

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

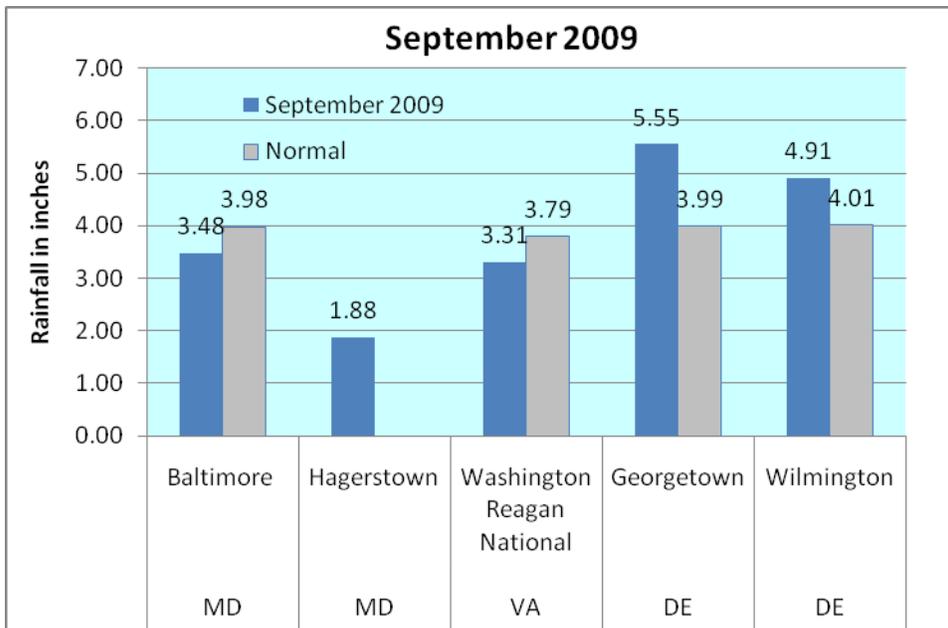
Water levels in September were normal in 38% of the streams and 69% of the wells used by the U.S. Geological Survey (USGS) to assess response to climatic conditions in Maryland, Delaware, and the District of Columbia. The highest water levels were on the Delmarva Peninsula, including Delaware, and the lowest water levels were generally in western Maryland.

Eight of the wells used in the monthly water conditions report are now real-time and can be viewed at: <http://waterdata.usgs.gov/md/nwis/current/?type=gw>

### Precipitation

Rainfall was slightly below normal in Baltimore and the District of Columbia, and less than 2 inches in Hagerstown, Maryland, according to the National Weather Service. The Hagerstown weather station does not have enough record to calculate statistics. In Maryland, rainfall was below normal from Frederick County west to Garrett County.

Worcester County, Maryland had the highest amount of rainfall with nearly 8 inches. Rainfall in Delaware was above normal in September in all three counties.



Sources: National Weather Service

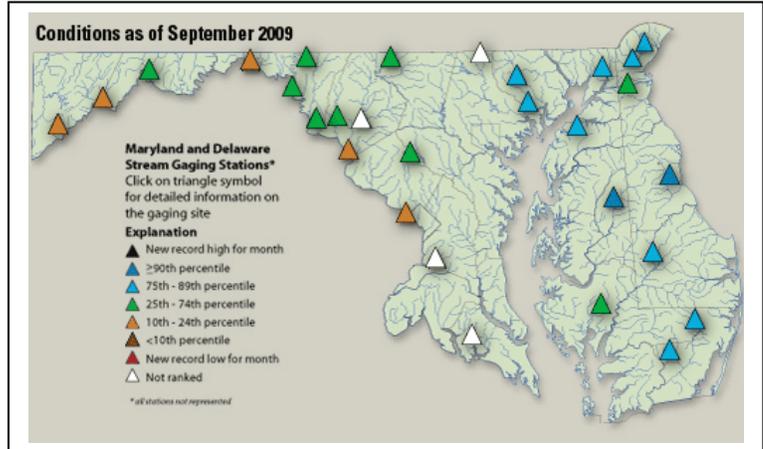
MD and DC: <http://www.weather.gov/climate/index.php?wfo=lwx>

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

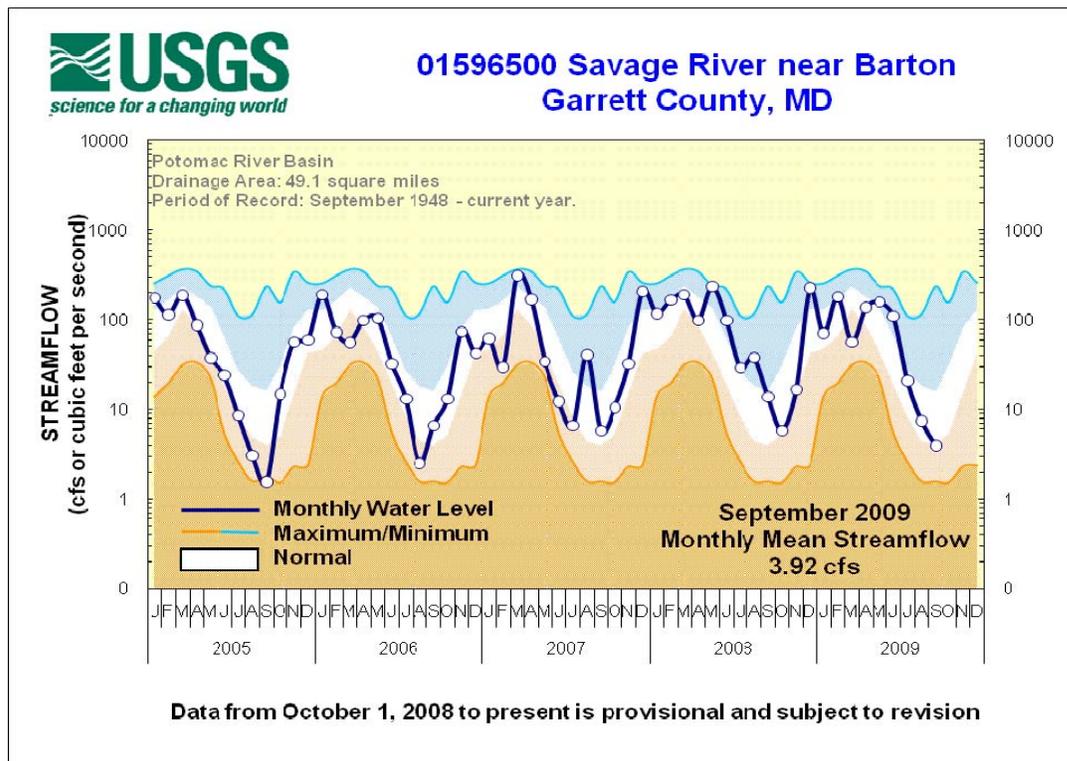
Middle Atlantic River Forecast Center (MARFC): <http://www.erh.noaa.gov/marfc/Maps/precip.html>

