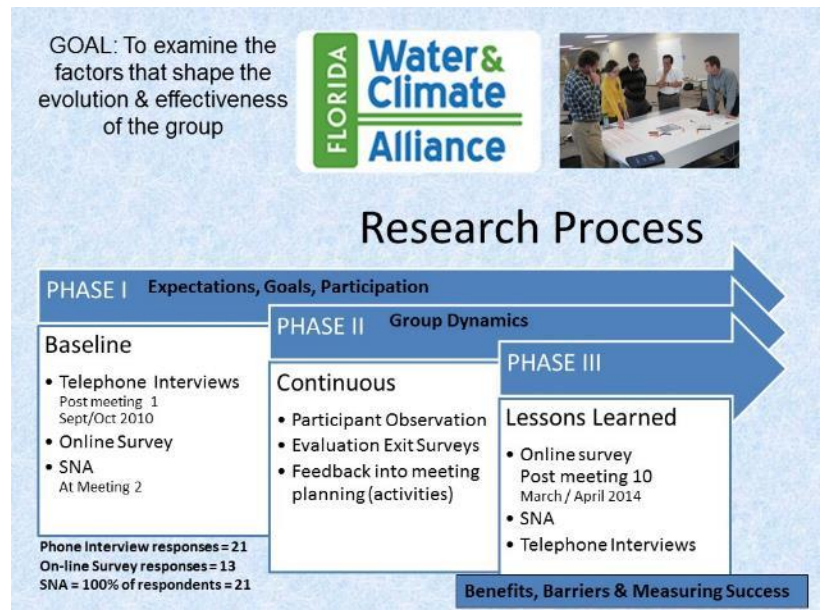
Session 2: FloridaWCA- Learning, Communicating and Impacting Decisions

2. a Communication Tools

Tracy Irani (UF) focused this session on a case study analyzing the intentionality of an effective presentation on climate change to decision makers. It was based on [brief video clips](#) of a joint presentation by Alison Adams (Tampa Bay Water) and Wendy Graham (UF) to the Tampa Bay Water Utility Board (October 21, 2013). The video highlights and discussion were used to share communications strategies for communication complex science to lay decision makers. Topics included accessibility of language, using multiple learning modalities, cueing effects, repetition, personal relevance and effective framing. Discussion included reflection by the presenters and the participants.

2. b. Social Network Analysis

Wendylin Bartels (UF), [provided a brief presentation](#) re-introduce the research focused on the factors that shape the evolution and effectiveness of the group and are an integral part of the process. In particular, she introduced the concept of Social Network Analysis as a tool for understanding knowledge transfer and its role in developing actionable science, an explicit objective of the Florida Water and Climate Alliance. She indicated that she would be following up with an on-line SNA and telephone interviews.



Session 3: FloridaWCA proposal effort and discussion - Moving science to action

Dr. Chris Martinez (UF) provided a brief overview of the FloridaWCA cooperative proposal effort responding to NASA ROSES RFP, [Earth Science Applications: WATER RESOURCES](#) and potential for more involvement from FloridaWCA partners. Dr. Vasu Misra (FSU), co-PI, [provided a presentation](#) with additional information regarding the merits of a competitive proposal, the overarching plan, and the specific application of climate and related data for generating a huge ensemble of regional forecasts that would be more useful to the proposed utility at a watershed scale. Partners for the proposal include Tampa Bay Water (co-PI's Alison Adams and Tirusew Asefa) and Peace River Manasota Regional Water Authority (Co-PI Kevin Morris).

Session 4: FloridaWCA and the Florida Climate Institute: Exploring mutual interests

During the previous FloridaWCA workshop (Workshop 10), it was decided to explore FloridaWCA potential links with Florida Climate Alliance water working group on Urban Water Management. FloridaWCA Participants discussed the need for clarification on the goals from FCI in order to best leverage these efforts for mutual benefit. Following up on this action, Wendy Graham and Lisette Staal participated in Florida Climate Institute Urban Water Management working group discussions, and invited them to share their interests in connecting with stakeholder groups that can help inform their programs. During this session, Jim Jones (UF), Director, FCI, and Kala Vairavamoorthy (USF Patel College of Global Sustainability) lead of FCI urban water management working group, shared Florida Climate Institute's objectives, activities and available resources of interest to FloridaWCA in a [presentation](#).

The presentation was followed with an in-depth discussion activity designed to provide an opportunity for FloridaWCA participants to suggest important research or education/outreach activities that would of interest to them and be included in FCI plans.



The activity was framed by 5 questions, and each of the small groups discussed all of the questions. Each group was composed of a mix of stakeholders from Utilities, Universities, Water Management District and local governments to provide a cross section of perspectives. Priority themes of interest emerging from discussion included: 1) information hub for the storage, sharing, access, and

dissemination on climate and water issues; 2) climate data specifically for Florida at various time scales (shorter-term outlooks); and 3) education opportunities both at university and for industry and planners (for specific questions and responses from group discussions see APPENDIX 3).

