South Carolina Surface Water Quantity Models
Monthly Summary

Invoice Date:	February 25, 2015
For Services Between:	January 18, 2015 and February 14, 2015
Invoice No.:	6

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 at DNR office
- Delivered SWAM model and project overview presentation to various environmental groups on February 13.

Data Collection

- Continued contacting registered surface water users in the Saluda, Broad, and Edisto basins and confirming and collecting historical withdrawal and operational data.
- Collected lake-level information for North Saluda and Table Rock Reservoirs, Lake Greenwood, and Lake Murray.
- Collected lake management and hydropower operations information from SCE&G and Greenwood County.

Data Analysis and Modeling

Saluda

- Continued testing of daily time step.
- Added new water-user icons and USGS gage icon to the SWAM interface.
- Updated code to allow water users to be displayed alphabetically in the water users list.
- Began updating draft model framework based on DNR comments.
- Continued development of the unimpaired flow (UIF) dataset to the confluence of the Broad River.

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

- Reviewed Broad Basin unimpaired flow methodology report (DTA, 2007) where UIFs were developed for the period 1952 to 2006 using area-weighted flow estimates from unimpaired reference streams.

PeeDee

- No work completed.

Catawba

- No work completed.

Santee

- No work completed.

Savannah

- No work completed.

Salkehatchie

- No work completed.

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 basin and finishing data collection in the Edisto basin. Begin organizing data for the Pee Dee and Catawba Basins.
- Submit updated Saluda Model Framework technical memorandum.
- Document and finish testing of the daily time step.
- Continue development of the Saluda Basin UIF dataset.
- Participate in the South Carolina Rural Water Association Water Resources Panel on February 27.
- Develop a project update presentation for the South Carolina Environmental Conference on March 16.

Issues Impacting Scope, Schedule, or Project Cost

No significant issues were identified during the previous month which might impact schedule; 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 is was prepared using area-weighted flows form 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.