

April 2009 USGS Maryland-Delaware-DC Water Conditions Summary

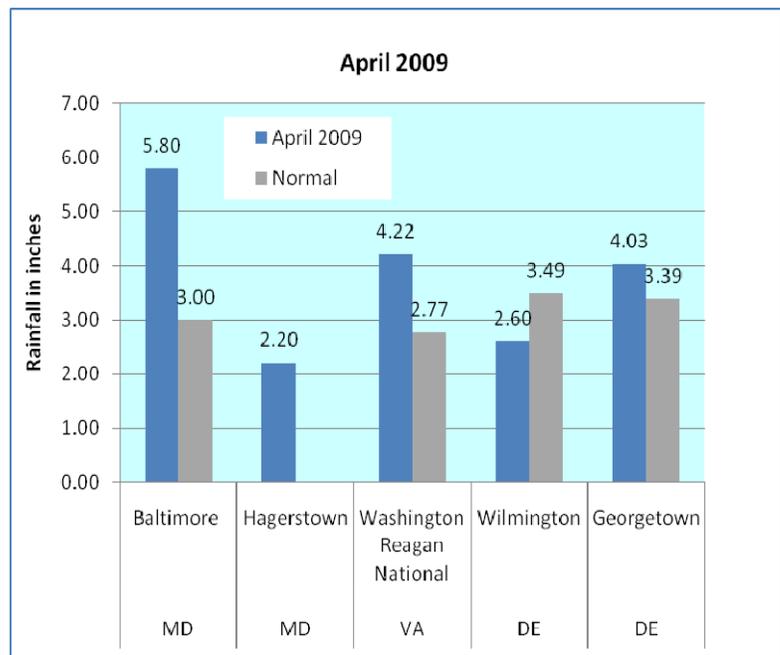
Streamflow and groundwater levels rose in April at all of the stations used by the U.S. Geological Survey (USGS) to assess response to climatic conditions across Maryland, Delaware, and the District of Columbia. Water levels were normal in 83% of the streams and in 38% of the wells. The rain has been steady, which has allowed for recharge to aquifers and streams. However, groundwater levels were below normal in 63% of wells water levels in 4 wells were in the lowest 10th percentile. The groundwater levels in the remaining 38% of wells were normal.

Precipitation

Precipitation in April ranged from 2.20 inches in Hagerstown to 5.80 inches in Baltimore according to data from the National Weather Service. The Hagerstown weather station had the least amount of precipitation for the second consecutive month, but this station does not have enough record to calculate statistics.

In Baltimore, the wet April followed a dry March and the driest February on record.

Rainfall at weather stations at Washington Reagan National Airport near the District of Columbia and Georgetown, DE was more than 4 inches in April. Rainfall was below normal in Wilmington, DE with 2.60 inches.



Rainfall deficits since January 1, 2009 are from 2 to 4 inches (data from MARFC) for the region. Counties with deficits near 4 inches (approximately one month's normal rainfall) are Carroll, Frederick, Garrett, Harford, Somerset, Washington, and Wicomico. Rainfall for the last 365 days remains in the normal range throughout Maryland, Delaware, and District of Columbia.