Session 5: FloridaWCA Learning Community Future

Discussion of Next Steps and Actions included:

1. Lisette will encourage all participants who have not yet responded to the Survey that was sent out before the meeting to respond to help us obtain useful information for moving forward with FloridaWCA group building and sustainability. **FloridaWCA SURVEY**
– https://ufl.qualtrics.com/SE/?SID=SV_1LzPsugMDfOx8AR

2. Mike Cullum will be meeting on April 23rd regarding a proposal put forward for FloridaWCA coordination efforts. Mike will connect with Wendy Graham, and Alison Adams regarding potential for participant/ presentation at the meeting

3. Future Focus on the Sustainability of FloridaWCA and strategic planning. A group volunteered to meet to plan appropriate steps, including potential larger strategic planning meeting. Volunteers included Wendy Graham, Alison Adams, Mike Cullum, Kevin Morris, RobTeegarden, Lisette Staal and Carolyn Cox. Action: Schedule a phone meeting to initiate discussion. Several suggestions for SUSTAINING FloridaWCA were mentioned that should be explored, among other things, during the discussion:

- What Florida Climate Institute provide that will support FloridaWCA as a network. Several items were mentioned during the afternoon session and being summarized. One key area was for FCI to be able to provide a data repository and provide support for networks like ours through the LBR under consideration.
- Find out what network of networks or similar groups are out there at local scale that would be good to connect with or learn more about
- Outreach—travel to different sites for meetings – take our story on the road
- Find resources for coordination of FloridaWCA
- How can we connect with Partners (FCI, etc.) and maximize mutual benefits
- Understand FLoridaWCA participant specific motivations (want are you getting out the the FloridWCA) and how can we serve the group
- Share/Provide what we have that makes us unique---projections at a time and Local scale for Florida.

4. Plan for the next FloridaWCA workshop sometime in the next Quarter - August/Sept?

Reflection and Evaluation

Sixteen participants completed a written feedback form indicating overall satisfaction with the process and outcome of the meeting. In terms of the most important actions, the majority of comments made reflected the need to develop a strategic plan, secure funding and continue networking. The table below shows average response on a scale of 1 to 5 where 5 is Excellent.

Stakeholder Group	1. Output – How well did we achieve what we needed to?	2. Organization – How effective was the meeting structure?	3. Use of Time – How well did we use our time?	4. Participation – How well did we do on making sure everyone was involved	5. Next Steps – How clear and doable are our next steps?
Utility	4.50	4.50	4.25	4.75	4.00
University	4.33	4.22	4.11	4.67	4.11
WMD	4.00	4.00	3.00	5.00	5.00
na	5.00	5.00	5.00	5.00	5.00
Total	4.44	4.38	4.19	4.75	4.25

Participants used words such as enthusiastic, satisfied and encouraged when asked how they felt about the meeting. (See Appendix 5 for detailed summary of responses).

APPENDIX 1: List of Participants – Workshop 11 – Thursday, April 10, 2014

Last name	First name	Organization
Adams	Alison	Tampa Bay Water
Asefa	Tirusew	Tampa Bay Water
Bartels	Wendylin	University of Florida/Florida Climate Institute/ Southeast Climate Consortium
Bolson	Jessica	University of Miami
Casler	Christina	UF
Chang	Jason (Seungwoo)	University of Florida
Cox	Carolyn	University of Florida/Florida Climate Institute
Cullum	Mike	Saint Johns River Water Management District
Ghebremichael	Kebreab	USF
Goldenberg	Bertha	Miami-Dade Water and Sewer Department (WASD)
Graham	Wendy	University of Florida Water Institute
Hiteshew	Todd	City of Fort Lauderdale
Ingram	Keith	University of Florida/Florida Climate Institute/ Southeast Climate Consortium
Irani	Tracy	University of Florida Center for Public Issues Education
Jones	James	University of Florida/Florida Climate Institute/ Southeast Climate Consortium
Martinez	Christopher	University of Florida/Florida Climate Institute/ Southeast Climate Consortium
Misra	Vasu	Florida State University/Florida Climate Institute/ SECC Consortium
Morris	Kevin	Peace River Manasota Regional Water Supply Authority
Spear	Kevin	Orlando Sentinel
Staal	Lisette	University of Florida Water Institute
Teegarden	Robert	Orlando Utilities Commission
Truer	Galen	University of Miami/Abess Center for Ecosystem Science and Policy
Vairavamoorthy	Kalanithy	University of South Florida

APPENDIX 2: Workshop 11 –Agenda
Florida Water and Climate Alliance (FloridaWCA)

