

# Potentiometric Surface Mapping Program

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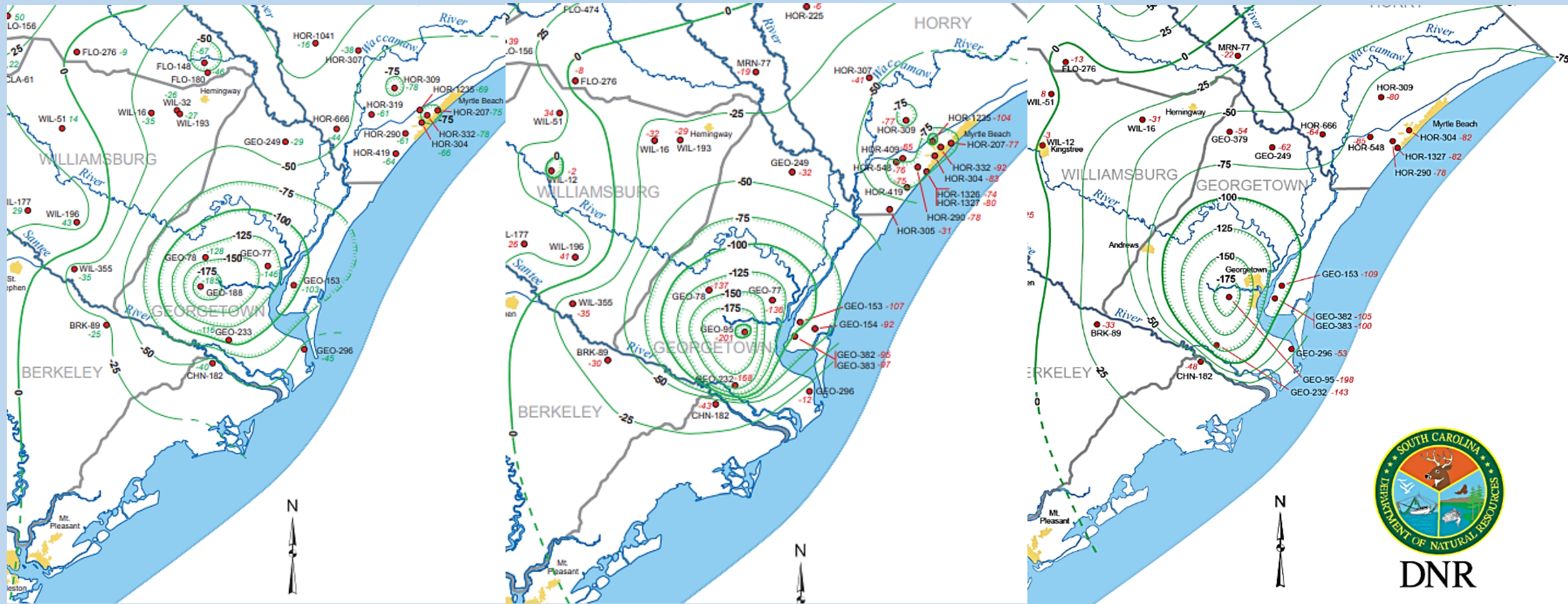
Groundwater Technical Advisory Meeting  
October 1, 2018



# Purpose of the Maps

- Assess changes in groundwater storage and determine regional flow directions and hydraulic gradients of the major aquifer systems
- Comparison of potentiometric maps over several years can reveal long-term changes in aquifer storage from groundwater withdrawals
- Analyses of potentiometric surfaces can help with drought, saltwater-intrusion, subsidence, and well-interference assessments
- Assist in state-level planning and groundwater use management policy development; and water-supply managers for both planning and development

