

South Carolina Surface Water Quantity Models Monthly Summary

Invoice Date: March 24, 2015
For Services Between: February 15, 2015 and March 14, 2015
Invoice No.: 7

Summary of Work Completed During Invoice Period

Project Management and Related Tasks

- Continued internal project coordination and management tasks, including:
 - Weekly project team meetings
 - Monthly project meeting by teleconference
- Participated in a State Water Planning panel discussion at the South Carolina Rural Water Association conference on February 27.

Data Collection

- Continued contacting registered surface water users and some dischargers in the Saluda, Broad, and Edisto basins and confirming and collecting historical withdrawal and operational data.
- Collected and confirmed start dates for significant discharges not associated with a withdrawal permit.
- Received bathymetric data and lake levels for Lake Rabon.
- Contacted DHEC and certain water users to confirm and clarify interbasin transfers.
- Received hydropower operating rules for Buzzard's Roost dam on Lake Greenwood.
- Received and clarified withdrawal and discharge data for SCE&G's McMeekin Station.

Data Analysis and Modeling

Saluda

- Finished testing of the daily time step.
- Finalized model framework based on DNR comments.
- Continued development of the unimpaired flow (UIF) dataset to the confluence of the Broad River, with focus on UIFs at reservoirs.

Edisto

- No work completed.
- *Note that project startup-activities including the kickoff meeting, modeling plan, model enhancement and other activities were included under the Edisto Basin budget. The Edisto was originally identified as the pilot basin for modeling.*

Broad

- Held discussion with Duke Energy regarding the methodology they used to develop unimpaired flows in the Broad River basin for the period 1952 to 2006.

PeeDee

- No work completed.

Catawba

- Requested and received access from NCDENR for the North Carolina Catawba-Wateree CHEOPS model.

Santee

- No work completed.

Savannah

- No work completed.

Salkehatchie

- No work completed.

Stakeholder Involvement

- Held weekly conference calls with DNR, DHEC, and Clemson University to plan for and organize the first stakeholder meeting for the Saluda basin, which is scheduled for April 21 at the CU-ICAR center in Greenville.
- Developed a draft schedule for stakeholder meeting dates (target weeks) through project completion.

Summary of Upcoming Work

Over the next month, the project team will:

- Continue with data collection with the focus on contacting permitted users in the Broad, Catawba, and Pee Dee basins and finishing data collection in the Edisto basin.
- Continue populating the baseline Saluda SWAM model with withdrawals, discharges, operating rules, and other data.
- Submit draft UIF dataset for the Saluda Basin.

Issues Impacting Scope, Schedule, or Project Cost

No significant issues were identified during the previous month which might impact the overall project schedule at this time; however, delays in receiving water use data in the Saluda have extended the Saluda Basin pilot model schedule slightly.

A review of the methodology that was used by others to develop the 1952–2006 Broad River UIF dataset indicates that it was prepared using area-weighted flows from reference gages. Since this methodology is different than what is being employed in other basins, CDM Smith will discuss with DNR and DHEC the advantages and disadvantages of preparing a UIF dataset for the entire period of flow records, rather than attempting to extend the existing 1952–2006 UIF dataset.

During the project kickoff meeting, and based on DNR and DHEC review of the draft Modeling Plan, several potential out-of-scope model enhancements were identified. These include:

- A “Current Situation Analysis” for quasi-real time operational support. This functionality would provide a probabilistic analysis of current conditions at any future point in time and how conditions are likely to change within 6 or 12 months based on projected use and management patterns.
- The ability to use near-term hydrologic flow forecasts (for example, 60-day streamflow forecasts from NOAA) for month-to-month operational planning.
- Use of HEC DSSVue and DSS files for results display and analysis.

CDM Smith will continue to solicit input from stakeholders and future model users, and discuss the expected level of effort with DNR and DHEC, so that decisions can be made about prioritizing and implementing these possible future enhancements as the project moves forward.