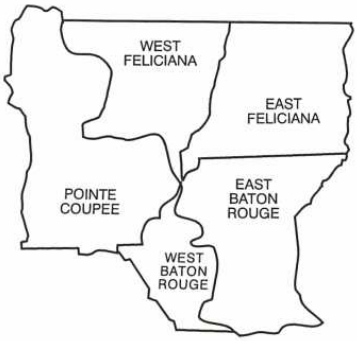

Capital Area Ground Water Conservation Commission

Watching out for A Treasured Earth Resource

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

Volume 35, Number 3 **NEWSLETTER** *January 2010*

Commission & District News

Scheduled Meetings. – The Technical Committee will meet at 1:30 p.m. Tuesday, March 9, 2010 in the conference room of the U.S. Geological Survey at 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, March 16, 2010 in the conference room of the U.S. Geological Survey. The Administrative Committee will meet at 8:30 a.m. in the Commission office, Suite 129, 3535 South Sherwood Forest Boulevard, one hour before the regular meeting.

December Meetings – The Technical Committee met Tuesday, December 1, 2009, in the conference room of the U.S. Geological Survey at 3535 South Sherwood Forest Boulevard, Baton Rouge, Louisiana.

John Lovelace gave a presentation on the Southern Hills aquifer system which includes fresh water sands from the "400-foot" sand down through the "2,800-foot" sand in the Baton Rouge area. These sands are correlated with sands of similar age extending eastward across the Florida Parishes. Cross sections across this area by Griffith (Water Resources Technical Report 72, 2003) show the relation of Baton Rouge area sands to those which have been given names for geographic locations further east such as Hammond, Covington and Slidell aquifers.

Pumpage from the entire system is about 320 million gallons per day. Water level declines depend on location of the well. In the recharge area declines are less than one foot per year. South of the recharge area declines reach one foot per year or more. Areas of heavier pumpage show declines greater than one foot per year in most sands.

Jason Griffith gave a brief progress report on the modeling study in Baton Rouge. A more detailed report was mailed to each Commissioner. Plans for next quarter include working on flow patterns across the Baton Rouge fault, compiling chloride data and working on the SEAWAT model.

A brief discussion was held concerning two long-term observation wells (EB-824 and EB-825) that were destroyed in a construction area. The prospect of recovery of these wells is not known but the Commission plans to set up a meeting with Parish DPW, the contractor, and USGS to decide what measures can be taken. Legislation is needed to penalize those who destroy wells illegally.

Well Failure

The Baton Rouge Advocate reported on December 2nd a well failure in the town of Independence. The article reported that the well had not been "cleaned or inspected" for 12 years. Water well pumps, like anything else mechanical, should have a periodic inspection and maintenance schedule. The age of the well was reportedly unknown, which is an indication that no records were kept and no one had a clue that the well might someday fail. Water pressure was reported to drop to 10 pounds per square inch requiring school children to be sent home and emergency measures to be taken at a local hospital.

In our April 2008 newsletter we reported on an article written in a trade journal entitled "How Many Ways to Kill a Pump". A brief description follows:

1. **Ignore it** – This is a sure sign of trouble. Periodic checks should be made of the pump and motor.

2. **Strangle it** – Set the pump at a level that allows it to operate at less than maximum suction head. Cavitation caused by a too-high pump setting or clogged strainer, will result in an overworked pump.

3. **Fry it** – This may happen by closing down valves to control discharge. A pump should operate under the conditions for which it was designed.

4. **Overtax it** – Work it at higher than rated capacity and you can count on a broken shaft or bearing.

5. **Rip it apart** – If the pipes don't match with the pump, get out the come-along and contort the components until they fit.

6. **Vibrate it to death** – Misaligning the pump and motor can set up a vibration that will work on the bearings and shaft.

Metering for Baker. – The City of Baker has approved a plan to meter their public water supply usage. Previously the city operated on a flat-rate plan which is not conducive to good water conservation. Pricing that is based on meter usage should encourage users to be more conservative in the use of their valuable ground-water resource. Baker presently has four wells pumping from the "2,800-foot" sand.

Annual pumpage figures for 2007 and 2008 show an average pumpage somewhat above 2 million gallons per day. It will be interesting to compare this figure with pumpage after the installation of meters.

10-Year Summary of Pumpage

Table 1 records the average daily pumpage from each major aquifer for the period 1999-2008. Totals for each year are summarized on the bottom line. Total average pumpage for the period has remained relatively stable in the range of 160-170 million gallons per day (mgd). Maximum pumpage was recorded in 2000, a year of drought. A sizeable jump was noted in 2006, and may be explained by the increase in population after hurricane Katrina. A discussion of individual aquifer pumpage follows. (See Table 1 and Figure 1 reference)

"400-foot" sand. – Down slightly in the last half of the decade.

"400/600-foot" sand. – Relatively flat except for 2008 when pumpage decreased by 6 mgd. In 2007, Georgia-Pacific initiated technology improvements in the operation of its 20 production wells. Comparative figures for 2009 should be available by April 2010.

"600-foot" sand. – Relatively flat. Peak pumpage in 2006.

"800-foot" sand. – Pumpage increased after 2005 as new wells were completed.

"1,000-foot" sand. – Increase at the end of the period.

"1,200-foot" sand. – Slight upward usage trend over the 10-year period.

"1,500-foot" sand. – Upward usage trend over the first half of the decade.