# Cone of depression in Georgetown Cty - Crouch Branch Aquifer

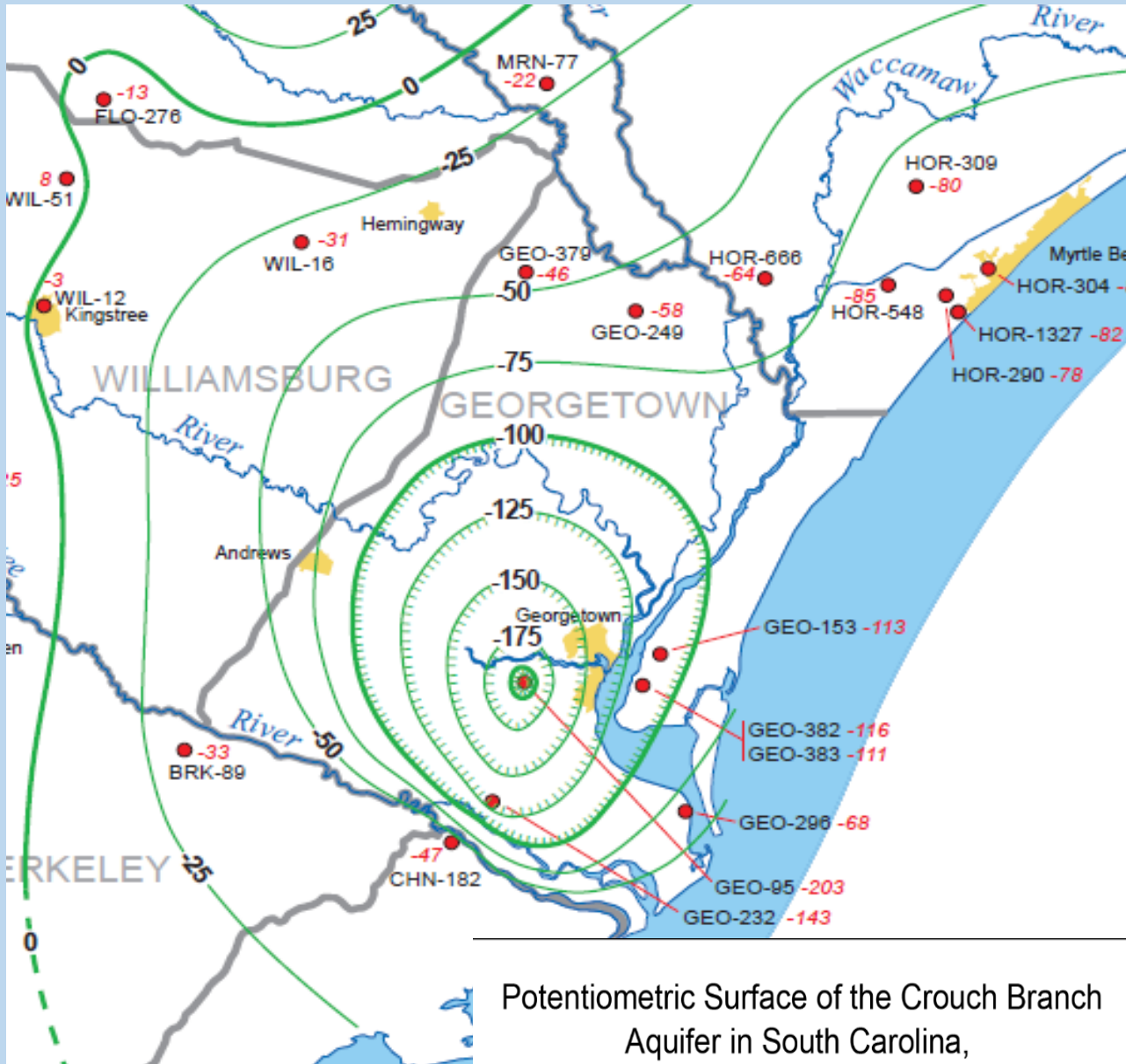


2012

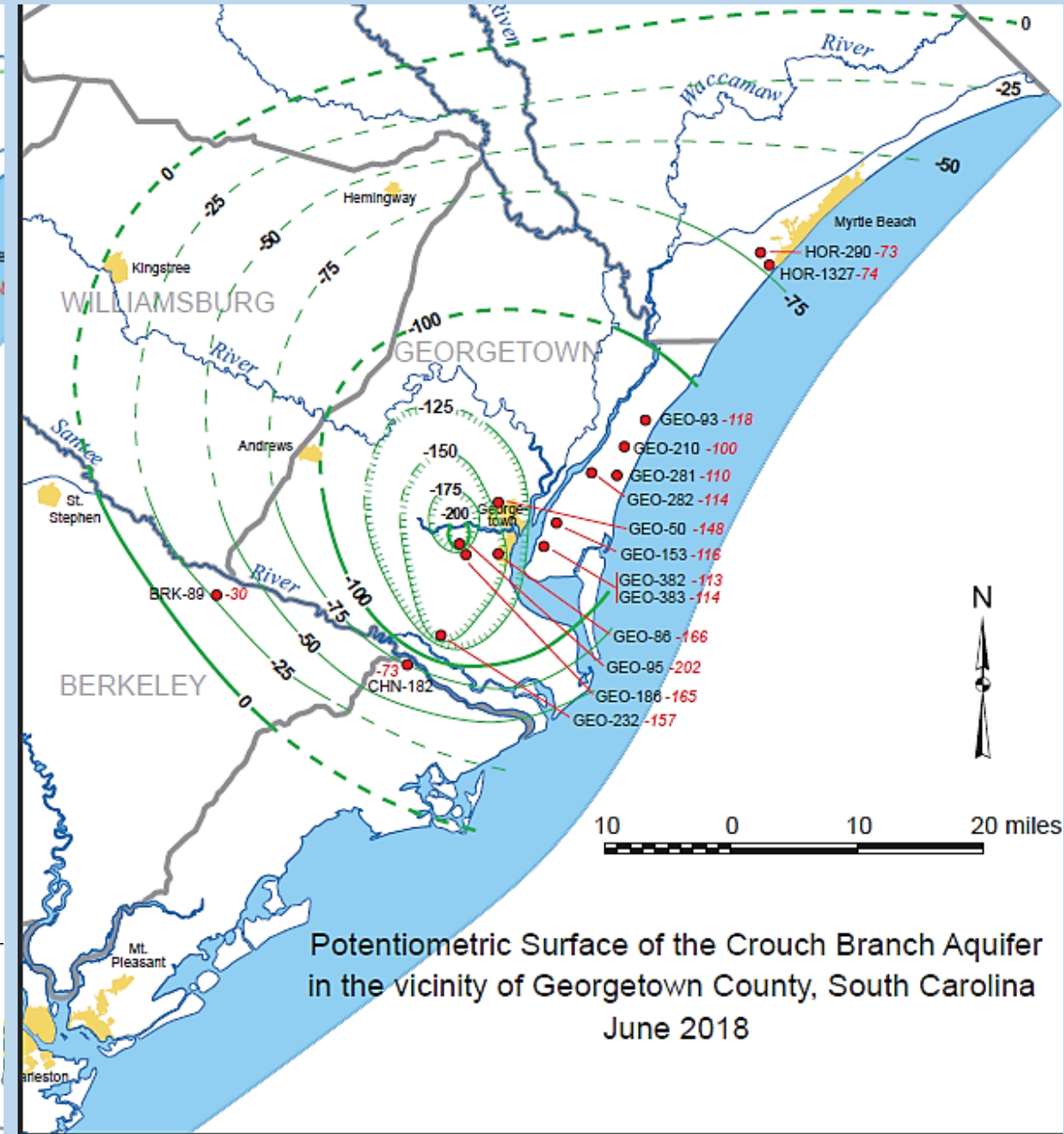
2015

2016

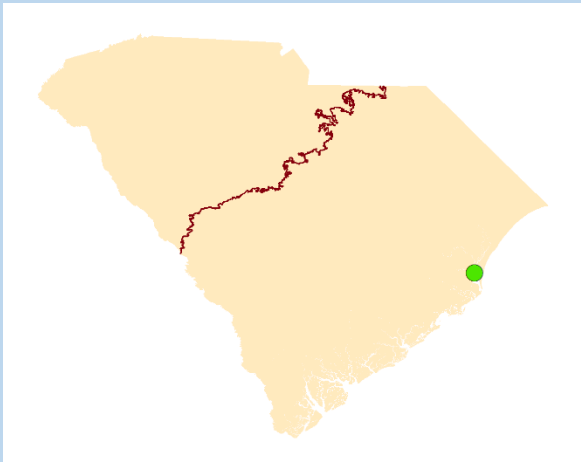




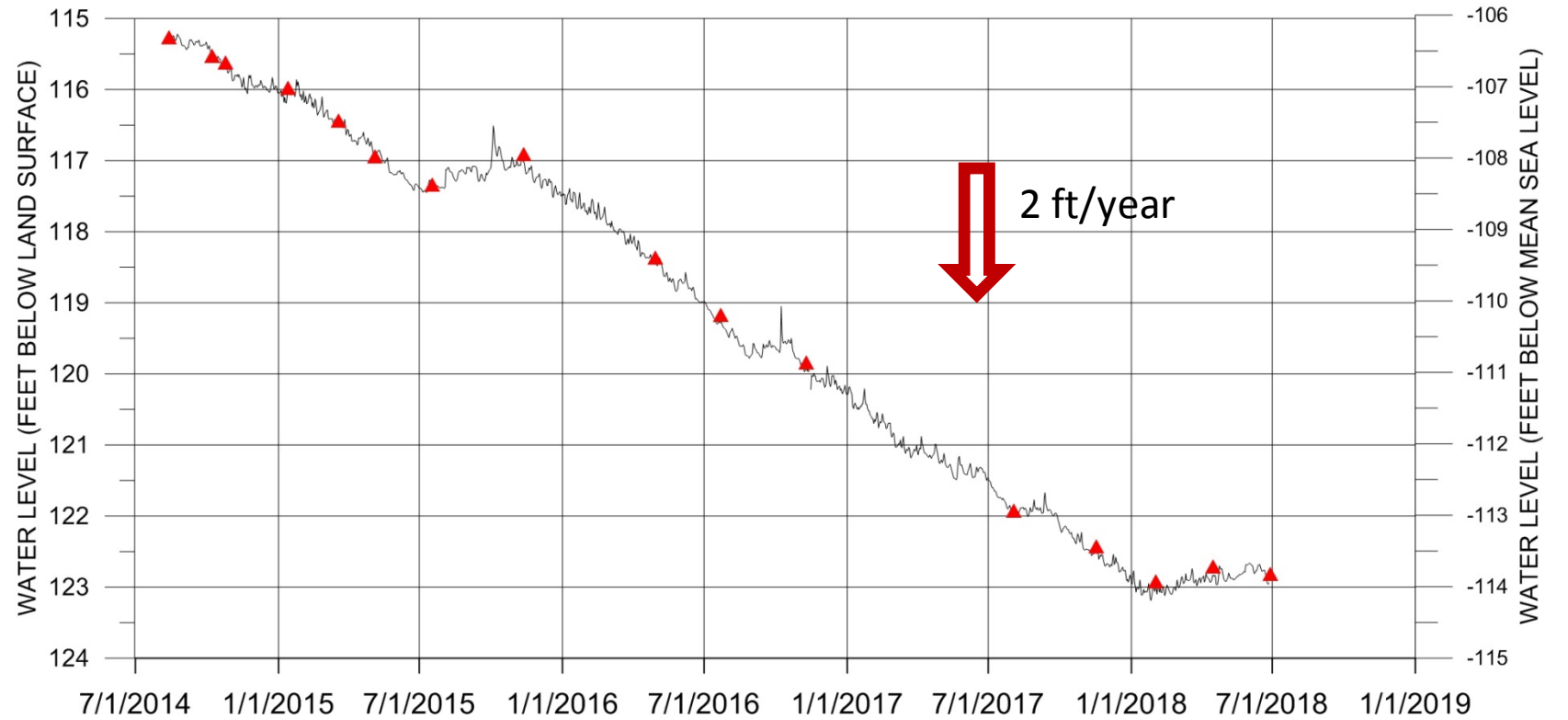
Potentiometric Surface of the Crouch Branch Aquifer in South Carolina, November–December 2016



Potentiometric Surface of the Crouch Branch Aquifer in the vicinity of Georgetown County, South Carolina June 2018



