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State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION

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COMMISSIONER OF CONSERVATION

January 14, 2013

Anthony J. Duplechin, Director
Capital Area Groundwater Conservation Commission
3535 South Sherwood Forest Blvd., Suite 137
Baton Rouge, LA 70816-2255

Re: Agenda for CAGWCC Meeting Scheduled on Tuesday, March 19, 2013

Dear Mr. Duplechin:

I want to thank you for your participation and input at our meeting with USGS staff on December 13, 2012 on the matter of saltwater encroachment in the Southern Hills aquifer system in the Baton Rouge area. That meeting and the December 22, 2012 presentation by USGS on preliminary model results of aquifer groundwater flow and solute transport scenarios for the 1500 and 2000 foot sands were both beneficial to our ongoing efforts to manage groundwater resource sustainability in the Baton Rouge area. Seeking to continue timely forward progress on this matter, I am respectfully requesting that two items be added to the agenda for the March 19th CAGWCC meeting.

As you are aware, the Capital Area Groundwater Conservation District was established by the Louisiana Legislature in 1974 to operate as the front line manager and provide for the efficient administration, conservation, orderly development and supplementation of groundwater resources for the parishes of East Baton Rouge, East Feliciana, Pointe Coupee, West Baton Rouge and West Feliciana. To that end, a Board of Commissioners was appointed and empowered to take all necessary steps to prevent intrusion of salt water or any other form of pollutant into any aquifer or aquifers, including the powers to operate withdrawal wells for the extraction of salt water or water affected by any pollutant and to dispose of such water by injection or otherwise; to operate injection wells to create freshwater barriers against salt water intrusion or the intrusion of any other pollutant; and to control pumping rates by users in any area threatened by intrusion of salt water or other form of pollutant.

You are also aware that the Office of Conservation, acting at the request of the Baton Rouge Metropolitan Council and the Capital Region Legislative Delegation, held a public hearing on the issue of saltwater encroachment in the 1500 and 2000 foot sands of the Southern Hills aquifer system. In light of the responses received subsequent to the hearing, the Office of Conservation has made the following observations:

1. A public hearing was held on April 12, 2012 to take testimony, receive evidence and hear public comments in order to determine if the water table under East Baton Rouge Parish is being lowered because of excessive pumping of groundwater, and whether the lowering of the water table is causing the acceleration of the intrusion of saltwater in the 1500 and 2000 foot sands of the Southern Hills aquifer system from south of the Baton Rouge fault into freshwater north of the fault.

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2. Public comments were provided prior to, during and after the public hearing; all filed into the agency's public record under Office of Conservation Public Hearing Docket No. ENV 2012-02.
3. Aquifer sustainability is defined by Louisiana Ground Water Management law and regulations as "the development and use of ground water in a manner that can be maintained for the present and future time without causing unacceptable environmental, economic, social, or health consequences."
4. Saltwater encroachment has been identified in the freshwater sands of the Southern Hill Aquifer System by scientist since 1964. In a report entitled Salt-Water Encroachment in Aquifers of the Baton Rouge Area, Louisiana Mr. Rollo of the USGS recognized that saltwater was migrating toward the Industrial District in the 600 foot and 2000 foot sands and toward the Lula Street pumping station in the 1500 foot sand. Most recent published information from the United States Geological Survey (USGS) indicates that saltwater continues to encroach into the 1500 and 2000 foot freshwater sands further away from the Baton Rouge fault toward respective pumping center at a rate that threatens to compromise long-term sustainability of the aquifer system in the Baton Rouge area.
5. Based on USGS research, although there is an extensive thick clay layer between the 1200 foot and 1500 foot sands in the Baton Rouge area, it is expected that water withdrawal from one sand could have a measurable impact on the other sand. It is also expected that water withdrawal from the 1500 foot and 1700 foot sands could also have a measurable impact on each other. For purposes and intentions of this letter, references herein to the 1500 foot sand shall represent collectively the 1200, 1500 and 1700 foot sands.
6. The USGS's solute transport and groundwater flow model for the 1500 and 2000 foot sands of the Southern Hill aquifer system underlying the Baton Rouge area which was slated to be completed last October, is anticipated to be complete and available for use in predicting saltwater encroachment in the area in the Spring of 2013. As reported by a representative of the USGS at the December 2012 Water Resources Commission meeting, based on the current level of pumpage, the 1500 and 2000 foot aquifer sands in the Baton Rouge area are not sustainable relative to salt water intrusion and there is really no question that there will have to be some changes, reductions, the reductions in pumping, or movement of wells further from the fault to address the issue, or use of scavenger wells to pump the salt out of these sands.
7. The Commissioner of Conservation ordered that certain groundwater well owners with wells located in the 1200, 1500, 1700 and 2000 foot sands in the Baton Rouge area shall provide to the Office of Conservation on or before September 28, 2012 a written report of its company's current annual groundwater withdrawal volume per water well, projected near-term (within 5 years) annual groundwater withdrawal volume per existing and new well(s), projected long-term (5 to 30 years) annual groundwater withdrawal volume per existing and new well(s) and current, near-term and long-term plans for reducing groundwater withdrawal or preventing further migration of saltwater toward its well(s).
8. Projections submitted as a result of the above described order were received by the Office of Conservation, but showed no indications of a reduction in groundwater use.