WORKSHOP 11 –Agenda

Thursday, April 10, 2014, 8:30 – 4:00pm

Orlando Utilities Commission (OUC), Safety & Training Conference Room
 at the Gardenia Avenue office, 3800 Gardenia Avenue, Orlando, FL

***Overall Working Group Goal:** Unfold the need for, and enhance the usability of, climate change and variability data and tools in the planning and operations of Florida’s public water supply utilities.*

Workshop Objectives

1. Create an environment for sustaining the learning community, sharing information and networking.
2. Discuss proposal opportunity to enhance relevance and application of NASA and other data products.
3. Experience and discuss tools of communication useful to convey science to decision makers.
4. Learn about and explore partnership opportunities with the Florida Climate Institute
5. Sustaining the FloridaWCA network.

8:15 – Check in, Coffee, Networking

8:45 – 9:45 **Session 1:** FloridaWCA – Introductions, where we are, what’s new? (Lisette Staal)

- Introductions, looking back, meeting objectives, schedule
- Updates and new stuff, research results, cool ideas????

9:45 – 10:00 BREAK

10:00 – 11:30 **Session 2:** FloridaWCA- Learning, Communicating and Impacting Decisions

1. Communication Tools(Tracy Irani)
2. Social Network Analysis (Wendylin Bartels)

11:30- 12:00 **Session 3:** FloridaWCA proposal effort and discussion – (Chris Martinez, Vasu Misra)

12:00 – 1:00 Lunch

1:00 – 3:00 **Session 4:** FloridaWCA and the Florida Climate Institute: Exploring mutual interests (Jim Jones, Kala Vairavamoorthy, Kebreab Ghebremichael, Carolyn Cox)

1. Share Florida Climate Institute’s objectives, activities and available resources of interest to FloridaWCA
2. provide an opportunity for FloridaWCA participants to suggest important research or education/outreach activities that would of interest to them and be included I FCI plans

3:00 – 3:15 BREAK

3:15 – 4:00 **Session 5:** FloridaWCA Future (Lisette Staal, all....)

Discussion: Next Steps, Reflection and Evaluation

APPENDIX 3 – Session 1: Participant FloridaWCA related Activities

Utility Participants

- Presented a comprehensive multi-year stormwater plan to the city commission in January, 2014
- EPA/CRWU - Webinar series on climate change reports to utilities- presented a case study on Tampa Bay Waters climate information for operational planning
- Participated in Pinellas County Sea Level Rise working group organization meeting and shared information with this new group about FloridaWCA
- Gave presentation at Charlotte Harbor National Estuary Program on work being done to project water quality changes anticipated due to sea level rise on the Peace River.
- Gave a presentation at Florida Water Conference in Orlando- "A Surface Water Supply Resiliency Model for 21st Century" It included SLR and climate change adjustments.
- Facilitated a webinar to be presented for FloridaWCA by the Pacific North West National Lab.
- Presented to the County's Sea Level Rise Task Force our groundwater modeling effort with USGS.
- Got a presentation accepted for June for the American Water Resources Conference on the ASR recovery Initiation decision tool I developed as part of FloridaWCA. (Integrated Water Resource Conference, Reno, NV)
- FSAWWA Plans to change (12/1/14) - FLA 2030 moves to 2035 or 2040, water research foundation plans to hold the 2nd conference—Florida's 2nd energy water nexus, WRCA will pass in 2014.
- Held a stakeholder workshop in February 2014 to discuss financing options for storm-water plan.

Water Management District

- Initiated talk with SLR working group (5 WMD's and FDEP) about FloridaWCA. Their summary report is being drafted and the final meeting is 4/23. Proposal to sunset and shift coordination to FWC with funding under discussion.

Other

- I recently covered/wrote about the FLAWWA best water contest and learned that water, tap water comes from a surprising variety of sources and is treated in a surprising variety of ways.

Academic

- Submitted a Letter of Interest (LOI) for NASA Water resources Request for proposal.
- Florida Climate Institute is drafting an LBR that has potential opportunities for the Florida WCA... partnerships, funding, and projects all under discussion..
- Traveled to Maputo, Mozambique and participating in flood planning by colonists downtown.
- Appointed as UF Department Chair of Family, Youth, and community Sciences. This will allow me to bring more community scientists into Florida WCA and its work.
- Conducted some research about evapotranspiration projections.
- Woke up this morning!
- Conducted survey of coastal utilities assessing their attitudes toward preparedness for saltwater intrusion.
- We will be hiring a new faculty member in the Center I direct who will focus on natural resources issues, including climate and water policy.
- Publication of SE Climate book, island express - CaKEx.. Meeting of GOM climate Outreach COP
- Expanding the FCI to include 7 universities, established working group for Climate/SLR, urban water management and others; drafting of state-wide LBR with support of all 7 universities.
- Writing a grant proposal with FloridaWCA partners.
- Held the 4th Biennial Water Institute Symposium that featured Water Supply in a non-stationary world that included several panels, and multiple presentations by FloridaWCA participants
- Working with FloridaWCA partner on writing up decision tool development for publication

APPENDIX 4 - Session 4: FloridaWCA and the Florida Climate Institute:

Exploring mutual interests

The following questions and subsequent bulleted items were compiled during the FCI presentation and discussion period using the flip charts completed by the groups and conversations that followed during the April 10 WCA meeting in Orlando, FL.

