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WORKSHOP REPORT

Workshop Nine

Wednesday, June 26, 2013

8:30 – 4:00pm

Prepared by
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Hosted by
Orlando Utilities Commission in Orlando, Florida

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Florida Water and Climate Alliance (FloridaWCA)

WORKSHOP Nine – Wednesday, June 26, 2013, 8:30 – 4:00 pm, Orlando Florida

The Florida Water and Climate Alliance (FloridaWCA) brings together interested stakeholders 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. The FloridaWCA links interested stakeholders from public water supply utilities, local governments, water management districts and academic institutions in Florida. 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 in partnership with 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](#).

Executive Summary

This is a report of the ninth workshop ([all workshop reports are available on line](#)). The specific objectives of this workshop were to share FloridaWCA learning community progress, updates, and sustainability efforts; 2) Understand different thinking, learning and communication styles and why they matter when working with climate issues; 3) Share recent results of NOAA project focused on use of seasonal data to minimize operational risk for water supply and ecosystem restoration; 4) Explore practical application of seasonal data in two utilities - where does it fit in helping with decision making? How can it be used? and 5) Determine FloridaWCA next steps.

Twenty-two participants attended the workshop. Comments on the exit survey indicated a high level of satisfaction with current workshop format and in the day's activities and outcomes. Responses to a question on the most important next step for FloridaWCA centered on the desire for application of the research, a need to communicate information, increasing participation and finding funding to continue the groups' efforts.

Specific outcomes included:

- Website - Suggestions solicited and contributed. All FloridaWCA participants encouraged to visit the revised website and provide comments, suggestions, or items of interest to Lisette Staal. Send to lstaal@ufl.edu Committee to meet (Lisette Staal to convene)
- Communication and User Perspective – shared understanding of learning styles, and request to continue with other aspects of communication as our group moves forward. (Tracy Irani (lead) – Bertha Goldenberg, Alison Adams, Gina Larsen, Keith Ingram).
- Projects and Applications - Project NOAA Seasonal Scale results shared and Peace River Manasota Regional Water Authority Case study drafted and shared. Solicited input...
- Workshop Planning - The next **FloridaWCA workshop (#10)** will be scheduled in the last quarter of 2013, with a focus on latest science, issues and partners' experiences of Sea Level Rise, including presentations of "cases" in Miami Dade and Broward County (Fran Henderson and Bertha Goldenberg).. The workshop should also include updates on NOAA Projects, SFWMD – use of seasonal scale data PRWMA CASE for decision making, a focus on some aspect of communication identified Lisette will follow up on date and overall agenda development for the next workshop. If you have any suggestions, please contact her at lstaal@ufl.edu.

Detailed Summary of Workshop 9: See APPENDIX 2 for the detailed agenda.

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 Objectives: The specific objectives of this workshop were to:

1. FloridaWCA – learning community progress, updates, and sustainability
2. Understanding different thinking, learning and communication styles and why they matter.
3. Sharing recent results of NOAA project focused on use of seasonal data to minimize operational risk for water supply and ecosystem restoration.
4. Exploring practical application of seasonal data - where does it fit in helping with decision making? How can it be used?
5. Determine FloridaWCA next steps.

Details of Workshop Sessions:

Session 1: FloridaWCA learning community – introductions, updates, website

Introductions: Wendy Graham, Director of the UF Water Institute, welcomed the participants. Lisette Staal, workshop facilitator opened the workshop with participant introductions, asking participants to indicate how many workshops each person has participated in. Again, a significant core of 7- 10 people have participated in 8 or 9 workshops, and several people were attending for the first time.

