



Surface Water Quantity Models

Progress Meeting — Notes

May 4, 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, Rob Devlin
Clemson: Jeff Allen, Katie Giacalone

1. Updated Agricultural Irrigation Model

- a. Weather factor included and 1950-2013 estimated withdrawals “calibrated”
- b. DHEC data will be used for withdrawals 2002-2013
- c. 1950-2001 will use model “calibrated” withdrawals

Calibration was performed by county for all basins. A calibration factor was derived by comparing draft modeled demand by basin to DHEC reported withdrawals by basin. The calibration factor was then applied to the 0.9 feet/acre application rate assumption, effectively lowering (in most instances) the feet-per-acre application rate. DNR indicated that this approach seemed reasonable. CDM Smith will circulate the updated Ag Irrigation Model for review and confirmation.

2. Saluda Model Unimpaired Flow Dataset

- a. Evaporation Methodology (memo provided to DNR/DHEC)
CDM Smith provided a memorandum detailing evaporation and methodology for DNR review and comment.
- b. Steps to completion of draft dataset

Several aspects of the UIF methodology are still being reviewed and discussed. These include (1) the appropriate data and method of calculating evaporation at reservoirs; (2) feedback from Greenville Water on the reservoir calculations performed at Table Rock and North Saluda reservoirs; and (3) the selection of the most representative rain gages for reservoir UIF

calculations. CDM Smith will schedule a call with K.C. Price of Greenville Water on Tuesday or Wednesday. DNR is reviewing the evaporation methodology. CDM Smith is reviewing the other available precipitation data and will provide a recommendation for the most representative station to use for reservoir UIF calculations. Once these items are resolved, CDM Smith will continue with the UIF development. As UIFs are computed in tributaries with no USGS streamflow information, CDM Smith will provide to DNR and DHEC for review examples of the methodology for selecting reference basins.

3. Stakeholder Involvement

- a. Jeff Allen reported that feedback from the Saluda meeting was generally positive. Several suggested modifications were discussed, including:
 - i. Providing multiple microphones during the question and answer session.
 - ii. Performing additional review and grouping of questions prior to the question and answer session, to provide the panel with more insight into the nature of the question.
 - iii. Providing additional information to the media so they are better informed and can accurately report on the meeting.
 - iv. Getting the meeting notice and invitation out earlier, to provide interested parties more time to make accommodations to attend.
- b. First Edisto Meeting
 - i. Proposed for week of June 15th
 - ii. Date and Location options
 - iii. Clemson will look into options for holding the meeting, possibly in Orangeburg or Aiken. Clemson will circulate information on proposed dates and locations over the next week.
- c. First Broad Meeting
 - i. Proposed for week of July 20th
 - ii. Date and Location options
- d. Website and video update (Clemson)
 - i. Jeff Allen indicated that website updates have been made, and that additional enhancements are forthcoming.
 - ii. Jeff Allen reported that the introductory video is still being edited, but would be available and posted soon.

4. Data Collection Update

- a. Edisto – Waiting on data for Charleston, Orangeburg & Aiken
- b. Broad – Waiting on data for Greer, Winnsboro & Gaffney
- c. Pee Dee – Initial contact made for all WS and IN users

d. Catawba – Starting with Catawba-Wateree WMG

CDM Smith will first reach out to the Catawba-Wateree Water Management Group regarding the needed data for developing the unimpaired flow dataset and baseline model. Based on previous discussions with the South Carolina At-Large Director, Jimmy Bagley (City of Rock Hill), this is preferred before making contact with individual water users, as the CWWMG may have already compiled much of the needed information.

5. Upcoming Deliverables

- a. Edisto Framework – Week of May 11
- b. Edisto UIF Methodology – Week of May 17
- c. Saluda UIF Dataset – End of May

6. Other Items

Tim Cox reported that a number of minor modifications and enhancements have been made to the Simplified Water Allocation Model (SWAM), based on input and feedback during the DNR/DHEC training session held on April 23. Most significantly, the model now allows the user to select the type of water rights which are applicable — riparian (as is applicable in South Carolina) or prior appropriation (as is applicable in the western US). When riparian rights are selected, the model assigns priority based on physically available water and the location within the river system. In this manner, the model satisfies the needs of upstream users before downstream users.