PRIORITY THEMES EMERGING FROM DISCUSSION:

- INFORMATION HUB FOR THE STORAGE, SHARING, ACCESS, AND DISSEMINATION ON CLIMATE AND WATER ISSUES
- CLIMATE DATA SPECIFICALLY FOR FLORIDA AT VARIOUS TIME SCALES (SHORTER-TERM OUTLOOKS)
- EDUCATION OPPORTUNITIES BOTH AT UNIVERSITY AND FOR INDUSTRY AND PLANNERS

#1. What research and education projects are needed to help water utilities obtain the climate and SLR information they need to manage water supplies and make more “climate smart”?

- Better define process/steps for using climate information
- Better understanding of vulnerabilities and how CC contributes
- Demonstration projects with emphasis on energy and efficiency
- Institutional economics and policy analysis
- Climate projections on multiple time scales (10-30 years) to integrate with plans
- Demographic changes and impacts on water usage, migratory patterns, etc.
- Enhanced linkages between utility community and management community on governance
- Increase skill in projections (climate and SLR)
- Increase understanding of diverse decision context
- Develop strategies for managing uncertainty

#2. How can FCI work with WCA members to help bridge the gap between researchers, innovators, and the water sector in order to maximize the uptake of research and innovation to influence practice and policy.....describe possible mechanisms to operationalize this.

- FCI can provide funds to hold workshops, manage knowledge/content, special pubs, and venue to develop proposals collaboratively with academia and practitioners
- Utilities can provide support to FCI LBR
- Joint course development and teaching (both at university level and for continuing education for managers and planners)
- Bring in more diverse groups to meetings (stormwater, wastewater, etc.)
- Stakeholder platform in which universities are listeners
- Research and innovation that clearly demonstrate economic value
- Financial innovation with regards to climate change and SLR

- Inform population dynamics with climate change
- Federal drinking water regulations

#3. What critical needs and problems are you facing that the LBR support can help to develop solutions for AND support the continuing evolution of the WCA?

- Continue to improve climate prediction and projection @ high spatial resolution
- Develop and information hub for water and climate data users (data repository, curated list of resources, website discussed)
- Better define how to communicate to diverse audiences and use behavioral decision-making tools
- Operationalize production storage of climate data for users
- NASA—improve seasonal forecast for decision-making
- Demand forecasting
- Develop communicate networks for better data storage, sharing, and access
- Research support to managers tasked with meeting unfunded mandates
- Focus on ecosystem health
- More university involvement to develop science that underpins regulatory directives

#4. What benefits can be accrued in relation to climate resiliency by changing our perspectives of urban water management (i.e. productive use, integration, beneficiation)?

- Review and integrate water utility plans with water supply management at local and regional scales
- Focus on efficiency. Education in schools and industry will yield sustainable water use.
- Research on barriers (regulatory and institutional) and incentives to adoption of innovative technologies
- Need for public understanding and policy level changes
- Energy efficiency
- Incremental decision-making to reduce infrastructure cost will reduce hazard risks and increase our ability to adapt to changes

APPENDIX 5 – FloridaWCA Participant Feedback Responses

Stakeholder Group	1. Output – How well did we achieve what we needed to?	2. Organization – How effective was the meeting structure?	3. Use of Time – How well did we use our time?	4. Participation – How well did we do on making sure everyone was involved	5. Next Steps – How clear and doable are our next steps?
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Total	4.44	4.38	4.19	4.75	4.25

6. What are most important ACTIONS the group can take toward SUSTAINABILITY?

- get funding!
- Identify and capitalize on linkages with other Industry entities like FCI
- recognize that many organizations might contribute to sustain the FloridaWCA, eg FCI, SECC, utilities, etc.
- strategic plan good idea; figure out what goal are with respect to FCI relationship
- strategic planning, get more funding
- develop a strategic plan (2)
- secure funding; continue networking
- looking at research opportunities that support FloridaWCA existence

7. What do you see as the most important next step for the Florida Water and Climate Alliance?

- Strategic planning (4)
- Sustainability planning
- Set clear goals and build on past work
- Involve more partners, make work more visible
- Getting grants; bringing our group to others; how to keep motivated those who come once I disappear..