

Capital Area Ground Water Conservation Commission Technical Committee Meeting
U.S. Geological Survey Auditorium 3535 South Sherwood Forest Blvd., Suite 120
Baton Rouge, LA 70816.
December 3, 2019
1:30 p.m.

Meeting Notes

Committee members present:

Barry Hughhins – Chairman	Ronnie Albritton
Nelson Morvant	Mark Walton
Ryan Scardina	Matt Reonas
Dennis McGehee	

Meeting was called to order by Barry Hughhins - Committee Chairman

Roll was called by Mr. Duplechin and a Quorum was established.

Introductions were made

A review of the previous meetings notes was made. A typo attributed to Mr. Normand was questioned and subsequently corrected. They were adopted (Walton/Normand) with that correction pending.

In John Johnston’s absence, a presentation on the Southern Hills Aquifer System was given by Dr. Doug Carlson of the Louisiana Geological Survey. He went over trends of potentiometric levels in the following aquifers:

- Chico Equivalent
- Evangeline Equivalent and
- Jasper Equivalent

He gave a brief overview of saltwater intrusion in this area.

He stated that the belief that the Capital Area is running out of groundwater is not true. While he admits there is the problem of saltwater intrusion, it is not a crisis. He presented the following chart showing current volumes of available water, without any additional increase in rainfall:

Approximate volume within each sand aquifer in East Baton Rouge Parish. Two approximations, 1. Porosity is 25% and area north of Baton Rouge Fault is approximately two thirds of the parish’s total area of 228 square miles

Aquifer(s)	Range of thickness (ft)	Range of pore volume billions of gallons	Years of current pumpage
400 ft & 600 ft sands	75 to 400	594 to 3170	96 to 510
800 ft sand	50 to 150	396 to 1189	50 to 214
1000 ft sand	40 to 90	317 to 713	
1200 ft sand	40 to 100	317 to 792	
1500 ft & 1700 ft sand	20 to 300	158 to 2377	
2000 ft sand	100 to 300	792 to 2377	61 to 274
2400 ft sand	50 to 250	396 to 1981	
2800 ft sand	50 to 350	396 to 2773	

Thickness values and porosity is from Tomaszewski (1996)

Discussion is too voluminous to condense here. For a detailed description please listen to the audio on the District’s website. (<https://www.cagwcc.com/site2015/aboutus-meetings.htm>)

Due to time constraints, the report on the Board of Regents ITRS Projects by Frank T.-C. Tsai, Ph.D., P.E. Chevron Professor of Engineering, Director, Louisiana Water Resources Research Institute, was moved up. He had published a paper on scavenger well optimization in the Journal of Hydrology: Bayesian set pair analysis and machine learning based ensemble surrogates for optimal multi-aquifer system remediation design” by Jina Yin and Frank Tsai.

<https://doi.org/10.1016/j.jhydrol.2019.124280>.

He then reviewed the work he is doing for CAGWCC, taking advantage of existing work being accomplished by the USGS.

USGS National-Scale Grid (USGS Lower Mississippi-Gulf Water Science Center)

USGS MODFLOW-USG (unstructured grid: saving computing time with more complex model structure)

Developed an advanced meshing method for MODFLOW-USG models.

An Update on the Long Range Planning Project was given by Alyssa Dausman, PhD, Vice President for Science with The Water Institute of the Gulf.

She had prepared a general Scope of Work for Phase II, which will be a tremendous amount of work.

Task 2.0 COORDINATION, PROJECT MANAGEMENT, AND LEADERSHIP

Task 2.1 FURTHER SPECIFY PERFORMANCE METRICS AND ALTERNATIVES

Task 2.2 QUANTIFYING GROUNDWATER SUPPLY FOR THE CAPITAL REGION

Task 2.3 FORECASTING WATER DEMAND ACROSS THE CAPITAL REGION

Task 2.4 SOCIAL SCIENCE RESEARCH

Task 2.5 ECONOMIC RESEARCH AND ANALYSES

Task 2.6 EVALUATE EXISTING AQUIFER MONITORING FRAMEWORK

Task 2.7 DEVELOPING OUTREACH AND CONSERVATION EDUCATION MATERIALS

Task 2.8 LEGAL AND POLICY ANALYSIS

Task 2.9 FACILITATED DISCUSSION FORUM AND INFORMATION EXCHANGE

Task 2.10 SUPPORTING ACTIVITIES AND DATA NEEDS

Projected cost for Phase II is estimated to be \$1,589,425.

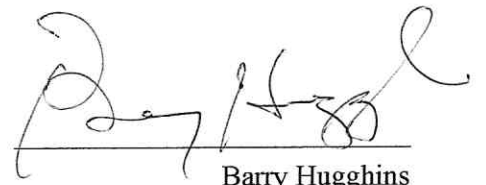
In Todd Talbot’s absence the report from the Planning & Specifications Subcommittee was given by Mr. Duplechin. The observation well has been completed and the driller is working to fulfill his contractual obligations. Weather has hindered reclamation efforts. The surveyor will survey the site to place corner markers for the concrete slab around the wellhead. Site will be registered with the Clerk of Court. A grab sample was obtained showing a Cl⁻ of 235 mg/L. It must be understood that this is a very rough sample. Once the well has reached equilibrium (3 months - beginning of February) Five discrete samples will be taken at equal distances over the eighty feet of sand in the well (\$2,000 a sample.) Selection of the second well site will be made after a thorough review of data from the first well.

Mark Walton reviewed the most recent pumping rates from the 1,500-ft /2,000-ft sands. Pumpage for both sands were within required limits.

The Progress report on the Baton Rouge model was given by Max Lindeman. The report documenting a computer model constructed to simulate groundwater flow and saltwater transport in the “1,500-foot,” “2,400-foot,” and “2,800-foot” sands was days away from being completed. Work is progressing on the next phase of modeling for the shallower sands. USGS is soliciting suggestions on scenarios to run on the shallower sands. Several comments were made on the availability of groundwater availability models.

There were no Committee Member Comments and no Public Comments.

Meeting was adjourned (Reonas/Walton)

A handwritten signature in black ink, appearing to read 'Barry Huggins', written over a horizontal line.

Barry Huggins
Technical Committee Chairman