

Groundwater Availability Assessment
Technical Advisory Committee Meeting
June 22, 2018
S.C. Geological Survey
5 Geology Road
Columbia, SC 29212

AGENDA

1. Overview of the USGS Coastal Carolina Focus Area Study– Bruce Campbell (USGS)
2. Water-Demand Forecasting in the Focus Area Study– Georgina Sanchez (PhD student, NC State)
3. Status Report on the Hydrogeologic Framework – Joe Gellici (DNR)
4. Status Report on the Groundwater Recharge Model – Bruce Campbell (USGS)
5. Status Report on the Groundwater Flow Model – Bruce Campbell (USGS)
6. What Constitutes Negative Impacts of Overpumping– Clay Duffie (Mt. Pleasant)
7. The Orangeburg Core Hole (ORG-393)
8. Discussion

MEETING NOTES

**New member – Charlie Gray, Chesterfield County Rural Water Co., is our newest member of the TAC. Charlie was recommended by Jill Miller, SC Rural Water Association.

1. Overview of the USGS Coastal Carolina Focus Area Study– Bruce Campbell (USGS)
 - *Bruce gave a presentation on the USGS National Water Census – Coastal Carolinas Focus Area Study.*
2. Water-Demand Forecasting in the Focus Area Study– Georgina Sanchez (PhD student, NC State)
 - *Georgina gave a presentation on Forecasting Urbanization and Future Water Demand. Please contact Georgina at gmsanche@ncsu.edu if you have questions about her presentation.*

- *Clay asked if the data output could be broken down by state since the focus area is in NC/SC.
Yes, a dataset will be released later this year which will include projected growth rates; however, it was noted that all data used is publicly accessible and open-source software was used as well so anyone can replicate it.*

3. Status Report on the Hydrogeologic Framework – Joe Gellici (DNR)

- *Joe gave a presentation on the status of the hydrogeologic framework. Structure-contour maps, isopach maps, and transmissive thickness maps are being done in ArcMap. Hydrogeologic sections are being done in Illustrator. A new software package “Strater” is being tested for the cross sections.*
- *Joe gave an overview of pumping tests that have been made in the State and that are being used for the groundwater model. The pumping tests were analyzed by Roy Newcome, DNR (retired).*
- *Joe informed the committee that DNR and DHEC will be measuring water levels from the Crouch Branch and McQueen Branch aquifers the week of June 25-29 in the Georgetown area to improve the delineation of the cone of depression that has developed in the area. The cone was previously defined on the basis of only 6-10 wells. Additional wells have been identified in the area that will be used in this latest study. Please contact Brooke Czwartacki at DNR (czwartackib@dnr.sc.gov) or Andrea Hughes at DHEC (hughesal@dhec.sc.gov) if you have questions about this project.*
- *Joe also informed the committee that DNR has funding to construct a monitoring well in the Crouch Branch aquifer in the Georgetown area at the 8 Oaks County Park. It is anticipated that drilling will commence in late August / early September. The well (approx. 640 feet deep) will be equipped with an automatic data logger (ADR) that will measure water levels on an hourly basis. Please contact Brooke Czwartacki (DNR) if you have questions about this project (czwartackib@dnr.sc.gov).*

4. Status Report on the Groundwater Recharge Model – Bruce Campbell (USGS)

- *Bruce gave a status report on the groundwater recharge model. Future land-use changes are being simulated and will be incorporated into the model to see if recharge rates are affected.*

5. Status Report on the Groundwater Flow Model – Bruce Campbell (USGS)

- Bruce gave a status report on the groundwater flow model. A new script was written to help simplify things in model. This was done in order to reduce noise in output. The model is currently in the process of being calibrated.
- Several months ago, Mark Amidon (Savannah River National Laboratories) provided DNR with water level data that the Savannah River Site (SRS) has been compiling over the past 30 years from its regional baseline monitoring wells. The database contains about 20,000 water level measurements from about 160 wells at SRS. Bruce is currently examining the data to determine how it can be incorporated into the model to improve model calibration.

6. What Constitutes Negative Impacts of Overpumping – Clay Duffie (Mt. Pleasant)

- Clay provided a detailed handout listing potential negative impacts that overpumping can cause. It will be discussed at length at the TAC’s next meeting. Clay suggested that the TAC eventually write a white paper on this subject that can be presented to the planning process advisory committee (PPAC) in the future.

7. The Orangeburg Core Hole (ORG-393)

- Joe gave a short presentation on the hydrostratigraphy of the Orangeburg core hole. The core hole was laid out in the SCGS repository for those who wished to view it. Kelley Ferda, Bruce Campbell, Josh Williams, and Joe Gellici examined the core after the meeting.

10 Attendees

Name	Affiliation	Email
Alex Butler	DHEC	butlerap@dhec.sc.gov
Bruce Campbell	USGS	bcampbell@usgs.gov
Joe Gellici	DNR	gellicij@dnr.sc.gov
Michael Yip	GCWSD	michaely@gcwsd.com
Ray Gagnon	GCWSD	rayg@gcwsd.com
Joshua Williams	DNR	williamsjm@dnr.sc.gov
Alicia Wilson	USC	awilson@geol.sc.edu
Clay Duffie	MPW	clayduffie@mpwonline.com
Georgina Sanchez	PhD Student, NC State	gmsanche@ncsu.edu
Kelley Ferda	South Island Public Service District	kelley@sipsd.com

Visit the webpage at: <http://www.dnr.sc.gov/water/waterplan/groundwater.html>