

## June 2009 USGS Maryland-Delaware-DC Water Conditions Summary

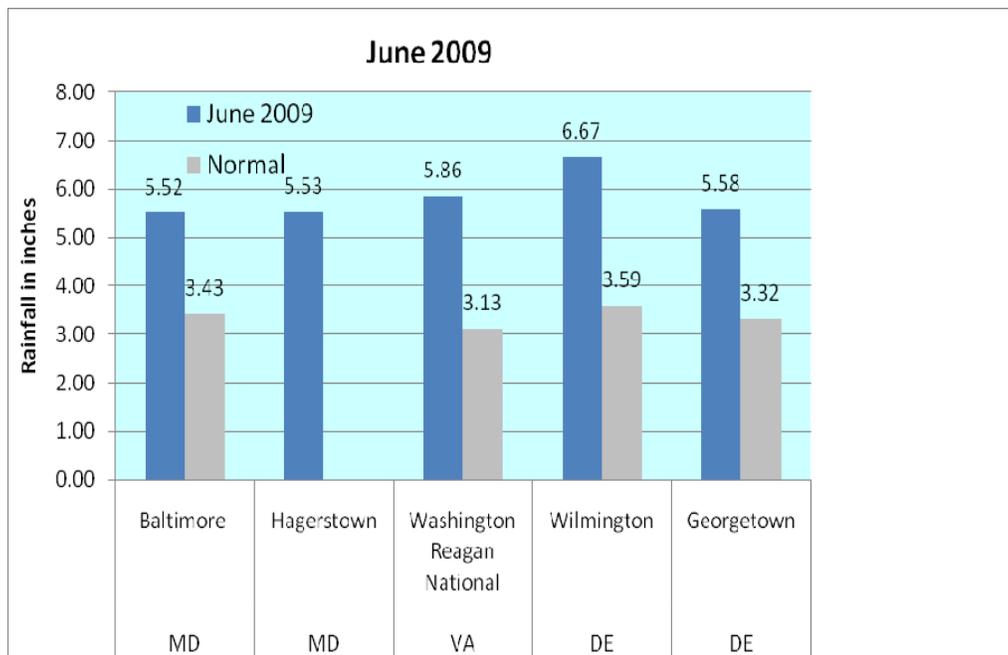
June was the third consecutive month with above normal rainfall, resulting in mostly normal to above normal water levels across the region. Streamflow levels were normal to above normal in all the streams used by the U.S. Geological Survey (USGS) to assess response to climatic conditions. In Maryland, Delaware, and the District of Columbia, groundwater levels were normal in more than half (54%) of the wells, above normal in 31% and below normal in 15% of the wells.

### Precipitation

For the third consecutive month, rainfall was above normal throughout Maryland, Delaware, and the District of Columbia. According to data from the National Weather Service's Baltimore weather station, the April-June 2009 period was the "the second wettest ever measured" with 19.71 inches, almost half the typical amount of annual rainfall. This was second only to that time period in 1889 when there was 21.69 inches. The first 3 months of 2009 were the second driest on record.

Rainfall at each of the 5 weather stations in the chart below shows more than 5 inches of rain in June. Wilmington had the highest rainfall of the 5 stations in June with 6.67 inches; close to twice the normal June rainfall. The Hagerstown weather station does not have enough record to calculate statistics. June temperatures were near normal, but they never reached 90 degrees Fahrenheit as they typically do in June.

June rainfall was above normal in all counties in Maryland except Garrett County (data from MARFC). June rainfall was also above normal in Delaware and the District of Columbia. For the last 365 days, rainfall remains in the normal range throughout Maryland, Delaware, and District of Columbia.