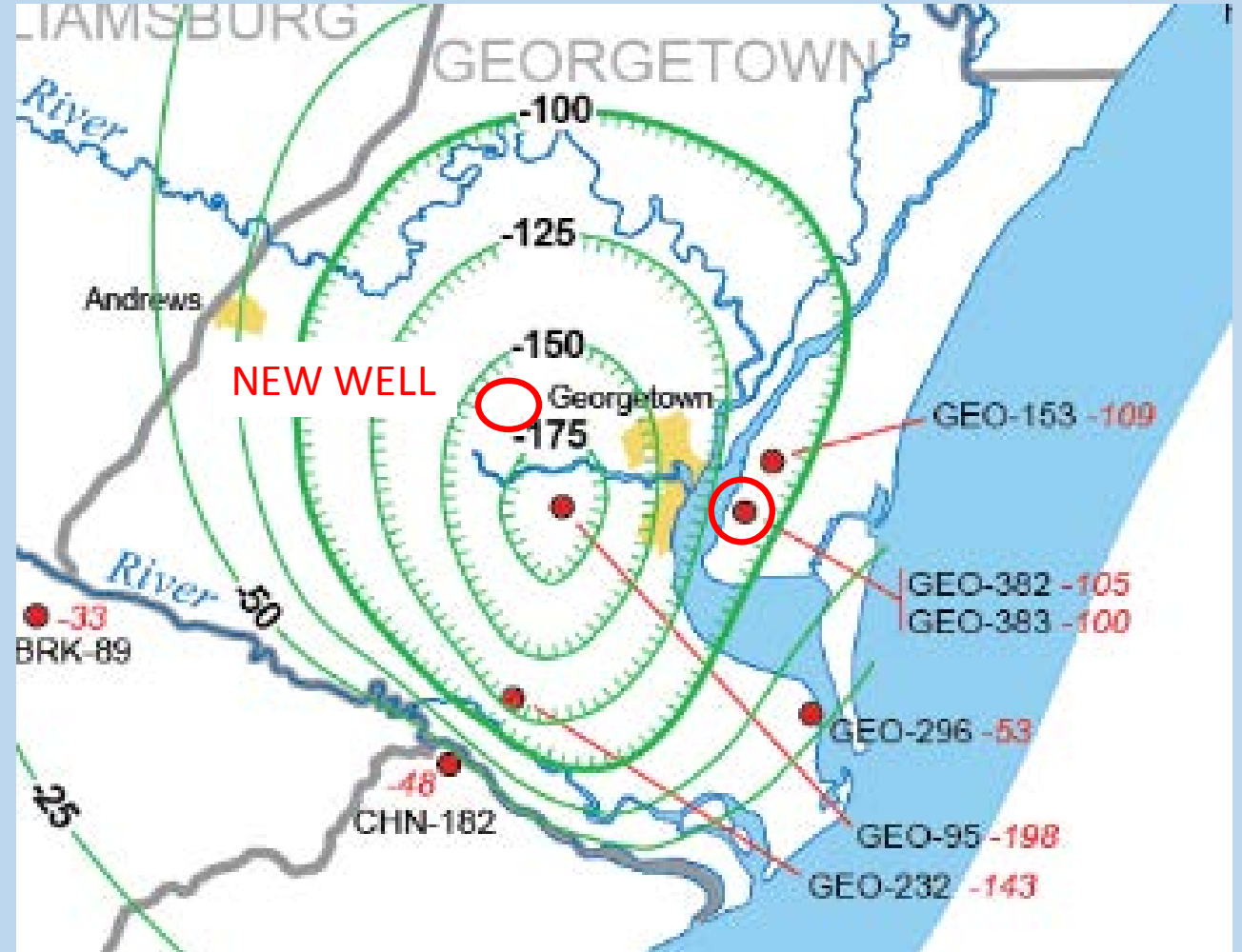
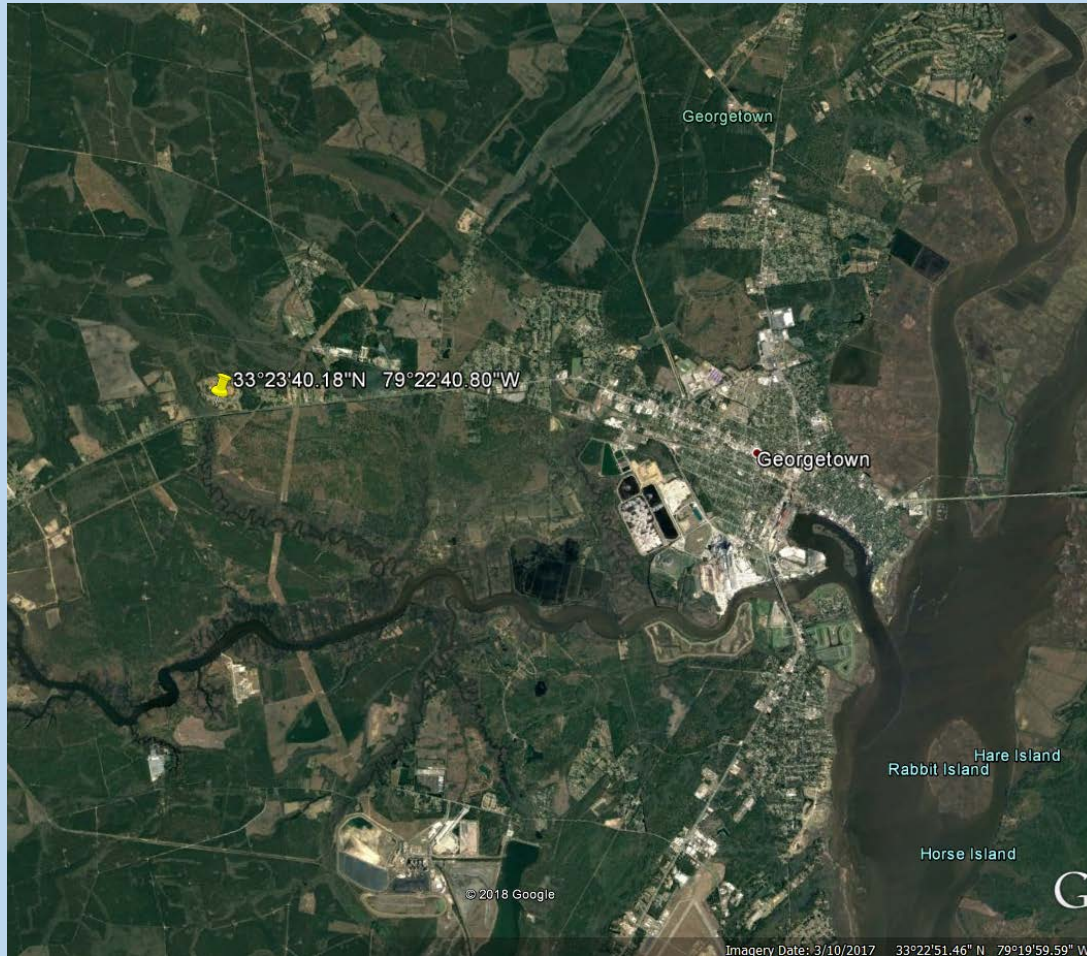
## GEO-0383 Daily Average Water Levels



