

FloridaWCA WORKSHOP REPORT

Workshop #14

Wednesday, March 30th, 2016

8:45 AM – 4:00 PM

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Hosted by
Orlando Utilities Commission (OUC), Orlando, Florida

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Florida Water and Climate Alliance Background

Florida Water and Climate Alliance (Florida WCA) is a stakeholder-scientist partnership committed to increasing the relevance of climate science data and tools to support decision-making in water resource management, planning and supply operations in Florida <http://floridawca.org/> The FWCA 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, the FWCA partnership includes the UF Water Institute, Southeast Climate Consortium (SECC), the Florida Climate Institute (FCI), UF/IFAS Center for Public Issues Education, six major public water supply utilities, representatives of local governments, and three water management districts.

Initially supported through [two NOAA funded projects](#) when the project concluded successfully in November 2015 participants called for some “slightly more formal type of governance” that would include a steering committee, technical science committees and central management support services including workshop planning, facilitation, website and deliverable production. In addition, they suggested that there is a need for bare bones support for design, implementation and management of 3 workshops and a website, with buy in for specific products. The UF Water Institute (WI) submitted a proposal and FWCA secured interim support from Saint Johns River Water Management District (SJRWMD) and Tampa Bay Water (TBW) to continue FWCA network workshops and website respectively.

Detailed information on the FloridaWCA is available the [FloridaWCA website](#) being managed by Dr. Chris Martinez, UF.

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 by creating spaces for sharing knowledge from the multiple perspectives and enhancing collaborative research. FloridaWCA participants are interested in impacting relevant research agendas in the technical and social sciences; understanding policy, management, operations and application of planning tools and understanding new policy changes at the state/local level that would affect the utilities; and the FloridaWCA network sustainability.

Steering Committee: Tirusew Asefa (TBW), Kevin Morris (PRMRWSA), Rob Teegarden (OUC), Sherry Brandt-Williams (SJRWMD), Vasu Misra (FSU), Tracy Irani (UF) and Chris Martinez (UF); Workshop Coordinator – Lisette Staal (UF Water Institute)

Workshop Summary- Wednesday, March 30th, 2016

This was the 14th workshop since the FloridaWCA was initiated and was attended by 18 participants. It was hosted by Orlando Utilities Commission in Orlando Florida.

Specific Workshop Objectives:

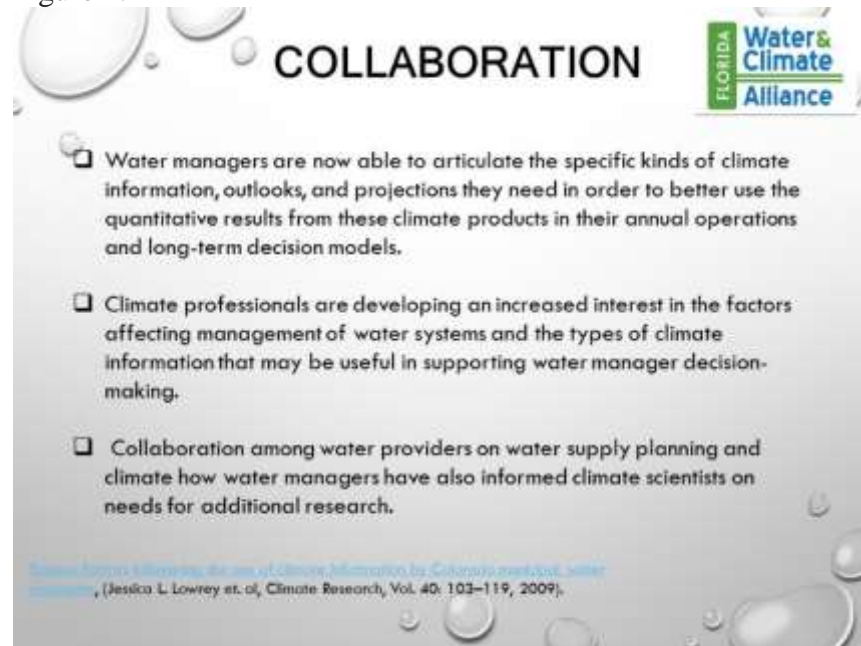
1. Stakeholder-scientist exchange on current research, tools and issues of relevance to water resource management and supply operations
2. Explore communication and application of research outcomes to FloridaWCA stakeholders
3. Sustain the FloridaWCA environment for shared information, learning and networking

Session 1: FloridaWCA Learning Network

- Welcome - Rob Teegarden, Vice President/water resources policy, planning & permitting, Orlando Utilities Commission welcomed the participants.
- Introductions/Agenda/ Setting the Stage - Lisette Staal (UF Water Institute),workshop facilitator, [introduced the day](#) and led an interactive activity focused on getting to know one another and particularly in the context of the FloridaWCA's interest in the use of climate information.