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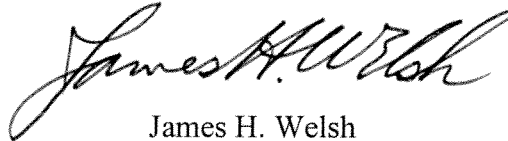
9. The 1500 and 2000 foot sands of the Southern Hills aquifer system located in the Baton Rouge area are not being used in a manner that can continue indefinitely without causing unacceptable environmental, economic, social, or health consequences.

10. Historic and recently published USGS potentiometric surface maps^{1,2,3,4,5} of the 1500 and 2000 foot sands clearly depict respective cones of depression with the shallowest closed contours encompassing respective historic and currently active pumping centers located at Lula Street and within the Industrial District.

While we await the final release of the USGS report and model, since the record contains sufficient monitoring data to affirmatively state that the groundwater withdrawal in the Baton Rouge area fails to meet the statutory definition of sustainability, we are requesting the Capital Area Groundwater Conservation Commission to add the following two items to the agenda for the March 19th meeting:

- 1) Recognition of Unsustainable Pumping Centers at the Lula Street Pumping Station and the Industrial District Requiring Corrective Action;
- 2) General discussion of management actions available and, as the front line manager on this issue, what solutions does the Capital Area Groundwater Conservation Commission propose to resolve the issue.

Yours very truly,



James H. Welsh

AR Commissioner of Conservation

1. Illustration Plates 4 & 5, C. February 1967 Water Levels, Salt-Water Encroachment in Aquifers of the Baton Rouge Area, Louisiana, Water Resources Bulletin No. 13, Department of Conservation, Louisiana Geological Survey & Louisiana Department of Public Works, Baton Rouge, La., August 1969.

2. Griffith, J.M., and Lovelace, J.K., 2003, Louisiana ground-water map no. 16: Potentiometric surface of the 1,500-foot sand of the Baton Rouge area, Louisiana, spring 2001: U.S. Geological Survey Water-Resources Investigations Report 03-4021, 2 sheets.

3. Prakken, L.B., 2004, Louisiana ground-water map no. 17: Generalized potentiometric surface of the Kentwood aquifer system and the 1,500-foot and 1,700-foot sands of the Baton Rouge area in southeastern Louisiana, March-April 2003: U.S. Geological Survey Scientific Investigations Map 2862, 2 sheets.

4. Tomaszewski, D.J. and Accardo, D., 2004, Louisiana Ground-Water Map No. 20: Potentiometric Surface of the 2,000-foot Sand of the Baton Rouge Area, Louisiana, May 2002: U.S. Geological Survey Scientific Investigations Map 2872, 2 sheets.

5. Rollo, J.R., 1969, Salt-Water Encroachment in Aquifers of the Baton Rouge Area, Louisiana: Louisiana Geological Survey Water Resources Bulletins #13, 45 pp. plus map pack.