Sources: National Weather Service

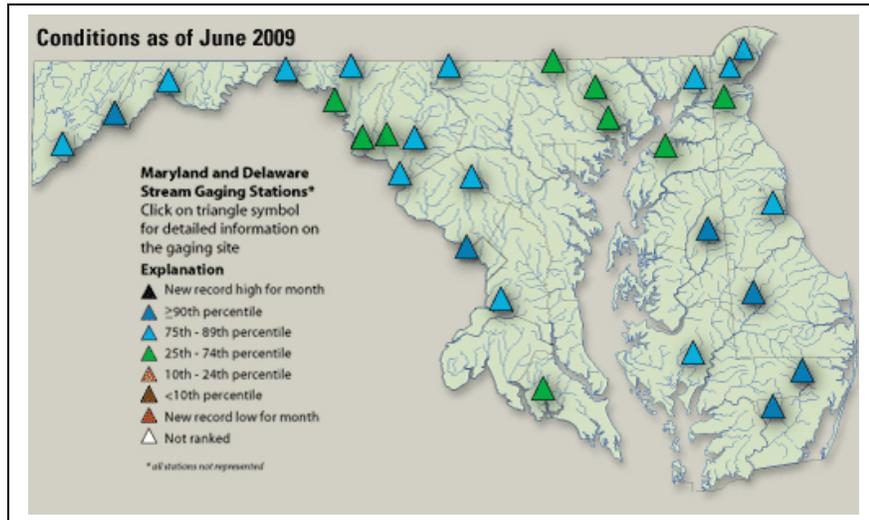
MD and DC: <http://www.weather.gov/climate/index.php?wfo=lwx>

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

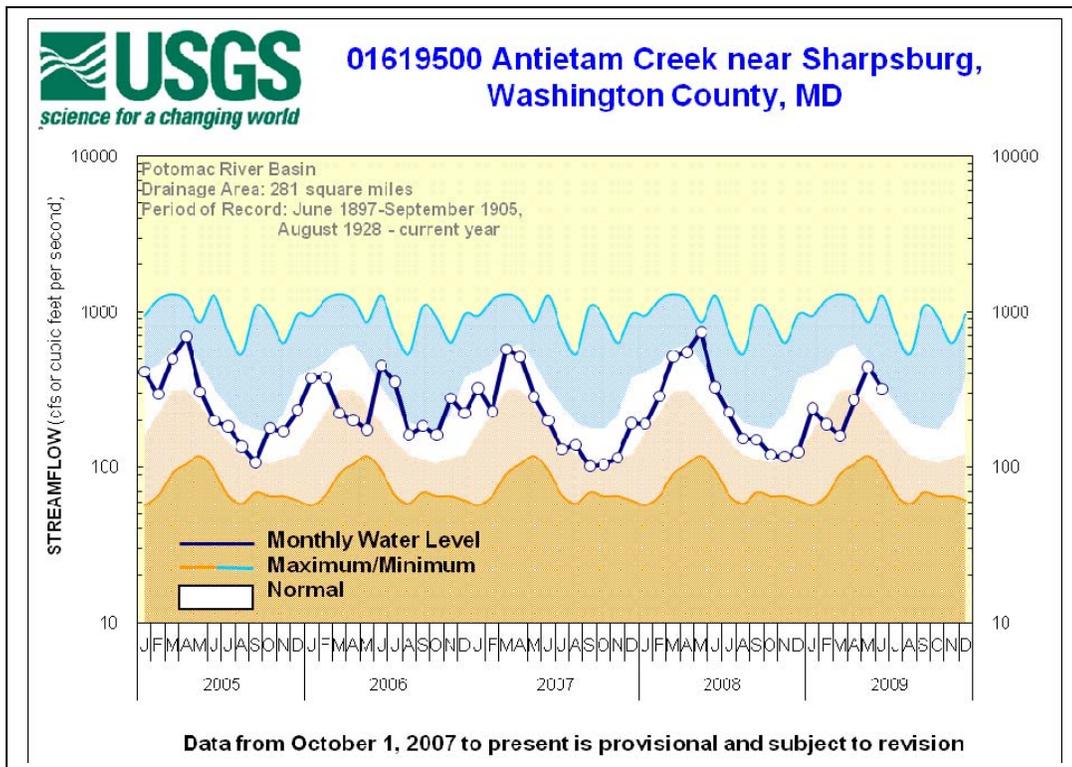
Middle Atlantic River Forecast Center (MARFC): <http://www.erh.noaa.gov/marfc/Maps/precip.html>

## Streamflow

Streamflow was normal to above normal at all the USGS streamflow stations used to assess climatic conditions in Maryland, Delaware, and the District of Columbia. June is the third month with above normal rainfall and the streamflow levels reflect the abundance of rainfall.



As an example, monthly mean streamflow in Antietam Creek is in the normal range in June and following the normal cyclic trend. Water levels drop during the summer months and reach their lowest point in the fall. 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.

