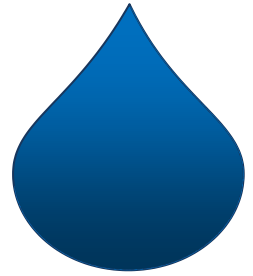


Capital Area Ground Water Conservation District



Watching out for A Treasured Earth Resource

Dedicated to the conservation, orderly development and protection of quality of ground water in the Capital Area

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NEWSLETTER

2nd Quarter 2014

Legislature takes a Stab at Groundwater Management



Several Bills and Resolutions concerning groundwater use in the Capital Area were introduced during the 2014 Louisiana Legislature. Of the seven pieces of Legislation introduced, only two, HB 789 by Rep. St. Germain and SR 171 by Sen. Claitor, made it through the process.

House Bill 789 added the East Baton Rouge Department of Public Works as a member of the Capital Area Groundwater Conservation Commission. The District testified in favor of this Bill.

Senate Resolution 171 requests the Louisiana State Law Institute to create a Water Code Committee. As this was introduced near the end of the session and was not required to be discussed in Committee, the District took no stance on the resolution.

Other pieces of Legislation included:

HB1120 JAMES

WATER/RESOURCES: Determines that the Southern Hills Aquifer System is an area of groundwater concern and a critical area of groundwater concern and provides for limitations on groundwater removal from such aquifer system.

HCR52 FOIL

WATER/RESOURCES: Urges the commissioner of conservation to evaluate the appropriateness of restrictions on withdrawals from the Southern Hills Aquifer System.

HCR89 FOIL

WATER/RESOURCES: Provides relative to the management regime for the Southern Hills Aquifer System

SB634 CLAITOR

WATER/WATERWAYS: Provides relative to groundwater and surface water.

SCR78 CLAITOR

WATER/WATERWAYS: Requests the Louisiana State Law Institute to create a Water Code Committee.

Commission Approves Management Plan

The Capital Area Groundwater Conservation Commission (CAGWCC) is putting the latest and best science available to work in launching an updated strategy in its continuing mission to combat saltwater encroachment and protect the productive use and sustainability of groundwater in the Baton Rouge area – laying out a defined plan of action in setting a schedule for the next 10 years to address the areas of greatest concern in the aquifer sands of highest priority. While the CAGWCC’s overall goal of protecting productive use and sustainability of the aquifer system have not changed, the new plan further refines the ongoing strategy of the CAGWCC in seeking the best methods to efficiently manage groundwater supplies in the region.

The 10-year guiding management plan outlines the process that will be used by the CAGWCC for evaluating sound and objective science in formulating specific management actions for each aquifer, or “sand,” in Baton Rouge. The group’s efforts will be based on the extensive modeling of the entire system by the U.S. Geological Survey (USGS), work that the city-parish government, state Department of Transportation and Development, and CAGWCC itself have committed jointly to underwrite. The USGS models for the different primary sands of the aquifer system are expected to be rolled out once a year through 2021 – with modeling of the key “1,500-foot” and “2,000-foot” sands already complete.

The CAGWCC has already taken initial action on the sands already modeled, imposing significant reductions and limitations in local

groundwater withdrawals, while continuing to pursue aggressive scientific modeling to understand the workings of the Southern Hills aquifer system close to the Baton Rouge fault, where saltwater encroachment from the south is occurring. CAGWCC also has incorporated into its plan the efforts of the Baton Rouge Water Company in installing a “scavenger well” to determine the effectiveness of that method in intercepting saltwater moving northward from the Baton Rouge fault.

CAGWCC Chairman Dennis McGehee applauded the work of his technical committee, including several members that have now rotated off the board, in converting the CAGWCC’s vision into a plan for action in both the short and longer term.

“They are a dedicated set of guys and recognized the need for us to be clear and coherent in our message and plan of action,” he said. “This plan gives us clear goals and timetables for evaluating the scientific data and for crafting the appropriate response. Just as important, it gives the public a transparent view into our process.”

The USGS models are critical to the entire process. Only when the hydraulics of groundwater in a “sand,” and potential for saltwater encroachment are modeled with proven scientific methods is the CAGWCC then able to evaluate the potential effectiveness and impacts of different management options, including pumping reductions, freshwater injection, saltwater removal south of the Baton Rouge fault, saltwater scavenging, or various

combinations of these and other actions.

Commissioner Tomaszewski to Represent Commission in LSU Study Proposal

Dan Tomaszewski has signed on as a co-investigator with LSU Engineering Professor Frank T.-C. Tsai in a proposal titled *Integrating space geodesy and groundwater-subsidence model to support aquifer management on saltwater intrusion and subsidence control in South Louisiana*.

