# Summary Plan for the Management of Salt Water Migration in the "1,500-Foot" and "2,000-Foot" Sands of the Baton Rouge Aquifer System Capital Area Ground Water Conservation Commission September 19, 2017

These actions have been or will be implemented by the Capital Area Ground Water Conservation Commission (CAGWCC) and ground water users in East Baton Rouge Parish that are under the jurisdiction of the 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 07/18/1988 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 installed a scavenger well in 2014 which is capturing and removing 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, if needed, will be implemented as computer modeling results and monitoring well salinity test results are known.

### "2,000-Foot" Sand

- 1. A CAGWCC Resolution on 10/15/1991 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. For this summary management plan users initially limited 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 reduced 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. From the end of 2014 forward the pumping limit for East Baton Rouge Parish is set at 23.5 MGD and the pumping limit for the Baton Rouge industrial district is set at 15.25 MGD averaged over each calendar year.
- 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 were conducted in 2013, 2014 and 2015 to simulate ground water withdrawal patterns in East Baton Rouge Parish that mitigate salt water encroachment in the "2,000-foot" sand.
- 5. CAGWCC increased pumpage fees to \$10.00 per million gallons in 2016, with \$5.00 per million gallons dedicated to finance geophysical test holes/wells to be used to locate a scavenger well(s) to remove salt water from the "2,000-foot" sand. Upon location of suitable sites, detailed engineering can proceed through preparation of a definitive estimate, followed by securing funds and installation.
- 6. CAGWCC will consider additional management requirements for the "2,000-foot" sand as computer modeling results and monitoring well salinity test results are known.

# Controlled Document Approved by CAGWCC at 9/19/2017 meeting

## Wells used in the development of this Management Plan

Well	Aquifer	Class	Well	Aquifer	Class
EB-413	1500-FOOT SAND	PUBLIC	EB-151	2000-2400 FOOT SAND	PUBLIC
EB-491	1500-FOOT SAND	INDUSTRIAL	EB-544	2000-FOOT SAND	INDUSTRIAL
EB-510	1500-FOOT SAND	PUBLIC	EB-587	2000-FOOT SAND	INDUSTRIAL
EB-561	1500-FOOT SAND	INDUSTRIAL	EB-630	2000-FOOT SAND	PUBLIC
EB-655	1500-FOOT SAND	PUBLIC	EB-656	2000-FOOT SAND	INDUSTRIAL
EB-657	1500-FOOT SAND	PUBLIC	EB-722	2000-FOOT SAND	INDUSTRIAL
EB-658	1500-FOOT SAND	PUBLIC	EB-733	2000-2400 FOOT SAND	PUBLIC
EB-726	1500-FOOT SAND	PUBLIC	EB-737	2000-FOOT SAND	INDUSTRIAL
EB-748	1500-FOOT SAND	INDUSTRIAL	EB-774	2000-FOOT SAND	PUBLIC
EB-771	1500-FOOT SAND	PUBLIC	EB-785	2000-FOOT SAND	INDUSTRIAL
EB-773	1500-FOOT SAND	PUBLIC	EB-788	2000-FOOT SAND	POWER GEN
EB-835	1500-1700-FOOT SAND*	INDUSTRIAL	EB-810	2000-FOOT SAND	INDUSTRIAL
EB-837	1500-1700-FOOT SAND*	INDUSTRIAL	EB-814	2000-FOOT SAND	PUBLIC
			EB-851	2000-FOOT SAND	INDUSTRIAL
EB-927	1500-FOOT SAND	PUBLIC	EB-855	2000-FOOT SAND	INDUSTRIAL
EB-938	1500-FOOT SAND	PUBLIC	EB-856	2000-FOOT SAND	INDUSTRIAL
EB-939	1500-FOOT SAND	PUBLIC	EB-874	2000-FOOT SAND	PUBLIC
EB-961	1500-FOOT SAND	PUBLIC	EB-878	2000-FOOT SAND	PUBLIC
EB-963	1500-FOOT SAND	INDUSTRIAL	EB-884	2000-FOOT SAND	INDUSTRIAL
EB-969	1500-FOOT SAND	INDUSTRIAL	EB-954	2000-FOOT SAND	INDUSTRIAL
EB-970	1500-FOOT SAND	INDUSTRIAL	EB-962	2000-FOOT SAND	INDUSTRIAL
EB-977	1500-FOOT SAND	INDUSTRIAL	EB-1030	2000-FOOT SAND	INDUSTRIAL
EB-984	1500-FOOT SAND	INDUSTRIAL	EB-1150	2000-FOOT SAND	PUBLIC
EB-1048	1500-FOOT SAND	INDUSTRIAL	EB-1151	2000-FOOT SAND	POWER GEN
EB-1155	1500-FOOT SAND	INDUSTRIAL	EB-1227	2000-FOOT SAND	POWER GEN
EB-1248	1500-1700-FOOT SAND*	INDUSTRIAL	EB-1253	2000-2400 FOOT SAND	PUBLIC
EB-1260	1500-FOOT SAND	INDUSTRIAL	EB-1280	2000-FOOT SAND	PUBLIC
EB-1277	1500-1700-FOOT SAND*	INDUSTRIAL	EB-1306	2000-FOOT SAND	PUBLIC
EB-1295C	1500-FOOT SAND	PUBLIC	EB-1309	2000-FOOT SAND	POWER GEN
EB-1423	1500-FOOT SAND	PUBLIC	EB-1313	2000-FOOT SAND	POWER GEN
EB-1424	1500-FOOT SAND	SCAVENGER	EB-1317	2000-FOOT SAND	POWER GEN
			EB-1319	2000-FOOT SAND	PUBLIC
			EB-1323	2000-FOOT SABD	POWER GEN
*Dual agree and wells at 1/ numbers					

<sup>\*</sup>Dual screened wells at ½ pumpage