

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

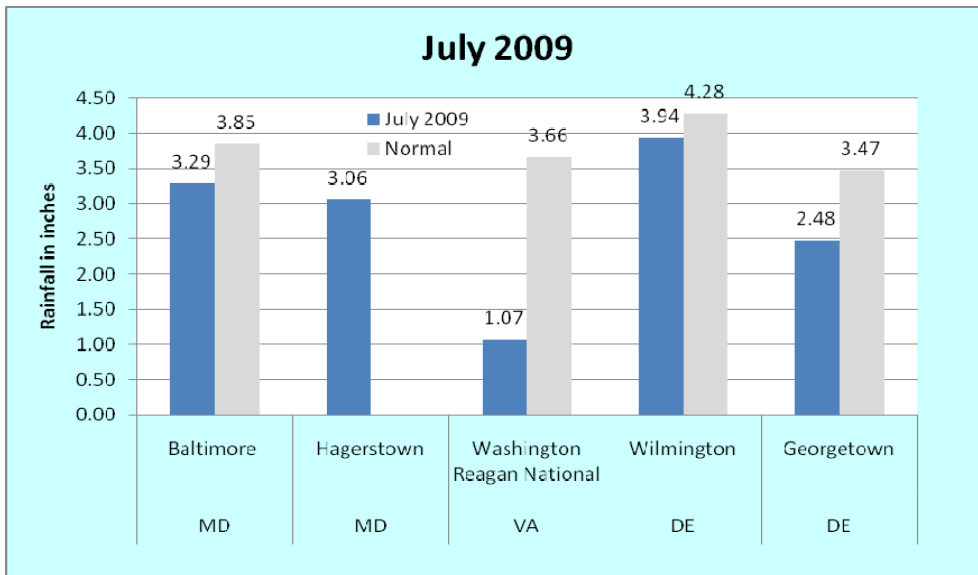
Water levels in most streams and wells dropped to normal levels after three consecutive months of above normal rainfall. Streamflow levels were normal in 27 of the 29 streams used by the U.S. Geological Survey (USGS) to assess response to climatic conditions in Maryland, Delaware, and the District of Columbia. Flow in the Youghiogheny River in Garrett County and Morgan Creek in Kent County, was below normal in July.

Groundwater levels were normal in 18 of the 26 wells, above normal in one well in Montgomery County and below normal in 7 wells (Baltimore, Carroll, and Charles Counties).

### Precipitation

Rainfall was slightly below normal in Maryland and Delaware, and much below normal in the District of Columbia, according to the National Weather Service. The 4 weather stations shown below had rainfall levels below normal. The Hagerstown weather station does not have enough record to calculate statistics.

In July, much of the rain comes from thunderstorms instead of large regional weather systems and the rainfall amounts can therefore vary greatly by location. Precipitation levels are normal for the year and for the last 365 days. Temperatures in July were below normal.



Sources: National Weather Service

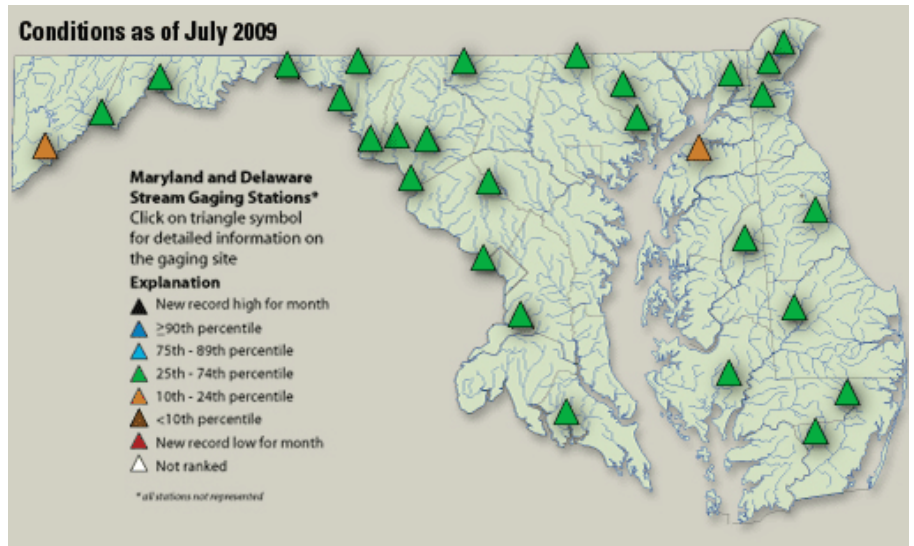
MD and DC: <http://www.weather.gov/climate/index.php?wfo=lwx>