Each participant received one of three statements (figure 1) drawn from a research paper published in Climate Research about the use of climate information by municipal water managers.

Figure 1.



Source: [Factors influencing the use of climate information by Colorado municipal water managers](#), (Jessica L. Lowrey et. al, Climate Research, Vol. 40: 103–119, 2009).

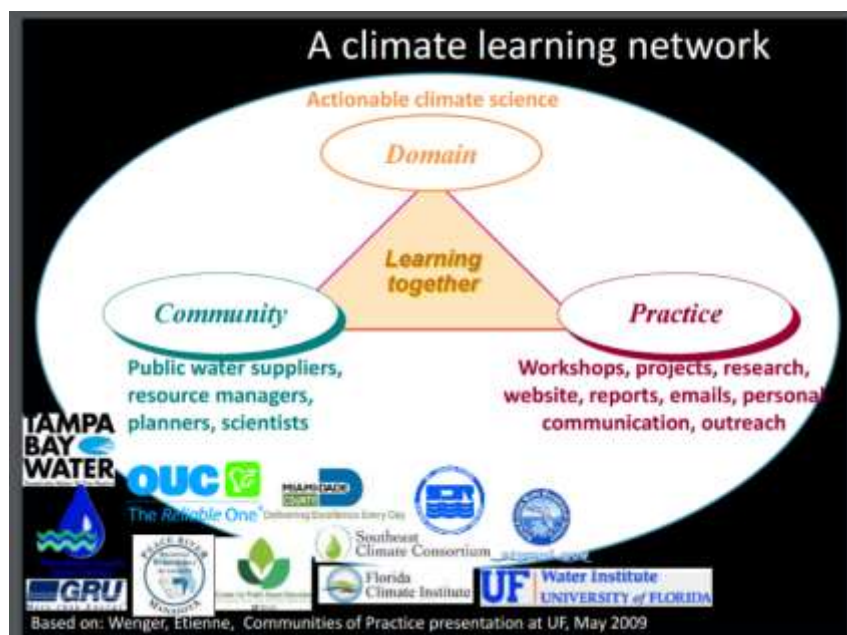
Participants were asked to pair with someone that they knew least, and to talk about the statements that they were holding, in particular considering three questions: Does the statement resonate with you? Do you know of any examples? What does this statement mean to you in your professional life?

Comments and discussion raised issues of importance from different participants' perspectives and re-emphasized needs from Utilities for information including reliable predictive tools, understanding effects of climate patterns, regional trends in temperature, precipitation and streamflow. In addition acknowledging the help stakeholders provide to researchers to help them understand the problems of interest to water resource managers at different time and space scales.

This activity helped set the stage for the presentations and discussions to follow by encouraging the participants to consider throughout the day two questions.

- Does the science/tool/information being presented address your water management issue? How?
 - Will it help you do what you need to do better? What else would you need?
- FloridaWCA Stakeholder-scientist collaborative network – what's unique, where we are, what's new, what's next? - (Kevin Morris (Peace River Manasota Water Supply Authority) shared his perspective of FloridaWCA as a climate learning network (see figure 1) that convenes scientists and practitioners in iterative knowledge co-production. [During his presentation](#) he provided background, perspective and connections with similar organization (Water Utility Climate Alliance (WUCA)), key success factors for the FloridaWCA, and current challenges.

Figure 2.



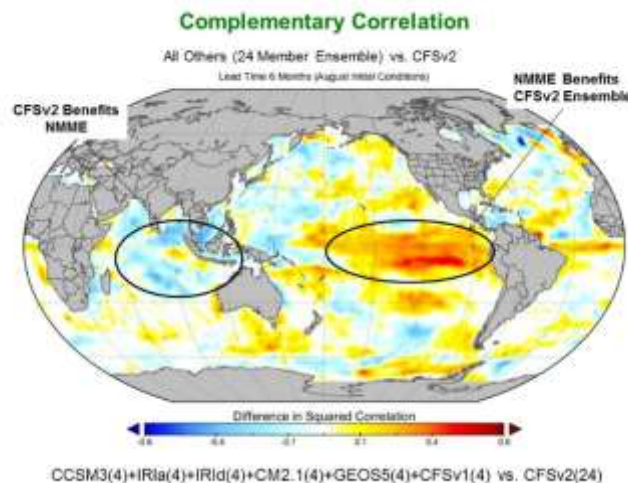
Session 2: Commonality of hydrologic models across time scales

- Presentation: "[Commonality of hydrologic models across time scales,](#)" [Dingbao Wang](#), Assistant Professor, Department of Civil, Environmental and Construction Engineering, University of Central Florida
- Discussion - What it all means to FloridaWCA participants and what next?