Sources: National Weather Service

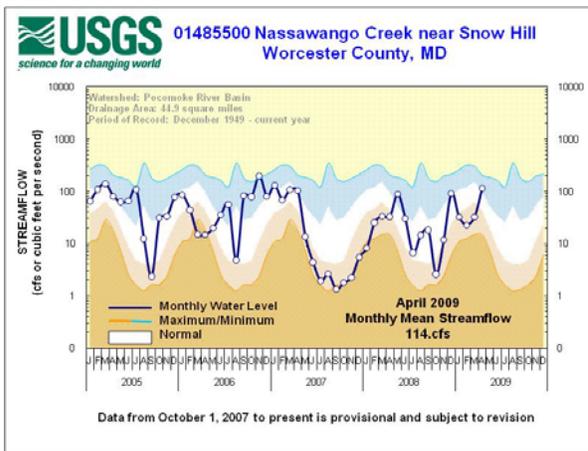
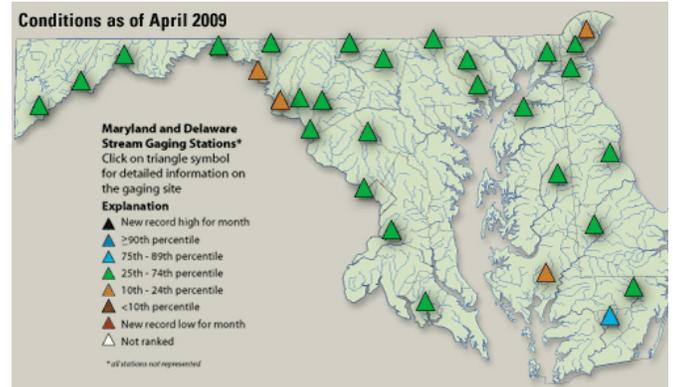
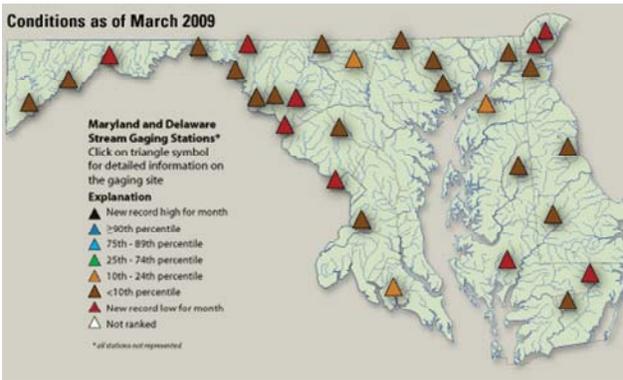
MD and DC: <http://www.weather.gov/climate/index.php?wfo=lsx>

DE: <http://www.erh.noaa.gov/phi/>

Middle Atlantic River Forecast Center (MARFC): <http://www.erh.noaa.gov/marfc/Maps/precip.html>

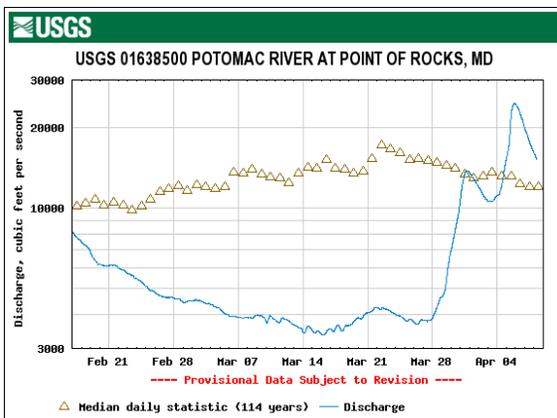
Streamflow

Streamflow rose in all the USGS streamflow stations used to assess climatic conditions in Maryland, Delaware, and the District of Columbia and was normal in 25 of the 30 sites. This is a large change from the rankings in March. Both the March and April maps are shown to illustrate this.



Monthly mean streamflow on the Nassawango Creek rose from below normal in March, to above normal in April. The dark line in the 5-year hydrograph represents the current flow and the white band shows the normal range based on the period of record.

Five-year hydrographs can be viewed at: <http://md.water.usgs.gov/surfacewater/streamflow/>

