South Carolina Surface Water Quantity Models
Monthly Summary

Invoice Date:	January 26, 2015
For Services Between:	December 14, 2014 and January 17, 2015
Invoice No.:	5

Summary of Work Completed During Invoice Period

Project Management and Related Tasks

- Continued internal project coordination and management tasks, including:
  - Weekly project team meetings
- Responded to DNR comments on Draft Unimpaired Flow (UIF) Methodology Report for the Saluda Basin and began preparing final report.
- Delivered SWAM model and project overview presentation to the Chamber of Commerce Environmental Technology Committee.

Data Collection

- Continued contacting registered surface water users in the Saluda and Edisto basins and confirming and collecting historical withdrawal and operational data.
- Began reviewing and organizing DHEC-provided surface water data for the Broad Basin in preparation for additional data collection from registered and permitted users.
- Collected historical agricultural withdrawal data from USDA Natural Resources Conservation Service (NRCS) and USGS Water Use Reports.

Data Analysis and Modeling

Saluda

- Finished SWAM model enhancement to incorporate daily time step and ability to select different units. Began team testing of daily time step.
- Developed draft model framework (i.e., determining location of model objects including withdrawal and discharge nodes; establishing recommended implicit vs. explicit river reaches; etc.) and provided to DNR/DHEC for review.
- Began data analysis to support development of the UIF dataset to the confluence of the Broad River.

Edisto

- Developed historical agricultural use estimate for basin (and statewide).
- *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

- Developed historical agricultural use estimate for basin (and statewide).

PeeDee

- Developed historical agricultural use estimate for basin (and statewide).

Catawba

- Developed historical agricultural use estimate for basin (and statewide).

Santee

- Developed historical agricultural use estimate for basin (and statewide).

Savannah

- Developed historical agricultural use estimate for basin (and statewide).

Salkehatchie

- Developed historical agricultural use estimate for basin (and statewide).

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 Final Unimpaired Flow Methodology Report.
- Document and finish testing of the daily time step.
- Continue development of the Saluda Basin UIF dataset.
- Deliver a presentation on the SWAM model and project overview to environmental groups on February 13, 2015.

Issues Impacting Scope, Schedule, or Project Cost

No issues were identified during the previous month which might impact schedule. 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.