Several questions and points made during discussion pointed to key issues of interest to participants. In particular, Dr. Wang noted that his hopes are that his research better providing available water balance across timescales will contribute to those who are considering “What is the best way to distribute the available water resources? Some questions raised regarded how predictable it is, what data period is used, and what specific human activities are important to look at.

Session 3: Current State of the Weather--ENSO forecast

- Presentation: “[Issues with the current ENSO forecast, interpreting it, and how to use it,](#)” [Ben Kirtman](#), Professor, Department of Atmospheric Sciences, Director of Cooperative Institute for Marine & Atmospheric Studies, and Director of Center for Computational Science Climate and Environmental Hazards Program, University of Miami

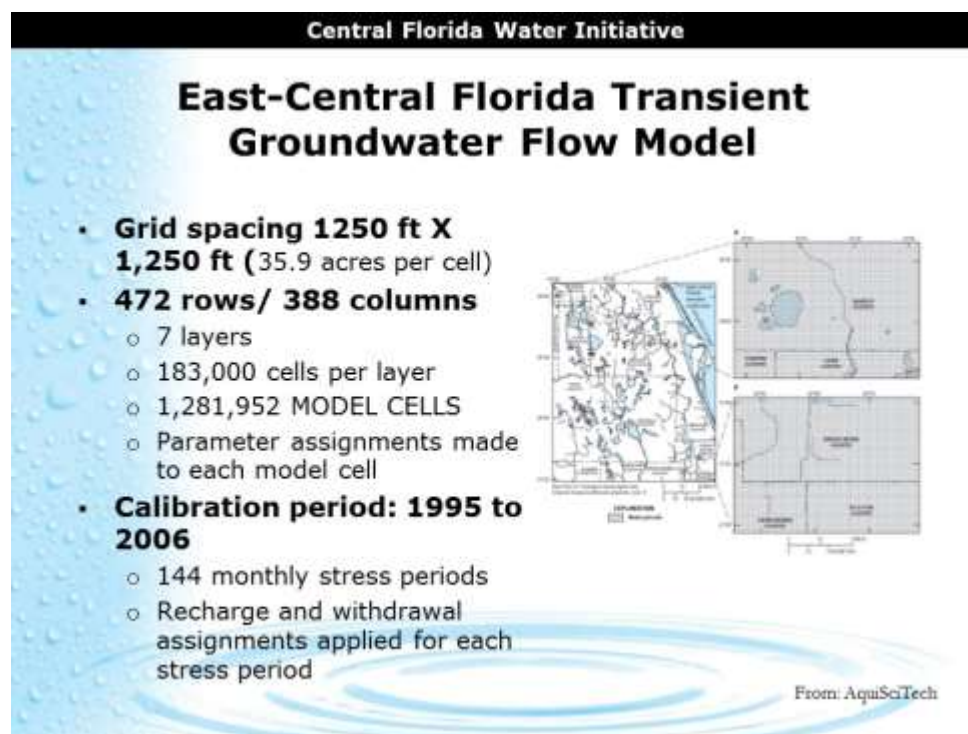


- Discussion - What it all means to FloridaWCA participants and what next?

There is significant amount of uncertainty in the ENSO Forecast, and the NNME model diversity is capturing the ENSO System. It can provide some probability and may help us to be able to say that this is a likely condition we need to plan for when talking to Boards. This uncertainty is a challenge and so refining these modeling tools is important. One participant summed up the difficulties in providing information by asking “What is worse? That the prediction not happen, or if it happens and we are not prepared?”