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

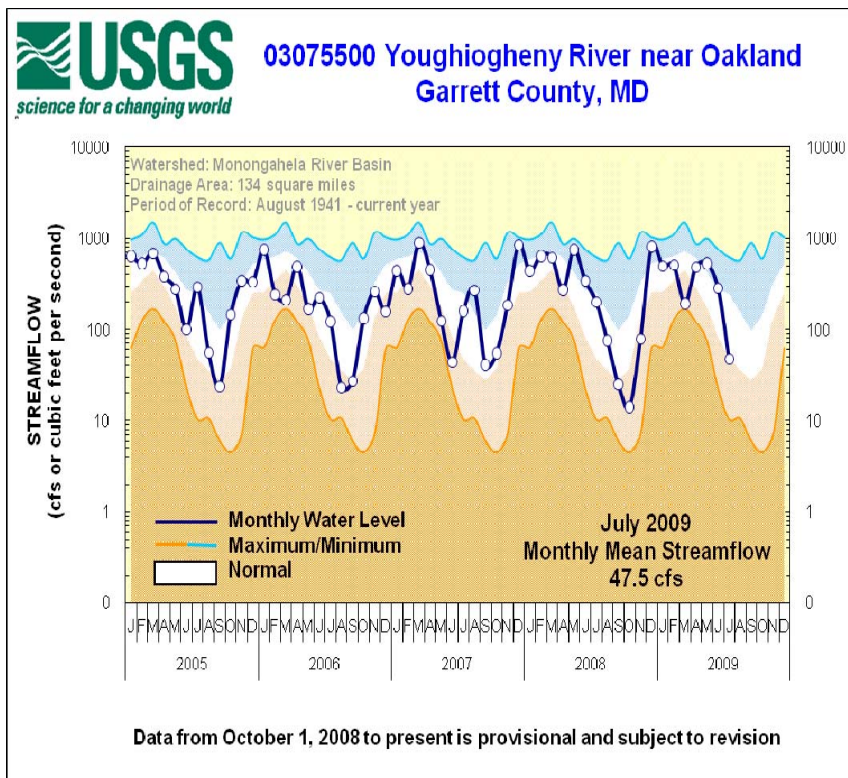
Middle Atlantic River Forecast Center (MARFC): <http://www.erh.noaa.gov/marfc/Maps/precip.html>

## Streamflow

Streamflow was normal in 27 of the 29 USGS streamflow stations used to assess climatic conditions in Maryland, Delaware, and the District of Columbia. Many of these streams had above normal flow in June. The remaining 2 sites (Garrett and Kent County, Maryland) had below normal streamflow.



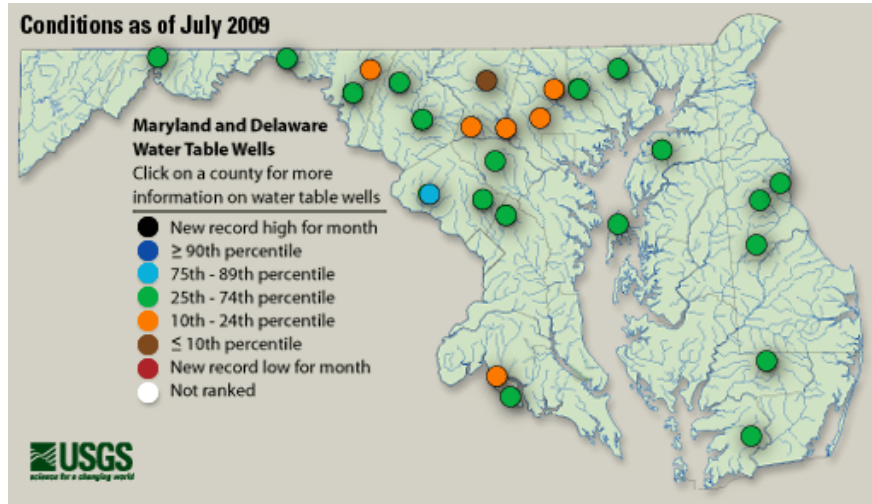
Monthly mean streamflow in the Youghiogheny River dropped to just below normal in July. Water levels usually drop during the summer months and reach their lowest point in the fall. The dark line in the 5-year hydrograph represents the current flow and the white band shows the normal range based on the period of record.



