PROGRESS REPORT
FOR PERIOD ENDING NOVEMBER 30, 2018

PROJECT: Development and maintenance of a computer model to simulate groundwater flow and saltwater encroachment in the Baton Rouge Sands, Louisiana.

COOPERATING AGENCIES: Capital Area Ground Water Conservation Commission, Louisiana Department of Transportation and Development, City of Baton Rouge and Parish of East Baton Rouge

PROJECT CHIEF: Chuck Heywood

PERIOD OF PROJECT: Oct. 2012 to Sept. 2022

PROBLEM: Large water withdrawals from aquifers in East Baton Rouge Parish have resulted in northward encroachment of saltwater across the Baton Rouge fault toward the public and industrial supply wells. Groundwater flow and solute transport models are needed for the Baton Rouge sands to simulate the effects of past, current, and a variety of possible future pumping scenarios and provide a tool to evaluate possible management alternatives.

OBJECTIVE: To develop a computer model that can be used as a tool to simulate past, current, and possible future conditions in Baton Rouge area sands.

PROGRESS AND SIGNIFICANT FINDINGS:

1. Completed editorial review of the report: “Simulation of Groundwater Flow and Chloride Transport in the “1,500-Foot”, “2,400-Foot”, and “2,800-Foot” Sands of the Baton Rouge Area, Louisiana.” Text, tables, and figures were revised accordingly.
2. Submitted the draft report for USGS approval.
3. Completed colleague review of the model archive: “SEAWAT model archive of Chloride Transport in the “1,500-Foot”, “2,400-Foot”, and “2,800-Foot” Sands of the Baton Rouge Area, Louisiana”.
4. Submitted groundwater model archive for USGS approval.
5. Compiled historic groundwater withdrawal from the 400-ft sand and updated the specified groundwater withdrawals for the model multi-node well package.

PLANS FOR NEXT QUARTER:

1. Obtain USGS approval for model report and archive. Prepare the report for publication.
2. Simulate historic groundwater flow within the “400-ft,” “600-ft,” “800-ft,” and “1,000-ft” sands, and conduct initial calibration of parameters representing simulated aquifer properties by optimizing the fit of simulated to observed historic water levels.
3. Construct model files for simulating chloride transport in the “600-ft” and “1,000-ft” sands.

PROBLEMS/CONCERNS:

None.