Session 4: Central Florida Water Initiative

- [Introduction to speaker, topic and what it means to FloridaWCA](#) (Kevin Morris) Putting the CFWI in context for the participants, Kevin shared that it includes 3 Water Management Districts, 5, Counties and dozens of Local Government/Utilities. In particular, he pointed out why it is important to the Florida WCA. CFWI is first of its kind, a massive, multi-districted modeling and planning effort in Florida involving billions of dollars in infrastructure investment and will shape the future of water supply across a broad swath of our State. He note that it would be helpful for FloridaWCA to better understand the CFWI, seek to engage with key team members, and identify points of collaboration.
- Presentation - “[Central Florida Water Initiative: The Next 5 years!](#)” John Shearer, P.E., Shearer Consulting, Inc.

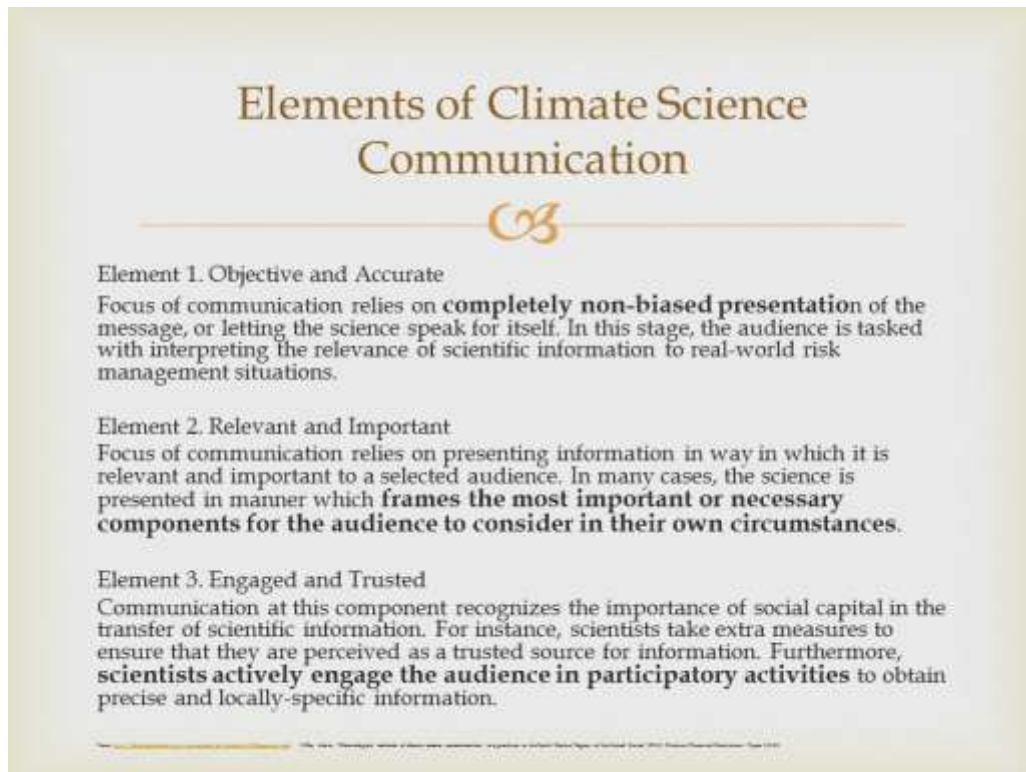


- Discussion - What it all means to FloridaWCA participants and what next?

Participants were particularly interested in information on the process for updating the hydrologic ECFT model and whether or not Climate variability and data are being taken into account in this process. John noted that he is not aware of use of specific climate data. Participants were interested in seeing the types of data they have to be considered. John Shearer indicated that this is an ongoing and participatory process and encouraged the participants to contact the modeling team.

Session 5: Increasing relevance and use of climate science from the user perspective

- [Presentation](#) on Communicating scientific information and its relevance to management situations (Tracy Irani)



From: <http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=4192&context=etd> Wilke, Adam, "Climatologists' methods of climate science communication to agriculture in the North Central Region of the United States" (2013). *Graduate Theses and Dissertations*. Paper 13185.

- Discussion - reshaping programs and activities to reflect participants' current or projected interests/issues
 - Current activities- workshops, website, webinars, outreach
 - Generating new ideas and pinpointing new opportunities

Participants discussed FloridaWCA current activities and focused on generating new ideas and new opportunities. This discussion flowed into the FloridaWCA Business meeting (see next section for summary)

FloridaWCA Steering Committee Meeting Outcomes

Workshop (Tirusew, Lisette) – Face to face meetings continue to be important for sharing both the science and the communication potential and challenges of interest to FloridaWCA. Ensuring Science presentations as well as interaction and focus on application are important for the workshops.