"1,500/1,700-foot" sand. – This pumpage was previously classified as pumpage from the "2,000-foot" sand. The new classification was made in 2004 and was agreed upon by the Commission, the U.S. Geological Survey, and Louisiana Department of Transportation and Development. The conclusion was based on updated mapping of the aquifers in the Baton Rouge area (USGS Technical Report 72).

"1,700-foot" sand. – Total pumpage showed a sharp increase over the last half of the decade. The increase is attributed to the addition of new public-supply wells completed in East Baton Rouge Parish.

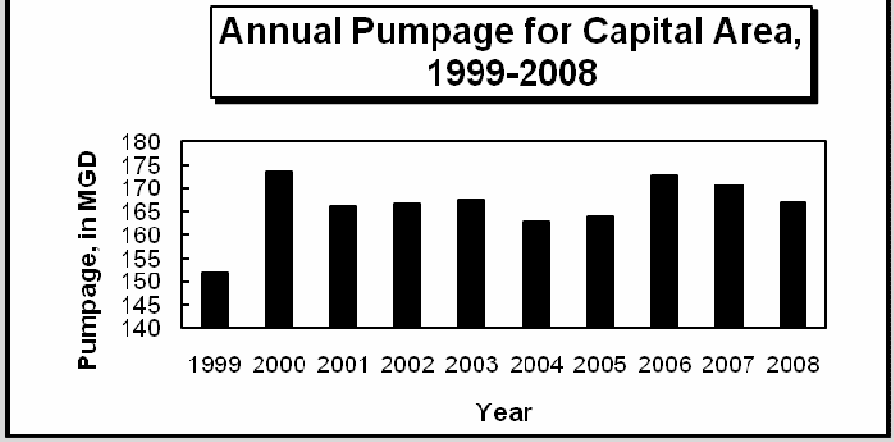

Figure 1

"2,000-foot" sand. – After a high of 41 mgd in 2000, pumpage settled back to a 30-40 mgd range until 2004. At that point total pumpage decreased further as some wells in East Baton Rouge Parish were re-classified as "1,500/1,700-foot" sand wells.

"2,400-foot" sand. – Pumpage shows a generally flat trend over the period.

"2,800-foot" sand. – Relatively flat since 2000. This sand is pumped for public-supply and industrial uses mostly in northern East Baton Rouge Parish.

Climate News

The Arctic Ocean is warming up, icebergs are growing scarcer and seals are finding the water too warm according to a report sent to the Commerce Department from the American Consulate at Bergen, Norway. Fishermen, seal hunters and explorers point to a radical change in climate and hitherto unheard of temperatures. Soundings to a depth of 3,100 meters show that the Gulf Stream is still very warm. Great masses of ice have been replaced by moraines and at many places well known glaciers have disappeared. Schools of herring and smelt, which have never ventured this far north, are reported in the old seal fishing grounds. Within a few years it is predicted that, due to the ice melt, the sea will rise and make most coastal cities uninhabitable. (*This article was reported by the Associated Press and printed in the Washington Post on November 2, 1922.*)

Reports

Tomaszewski, D.J., 2009, Ground-Water Resources in Rapides Parish, LA, 2005; Louisiana Water Resources Technical Report No. 78.

Prakken, L.B., and Wright, L.S., 2009, Water Withdrawals and Trends in Ground-Water Levels and Stream Discharge in Louisiana, 1996-2005; Louisiana DOTD Water Resources Technical Report No. 79.

Nothing New Under the Sun

The budget should be balanced,
the Treasury should be refilled,
public debt should be reduced,
the arrogance of officialdom should
be tempered and controlled
and the assistance to foreign
lands should be curtailed lest
Rome become bankrupt.
People must again learn to work,
Instead of living on public
assistance.

AVERAGE PUMPAGE FROM MAJOR AQUIFERS OVER A 10-YEAR PERIOD

Aquifer	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
"400-foot"	5.293	5.948	5.064	5.455	4.689	4.094	4.425	4.344	3.604	4.228
"400/600"ft	4.731	12.975	12.401	12.533	12.232	11.663	11.521	11.495	13.223	7.308
"600-foot"	5.733	6.319	5.961	6.027	6.224	7.097	7.043	7.681	6.408	6.75
"800-foot"	2.037	2.486	2.129	1.941	2.325	2.53	2.663	4.326	5.001	4.256
"1,000-foot"	8.466	8.469	7.567	7.218	7.441	6.626	6.284	8.418	7.768	9.135
"1,200-foot"	21.100	21.793	21.026	23.153	23.057	22.083	23.018	23.858	24.037	24.047
"1,500-foot"	16.452	17.952	17.79	18.273	19.082	19.127	19.318	19.338	19.322	19.504
"1500/1700 ft"						7.818	7.975	7.983	7.664	7.607
"1,700-foot"	2.352	2.487	2.364	2.528	3.016	3.939	5.611	6.142	5.977	6.947
"2,000-foot"	39.633	41.115	37.690	36.167	35.858	24.527	24.444	25.198	24.024	24.291
"2,400-foot"	18.978	20.538	21.198	19.676	20.199	20.379	19.407	20.581	21.284	20.825
"2,800-foot"	27.350	33.596	33.091	33.868	33.515	31.417	32.445	33.417	31.321	32.022
Total MGD	**152.125**	**173.678**	**166.281**	**166.839**	**167.638**	**161.300**	**164.154**	**172.781**	**169.633**	**166.920**

Table 1