**Aquifer: Crouch Branch**  
**Elevation: 9 ft**  
**Depth: 560 ft**  
**Screen: 530-550 ft**



# New Crouch Branch Well – 640 ft



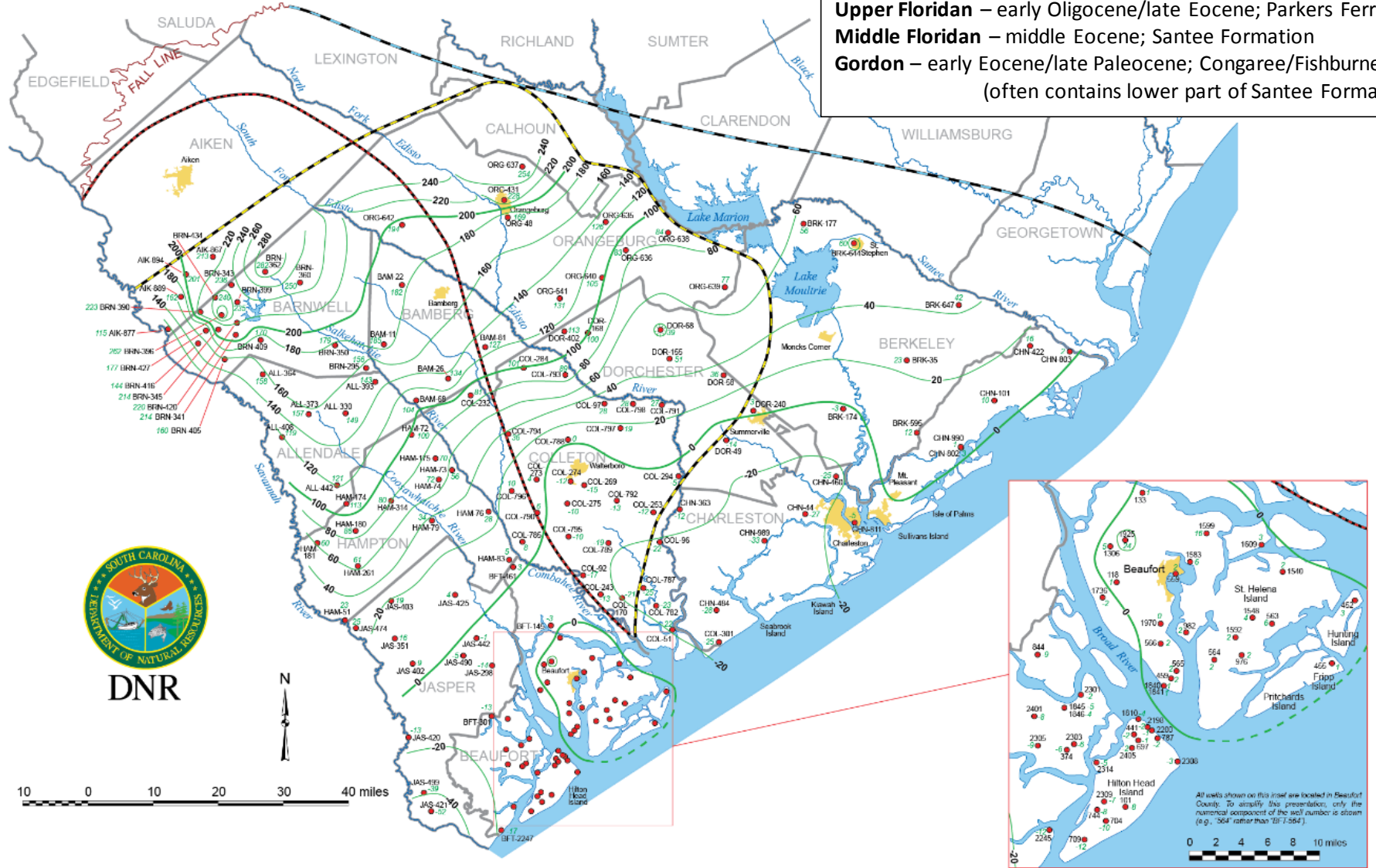


# Potentiometric Surface of the Upper Floridan, Middle Floridan, and Gordon Aquifers in South Carolina, November–December 2016

**EXPLANATION**

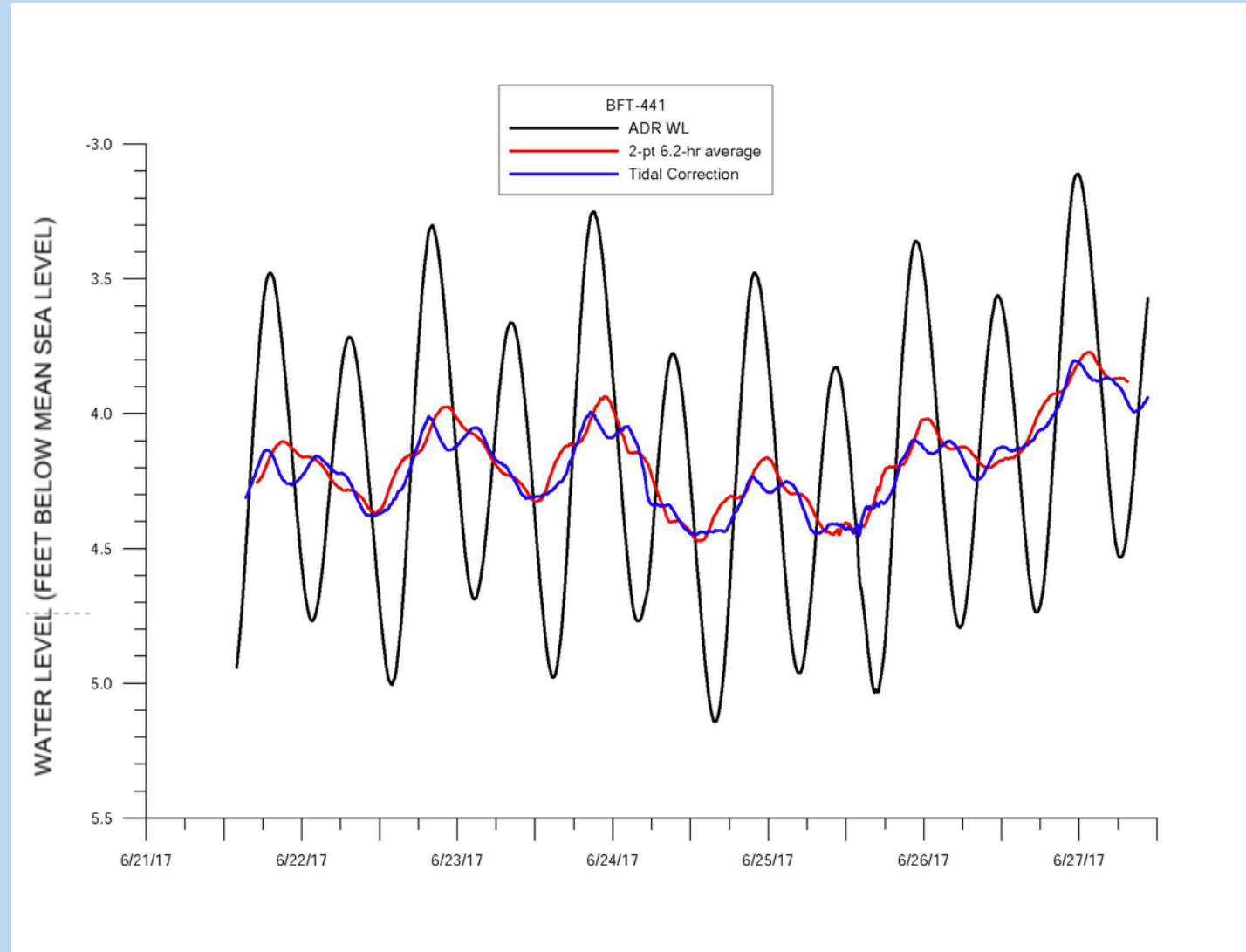