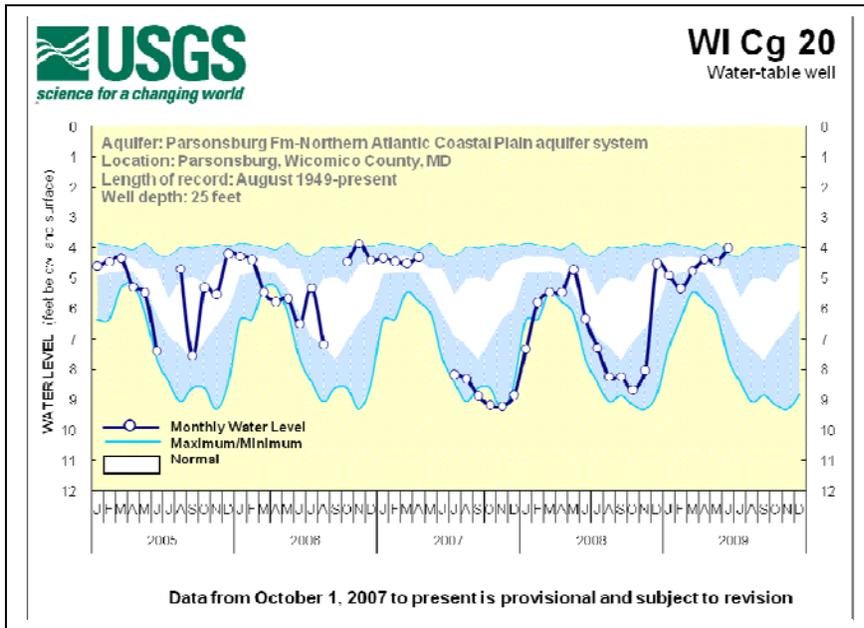
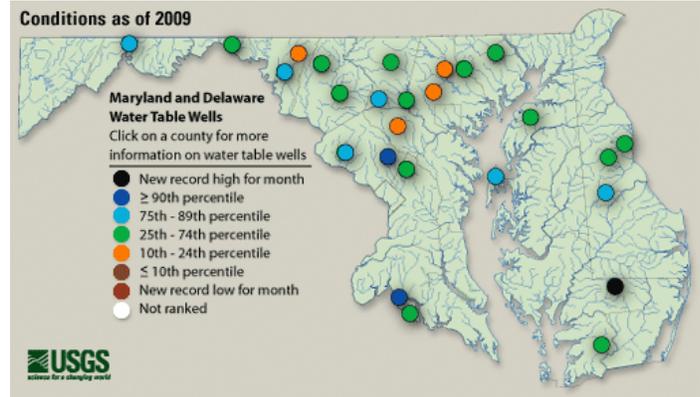


Five-year hydrographs can be viewed at: <http://md.water.usgs.gov/surfacewater/streamflow/>

## Groundwater

Groundwater levels ranged from below normal in central Maryland to normal to above normal in other parts of these states. A new record high June water level was set in well in Wicomico County.

For the wells used by the USGS to assess climatic conditions, groundwater levels were below normal in 4 wells, normal in 14 wells, and above normal in 8 wells.



The groundwater level in well WI Cg 20 in Wicomico County, Maryland rose to the highest June level since 1979. The 5-year hydrograph shows the water level as a dark line and normal (between the 25<sup>th</sup> and 75<sup>th</sup> percentiles) as a white band.

Five-year hydrographs can be viewed at:

[http://md.water.usgs.gov/groundwater/web\\_wells/current/water\\_table/counties](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) was 75.28 billion gallons in available storage at the end of June 2009.

Water stored in the Triadelphia and Duckett Reservoirs, which serve Montgomery and Prince George's Counties, increased to 100% capacity at the end of June, 2009.

June 2009	Percent available /normal storage	Volume (billion gallons)	Source
<b>Baltimore Reservoirs</b>			<b>Baltimore City</b>
Loch Raven	99.15%	21.02	
Liberty	99.35%	36.56	
Prettyboy	99.16%	17.70	
<b>Total</b>	<b>99.25%</b>	<b>75.28</b>	
<b>Patuxent Reservoirs</b>			<b>Washington Suburban Sanitary Commission (WSSC)</b>
Triadelphia	100%	5.87	
Duckett	100%	5.26	
<b>Total</b>	<b>100%</b>	<b>11.13</b>	