



News Release

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U.S. Geological Survey

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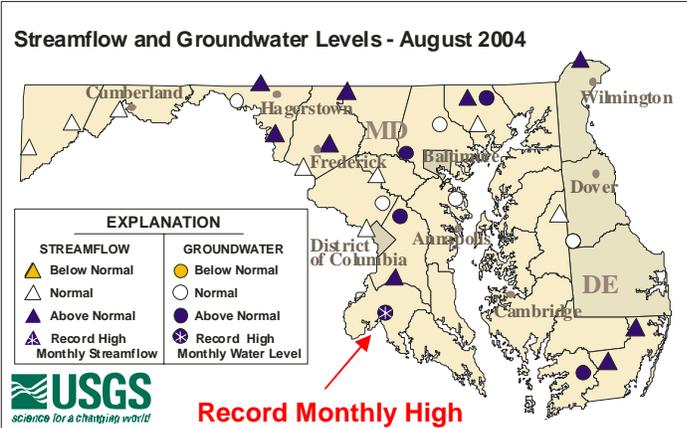
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August Hurricanes Raise Water Levels in Southern Maryland

Rainfall from Hurricanes Bonnie and Charley in August caused water levels to rise in Maryland. Streamflow levels in southern Maryland are above normal and an observation well in Charles County is at its highest August level since 1979 according to hydrologists at the U.S. Geological Survey (USGS). In other areas of Maryland and Delaware, August water levels were normal to above normal. Total freshwater flow to the Chesapeake Bay was more than twice the normal amount for August.

Status of Streams and Wells

The map to the right shows the location of the wells and streams used by the USGS to monitor water conditions in Maryland, Delaware, and the District of Columbia. Water levels were influenced by the path of the Hurricanes, which crossed central and southern Maryland. The result was a new monthly high for an observation well in Charles County (see starred symbol on map), and river levels rose to above normal levels. In western Maryland, where rainfall was below normal, water levels rose, but remained in the normal range.



Precipitation

Rainfall in August ranged from below normal to above normal across Maryland and Delaware. Rainfall was 3.74 inches, or 1.03 inches below normal, at Baltimore-Washington International (BWI) Airport, and only 2.30 inches (second consecutive month) at Hagerstown, Maryland, according to preliminary rainfall data from the National Weather Service. However, summer rainfall was above normal and temperatures were not excessive in August. Rainfall in Wilmington, Delaware was 1.82 inches above normal (5.33 total inches), and has been above normal for several months. In Somerset, Wicomico, and Worcester Counties, Maryland, August rainfall was nearly 3 times normal. Rainfall at Washington D.C. was 1.65 inches above normal, with 5.09 inches.

Groundwater-Unconfined or Shallow Aquifers

Abundant rainfall throughout the summer caused groundwater levels to rise in many of the wells used by the USGS to monitor unconfined or shallow aquifer response to climatic conditions in the bi-state region. Groundwater levels were in the normal to above normal range during August, and the observation well in Charles County reached the highest August level since 1979. For 5-year hydrographs of groundwater levels for the climatic indicator wells, visit: <http://md.water.usgs.gov/groundwater/>.

Groundwater-Confined or Deep Aquifers

Water levels in the deep confined aquifers continue to decline because the wells are pumped at higher rates than the rate at which deep groundwater is recharged. Because confined aquifers are deep, water levels in confined aquifers respond slowly to climatic conditions. The network of confined aquifer wells has been reduced because of diminishing funds. Several wells will no longer be measured on a monthly basis and the web pages will be updated when data is collected. Limited data for confined aquifer wells can be viewed at: <http://md.water.usgs.gov/groundwater>. Real-time water-level data can be viewed at: <http://waterdata.usgs.gov/md/nwis/gw>

Reservoir Storage

Storage of the Baltimore reservoir system dropped 2 percent, to 96 percent of capacity in August. The Baltimore reservoirs (Loch Raven, Liberty, and Prettyboy) have been nearly full since May 2003. Storage in the Triadelphia and Duckett Reservoirs on the Patuxent River, which serves Montgomery and Prince Georges Counties, dropped 7 percent to 89 percent of capacity in August.

Water Monitoring

The USGS has been collecting National streamflow data for 120 years, since 1884. Streamflow monitoring began in Maryland on the Potomac River at Point of Rocks, Maryland in 1895 and continues today. Streamflow and groundwater levels are used to assess current water conditions and can be used to predict the potential for flooding and drought conditions. These USGS data have been provided to State and local water resource managers and are critical for making appropriate decisions on water regulation. For more information on streamflow and groundwater levels in Maryland, Delaware, and the District of Columbia, visit Water Watch at: <http://md.water.usgs.gov/waterwatch/>.

The real-time streamflow stations used in this analysis are operated in cooperation with the Maryland and Delaware Geological Surveys, the Maryland State Highway Administration, the U.S. Army Corps of Engineers, the Maryland Department of Natural Resources, the Maryland Department of the Environment, Baltimore County, Baltimore City, and other agencies. The long-term observation wells used in this analysis are operated in cooperation with the Maryland and Delaware Geological Surveys and the Interstate Commission on the Potomac River Basin. The real-time wells are operated in cooperation with the Maryland and Delaware Geological Surveys, the Interstate Commission on the Potomac River Basin, and Calvert County, Maryland. The USGS publishes data for 137 streamflow stations, 393 observation wells, and 4 springs across Delaware, Maryland, and the District of Columbia.

The USGS serves the Nation by providing reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.

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