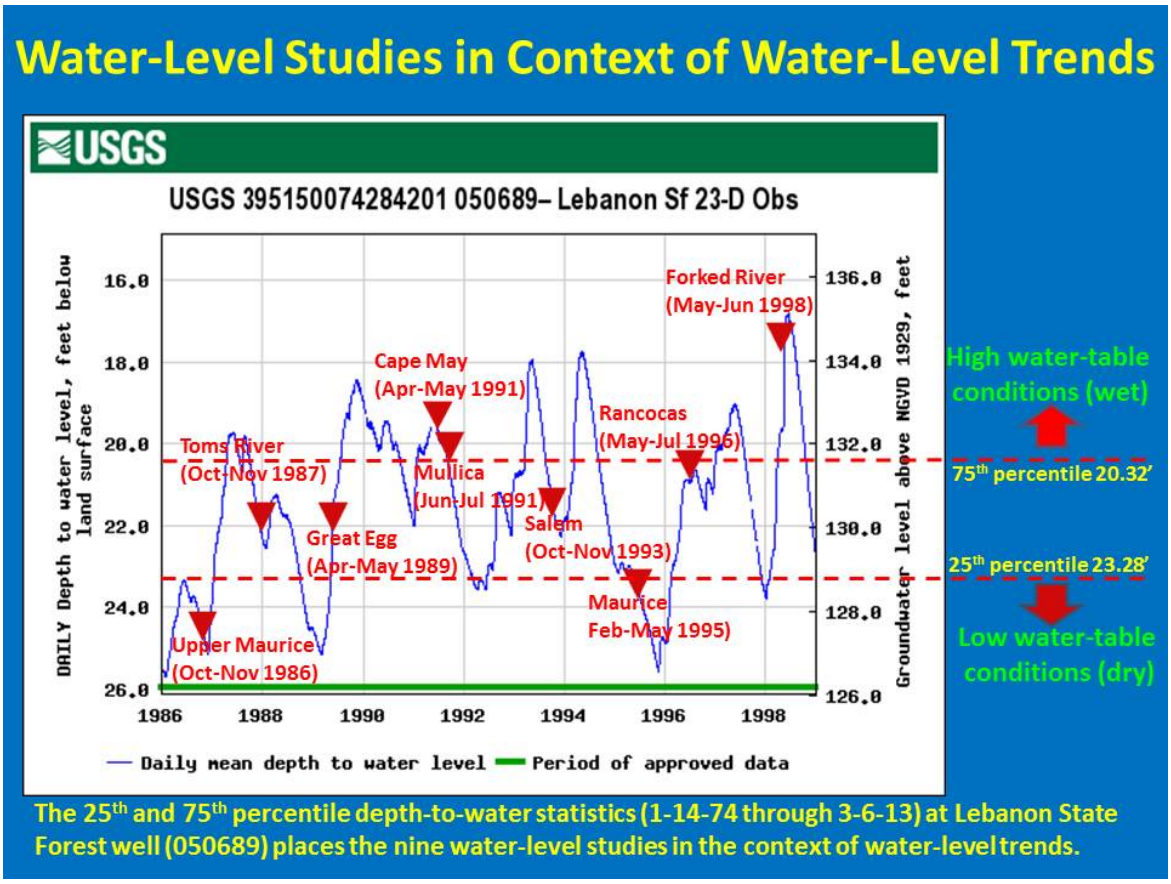
Study Areas: The labels for the nine surficial aquifer study areas on the index map indicate the key river basin that is named in each publication title. The Upper Maurice River study area was the first of the series in 1986, and the extent of three subsequent studies (Great Egg Harbor River, Salem River, and Maurice River) overlap this earliest study area. The nine surficial aquifer studies in the NJ Coastal Plain were done in cooperation with the New Jersey Department of Environmental Protection in order to provide a scientific basis to help address environmental, water-resource management and planning, water availability, water use, and water quality questions.

Water level data and interpretive water-level contours are presented as part of each Surficial Aquifer Study and provide insight into the depth to water, altitude of the water table, water-table gradient, and direction of groundwater flow within the unconfined aquifer systems. An on-line web-viewer was constructed so the water-level data elements and maps can be conveniently viewed, and underlying data can be accessed (http://nj.usgs.gov/special/web_mapper/). It is important to note that the water-levels and contour interpretations are specific to the period of measurement for each study. The figure below uses one observation well to illustrate the approximate differences/trends in water-table conditions among the different time periods (fall or spring, 1986-1998) for the nine surficial aquifer studies. In addition to differences in water-table conditions and historical trends, changes in local or regional withdrawals can also complicate comparisons. For all these reasons, caution must be exercised when applying this historical water-level information to any other time period, including current conditions, and any comparison should only be considered an approximation.



The range of other information from the original surficial aquifer study publications includes presentation of; land use, population data, water-use, surficial geology, precipitation, evapotranspiration, and hydraulic properties of the surficial aquifer. Streamflow-related information includes stream discharge data (statistics on mean discharge and base flow), flow duration curves, and low-flow correlations. Water-quality data is presented for both groundwater and surface-water sites, and regional comprehensive water budgets are also presented.

Study Area Boundaries: The study area boundaries were delineated in cooperation with the New Jersey Department of Environmental Protection for their purpose of developing a scientific basis to help address water-resource management questions. In most cases, the study area boundaries coincide with the outlines of major surface-water drainage basins. Links to data explanations (metadata) and downloadable data for each of the study areas can be found at the bottom of this web page.