

South Carolina Surface Water Quantity Models Monthly Summary

Invoice Date: September 30, 2016
For Services Between: September 1, 2016 and September 30, 2016
Invoice No.: 25

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

Data Collection

- Data collection most river basins is substantially complete; however additional follow-up calls are being made as the data is analyzed and incorporated and used for unimpaired flow (UIF) development and model development. For example, Santee Cooper provided additional daily reservoir elevations for Lake Marion, prior to 1997.

Data Analysis and Modeling

Saluda

- No work was performed. Remaining work includes finalizing the model report and submitting the final baseline model. CDM Smith will also update the original calibration model to include the latest reservoir operations enhancements and water user conservation enhancements.

Edisto

- No work was performed. Remaining work includes finalizing the model report and submitting the final baseline model.

Broad

- CDM Smith reviewed model comments and recommendations provided by DNR on 9/8/16. Adjustments to SWAM's reservoir forecasting algorithm were made, and incorporated into the model (and all other models). Remaining work includes finalizing the model report and submitting the final calibration and baseline models.

Pee Dee

- No work was performed. Remaining work includes finalizing the model report and submitting the final baseline model.

Catawba-Wateree

- Development of the draft calibration model was completed and work began on incorporating the LIP rules into the baseline model.
- The Draft Model Report was completed and submitted to DNR and DHEC for review.

Santee

- Development of the UIFs and calibration model continued.

Savannah

- Development of the UIFs for the tributaries continued.

Salkehatchie

- No work was performed. Remaining work includes finalizing the model report and submitting the final baseline model.

Stakeholder Involvement

- On September 14, CDM Smith gave a presentation at the SC Rural Water Association Annual Meeting, focusing on uses of the surface water models.

Summary of Upcoming Work

Over the next month, the project team will:

- Finish development of the Santee Basin UIFs and calibration model.
- Submit the final (complete) Saluda Basin Model Report and calibration and baseline models.
- Submit the final Edisto Basin and Salkehatchie Basin Model Reports.

Issues Impacting Scope, Schedule, or Project Cost

Schedule adjustments were made to reflect the project progress and more accurately account for future deliverables. Additional time has been spent (1) collecting water use and hydrologic information to support the UIFs and models; (2) performing model enhancements to provide increased user flexibility when modeling reservoirs and their operating rules; and (3) to allow for adequate review time of draft UIF datasets and models. In response, DNR has approved a time-only change order extending the project by five and one-half months, to the end of 2016. An updated schedule is attached.

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 has presented a scope for implementing these enhancements to DNR and DHEC. The decision on whether to implement one or more of these enhancements will likely be made once additional models are completed.

Basin and Milestone	2016					Aug				Sep				Oct				Nov				Dec			
	1-Aug	8-Aug	15-Aug	22-Aug	29-Aug	5-Sep	12-Sep	19-Sep	26-Sep	3-Oct	10-Oct	17-Oct	24-Oct	31-Oct	7-Nov	14-Nov	21-Nov	28-Nov	5-Dec	12-Dec	19-Dec	26-Dec			
Catawba-Wateree																									
Model Framework																									
1st Meeting																									
UIF Dataset																									
Calibrated Model																									
2nd Meeting & Training																									
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UIF Dataset																									
Calibrated Model																									
2nd Meeting & Training																									

2016 Proposed Stakeholder Meeting Schedule

Basin	1st Meeting Week of:	2nd Meeting Week of:
Saluda	completed	completed
Edisto	completed	completed
Broad	completed	completed
Pee Dee	completed	completed
Catawba-Water.	completed	31-Oct-16
Santee	completed	31-Oct-16
Savannah	completed	5-Dec-16
Salkehatchie	completed	completed

1 = First Meeting
 2 = 2nd Meeting
 D = Draft Completion Date
 F = Final Completion Date
 T = Training

Final Baseline models and modeling reports for all eight river basins will be submitted in November and December.