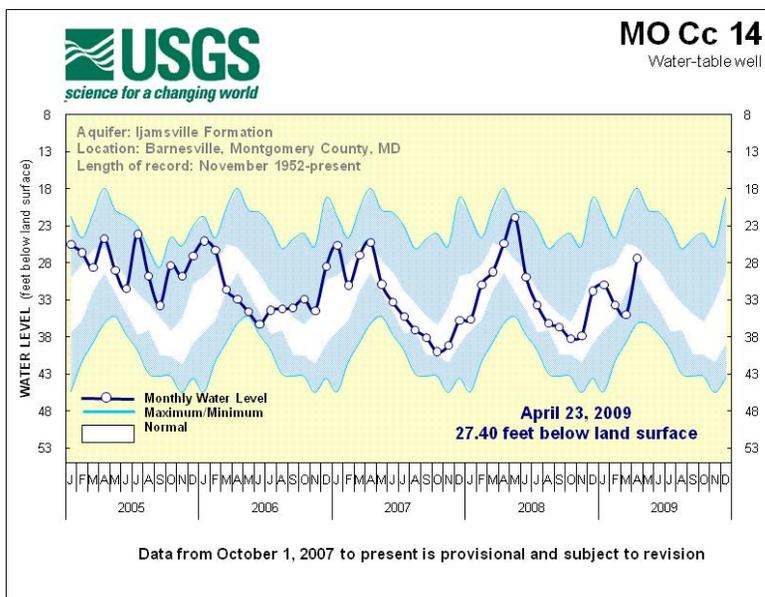
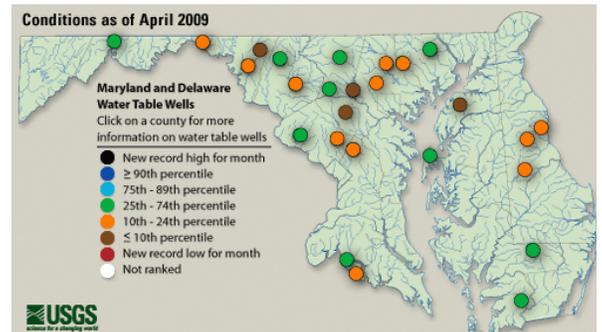
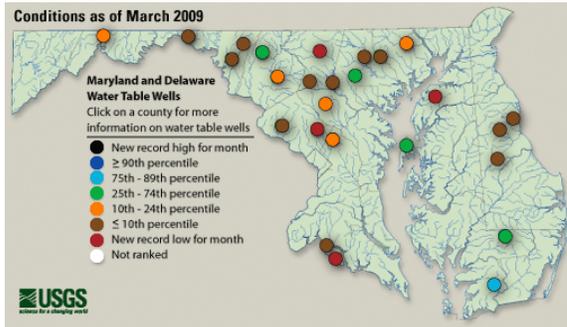


This hydrograph for 50 days of streamflow on the Potomac River at Point of Rocks shows how far the levels were below normal (triangles); many new daily record lows were set in March. Rainfall was steady at the end of March and through April, and as a result, streamflow rose to above normal in April and remained high through the month.

Real-time streamflow data can be viewed at: <http://waterdata.usgs.gov/md/nwis/rt>

Groundwater

The maps below show how much groundwater levels improved since March when there were 4 record lows and only 5 sites were at normal to above normal levels. In April, groundwater levels were below normal in 16 of the 26 wells used by the USGS to assess climatic conditions. The groundwater levels in the remaining 10 wells were normal. Groundwater levels are continuing to rise as rainfall has been steady.



The groundwater level in the well in Montgomery County, Maryland rose abruptly from below normal in March to normal in April. The 5-year hydrograph shows the water level as a dark line and normal (between the 25th and 75th percentiles) as a white band.

Five-year hydrographs can be viewed at:

http://md.water.usgs.gov/groundwater/web_wells/current/water_table/counties

Reservoir Levels

Water available from the Baltimore reservoir system (Loch Raven, Liberty, and Prettyboy) rose 4% to 72.46 billion gallons in available storage at the end of April 2009.

Water stored in the Triadelphia and Duckett Reservoirs, which serve Montgomery and Prince George's Counties, increased 16% in normal capacity at the end of April, 2009. The gate maintenance on the Triadelphia reservoir is complete and the reservoir is filling.

April 2009	Percent available /normal storage	Volume (billion gallons)	Source
Baltimore Reservoirs			Baltimore City
Loch Raven	100%	21.20	
Liberty	91%	33.49	
Prettyboy	100%	17.85	
Total	96%	72.46	4% increase since March 2009
Patuxent Reservoirs			Washington Suburban Sanitary Commission (WSSC)
Triadelphia	72%	4.04	
Duckett	85%	4.25	
Total	79%	8.29	16% increase since March 2009