The proposal is being submitted as part of NASA’s “Research Opportunities in Space and Earth Sciences (ROSES) 2013 Program.

Summary

The goal of this proposal is to develop an integrated remote sensing, physically based saltwater intrusion and subsidence modeling framework for the operational support of the stakeholders in South Louisiana to better manage groundwater resource in order to control saltwater intrusion and subsidence. To judge the feasibility, the project selects the Baton Rouge area as the test bed since this area is next to the Mississippi River and is transected by the listric Baton Rouge fault and Denham Springs-Scotlandville fault. Moreover, the offices of the decision-making end users are all in Baton Rouge, which will facilitate project implementation and coordination. The end users are the Louisiana Department of Natural Resources, and Capital Area Ground Water Conservation Commission, and the USGS Louisiana Water Science Center. The project will utilize the integrated framework to forecast saltwater intrusion and potential subsidence hazard for 30 to 180-

day pumping anomalies. The forecast results will be used by the end users to make groundwater withdrawal policies and management plans. To simulate saltwater intrusion and subsidence, the USGS SUB Package will be incorporated into the USGS SEAWAT model. The project will utilize the data from NASA UAVSAR as well as satellite interferometry data such as C-band (ERS, Envisat, and Radarsat) and L-band (ALOS-1) to calibrate and constrain the coupled groundwater-subsidence model. Moreover, the project will integrate airborne and satellite remote sensing measurements with in-situ GPS data from LSU Center for Geoinformatics (C4G) network and the extensometer data from the USGS Louisiana Water Science Center to quantify groundwater withdrawal-induced subsidence and faulting-driven subsidence. The integrated framework will be used to conduct near-term and medium-term groundwater management scenarios and forecasts, enabling an optimized groundwater management, and providing recommendations of groundwater sustainability and subsidence control strategies to the decision makers.

The results will help the CAGWCC better manage groundwater for the Capital Area.

GAO Releases Report

Freshwater: Supply Concerns Continue, and Uncertainties Complicate Planning

Why GAO Did This Study

The nation's water bodies have long supplied Americans with abundant freshwater, but recent events, such as the ongoing California drought, have focused attention on competing demands for this limited resource. In

the United States, the states are primarily responsible for managing freshwater resources, and many federal agencies influence states' management decisions. In 2003, GAO issued a report providing an overview of trends in freshwater availability and use, as well as states' views on ways the federal government could assist states to help meet future water management challenges.

GAO was asked to report on changes since 2003. This report examines (1) issues related to freshwater availability and use; (2) expectations for water availability and use over the next 10 years and how these expectations may affect water planning; (3) steps, if any, states have taken to manage freshwater resources; and (4) actions, if any, federal agencies have taken to support management of freshwater availability and use and perspectives from state water managers, experts, and literature on what the federal government can do to enhance its support. GAO conducted a survey of 50 state water managers with a response rate of 100 percent. GAO also reviewed reports and documents from entities, such as federal agencies and environmental organizations, and interviewed federal officials and experts, including environmental and industry officials, to understand freshwater issues across the nation.

What GAO Found

Key issues related to freshwater availability and use—such as concerns about population growth straining water supplies, lack of information on water availability and use, and trends in types of water use—remain largely unchanged since 2003, according to state water managers, experts, and literature. In addition, GAO's review found certain issues, such as the impacts of climate change and extreme weather events, including droughts and floods, on water resources and the effect of the energy sector on water

quantity and quality, have gained prominence.

According to state water managers, experts, and literature GAO reviewed, freshwater shortages are expected to continue into the future. In particular, 40 of 50 state water managers expected shortages in some portion of their states under average conditions in the next 10 years. However, uncertainty stemming from factors, such as patterns of economic growth and land use change, is likely to complicate future state water managers' planning efforts.

GAO's review found that over the last decade states have taken a number of steps to improve management of freshwater availability and use. These include conducting freshwater resource studies and assessments, developing drought preparedness plans, developing water management tools, taking conservation actions, and taking steps to address climate change impacts on water resources.

Since 2003, federal agencies have taken various actions to support freshwater management. For example, the Department of the Interior's U.S. Geological Survey initiated the National Water Census to assess water availability and use across the nation. Also, numerous agencies participate in the National Drought Resilience Partnership, created in 2013. In addition, state water managers, experts, and literature GAO reviewed identified actions the federal government could take to support state water management efforts, including increased collaboration among federal agencies and with states and other stakeholders, and maintaining and collecting key data. The report can be found at:

<http://www.gao.gov/products/GAO-14-430>

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