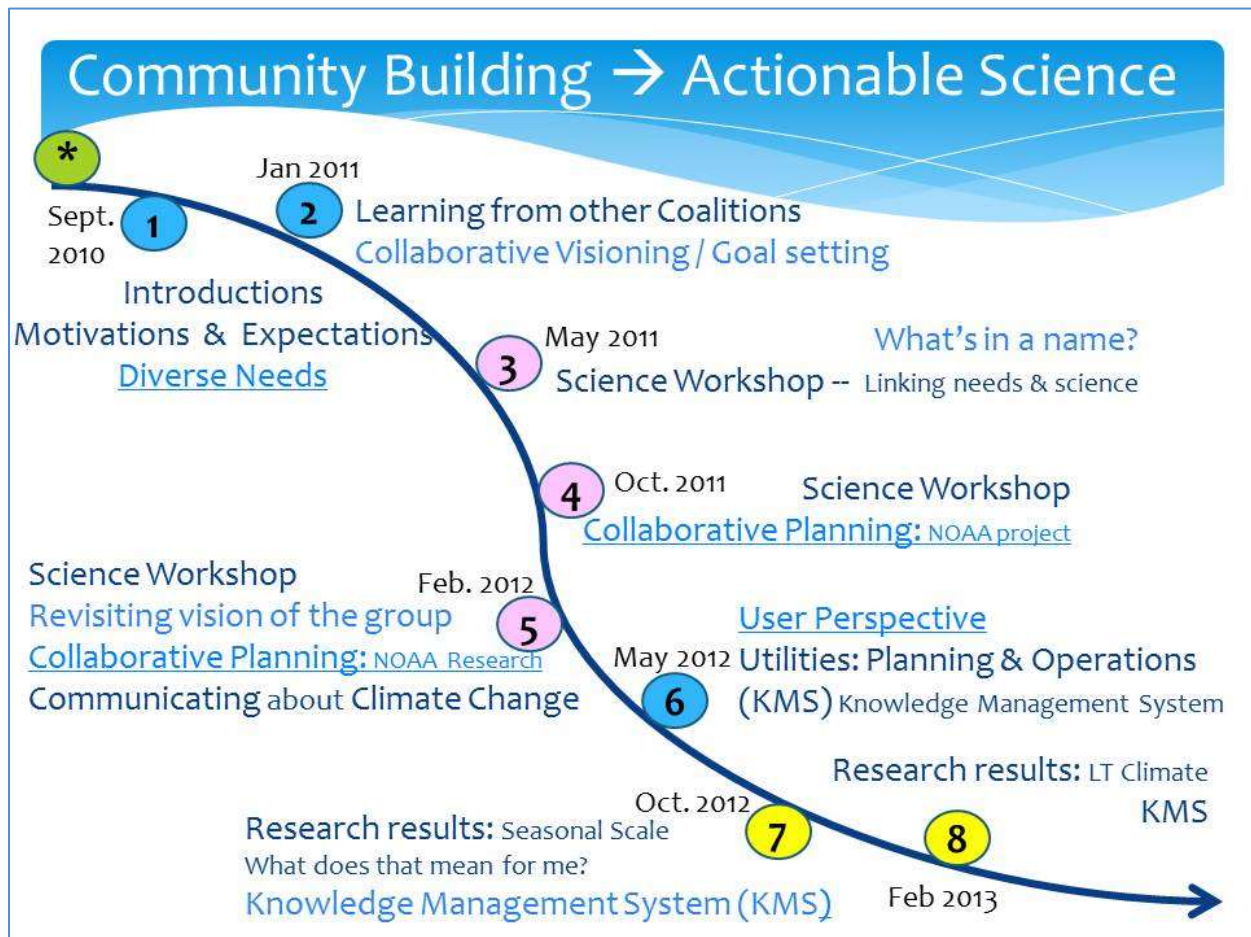
Setting the stage: Lisette asked the participants to form 4 groups (mixing in with people from different organizations), and placed 5 different looking bags with something different in each bag. The groups were asked to pick a bag based upon the look. They could not see what was in the bag. When asked how each group made a decision on which bag to choose, several groups said they “just delegated” the decision to one member. Only one of the groups talked about which bag to choose.

The facilitator then told the groups that she was going to ask them to identify what was in the bag. She gave them the option to keep the bag, trade it with another group, or trade it for the extra fifth bag still remaining on the floor. No group chose to change their bag at that time. The groups then spent a few minutes trying to determine (without looking) what was in the bag. Once the group made a “decision” on what was in the bag, the facilitator asked them to share what they had

determined was inside the bag, and how they know. The facilitator then took the bags back from the groups, without having an opportunity to see what was in the bag. Discussion of the experience focused on some of the differences in the groups and how they decided what was in the bag and how does all this relate to what we are doing together. Comments reflected on personal differences in analyzing, dealing with uncertainty, importance of context when making decisions given any “degree of certainty” (... if they were going to give the bag to a child, how certain were they that it would be safe? Did that change their level of concern about being right.) How important was it to know what was in the bag? This varied dramatically in the group – some participants were very frustrated at not being able to see what was in the bag, and others were not concerned at all. The facilitator noted that the rest of the day we would be focusing in on different ways of thinking and learning, and tools for decision making and dealing with uncertainties.

