



## Surface Water Quantity Models

### Progress Meeting — Notes

April 6, 2015 – Teleconference

**Attendees:** CDM Smith: John Boyer, Kirk Westphal, Tim Cox, Nina Caraway  
SCDNR: Joe Gellici, Andy Wachob, Scott Harder, Alex Pellet, Bill Clendenin  
SCDHEC: David Baize, Chuck Gorman  
Clemson: Katie Giacalone, Lori Dickes  
Others: Eddie Twilley

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#### 1. Review and Discussion: DNR Comments on Agricultural Irrigation Model

- DNR noted that there were significant differences between modeled and reported agricultural water use over the past 12 years that need to be explained. DNR also asked whether the modeled or reported water use would be used in the SWAM model. There was also a discussion on how complete the DHEC water use database was and whether this data (at least for the last 12 years) should be considered as a way to calibrate the historical water use. DNR suggested that this issue be revisited after CDM Smith incorporates a modified irrigation rate and climate parameters into its model.
- The model developed to estimate agricultural irrigation rates assumed 1.5 feet per acre; however, DNR indicated that an average of 0.9 feet per acre was identified in the 2008 Farm and Ranch Irrigation Study. CDM Smith will evaluate the use of a lower application rate, by comparing the model estimates to actual DHEC data over the past decade.
- CDM Smith will also evaluate whether a range of rates should be used for wet, dry, and normal years. CDM Smith will consider if the model estimates should be distributed uniformly over each county, or assigned to DHEC-reported withdrawal locations (as is currently done).
- CDM Smith will also evaluate the sensitivity of these assumptions and determine where uncertainty is greatest. It was noted by DHEC that

agricultural irrigation accounts for only 3% of overall surface water withdrawals in the state, and most of the withdrawals occur in the Edisto (60%), Saluda (15%) and Pee Dee (8%).

- DHEC also noted that the recent water-use data (since 2002) should be better than data collected prior to 2002. DHEC stated that because the larger users do report, the amount of underreporting is probably not that significant.

## **2. Saluda Model Unimpaired Flow Dataset**

### **a. Example UIFs**

- Kirk Westphal provided a summary of UIF development status and an overview of sample UIFs provided for DNR and DHEC review.
- DNR and DHEC will review sample UIFs and respond with questions or comments in approximately 1 week.

### **b. Schedule Update**

- CDM Smith continues to work through development of the draft UIF dataset, with a target completion during the week of April 20.

## **3. Stakeholder Involvement – First Saluda Meeting**

### **a. Status of meeting invitations and website**

- Katie Giacalone reviewed the status of the website, Saluda stakeholder meeting invitation and agenda. Clemson will circulate a final agenda and invitation early this week, and send out (by e-mail) the invitation with agenda mid-week.
- Clemson indicated they are making progress on the scwatermodels.com website, which will run off a Clemson server. The website will include pages describing the modeling process, water assessments, the model, and the 8 basins. The site will include a mechanism for people to sign up so that they can be kept notified of new events, meetings, and other updates.
- DNR and DHEC will get together later this week to discuss their respective assignments and coordinate their presentation for the first Saluda stakeholder meeting.
- Clemson and CDM Smith will arrange a call next week to review each group's presentation for the first Saluda stakeholder meeting.

### **b. Webinar filming (Scheduled for April 20)**

- Clemson indicated that Donna London will be leading the effort to develop the webinar and is working on script for DNR, DHEC, and CDM Smith.

#### **4. SWAM Model Enhancement Scope**

- Scott Harder asked if the proposed HEC DSSVue functionality could also include import of UIF datasets as well as other input data. John Boyer indicated that it would be added to the scope.
- CDM Smith will develop a fee estimate for each of the three identified enhancements, with the understanding that DNR and DHEC may not decide on the enhancements until after the pilot model is developed.

#### **5. Broad River Unimpaired Flow Dataset – Amendment Request Status**

- Joe Gellici noted that the amendment request for additional funding is working its way through the Budget Control Board.

#### **6. Data Collection Update**

##### **a. Edisto and Broad**

- John Boyer indicated that CDM Smith (Columbia staff) continue to make contact with water users in the Edisto and Broad River basins.

#### **7. Other**

- No other items were discussed.