

Hydrology Section — Land, Water and Conservation Division

South Carolina Department of Natural Resources

www.dnr.sc.gov

803-734-9100



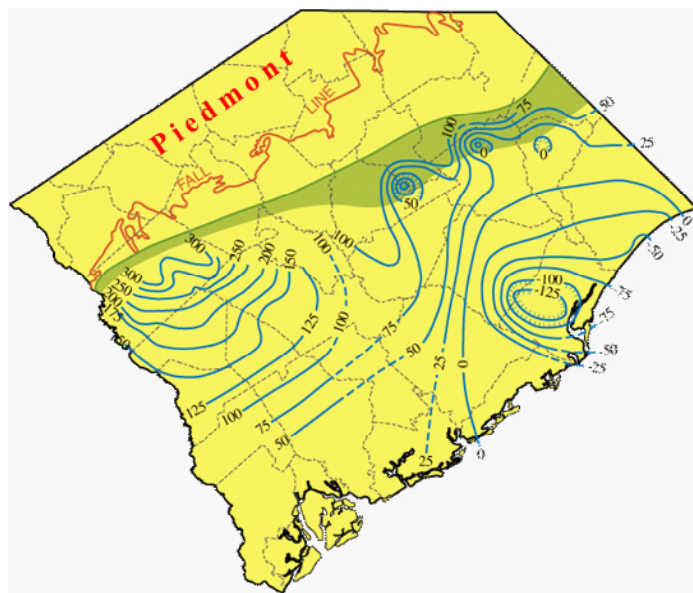
DNR

PROJECT: Potentiometric Mapping

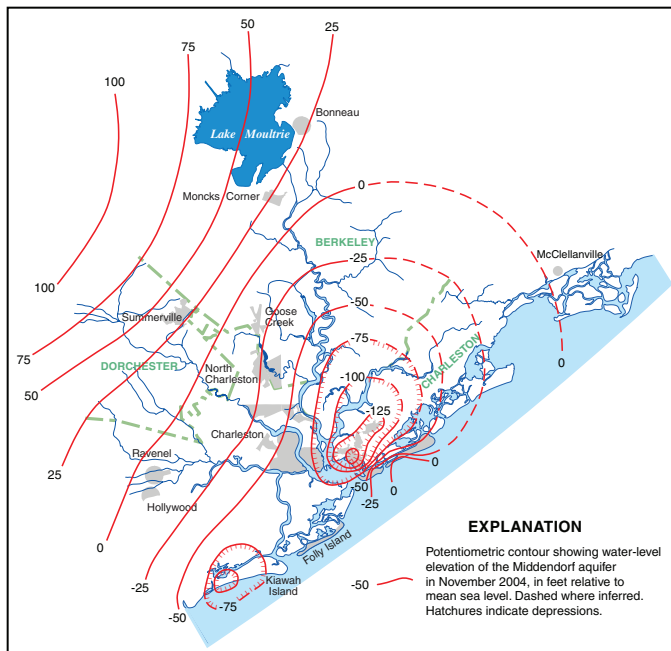
OBJECTIVE: Evaluate water levels in the major Coastal Plain aquifers of South Carolina

The potentiometric surface of an aquifer is defined by the elevations at which water stands in tightly cased wells completed in the aquifer. Over the past 15 years, the Hydrology Section, in collaboration with the U.S. Geological Survey, SCDHEC, and the Savannah River Site, has prepared numerous potentiometric maps of the major Coastal Plain aquifers (Floridan, Black Creek, and Middendorf) in order to assess changes in groundwater storage and to determine regional groundwater flow directions and hydraulic gradients.

Water-level data used to construct these maps are collected from about 600 wells across the Coastal Plain, including numerous monitoring wells and a variety of public-supply, industrial, and agricultural wells. Water levels are typically measured in November/December about once every five years. A new 3-year rotating schedule went into effect in 2011, in which one of the three aquifers will be measured each year and every three years thereafter.



Potentiometric surface of the Black Creek aquifer, 2004.



DNR hydrologist measuring the water level in a monitoring well in Allendale County.

Selected reports:

SCDNR Water Resources Report 48: *Potentiometric surface of the Floridan aquifer and Tertiary sand aquifer in South Carolina, November 2004* (2009) Hockensmith, B.L.: <http://www.dnr.sc.gov/water/hydro/HydroPubs/pdf/Report48Floridan.pdf>

SCDNR Water Resources Report 47: *Potentiometric surface of the Black Creek aquifer in South Carolina, November 2004* (2009) Hockensmith, B.L.: http://www.dnr.sc.gov/water/hydro/HydroPubs/pdf/Report47_BlackCreek.pdf

SCDNR Water Resources Report 46: *Potentiometric surface of the Middendorf aquifer in South Carolina, November 2004* (2009) Hockensmith, B.L.: http://www.dnr.sc.gov/water/hydro/HydroPubs/pdf/Report46_Middendorf.pdf

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