

June 2010 USGS Maryland-Delaware-District of Columbia Water Conditions Summary

Groundwater and streamflow levels dropped in June in response to the third consecutive month of below normal rainfall. The lowest water levels were in Carroll and Frederick Counties, southern Maryland and the southern part of the Delmarva Peninsula.

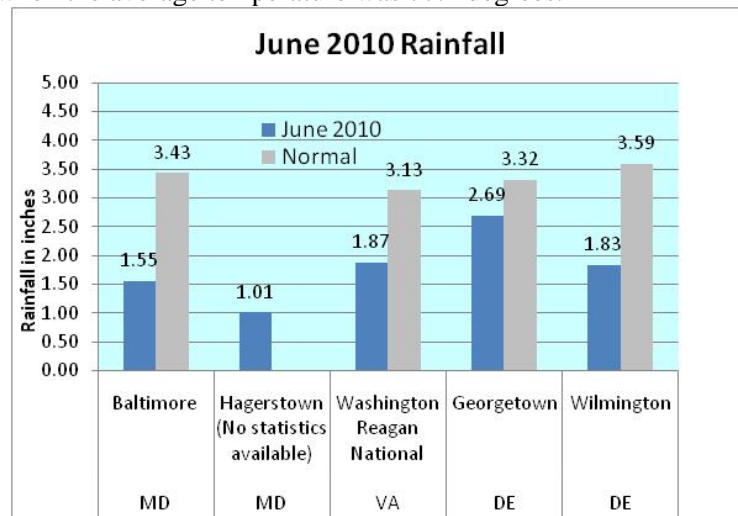
The groundwater level in the well in Carroll County was the lowest June water level since 1999. Another 4 wells had water levels close to record lows. More than half, or 16 of the 25 wells had groundwater levels in the normal range.

Streamflow was normal in 52%, or 15 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 in June. In May, 78% of the stations had normal streamflow.

Precipitation

Rainfall was more than an inch below normal at all five National Weather Service stations in Maryland, Delaware, and at Washington Reagan National Airport in the District of Columbia in June. Since April, precipitation has been below normal, and for the year to date, precipitation ranges from a 0.6-inch deficit in Dorchester and Queen Annes' Counties to a 4.5-inch deficit in Carroll County, according to the Middle Atlantic River Forecast Center. Compared to the normal precipitation for the past 365 days, most of the region, except western Maryland, remains above normal despite below normal precipitation in the spring and early summer of 2010. The largest surplus is in Worcester County, with 15.2 inches.

Many daily high temperature records were set in Baltimore and the District of Columbia in June and the average monthly temperatures were 6 to 7 degrees Fahrenheit above normal. According to the National Weather Service for the weather station in Wilmington, Delaware, "June 2010 was the third warmest June on record with an average temperature of 76.7 degrees. The warmest June on record occurred in 1895, when the average temperature was 77.2 degrees."



Sources: National Weather Service

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

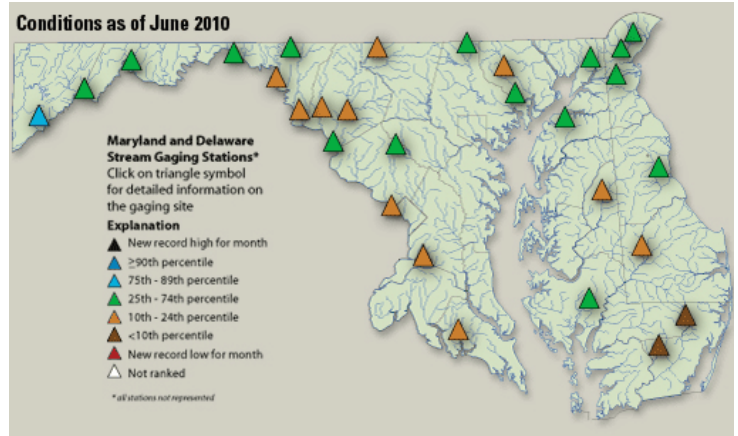
DE: <http://www.erh.noaa.gov/phi/>

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

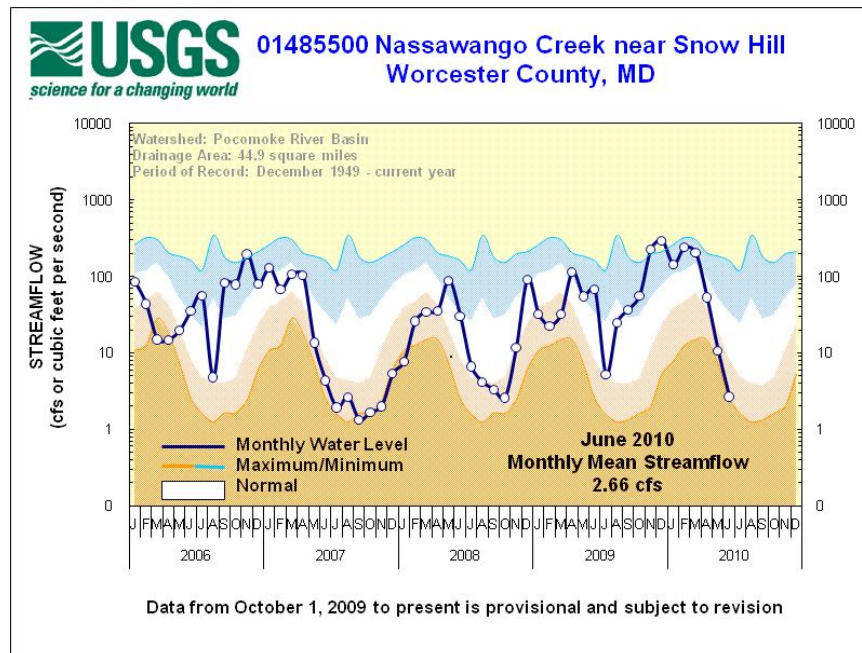
Streamflow

Monthly mean streamflow levels have dropped since May at many of the USGS streamflow stations used to assess climatic conditions in Maryland, Delaware, and the District of Columbia. In May, 78% of the stations were at normal levels, and in June, the number dropped to 52%. The number of streams with below normal monthly mean streamflows increased from 15% in May to 45% in June.