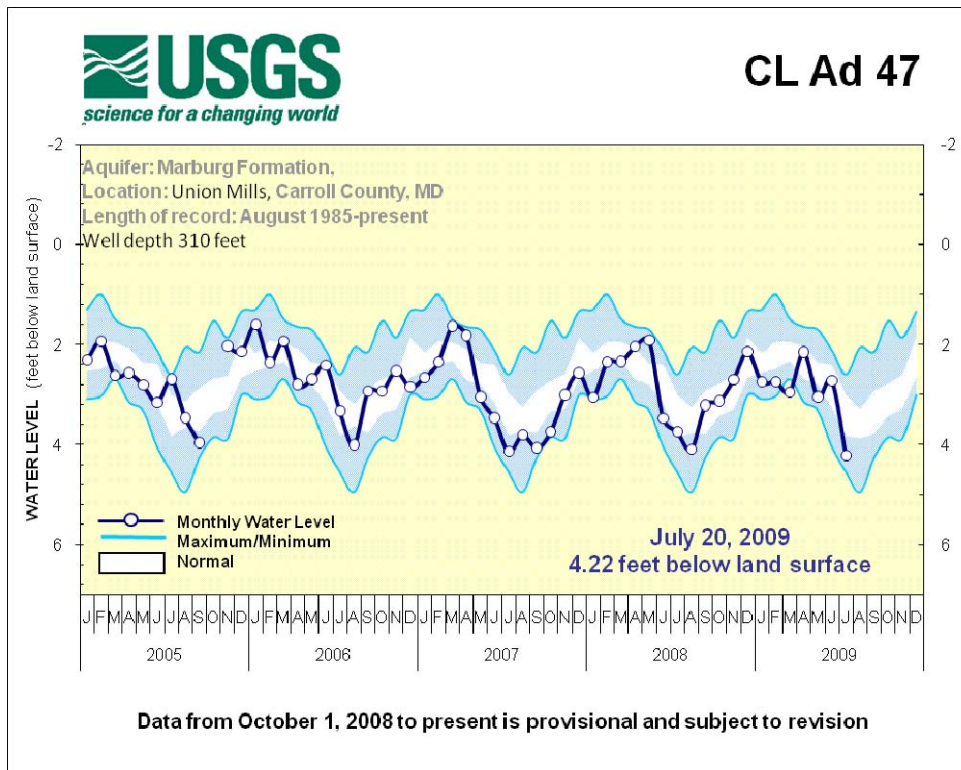
Five-year hydrographs can be viewed at: <http://md.water.usgs.gov/surfacewater/streamflow/>

## Groundwater

Groundwater levels were normal in 18 of the 26 wells used by the USGS to assess climatic conditions. The wells with below normal levels were in Baltimore, Carroll, and Charles Counties. The water level in the Montgomery County well was above normal.



The groundwater level in well CL Ad 47 in Carroll County, Maryland dropped abruptly in July. Well CL Ec 75 also in Carroll County showed a similar drop. While rainfall for the county was normal, an explanation would be that rain not much fell in this region in July. 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 groundwater 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 75.85 billion gallons in available storage at the end of July 2009.

Water stored in the Triadelphia and Duckett Reservoirs, which serve Montgomery and Prince George's Counties, decreased to 97.70% capacity at the end of July 2009.

<b>July 2009</b>	<b>Percent available /normal storage</b>	<b>Volume (billion gallons)</b>	<b>Source</b>
<b>Baltimore Reservoirs</b>			<b>Baltimore City</b>
Loch Raven	93.77%	19.88	
Liberty	98.21%	36.14	
Prettyboy	99.99%	17.83	
<b>Total</b>	<b>97.36%</b>	<b>75.85</b>	
<b>Patuxent Reservoirs</b>			<b>Washington Suburban Sanitary Commission (WSSC)</b>
Triadelphia	99.80%	5.59	
Duckett	95.59%	4.79	
<b>Total</b>	<b>97.70%</b>	<b>10.38</b>	