Lisette gave a brief presentation to bring the group up to date on [FloridaWCA learning community progress to date](#), and shared the newly revised [Website](#) and introducing the site management and review team.

Figure 1. FloridaWCA Workshop Timeline indicating focus and activities to date.



Session 2: Ways of learning, thinking and communicating (Tracy Irani)

Dr. Tracy Irani, UF/IFAS Center for Public Issues Education presented [“Ways of learning, thinking and communicating: How differences matter in linking Science and Action.”](#) She talked about theories and inventories of individual cognitive differences. Drawing on theories articulated by Jung and Kolb, she introduced Kolb’s learning style indicator* (Accommodators, Divergers, Assimilators, and Convergors) as a way of recognizing individual differences and preferences. *Ref: Kolb DA, *Learning style inventory technical manual. McBer and Co., Boston, MA, 1976.*

The second half of this session including an activity and discussion to help the group begin to consider how [“Understanding learning, thinking and communicating --- why and how it can help us reach our goals.”](#) The activity involved having workshop participants take and self score the Kolb’s Learning Style Inventory, then group themselves according to which of the four style preference categories they scored into.

The group was able to observe that many of the scientists and modelers are assimilators (those who prefer watching and reflective thinking) while many of the modelers who apply their models for planning purposes as well as water utility managers were convergers (doers and reflective thinkers). These two groups represented the majority of participants, with only a very small number falling into other categories. Group members discussed how this could relate to challenges group members feel when trying to communicate complex science to other group members of different learning styles. Some group members also mentioned they now better understood the relationships in the NOAA project framework diagram mentioned in previous workshops.



Session 3: Use of Seasonal Climate Forecasts to Minimize Short-Term Operational Risks for Water Supply and Ecosystem Restoration

Presentation 1: ["Assessing the seasonal skill of the National Multi-Model Ensemble"](#) (Chris Martinez and Di Tian)

Discussion: Di Tian shared the results of his research funded through the **FloridaWCA NOAA Project 2: Use of seasonal climate forecasts to minimize short-term operational risks for water supply and ecosystem restoration.**

Presentation 2: Practical applicability from the user perspective. - "[How we use seasonal forecasts at Tampa Bay Water](#)" (Tirusew Asefa) Tirusew presented current use of seasonal data by Tampa Bay Water in operations planning and discussed potential for exploring the application of the projects research results of seasonal scale data using probabilistic forecasts.

Session 4: The user perspective - Use of Seasonal Climate Forecasts

Presentation 3: [How can we use seasonal data to help with decision-making? Peace River Manasota Regional Water Authority](#) (Kevin Morris)

Kevin Morris shared his experience of developing an exercise to explore and demonstrate application of Decision Science Methods to framing and articulating utility management decisions employing a widely varied pool of historic data observations coupled with scientific forecast products. It grew out of partner discussions in the [NOAA Project: Use of seasonal climate forecasts to minimize short-term operational risks for water supply and ecosystem restoration](#). He hopes the framework he described and the outcomes presented may serve to be useful to other utilities currently lacking a definitive framework for their water supply decisions. He emphasized that the complexity of decision tools available to utilities can vary greatly based upon the capabilities and expertise of the organization and how complex the variables are within the decision matrix. Complex, sophisticated computer models such as that in use by Tampa Bay Water (OROP) to optimize their operational matrix are greatly evolved compared to what he has developed. He has made an attempt to simply define an approach to answer a single but very important question to his organization – "When to initiate ASR Recovery". He noted that the formulation of each organization's decision tools will vary according to their unique mix of assets, access to data, staff skill level and the ability to frame the questions. He provided a handout entitled: [Peace River Manasota Regional Water Supply Authority Decision Processes Related to Water Supply Management Choices](#)



Discussion topics included the value of decision tools, the development of the decision tool in different contexts, choosing variables and scaling according to importance and organizational factors impacting potential development and application of the tools.

