



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

4th Quarter 2013

CAGWCC Plan for the Management of Salt Water Migration in the “1,500-Foot” and “2,000-Foot” Sands

These actions have been or will be implemented by ground water users in East Baton Rouge Parish that are under the jurisdiction of the Capital Area Ground Water Conservation Commission (CAGWCC) in order to define and manage salt water migration across the Baton Rouge Fault in the “1,500-foot” and the “2,000-foot” sands of the Baton Rouge Aquifer System.

“1,500-Foot” Sand

1. A CAGWCC resolution on 07/18/88 affirmed that industry will reserve the “1,500-foot” sand for public supply.
2. CAGWCC, East Baton Rouge Parish (EBR), the Louisiana Department of Transportation and Development (DOTD) and the US Geological Survey (USGS) have partnered to produce a computer model depicting and predicting ground water elevations and flow patterns in the “1,500-foot” sand.
3. Baton Rouge Water Company (BRWC) and CAGWCC contracted Dr. Frank Tsai of LSU to model salt water encroachment and mitigating actions in the “1,500-foot” sand, and that work was completed in 2010. BRWC through its consultant, Lane Hydro, completed a “Remedial Options for Saltwater Encroachment in the 1,500-Foot Sand” study in 2011 that included a ground water flow model. This work is assisting BRWC’s decision making for pumping strategies for this aquifer.
4. BRWC plans to install a scavenger well by 2014 to capture and remove salt water from the base of the aquifer.
5. BRWC will continue to operate wells in the “1,500-foot” sand and blend water to meet drinking water standards, and it will add these wells to the aquifer management strategy if these standards can no longer be met.
6. Users will limit production from the “1,500-foot” sand to 25 million gallons per day (MGD) averaged over each calendar year in East Baton Rouge Parish.
7. Users of the “1,500-foot” sand will install any new well northward away from the Baton Rouge Fault.
8. Additional actions to control saltwater migration will be implemented as computer modeling results are known, if needed.

“2,000-Foot” Sand

1. CAGWCC Resolution 10/15/91 adopted a conservation policy for the “2,000-foot” sand with a limit of 26 MGD average ground water withdrawal and a maximum water level depth of 320 feet below land surface. Users have complied with these limits.
2. Users will limit pumping from the “2,000-foot” sand to 24.5 MGD averaged over each calendar year in East Baton Rouge Parish. In the Baton Rouge industrial district, bounded by Chippewa St. extended west, the Mississippi River, Irene Road-Heck Young Road extended east and Plank Road, users will reduce pumping from the “2,000-foot” sand to 15.25 MGD, a reduction of 2 MGD, by the end of 2014 to further manage salt water migration. At the end of 2014 the pumping limit for East Baton Rouge Parish will be 23.5 MGD and the pumping limit for the Baton Rouge industrial district will be 15.25 MGD.
3. Users of the “2,000-foot” sand will install any new well northward away from the Baton Rouge Fault.
4. CAGWCC, DOTD, East Baton Rouge Parish (EBR) and the US Geological Survey (USGS) have partnered to produce a computer model depicting and predicting ground water elevations, flow patterns and salt water migration in the “2,000-foot” sand. The model will be maintained and updated as new information becomes available. Additional simulations of salt water movement will be conducted in 2013 to simulate a ground water withdrawal pattern in East Baton Rouge Parish that effectively mitigates salt water encroachment in the “2,000-foot” sand.
5. CAGWCC will consider additional management requirements for the “2,000-foot” sand after these simulations are known in 2013, and it will modify the management plan as the “2,000-foot” sand model is refined in later years.

Upcoming Meetings

Please note that the Technical Committee will meet on Tuesday, December 3, at **9:00 a.m.**, in conference room of the U.S. Geological Survey, 3535 South Sherwood Forest Boulevard, Baton Rouge, Louisiana. The regular meeting of the Board of Commissioners will be held at 9:30 a.m., Tuesday, December 10, 2013 in the same location. The Administrative Committee will meet at 8:30 a.m. in the District conference room, Suite 137, 3535 South Sherwood Forest Boulevard.

