

Surficial Aquifer

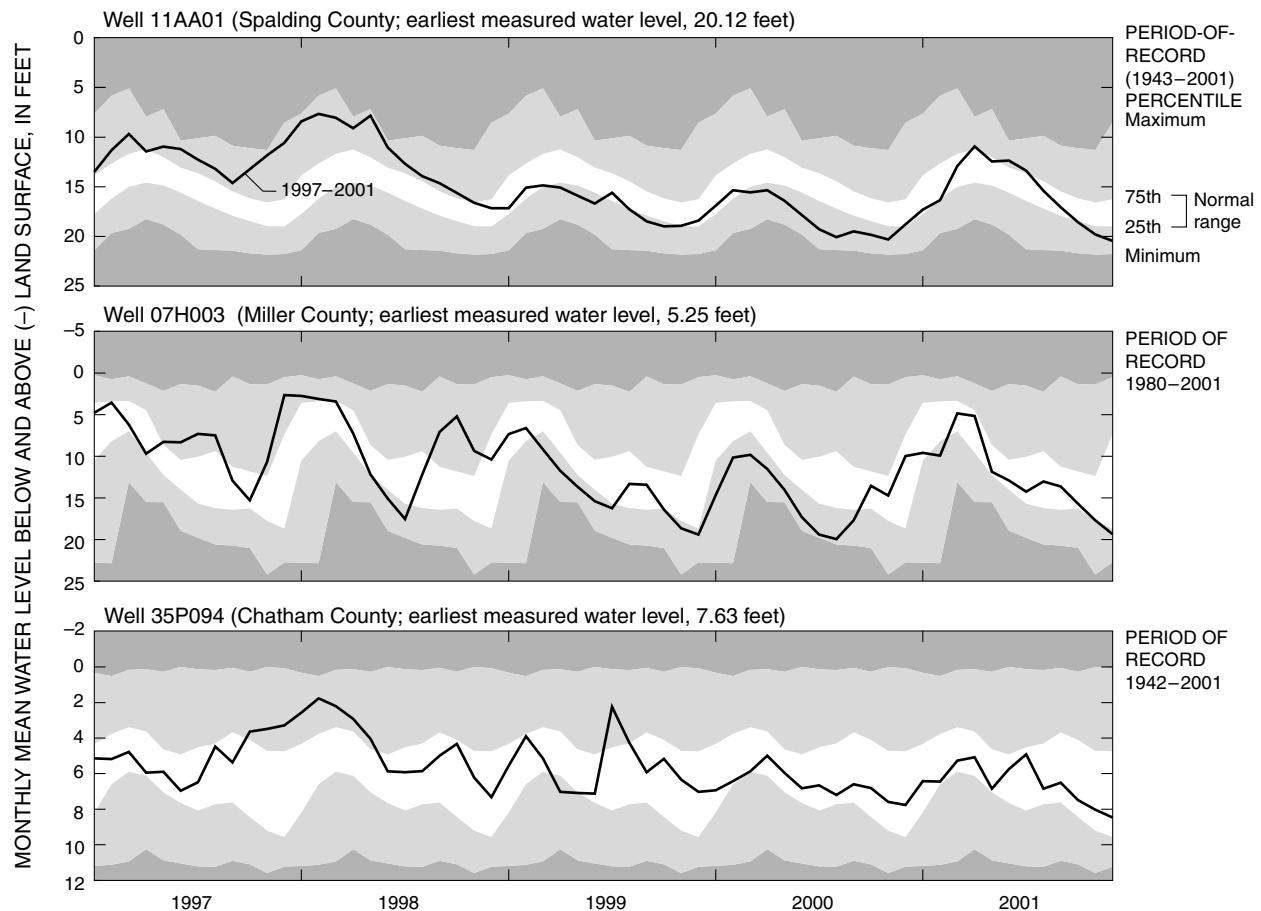
Water levels in 17 wells were used to define conditions in the surficial aquifer during 2001 (map and table, facing page). Water in the surficial aquifer typically is in contact with the atmosphere (referred to as an unconfined or water-table aquifer), but locally may be under pressure exerted by overlying sediments or rocks (referred to as a confined aquifer). Where unconfined, water levels change quickly in response to recharge and discharge. Consequently, hydrographs from these wells show a strong relation to climate.