Three months of below-normal rainfall on the southern Delmarva Peninsula resulted in the Nassawango and Pocomoke Rivers reaching the lowest (< 10th) percentile of monthly mean streamflow again in June.



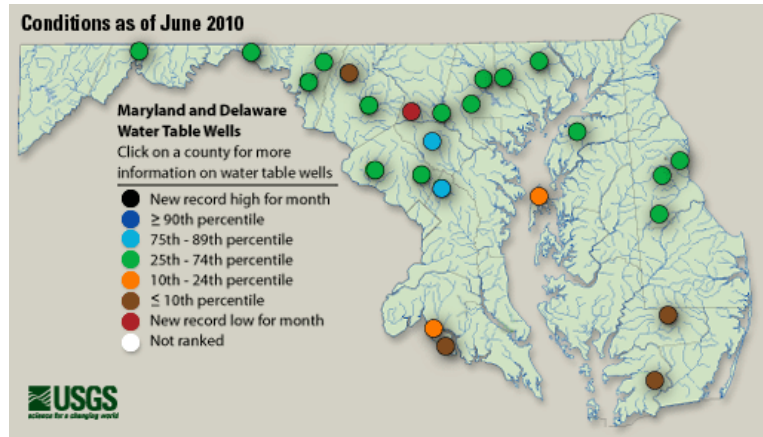
The monthly mean streamflow on Nassawango Creek continued to drop more quickly than the normal rate for the third consecutive month. Precipitation in the region has been below normal for the past three months. The dark line in the 5-year hydrograph represents the current monthly mean streamflow and the white band shows the normal range (25th to 74th percentile) based on the period of record (1949 to current year).



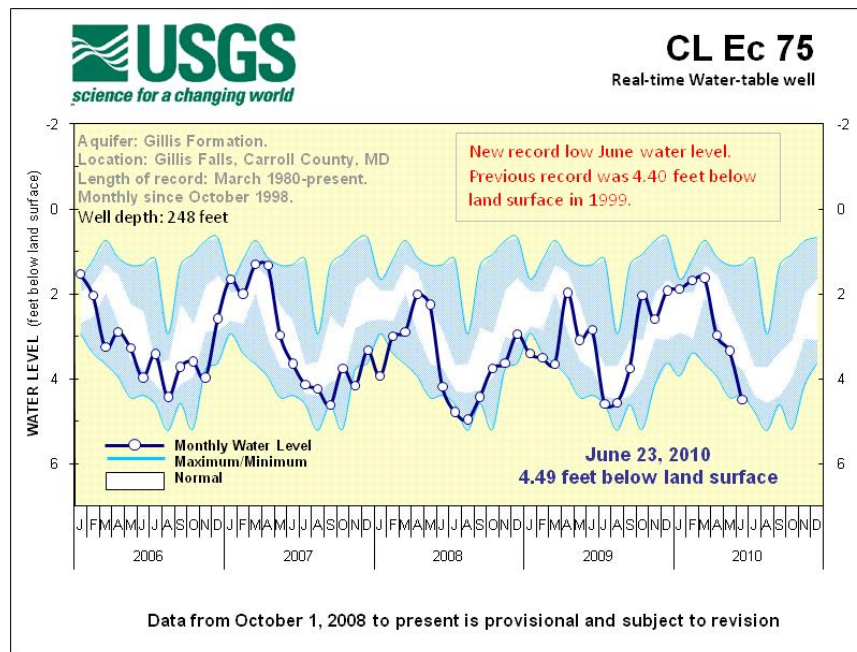
Five-year hydrographs can be viewed at: <http://md.water.usgs.gov/surfacewater/streamflow/>

Groundwater

Water levels were normal in 16 of the 25 wells used by the USGS to assess climatic conditions in June. Groundwater levels were below normal in 7 wells located in Carroll and Frederick Counties and southern Maryland and the southern part of the Delmarva Peninsula. The groundwater level in the well in Carroll County set a new June record low and 4 other wells were near record lows. Only 2 wells in central Maryland had above normal groundwater levels.



The groundwater level in well CL Ec 75 in Carroll County, Maryland dropped to the lowest June level on record (4.49 feet below land surface), beating the record set in 1999 (4.40 feet below land surface). The 5-year hydrograph shows the water level as a dark line and normal range (between the 25th and 74th 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

Reservoir Levels

Storage in the Baltimore reservoirs (Loch Raven, Liberty, and Prettyboy) dropped from 100% of available storage in May to 97%, with 73.47 billion gallons in available storage.

The Triadelphia and Duckett Reservoirs, which serve Montgomery and Prince George's Counties, were at 97% of normal storage, with 10.32 billion gallons at the end of June 2010.

June 2010	Percent available /normal storage	Volume (billion gallons)	Source
Baltimore Reservoirs			Baltimore City – Environmental Services Division
Loch Raven	98%	20.72	
Liberty	95%	35.10	
Prettyboy	99%	17.65	
Total	97%	73.47	
Patuxent Reservoirs			Washington Suburban Sanitary Commission (WSSC)
Triadelphia	100%	5.63	
Duckett	94%	4.69	
Total	97%	10.32	