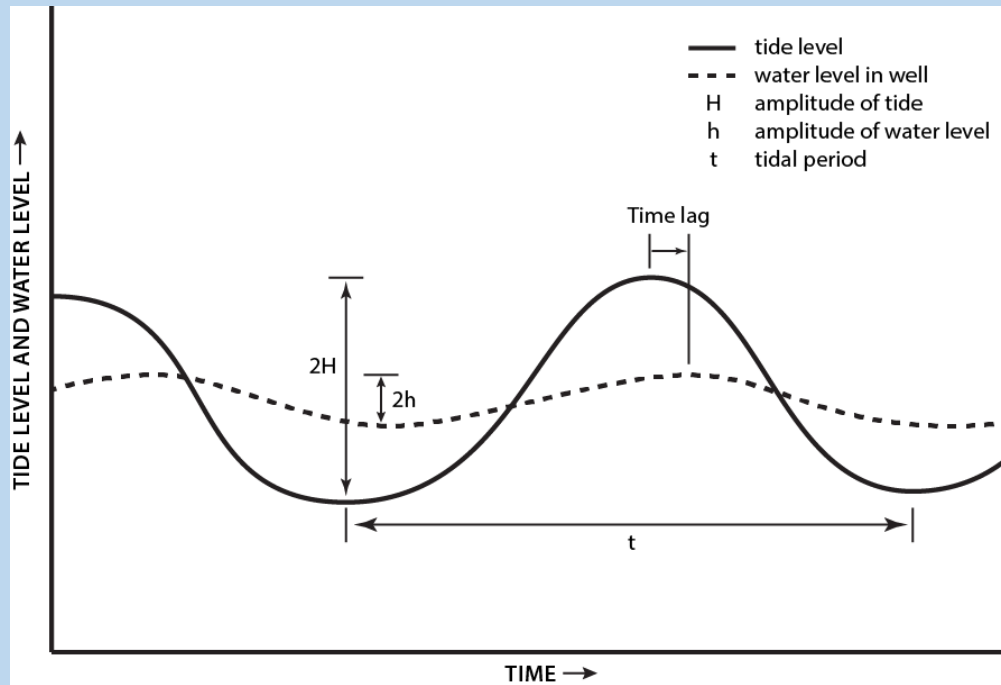
- Potentiometric contour for the Tertiary aquifers, in feet relative to sea level; dashed where inferred
- Measured well, with county well number and potentiometric elevation
- Approximate updip limit of Gordon aquifer
- Approximate updip limit of Middle Floridan aquifer
- Approximate updip limit of Upper Floridan aquifer