Session 5: What is next for FloridaWCA Learning Community- (Lisette Staal)

Discussion: Next Steps, Reflection and Evaluation

Discussion results - Issues of interest to Partners.....

- Peace River Manasota Regional Water Authority –
 - Input and further consideration of ASR recovery management..... Decision tool..
 - Other types of Data
- Miami Dade
 - Risk assessment of Seal Level Rise - interest in latest update of SL projection.
 - USGS groundwater model in Biscayne Bay (Virginal Walsh)
- Palm Beach
 - Regional wastewater (reclaimed) facilities and sea level rise intrusion
 - Lifecycle of infrastructure of wells
- Miami Dade and Palm Beach would be interested in –
 - What SFWMD is doing with seasonal forecasting of Drought and ground water level
 - USGS group giving a presentation on work with SLR 51 reservoirs (AWS0- seasonal
- Tampa Bay Water - Dynamic downscaling of CMI5 (?)
 - Not sure what funding agency would be interested. Some concern about downscaling in Climate Science field....
 - Potential for linking on a “LLC – landscape cooperatives for a proposal?
- USF Research - with LTR\$-- Gina Larson
- Communication
 - Continue to explore communication issues... framing, etc.
 - Form a small group to explore what interests are, and develop activities for next workshop (Tracy Irani to lead – volunteers include Gina Larsen, Alison Adams....
- Our Domain/focus - Continue to focus on climate science for adaptation and building resilience – not mitigation and energy policy issues

Website – issues for consideration by website management and review team.

- Need to understand “publication law” in term of posting published documents.
- Storing or linking to data sites – ownership and access issues
- Consider adding a list of people/contact for partners in particular\
 1. Website committee to meet (Lisette Staal to convene)
 2. All FloridaWCA participants to visit the revised website and provide comments, suggestions, or items of interest to Lisette Staal. Send to lstaal@ufl.edu

Next Workshop - Plan for workshop in next quarter.

- Focus on Sea level rise.
- Consider presentations of CASES from Miami Dade and Broward County, with particular emphasis on need from the FloridaWCA
- Presentation on Latest science.....
- Updates.....
 - a. Presentation from USF – project...
 - b. NOAA Project (Seasonal Scale) Update – and applications
 - c. PRWMA CASE for decision making
 - d. SFWMD – use of seasonal scale data
- Include focus on Communication – To be develop (Tracy Irani (lead) – Bertha, Alison, Gina, Keith)

Workshop Outcomes and Next Steps:

1. Website - Suggestions solicited and contributed. ACTIONS:
 - a. All FloridaWCA participants to visit the revised website and provide comments, suggestions, or items of interest to Lisette Staal. Send to lstaal@ufl.edu
 - b. Lisette Staal to convene website management and review committee.
2. Communication and User Perspective – shared understanding of learning styles, and request to continue with other aspects of communication as our group moves forward. Communication – ACTION:
 - a. meet with committee to discuss topics for communication – Bertha, Alison, Gina, Keith)
 - b. topic and session in next workshop to be develop (Tracy Irani (lead)
3. Projects and Applications - Project NOAA Seasonal Scale results shared and Peace River Manasota Regional Water Authority Case study on operational decision making developed and presented. Solicited input and feedback. ACTIONS;
 - a. Provide specific comments and sources of data to Kevin Morris for consideration
 - b. Check in with Obey on possibility of presentation on SFWMD use of seasonal scaled data...
4. Workshop Planning - The next **FloridaWCA workshop (#10)** will be scheduled in the last quarter of 2013. ACTIONS:
 - a. Lisette Staal to schedule time and location for workshop.
 - b. Agenda will have a focus on Sea Level Rise - latest science, issues and partners' experiences of Sea Level Rise, including presentation of CASES developed by Miami Dade and Broward County, with particular emphasis on presenting their needs and potential contribution of the FloridaWCA to their needs. (Fran Henderson and Bertha Goldenberg).
 - c. As appropriate, include updates on NOAA Projects, SFWMD – use of seasonal scale data PRWMA CASE for decision making.
 - d. Tracy Irani work with communication committee (and Lisette) to develop session for next workshop (lead) – Bertha Goldenberg, Alison Adams, Gina Larsen, Keith Ingram). Lisette will follow up on date and overall agenda development for the next workshop.