- ✓ Schedule next one for September 2016 – set date as soon as possible
- ✓ Suggest including results of ongoing research considering evapotranspiration at UF that is sponsored by Tampa Bay Water at UF (Graham, Chang)

Website (Chris Martinez) -This is a key “product” of the FloridaWCA and is highly valuable. May be something that WMD would be interested in. “Links to other tools” is less important than the uniqueness and products available through FloridaWCA.

- ✓ Emphasize research outputs, past presentations, journal articles
- ✓ Consider revising the intro page to better reflect the strengths and products of the FloridaWCA to date.
- ✓ Need to ensure continued support for Website

Webinars (Chris Martinez, Tracy Irani, Sherry Bryant-Williams) - This is a new effort for the FloridaWCA and group thought it was a very good idea, but discussed the level of effort that it should involve. Suggestion to leverage other Webinars that are relevant (NOAA, EPA, Center PIE at UF), etc. by participating as speaker, or sharing information on relevant webinars with FloridaWCA participants.

- ✓ link seminar with his new program supported through NIDIS (Chris Martinez)
- ✓ Define audience for the webinars. Consider focusing on “opinion leaders”
- ✓ Consider YouTube clips
- ✓ Participate as speakers in other Webinars to take advantage of their promotion
- ✓ Consider different levels of talks for the webinars ranging from “teaser” to get info about organization out, and science discussions.

Outreach (Rob Teegarden, Kevin Morris, Sherry Bryant-Williams) – As the FloridaWCA has evolved, it is becoming important to begin to share it with other organizations, and continue to bring stakeholders “to the table.” Discussion encouraged outreach to organizations that would be interested in the mission and outputs of the FloridaWCA. It was suggested that to attract Utilities, framing the discussion of climate and variability issues in the context of Adaptation and Resiliency is important.

- ✓ Explore possible linkages/synergies with the CFWI, in particular with the Water Resources Availability group relative to incorporating climate variability into models. **Alison Adams** will connect with Mark Hammond and others at SWFWMD to explore this potential)
- ✓ Begin to identify professional organizations and opportunities. Several were mentioned (AWWA and Florida section)
- ✓ Explore linkages and synergies with UF/IFAS Extension programs and priorities. In particular, link to Water Schools and Watershed Academy efforts. Volunteer as speakers at some of these efforts. Note that both Chris Martinez and Tatiana Borisova work closely with Extension programs.
- ✓ Frame information of what we do around adaptation and resiliency. Two areas of key interest to Utilities and Water Managers -- securing long term water resources and supply and addressing near term water issues for utility management in the context of climate change.

- ✓ An example of communication materials focused on community use of science (using information from regional models) in planning was mentioned – CLIMATE WISE at Climatewise.org which is an initiative of the GEOS Institute. Specific project related to Florida – future climate Conditions in the Saint Johns River Drainage Basin

Research – Proposals (Vasu, Tirusew) – Specific research efforts are key to the mission of the FloridaWCA. Locally relevant and site specific information to support decision makers will require research efforts. Previously funded NOAA projects supported research resulting in over..... publications. Tampa Bay Water has been funding on-going research focused on

- ✓ Identify key leading research issues and invite scientists to workshops, webinars, etc. to enhance potential collaborations for research proposals.
- ✓ Explore collaboration with WRF for larger NSF proposals...
- ✓ Identify funding opportunities
- ✓ Lead proposal efforts
- ✓ Develop white papers
- ✓ Need for translational documents focusing on the meaning of the science in operational sense
- ✓ Extension Fact sheets to share research results

FloridaWCA Sustainability – Contracts with SJRWMD and Tampa Bay Water provided funding last year for support for Website and Workshops respectively. The terms of these agreements have/will be completed by June 2016. Discussion of future funding included:

- ☞ \$12,500 – Confirmed commitment from Tampa Bay Water to continue at the same level of support (3 Workshops)
 - \$5,000 – Commitment from Peace River – (pending appropriate agreement)
 - \$10,000 Commitment from Orlando Utility Commission – (pending appropriate agreement)
 - \$12,500 – Potentially available from SJRWMD (Previously supported Website), however depends on matched commitment from other WMDs.
- ☞ TOTAL = \$12,500 confirmed to be committed with appropriate mechanism in place
 - TOTAL= \$65,000 potential with ALL proposed support above

Follow-up Actions for sustainability /funding

- ✓ Contact SWFWMD and SFWMD regarding potential support (Rob and Alison)
- ✓ Consider overall funding strategy and UF Water Institute faculty role (Graham, Staal, Irani, Martinez)
- ✓ Review the previous proposals for SOW for various tasks to rework SOW for potential new funding from WMD, OUC and PRWMA and Rework the SOW for Tampa Bay Water support