Recent Meetings

Technical Committee

The Technical Committee met on Tuesday, September 10, in the U.S. Geological Survey conference room at 3535 S. Sherwood Forest Blvd., Baton Rouge, Louisiana.

Commission Meeting Highlights

The Capital Area Ground Water Conservation Commission met at 9:30 a.m. on September 17, 2013 in the U.S. Geological Survey conference room at 3535 S. Sherwood Forest Blvd., Baton Rouge, Louisiana. The meeting was called to order by the Chairman, Mr. Joey Hebert.

The following Commissioners were present: John Adams, Trey Argrave, Dale Aucoin, John Cadenhead, Brian Chustz, Johan Forsman, Joey Hebert, Barry Huggins, Amelia Kent, Dennis McGehee, Julius Metz, Rosemary Rummeler, Mark Walton and Dr. John Westra.

Others attending the meeting were: Tony Duplechin and Shawn Scallan, Capital Area Ground Water Conservation District; John Lovelace, U.S. Geological Survey; Henry Graham, Louisiana Chemical Association; Matthew Reonas, Louisiana Department of Natural Resources; Ryan Simpson, Baton Rouge Area Chamber; Sayi Malineni, Environmental & Energy Professional; Don Dial, former Director; Randy Hollis, Owen & White; and Dan Tomaszewski, retired USGS.

The Administrative Committee met in the Capital Area conference room earlier in the morning.

Mr. Walton stated that the Commission needs to establish a time limit for public input prior to the vote on an agenda item at their meetings, and put forth as motion to that effect.

Mr. Huggins seconded this motion and it passed unanimously.

The Administrative Committee and Technical Committee reports were given by Messrs. McGehee and Duplechin, respectively.

At the request of Mr. Hebert, the report of the Technical Committee was made by Director Anthony Duplechin.

The Director also reported that the Commission received a signed copy from East Baton Rouge Parish of the cooperative contract for the USGS project, "Development & Maintenance of a Computer Model to Simulate Groundwater Flow and Saltwater Encroachment in the Baton Rouge Sands, Louisiana".

Mr. Walton stated that the Nominating Committee recommended Mr. Dennis McGehee for the office of Chairman; Mr. Dale Aucoin for the office of Vice-Chairman; and Ms. Amelia Kent for the office of Treasurer. There being no further nominees from the floor, Mr. Hebert made a motion to accept the nominees. Mr. Walton seconded the nomination and it passed unanimously.

Welcome Our New Commissioner

Mr. Mark Walton's term as board nominee for the Commission will expire December 1, 2013. Mr. Dan Tomaszewski was recommended as the board nominee. Mr. Tomaszewski is retired from the U.S. Geological Survey.

Interest in Groundwater Picking Up

Lt. Gen. Russel L. Honoré, US Army (Retired), who rose to national prominence as the so-called Katrina General, is planning to get heavily involved in the 2014 regular session with a package of "environmental justice" bills. Honoré is still looking for legislative sponsors but said the

bills will include, among other items, stronger regulations for aquifers, with an early focus on Baton Rouge.

The Louisiana Water Resources Commission is likewise trying to finish a comprehensive proposal for water management, though it may be pushed back to 2015. But if it does complete the task, and Honoré accomplishes his mission, the stage will be set for one of the highest profile debates on water the Legislature has seen in recent memory. (from: Greater Baton Rouge Business Report-November 11, 2013)

Supporters of a lawsuit against oil and gas companies over coastal land loss have organized a new nonprofit, Restore Louisiana Now, that will discourage the Louisiana Legislature from intervening in the suit. "This is a fight for the survival of this state and our way of life," John Barry, former vice president of the Southeast Louisiana Flood Protection Authority - East, told a group of environmental activists at the Burden Conference Center at a meeting held on November 15th. Lt. Gen. Russel Honoré headlined the meeting. "The industry has been given a free ride to do what they want in Louisiana," Honoré said. Topics included the Bayou Corne sinkhole, saltwater intrusion into the Baton Rouge-area water supply and safety issues at Louisiana's petrochemical plants and refineries. (from: Greater Baton Rouge Business Report-November 15, 2013)

LA Water Resources Commission Holds Workshop

Water Resources Commission Chairman introduced the Water Resources Commission and Water Management Advisory Task Force members in attendance and provided an overview of the challenges facing the state with regards to long-term water planning and the importance of resource sustainability.