**Upper Floridan** – early Oligocene/late Eocene; Parkers Ferry/Ocala Formation  
**Middle Floridan** – middle Eocene; Santee Formation  
**Gordon** – early Eocene/late Paleocene; Congaree/Fishburne/Williamsburg Formations (often contains lower part of Santee Formation in coastal areas)

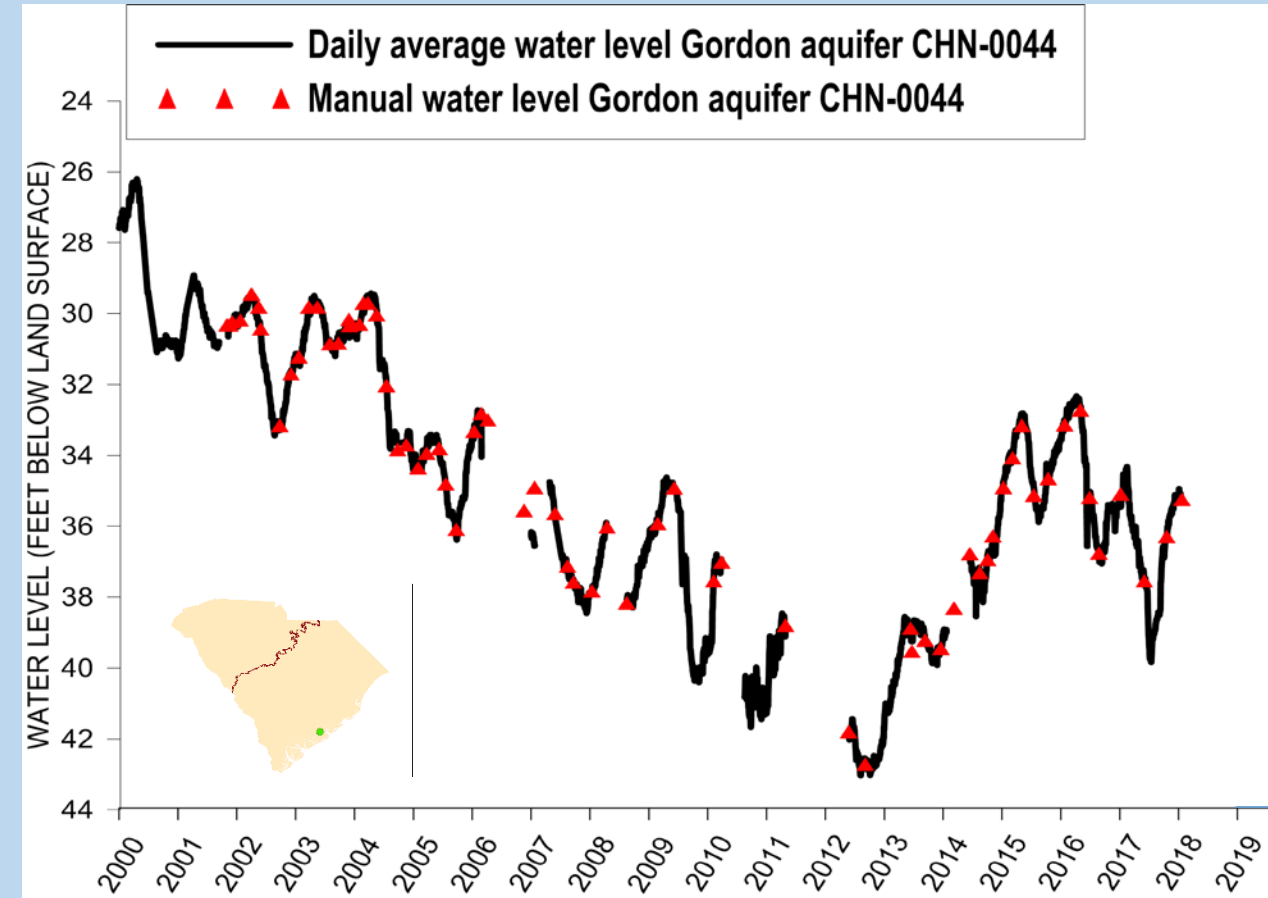
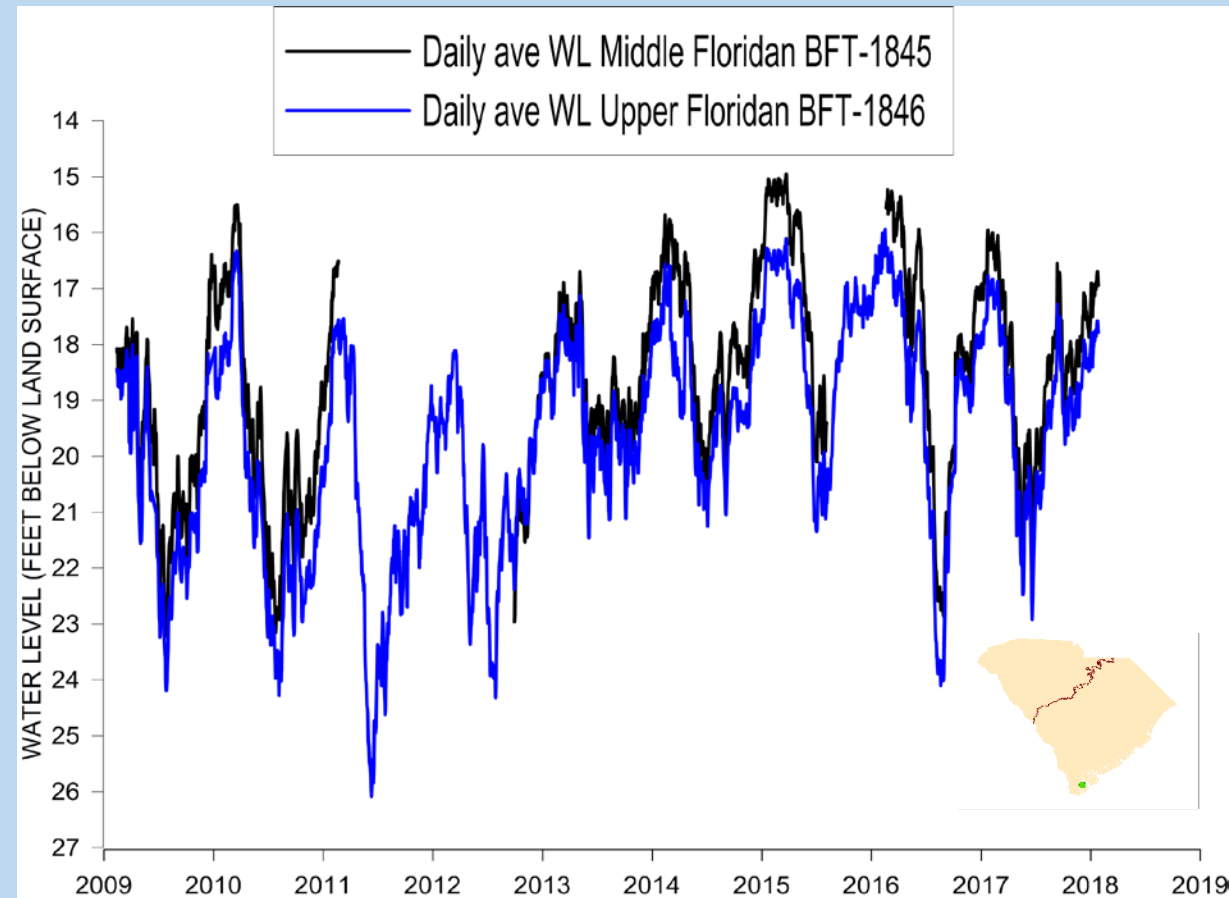