Workshop Evaluation

Response rate on the exit survey distributed at the end of this workshop was very high with 21 of 22 participants responding. Satisfaction in all aspects of the survey (workshop output, organization, use of time, participation/involvement, and clear steps) received over 4.5 on a scale of 1-5 with 5 being the highest level of satisfaction for both university and public water supply participants. Participants expressed general satisfaction with current workshop format and providing suggestions relative to participation, interest in more applied cases, communication activities, and a chance to focus on Sea Level Rise. Responses to a question on the most important next step for FloridaWCA centered on the desire for application of the research, a need to communicate information, increasing participation and finding funding to continue the groups' efforts. A brief summary of exit feedback survey responses appears in **Appendix 3**.

Lisette Staal thanked the participants and OUC for hosting the workshop.

APPENDIX 1: List of Participants – Workshop 9 – June 26, 2013

Last name	First name	Organization	email
Adams	Alison	Tampa Bay Water	AADAMS@tampabaywater.org
Anand	Hardeep	Ft. Lauderdale	hanand@fortlauderdale.gov
Asefa	Tirusew	Tampa Bay Water	tasefa@tampabaywater.org
Bastola	Satish	Florida State University	sbastola@fsu.edu
Chang	Jason (Seungwoo)	University of Florida	swjason@ufl.edu
Cullum	Mike	Saint Johns River Water Management District	mcullum@SJRWMD.COM
Goldenberg	Bertha	Miami-Dade Water and Sewer Department (WASD)	BMG@miamidade.gov
Graham	Wendy	University of Florida Water Institute	wgraham@ufl.edu
Hwang	Syewoon	University of Florida	aceace111@ufl.edu
Ingram	Keith	University of Florida/Florida Climate Institute/ Southeast Climate Consortium	ktingram@ufl.edu
Irani	Tracy	University of Florida Center for Public Issues Education	irani@ufl.edu
Larsen	Gina	University of South Florida	glarsen@mail.usf.edu
Maleski	Jerome	University of Florida	jmaleski@ufl.edu
Martinez	Christopher	University of Florida/Florida Climate Institute/ Southeast Climate Consortium	chrisjm@ufl.edu
Misra	Vasu	Florida State University/Florida Climate Institute/ Southeast Climate Consortium	vmisra@fsu.edu
Morris	Kevin	Peace River Manasota Regional Water Supply Authority	KMorris@regionalwater.org
Odera	Erica	University of Florida	ericalin@ufl.edu
Staal	Lisette	University of Florida Water Institute	lstaal@ufl.edu
Stahly	Aaron	Ft. Lauderdale	Astahly@fortlauderdale.gov
Stefanova	Lydia	Florida State University/COAPS	lstefanova@coaps.fsu.edu
Teegarden	Robert	Orlando Utilities Commission	rteegarden@ouc.com
Tian	Di	University of Florida	tiandi@ufl.edu

APPENDIX 2: Workshop Agenda – June 26, 2013

Florida Water and Climate Alliance (FloridaWCA)

WORKSHOP 9 –Agenda

Wednesday, June 26, 2013, 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. FloridaWCA – learning community progress, updates, and sustainability
 2. Understanding different thinking, learning and communication styles and why they matter.
 3. Sharing recent results of NOAA project focused on use of seasonal data to minimize operational risk for water supply and ecosystem restoration.
 4. Exploring practical application of seasonal data - where does it fit in helping with decision making? How can it be used?
 5. Determine FloridaWCA next steps.

Agenda:

8:30 Registration and Coffee

8:45- 9:45 Session 1: FloridaWCA learning community – introductions, updates, website, opportunities, and sustainability (Lisette Staal)

9:45 – 10:30 Session 2: Ways of learning, thinking and communicating (Tracy Irani)

Presentation: How differences matter in linking Science and Action.

10:30 BREAK

10:45 – 12:00 Session 2: (continued) (Tracy Irani)

Activity and discussion: Understanding learning, thinking and communicating – why and how it can help us reach “our” goals.

