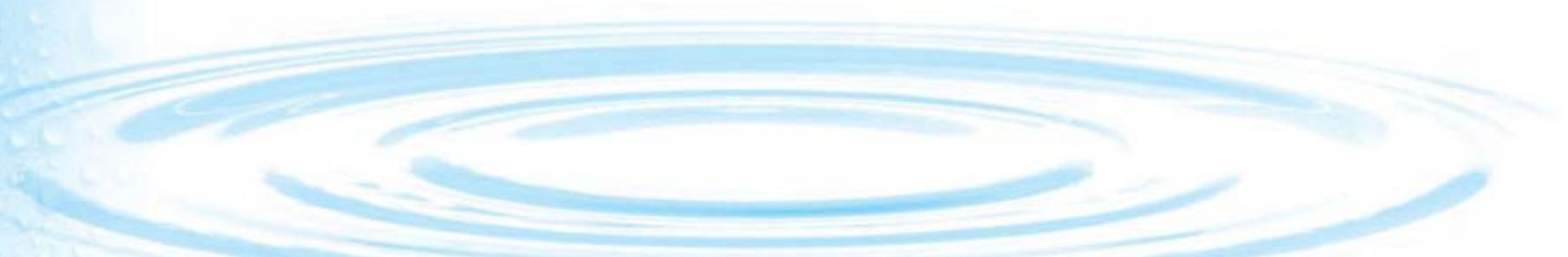


CFWI Hydrologic Analysis Team Status

July 8, 2011

Presented by David MacIntyre



The Hydrologic Analysis Team

The Hydrologic Analysis Team is made up of representatives from the three WMDs, DACS and technical representatives of the stakeholders. The team is charged with developing the necessary modeling tools and data analysis to support the CFWI.

Leads & Team Members as of July 8th 2011 are:

SWFWMD	SFWMD	SJRWMD	DACS	UTILITIES / OTHERS
<ul style="list-style-type: none"> • Mark Barcelo • Jill Hood 	<ul style="list-style-type: none"> • Akin Owosina • Jeff Giddings 	<ul style="list-style-type: none"> • Doug Munch • Brian McGurk 	<ul style="list-style-type: none"> • Camilo Gaitan 	<ul style="list-style-type: none"> • David MacIntyre (STOPR) • Bruce Lafrenz (STOPR) • Al Aikens (Seminole County/OUC) • Sarah Whitaker (WALC)
<ul style="list-style-type: none"> • Ron Basso • Ken Weber 	<ul style="list-style-type: none"> • David Butler • Chris Sweazy • Jason Yan 	<ul style="list-style-type: none"> • Patrick Burger 		<ul style="list-style-type: none"> • Oscar Vera (STOPR) • Chris Russell (OUC) • Brian Megic (Orange County) • Valerie Davis (WALC)

Hydrologic Analysis Team Guiding Principles

Mission

Ensure that the most appropriate science is applied to the modeling and data analysis to support decision making for the CFWI and that the work completed is defensible, understood by the initiative participants and collaboratively developed.

Approach

The team will work within a collaborative environment with open and full information sharing as well as joint responsibility and accountability for completing team assigned work products.

Hydrologic Analysis Team Objectives

Provide necessary modeling tools and data analysis and work collaboratively with other Initiative teams to:

- Evaluate the current and future availability of groundwater.
- Assess future water supply and management strategies.
- Develop processes to assess the long-term effectiveness of the management strategies.
- Support collaborative water supply planning.
- Support future regulatory actions.

Progress Since Last Briefing (1)

- The HAT met with the EMT June 1st
 - Reviewed methods to link environmental and hydrologic analysis
 - Agreed additional future meetings required
- Met with USGS June 24th to discuss data mining and artificial neural network (ANN) results
 - ANN water level response models still under development – encouraging initial results
 - Decisions Support Software (DSS) under development
 - ANN & DSS results may not be released publicly until mid-2012

Progress Since Last Briefing (2)

- Met with Intera June 24th to discuss statistical data analysis results
 - Intera explored consistency in water level / potentiometric behavior across CFCA region
 - Intera showed sub-regions with similar characteristic trends
 - Intera currently working to assess potential cause & effect relationships
- HAT conference call/web meetings on May 26th; June 21st & 30th; July 5th, 6th & 7th.
 - Discussions on existing and future water use
 - Discussions on alternative hydrologic analysis approaches

Relating Water Level Change to Environmental Impact (1)

EMT Leads

- Observations of environmental stress associated with water level changes in wetlands and surface waters

EMT & MFL&RT Lead

- Definition of environmental harm & significant harm associated with water level changes in wetlands and surface waters
- Definition of environmental harm & significant harm baseline condition(s) in wetlands and surface waters

HAT Leads

- Methods to associate observed water level changes to observed environmental stress in wetlands and surface waters
- Methods to associate modeled groundwater drawdown to risk of environmental harm

Relating Water Level Change to Environmental Impact (2)

Key Technical Questions

- Is environmental harm measured as change from some defined baseline condition?
 - If so, what condition? What is the corresponding water level baseline definition?
 - Can environmental harm be directly estimated from groundwater drawdown if both factors are not defined consistently?
- How much environmental harm is caused by groundwater pumping vs. other factors influencing water levels?
 - How can relative magnitude of different influences be assessed?

Anticipated Work for Next Month (1)

- Meet with USGS to review progress on the ECFT model calibration. Stakeholders to provide input and any additional information for consideration during calibration.
- Meet with the EMT on July 13th to continue discussions on relating changes in water levels to environmental harm. Start development of methods and metrics to evaluate water resource values for protection.
- Review Intera's work plan to investigate potential cause and effect relationships based on statistical analyses.

Anticipated Work for Next Month (2)

- Develop a plan to assess the effects of groundwater withdrawals vs. land use changes/structural alterations on water levels in wetlands and surface water bodies.
- Finalize HAT schedule and overall integrated schedule of the CFWI. Need Technical Management Team to coordinate individual team schedules.

Follow-up Items From Previous Steering Committee Meeting

- Establish an information sharing website
- DACS nominate a member for the HAT
- Form/activate Technical Management Team

Issues for Steering Committee

Short Term

- Clarification on existing legal & regulatory constraints.
 - Process for assessing interaction between technical approach and law/regulation?

Potential Long Term / Future

- How to assess the effects of groundwater withdrawals vs. land use changes/structural alterations? Do these affect the baseline hydrologic condition?
- How to address the interaction between different permitting programs in terms of hydrologic impacts (e.g., CUP/WUP & ERP)?

Questions