Education Session: Where We're At With Water Planning

Jerome "Zee" Zeringue, Executive Director of the Coastal Protection and Restoration Authority (CPRA) gave a presentation on the Coastal Master Plan

Karen Gautreaux of The Nature Conservancy of Louisiana, former Chair of the Ground Water Resources Commission and current member of the Water Resources Commission, gave a presentation on the initial development of the state groundwater management program

Gary Snellgrove, Director of the Environmental Division in the Office of Conservation, gave a presentation on the evolution of groundwater management since 2003

James Devitt, deputy general counsel for the Department of Natural Resources, gave a presentation on the creation and operation of the Surface Water Management Program.

Planning Session: Where We Need to Go

Mark S. Davis of Tulane University, and a member of the Water Resources Commission, gave a broad review of current water demand and management issues in the 21st century, and Louisiana's place within this matrix

Matt Reonas, Office of Conservation, outlined the background and development of this workshop as a "next step" towards long-term water resource planning before turning the session over to a roundtable panel.

Roundtable Discussion

The facilitator was Nick Speyrer of Speyrer Consulting. The panelists included members of the Water Resources Commission, unless otherwise noted: Brad Spicer, LDAF; Harold "Hal" Leggett, industry representative; Pat Credeur, La. Rural Water Assn., Water Mgmt. Advisory

Task Force; Jim Pratt, Sabine River Authority-LA; Chris Knotts, DOTD; Charles "Chuck" Killebrew, CPRA.

Baton Rouge Groundwater

First in a series

Recently there has been a lot of discussion about groundwater in the Baton Rouge area. It's time to take a look at work that has been done to identify the various sands in the Baton Rouge area.

Groundwater in the Baton Rouge area is found in ten sands named after their depths in the Baton Rouge industrial area north of downtown Baton Rouge along the Mississippi River: the "400-foot", the "600-foot", the "800-foot", the "1,000-foot", the "1,200-foot", the "1,500-foot", the "1,700-foot", the "2,000-foot", the "2,400-foot", and the "2,800-foot" sands.

"400-foot" and "600-foot" sands - The major hydrologic boundaries for the "400-foot" and "600-foot" sands are the northern limit of the aquifers in southern Mississippi, the Baton Rouge fault in the south, and the Mississippi River through the Mississippi River alluvial aquifer, which is hydraulically connected with the sands of the "400-foot" and "600-foot" aquifers.

The Baton Rouge fault is a significant barrier to groundwater movement in the "400-foot" and "600-foot" aquifers at Baton Rouge. The "400-foot" aquifer south of the fault is connected to the "600-foot" aquifer north of the fault. The differences between water levels across the fault in these aquifers indicate that the fault restricts flow from the south toward the cone of depression beneath the industrial district of Baton Rouge.

Whiteman (1979) determined that there is a northward component of flow in the "400-foot" sand south of the fault, which indicates that some leakage does occur through the fault.

East of East Baton Rouge Parish, the Baton Rouge fault may not be a barrier to ground-water flow in the "400-foot"

and "600-foot" aquifers. A north-south geo-hydrologic section east of the Amite River indicates that the "400-foot" and "600-foot" aquifers are merged and thick sands and gravels of these aquifers are adjacent to each other across the fault.

South of the Baton Rouge fault at Baton Rouge, the "400-foot" sand is hydraulically connected with the Mississippi River alluvial aquifer.

Water levels in the "400-foot" sand fluctuate with the stage of the Mississippi River, as do the water levels in the shallow Pleistocene sands near the river.

North of the Baton Rouge fault in the industrial area, the "400-foot" and "600-foot" sands are not connected to the Mississippi River at the present river channel. The "400-foot" sand is hydraulically connected to the river through the Mississippi River alluvial aquifer west of the present river channel.

(from Kunianski - 1989)



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