



CAPITAL AREA  
GROUND WATER  
CONSERVATION  
COMMISSION

# 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*

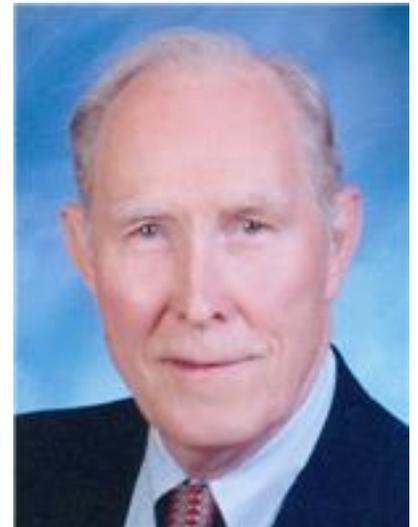
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NEWSLETTER

June, 2016

## Former Director George Cardwell Passes Away

George Thomas Cardwell passed away on Saturday, July 10, a week short of his 94th birthday. He was a long time resident of Baton Rouge and later of New Orleans. Mr. Cardwell was born in New London, Missouri, the son of the late Charles and Ruth Cardwell. He was predeceased by his wife Del Cardwell, a sister Leah Sutton, a brother Ralph Cardwell, and brother in Law, William Key. He is survived by his sister, Emily Nunnelly and brother Jack Cardwell, his son Terry Cardwell and daughter Lynn Jenkins, his grandchildren, Wesley Cardwell and wife Kathryn, Katherine Cardwell Davis and husband Matthew, Joey Cardwell and wife Allison, Douglas Jenkins with whom he shared a special bond, Rebecca Jenkins, and his great grandchildren, Landon Cardwell, Samantha Cardwell, Olivia Cardwell, Henry Davis, Charlotte Cardwell, Abby Cardwell, and Pierce Davis. Mr. Cardwell was a veteran of World War II, serving in the US Navy at Iwo Jima and Guadalcanal. He attended Central Methodist College, then graduated from The University of Missouri with a degree in Geology. He worked for the US Geological Survey, served as Director of the Capital Area Ground Water Conservation District, and worked as a private consultant. Mr. Cardwell was a member of the University Methodist Church in Baton Rouge and St. Luke's Methodist Church in New Orleans. He was a Charter Member of the D-Day Museum, The Geological Society of America and was a Founding Life Member of the Baton Rouge Geological Society.



(adapted from TheAdvocate.com)

## Baton Rouge Water Company Receives Conservation Award

The Capital Area Ground Water Conservation Commission (CAGWCC) is pleased to announce that its Awards Committee has selected the Baton Rouge Water Company to receive the 2016 Leo Bankston Award for the innovative use of technology in groundwater protection and/or conservation. In particular, the committee is recognizing the work of Baton Rouge Water in the planning, design, and installation of the “scavenger” well system in the 1500-foot sand of the Baton Rouge Aquifer System intended to protect the large public supply center at the Lula Street Pumping Station from further saltwater encroachment. Nearly two years of data show the “scavenger” system to be working as predicted. Importantly, the successful implementation of this project



has served as a guide for further action by the CAGWCC in its approach to management of saltwater encroachment in the 2000-foot sand. The Awards Committee deemed the technological innovation of the “scavenger” well system and its impact on future management actions to be determining factors in the final evaluation.

The Awards Committee found the decision an especially tough one with several quality applicants. The committee would like to commend Exxon Polyolefins for their conservation measures in the use of new nozzles at their hopper car wash operation. The

committee especially would like to recognize the leadership of the ExxonMobil Baton Rouge Complex, including the refinery and chemical plant, for their significant reduction in regulated groundwater use from the 2000-foot sand through the use of clarified river water and the movement of production to the unregulated 400-foot sand. The reduction from the 2000-foot sand totals approximately 3.6 million gallons a day, or a 43% drop from average daily usage in 2012. This very large reduction required a substantial commitment of time and resources in adherence to the CAGWCC’s 2000-foot sand management plan. The efforts of the ExxonMobil team to meet the spirit and letter of this management plan are hereby acknowledged, with the recommendation that the ongoing reduction be submitted for consideration as a very worthy candidate for the 2017 Bankston Award.

The Bankston Award was first presented in 2003 in memory of Leo Bankston, who was instrumental in the creation of the CAGWCC and served as founding chairman in 1975. It is given on an annual basis to any groundwater user in the Capital Area Ground Water Conservation District (CAGWCD) that has implemented significant reductions in groundwater use or has in some other way helped protect the Baton Rouge Aquifer System. Previous recipients include Honeywell, ExxonMobil, Georgia Pacific, and the City of Baker.



## [Map of aquifer below Baton Rouge can help keep saltwater away](#)

BY AMY WOLD ([awold@theadvocate.com](mailto:awold@theadvocate.com))

Researchers at LSU have mapped a section of the water-containing sand layers of the Southern Hills Aquifer, something that can prove invaluable to the Capital Area Ground Water Conservation Commission as it decides how to deal with saltwater intrusion.

The map of the aquifer, which provides the Baton Rouge residents and businesses with water, is the result of years of work by Frank Tsai, professor in the Department of Civil and Environmental Engineering at LSU. It is included in a three-year project, which began last year and involved input from ExxonMobil and Georgia Pacific, the commission and the university.

“We really know how to help the commission plan their remediation designs,” Tsai said.

To get the data for the mapping, project workers took information from more than 500 wells to determine where sand layers occur. The layers aren't uniform, rising and falling based on where the river deposited the sand.

The goal for the first year of work was to build the computer model for 11 layers of sand from 400 feet to 2,800 feet.

Tsai now will look at how to slow or stop the saltwater intrusion. Options include scavenger wells that help draw up salt water away from freshwater wells, freshwater injection that helps push away salt water, and horizontal drilling to get the most benefit for the least cost. All of these options will require the acquisition of property to locate the wells.

Tsai said the commission will recommend places for the wells, and he will run the information through the computer model to see if there are the right conditions underground.

The final year is set aside to fine-tune a plan to stem the flow of salt water. That would include deciding how much water needs to be removed, or pumped into the well, to optimize the desired result of keeping salt water at bay, he said.

The computer model also can be used to answer a variety of questions such as how much water flows in and out of the Baton Rouge portion of the aquifer. The model also can help manage groundwater resources.

“Our groundwater model can not only look into groundwater issues; we can also look at energy issues,” Tsai said.

Follow Amy Wold on Twitter, @awold10.

## FINAL DISPOSITION OF GROUNDWATER RESOURCE BILLS FROM THE 2016 REGULAR SESSION OF THE LOUISIANA LEGISLATURE

HB 526 R. Carter – Requires permits for industrial users of groundwater that withdraw greater than 100,000 gallons a day. Considered in House Natural Resources, 4/13/16.

HB 528 R. Carter – Prohibits the withdrawal of water from a natural and scenic river or ground water for the purpose of hydraulic fracturing. Pending House Natural Resources.

HB 553 Marcelle – Designates East Baton Rouge, West Baton Rouge, East Feliciana, West Feliciana, and Pointe Coupee as a critical area of groundwater concern and provides for limits on membership on certain governing bodies and restrictions on groundwater use in critical areas. Involuntarily deferred, 4/27/16.

HCR 115 Carter – Urges and requests the Office of Conservation to study the effects of ground water withdrawals from the Southern Hills Aquifer System. Passed House, 79-3. Passed Senate, 33-0. Sent to Secretary of State.

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