APPENDIX 1: List of Participants –

Florida Water and Climate Alliance Workshop – March 30, 2016 – Orlando (OUC)

Last name	First name	Stakeholder group	Organization
Adams	Alison	PWS Utility	Tampa Bay Water
Asefa	Tirusew	PWS Utility	Tampa Bay Water
Borisova	Tatiana	University	University of Florida
Brandt-Williams	Sherry	WMD	SJRWMD
Christian	David	WMD	SJRWMD
Davis	Dennis	consulting	WRIGHT-PIERCE
Hafen	Mark	University	University of South Florida
Hallowell	Steven	consulting	WRIGHT-PIERCE
Irani	Tracy	University	University of Florida
Kirtman	Ben	University	University of Miami , Rosenstiel School for Marine and Atmospheric Science
Martinez	Christopher	University	University of Florida/Florida Climate Institute/ Southeast Climate Consortium
May	Joe	PWS Utility	Miami Dade Water and Sewer
Misra	Vasu	University	Florida State University/Florida Climate Institute/ Southeast Climate Consortium
Morris	Kevin	PWS Utility	Peace River Manasota Regional Water Supply Authority
Shearer	John	Consulting	Shearer Consulting, Inc
Staal	Lisette	University/facilitation	University of Florida Water Institute
Teegarden	Robert	PWS Utility	Orlando Utilities Commission
Wang	Dingbao	University	University of Central Florida
Wheeler	David	govt-city	City of Ocoee
Zhang	Yanfeng	WMD	SJRWMD

APPENDIX 2: Agenda -

FloridaWCA Workshop

Wednesday, March 30th, 2016, 8:45 – 4:00

Orlando Utilities Commission (OUC)

6003 E. Pershing Avenue, Orlando, 32822 * (see directions overleaf)

Workshop Goal: Provide a shared learning environment for water utility and resource managers and academic scientists to increase the practicality of climate models, data and tools in the planning and operations of Florida's public water supply utilities.

Specific Workshop Objectives

4. Stakeholder-scientist exchange on current research, tools and issues of relevance to water resource management and supply operations
5. Explore communication and application of research outcomes to FloridaWCA stakeholders
6. Sustain the FloridaWCA environment for shared information, learning and networking

8:45 – Check in and Networking

9:00 – 10:00 **Session 1:** FloridaWCA Learning Network

- Welcome and introductions
- FWCA Stakeholder-scientist collaborative network – what's unique, where we are, what's new, what's next? (Steering Committee)

10:00 – 11:00 **Session 2: Commonality of hydrologic models across time scales**

- Introduction to speaker, topic and what it means to FloridaWCA (Chris Martinez)
- Presentation: "Commonality of hydrologic models across time scales," [Dingbao Wang](#), Assistant Professor, Department of Civil, Environmental and Construction Engineering, University of Central Florida
- Discussion - What it all means to FloridaWCA participants and what next?

11:00 – 11:15 BREAK

11:15 – 12:15 Session 3: Current State of the Weather--ENSO forecast

- Introduction to speaker, topic and what it means to FloridaWCA (Chris Martinez)
- Presentation: “Issues with the current ENSO forecast, interpreting it, and how to use it.” [Ben Kirtman](#), Professor, Department of Atmospheric Sciences, Director of Cooperative Institute for Marine & Atmospheric Studies, and Director of Center for Computational Science Climate and Environmental Hazards Program, University of Miami
- Discussion - What it all means to FloridaWCA participants and what next?

12:15– 1:15 LUNCH

1:15 – 2:30 Session 4: Central Florida Water Initiative

- Introduction to speaker, topic and what it means to FloridaWCA (Kevin Morris)
- Presentation: - “Central Florida Water Initiative: The Next 5 years!” John Shearer, P.E., Shearer Consulting, Inc.
- Discussion - What it all means to FloridaWCA participants and what next?

2:30 – 2:45 BREAK

2:45 – 4:00 Session 5: Increasing relevance and use of climate science from the user perspective

- Communicating scientific information and its relevance to management situations (Tracy Irani)
- Discussion - reshaping programs and activities to reflect participants’ current or projected interests/issues
 - Current activities- workshops, website, webinars, outreach
 - Generating new ideas and pinpointing new opportunities

4:00 FloridaWCA Steering Committee – Business meeting (open)