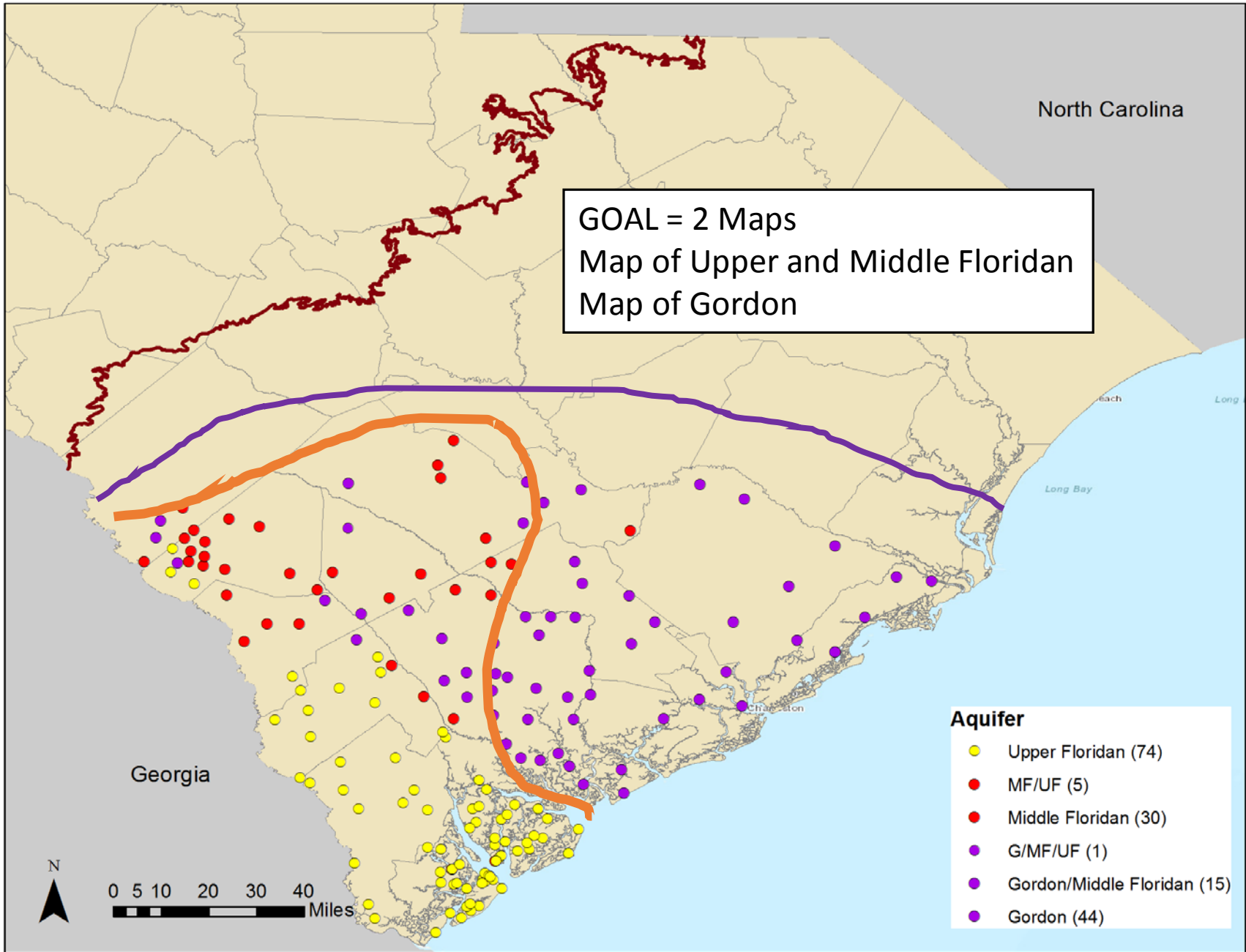


# Correcting for tidal effects in Upper Floridan aquifer

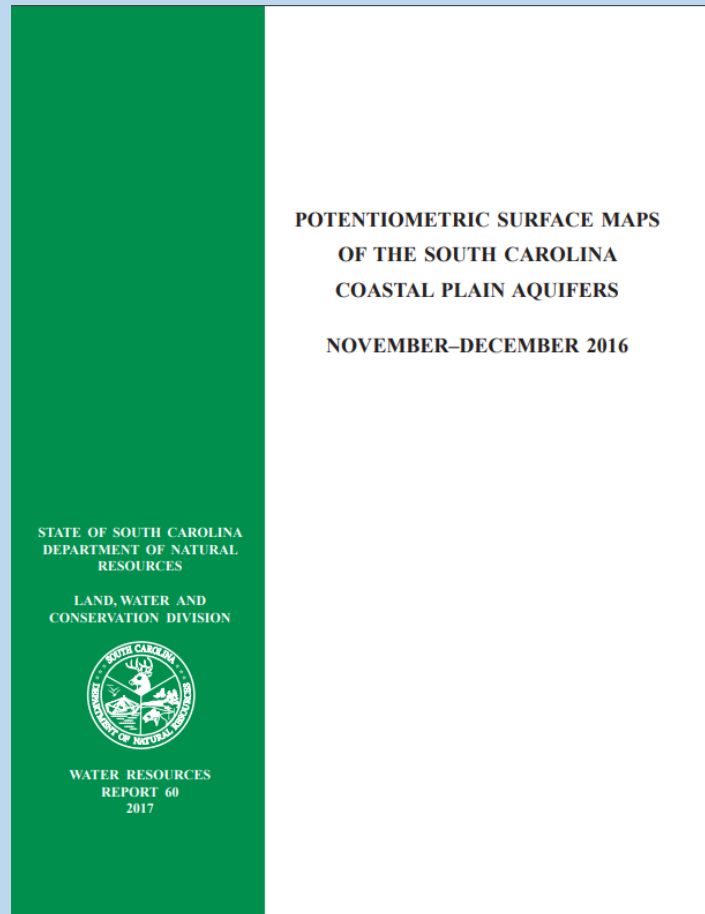


# Water-level trends in U/M Floridan and Gordon aquifer



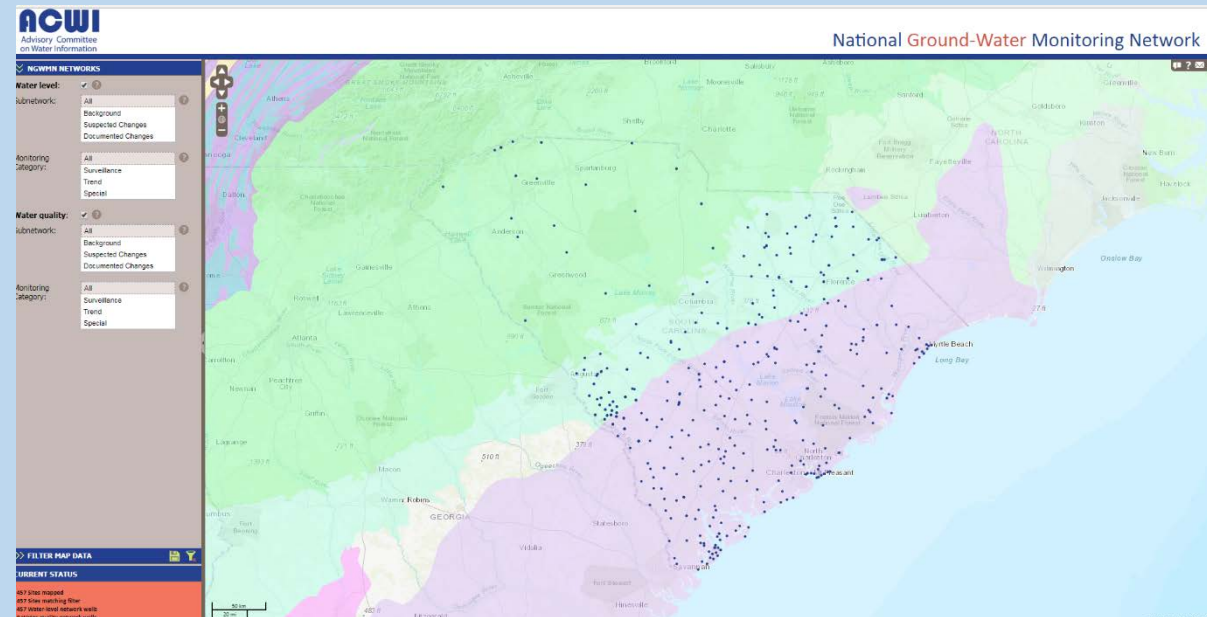


# Groundwater Data Availability



<http://www.dnr.sc.gov/water/hydro>

## National Groundwater Monitoring Network Data Portal



<https://cida.usgs.gov/ngwmn/>

