

# Arc Hydro in Florida: Lessons Learned and Emerging Technologies

November 16<sup>th</sup>, 2007

8:30 am to 5:00 pm

University of Florida - Reitz Union 282

8:00 – “sign in” & coffee

8:30 – 8:55 – Arc Hydro overview – Jack Hampson (PBS&J)

9:00 – 9:05 – Welcome – Wendy Graham (UF/Water Institute)

[Arc Hydro in Florida: History and Water Management District updates](#)

9:05 – 9:20 – Arc Hydro in Florida – Jim Cameron (SFWMD)

9:20 – 9:40 – SFWMD Update – Lawrence Spencer

9:40 – 10:10 – SWFWMD Update – Al Karlin

10:10 – 10:30 – SJRWMD Update – Chris Mundy

10:30 – 10:50 – Break

[Arc Hydro: Emerging Technologies I](#)

10:50 – 11:10 – Analytical framework for Coastal and Estuarine Study – Sandra Fox (SJRWMD)

11:10 – 11:30 – SFWMD “WCS Tracker” – Steve Bourne (PBS&J)

11:30 – 12:00 – Hydrologic Information Systems (HIS) – David Maidment (UT)

12:00 – 1:30 – Lunch

[Arc Hydro: Emerging Technologies II](#)

1:30 – 2:30 – Groundwater Arc Hydro – Norm Jones (BYU)

2:30 – 2:50 – Digital Watershed – Jack Hampson (PBS&J)

2:50 – 3:10 – Break

[Arc Hydro: Emerging Technologies III and Discussion](#)

3:10 – 3:40 – “What works and what hasn’t (yet)” – Alan Foley (JEA)

3:40 – 4:00 – What’s new with Arc Hydro from ESRI – Christine Dartiguenave (ESRI)

4:00 – 5:00 – Bringing it all together – “Next steps in Florida” – Dr. Maidment (UT)

The purpose of this meeting is to share information about hydrologic data management and tool development for decision making, visualization and modeling efforts in Florida.

### **Morning Presentations:**

- What is Arc Hydro? An overview of basic Arc Hydro functionality (*"GIS for Water Resources"*). For those who are new to Arc Hydro and wish to be able to better appreciate the presentations that will follow. (**Jack Hampson, PBS&J**)
- Florida Arc Hydro History 101: Overview of the implementation of Arc Hydro at Florida Water Management Districts. *How the Florida Arc Hydro Working Group (FAHWG) and the Florida Arc Hydro Users Group (FLAHUG) came in to being and what they are accomplishing for the benefit of water resource management in Florida.* (**Jim Cameron, SFWMD**)
- Update from on Arc Hydro implementation at South Florida Water Management District. *SFWMD developed the Arc Hydro Enhanced Database (AHED), based on the Arc Hydro data model, as its storehouse for District hydrological feature locations. This presentation will concentrate on the first phase of the District's current project to fully populate AHED with hydrologic features, and will offer a preview of how a fully implemented AHED database will improve hydrologic data management at the District* (**Lawrence Spencer, SFWMD**)
- Update from Southwest Florida Water Management District. *The SWFWMD has focused on extending the functionality of Arc Hydro by developing tools for sub-basin delineation in deranged and pitted terrains. Newly developed feature datasets further develop the Arc Hydro data model to include "HydraulicElementPoints" to describe and model hydraulic networks.* (**Al Karlin, SWFWMD**)
- Update from St. Johns Water Management District. *The SJRWMD has completed a district wide Arc Hydro implementation using 1:24,000 NHD data. The presentation will summarize the geodatabase characteristics, lessons learned, and plans for the next phase, including updates and groundwater geodatabase development.* (**Chris Mundy, SJRWMD**)
- ACES: A nalytical F ramework for C oastal and E stuarine S tudy. *The extension of Arc Hydro concepts and schema to estuarine and coastal areas using a workbench approach that allows for the exploration of estuarine geomorphology in GIS, initially designed for better understanding of water quality in estuaries.* (**Sandra Fox, SJRWMD**)
- Arc Hydro Tools: WCS Tracker - *A tool for real-time water budget calculations on water control systems in South Florida.* (**Steve Bourne, PBS&J**)
- Hydrologic Information System (HIS). *The National Science Foundation has funded Test Bed projects to test various aspects of hydrologic observatory design and operation. HIS is a geographically distributed network of hydrologic data sources and functions that are integrated using web services to collect, distribute and visualize data.* (**David Maidment, UT, Austin**)

### **Afternoon Presentations and Discussions:**

- Groundwater Arc Hydro data model and tools. *Introduction to Groundwater Arc Hydro and developments in implementations of the Groundwater Arc Hydro toolset* (**Norm Jones, BYU**)

- The Digital Watershed. *First, an overview of the Digital Watershed concept--the increasingly realistic spatial and temporal representation of watersheds in relational database information systems. Second, an overview of what is the point--the spectrum of current and future uses as well as, the potential of current and future partnerships.* (**Jack Hampson, PBS&J**)
- Arc Hydro in Florida: What works and what hasn't yet. – *Arc Hydro concepts have been applied at a range of scales to support water resources analyses and management within Florida. This presentation will summarize some of the Florida successes, challenges and key considerations for enterprise applications of an Arc Hydro geodatabase* (**Alan Foley, Jones Edmunds and Associates**)
- What's new with Arc Hydro from ESRI: *An integrated approach to terrain modeling & the geo-processing framework for the Arc Hydro tools* (**Christine Dartiguenave, ESRI**)
- Bringing it all together and Next Steps for Florida (**David Maidment, UT-Austin**)