12:00 - 1:00 LUNCH

1:00 – 2:00 Session 3: Use of Seasonal Climate Forecasts to Minimize Short-Term Operational Risks for Water Supply and Ecosystem Restoration.

Presentation: "Assessing the seasonal skill of the National Multi-Model Ensemble" (Chris Martinez and Di Tian)

Discussion:

Presentation: Practical applicability from the user perspective. - “How we use seasonal forecasts at Tampa Bay Water” (Tirusew Asefa)

Discussion:

2:00 – 3:00 Session 4: Practical applicability from the user perspective

Presentation: How can we use seasonal data to help with decision-making? Peace River Manasota Regional Water Authority (Kevin Morris)

Discussion:

3:00 - BREAK

3:15 – 4:00 Session 5: What is next for FloridaWCA Learning Community- (Lisette Staal, All)

Discussion: Next Steps, Reflection and Evaluation

APPENDIX 3: Exit Survey Workshop – June 26, 2013

Average response by institutional affiliation - survey responses (1 low - 5 high)

	Public Water Supply Utility	Water Management District	University	Other
1. Output	4.60	4	4.42	4.5
2. Organization	4.80	4	4.67	4.5
3. Use of Time	4.60	4	4.42	4.5
4. Participation-involvement	4.80	5	4.50	4.5
5. Next Steps clear	4.80	5	4.42	4.0

6.a. What will you most likely use this website for?

Many of the responses reflected the potential of the website to support group interchange, and a repository of relevant resources.

Contacts, learning, exchanging information;

- Staying in touch and up to date with the group
- Tell others (potential new members) about the site-- a way to communicate who we are.
- refer to others if interested in knowing more about the groups' work
- Tell and explain where it is to others
- Communication and mostly receiving the information
- To read what has been previously presented.
- Review past meetings/projects

Resources

- Keeping up to date on the latest industry happenings and papers
- Researching information
- Data and relevant publications;
- Repository for information products
- to find documents
- Use the data links and publications
- Utilize data and other relevant information.
- Data
- Data gathering
- looking for documents and data sets
- Reference material- direct others to view for education.
- best practices and training staff and community

6.b. Do you have documents now that you would like to post on the website? If so, share your email address... if you would like to be contacted.

Several participants provided their email addresses indicating they do have documents to share, and others noted that they would send some along.

7. We heard several presentations. How useful (practically applicable) is this information in your job?

	<i>7a. Ways of learning, thinking and communicating</i>	<i>7b. Assessing the seasonal skill of the National Multi-mode Ensemble</i>	<i>7c. How we use seasonal forecasts at Tampa Bay Water</i>	<i>7d. CASE - Peace River Manasota Regional Water Supply Authority - Decision Process Example.</i>
Utility	4.40	3.80	4.20	4.40
University	4.64	3.45	4.55	4.45
WMD	4.00	4.00	4.00	5.00
Other	4.50	3.50	4.00	4.00

8. What would you like to see at a future workshop of the Florida Water and Climate Alliance?

There was a high level of response to this question, noting general satisfaction with current workshop format and providing suggestions relative to participation, interest in more applied cases, communication activities, and a chance to focus on Sea Level Rise.

- Not sure, maybe more government reps.
- continue as is
- The present structure is good... so continue
- More case studies, results and success stories
- Scenario development in Florida
- Continue on the project of peace river and document how the group makes a difference on their work.
- Keep looking at case studies/uses
- Technical presentations need to be better prepared. E.g. legible graphics, fewer graph and data per slide
- SLR focus
- The communication segments were a real bonus
- more team-building and communication activities

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

Responses centered on the desire for application of the research, a need to communicate information, increasing participation and finding funding to continue the groups' efforts.

- start to use research results
- application studies
- more case studies of applied decision making tools like Kevin presented.
- Focus on SLR
- focus on S.Florida progress- they are investing significant resources
- Invite speakers, elected officials for a talk.
- Disseminating information and sharing with community.
- Adaptation and resilience relevant to a lay person.
- progress on communication to outsiders
- Communicating data to the general public
- We need more utilities participating
- \$\$\$ to continue