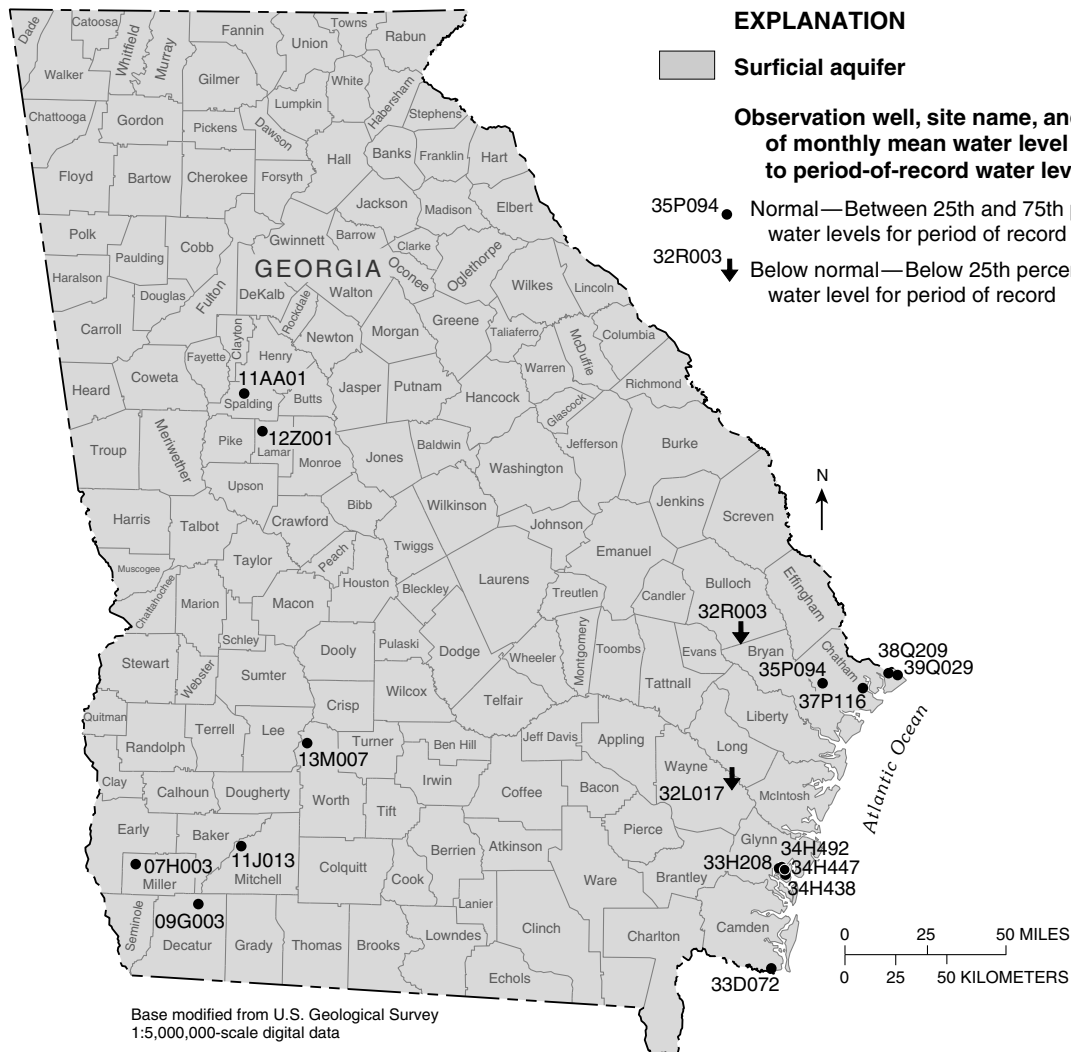
Water levels in 15 of the 17 wells measured were within the normal range during 2001, with wells 32R003 and 32L017 below normal. These two coastal wells (32R003 and 32L017) were likely constructed in confined parts of the surficial aquifer, and water levels may be influenced by nearby pumping, possibly the reason that water levels are not consistent with the rest of the wells in the State.

Water-level hydrographs for three surficial aquifer wells (shown below) were chosen to illustrate monthly mean

water levels during 1997–2001 and period-of-record water-level statistics. These long-term water-level records indicate that during 1997 and 1998, water levels in the surficial aquifer were at or above normal throughout Georgia, but the effects of drought became apparent during the early part of 1999 and continue until early 2001.

The hydrograph for well 11AA01 in Spalding County shows that the water level during 1997–98 was in or above the normal range. During early 1999, the water level began to decline intermittently below the normal range until early 2001, when the water level rose into the normal range. The hydrograph for well 07H003 in Miller County shows a similar pattern in that the water level during 1997–98 was at or above normal, during 1999 and 2000 was mostly below normal, and recovered to normal during 2001 but dropped below normal during the last few months of the year. The hydrograph for well 35P094 in Chatham County shows a pattern quite different from the other two wells. The water level in this well has been at or above normal for the past 5 years, except for about 2 months during early 1999.





Site name	County	Other identifier
32R003	Bulloch	Bulloch South test well 2
33D072	Camden	Georgia Geologic Survey, St Marys, test well 3
35P094	Chatham	University of Georgia, Bamboo Farm well
37P116	Chatham	Georgia Geologic Survey, Skidaway Institute, test well 4
38Q209	Chatham	Fort Pulaski, Savannah Harbor Expansion, monitoring well 3
39Q029	Chatham	Tybee, Savannah Harbor Expansion, monitoring well 1, COE
09G003	Decatur	U.S. Geological Survey, test well DP-6
33H208	Glynn	Georgia-Pacific, south, test well 3
34H438	Glynn	Georgia Geologic Survey, Coffin Park, test well 3
34H447	Glynn	Glynn County Courthouse (shallow)
34H492	Glynn	Coastal Georgia Community College P-17
12Z001	Lamar	Dixie Pipeline
07H003	Miller	U.S. Geological Survey, test well DP-3
11J013	Mitchell	U.S. Geological Survey, test well DP-12
11AA01	Spalding	University of Georgia, Experiment Station
32L017	Wayne	Georgia Geologic Survey, Gardi, test well 3
13M007	Worth	U.S. Geological Survey, test well DP-9