## Streamflow

Streamflow was above normal in 45% of the 25 USGS streamflow stations used to assess climatic conditions in Maryland, Delaware, and the District of Columbia. Most of these streams were on the Delmarva Peninsula and northeast Maryland. Streamflow was below normal in western Maryland, including the Potomac River. There were 38% of streams in the normal range in September.



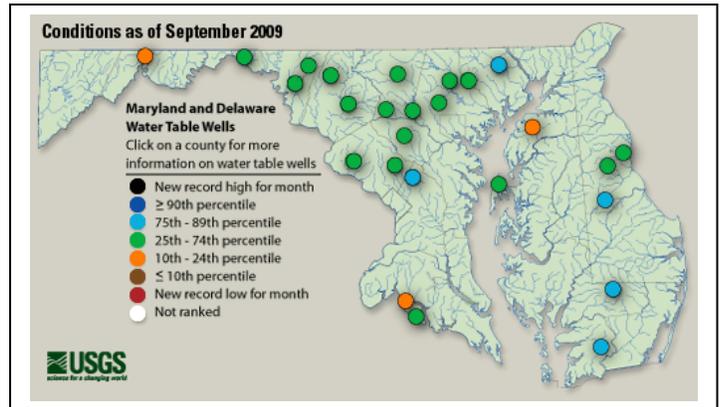
Monthly mean streamflow on the Savage River continued to drop in September to below normal. The end of September is also the end of the 2009 water year (October 1 to September 30) when water levels are typically at their lowest levels. As the temperatures become cooler and plants become dormant, water levels are expected to rise. 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/>

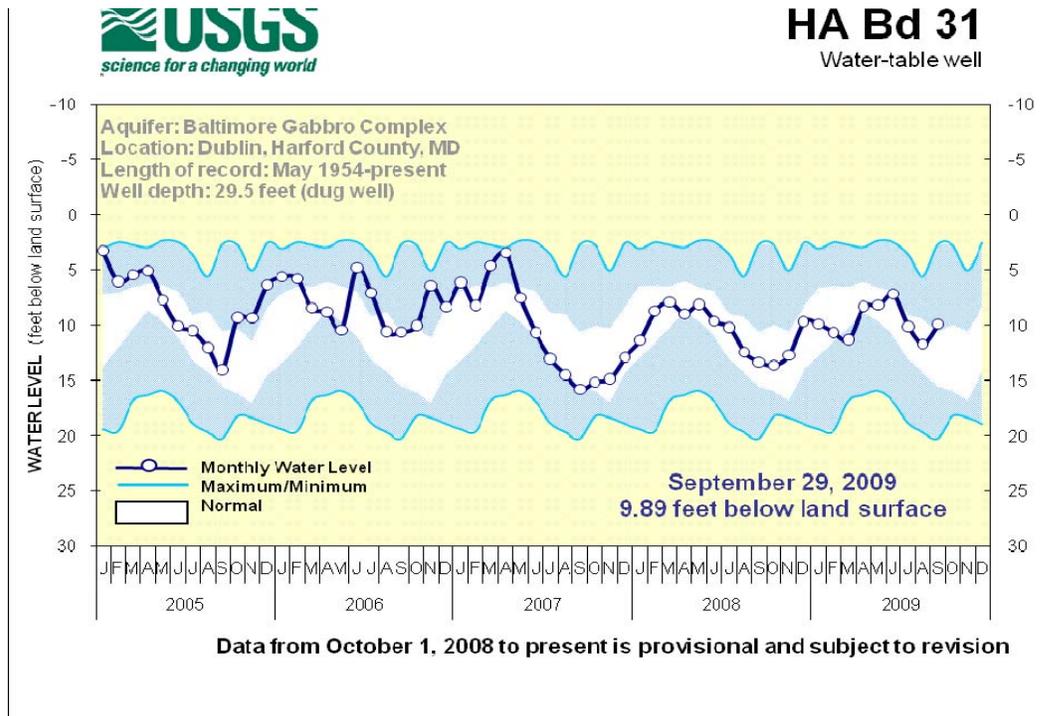
## Groundwater

For the second consecutive month, groundwater levels were normal in 69% of the 26 wells used by the USGS to assess climatic conditions. In September, 19% of wells had above normal and 12% had below normal water levels.



Real-time water levels recording has been added to eight wells and can be viewed at: <http://waterdata.usgs.gov/md/nwis/current/?type=gw>

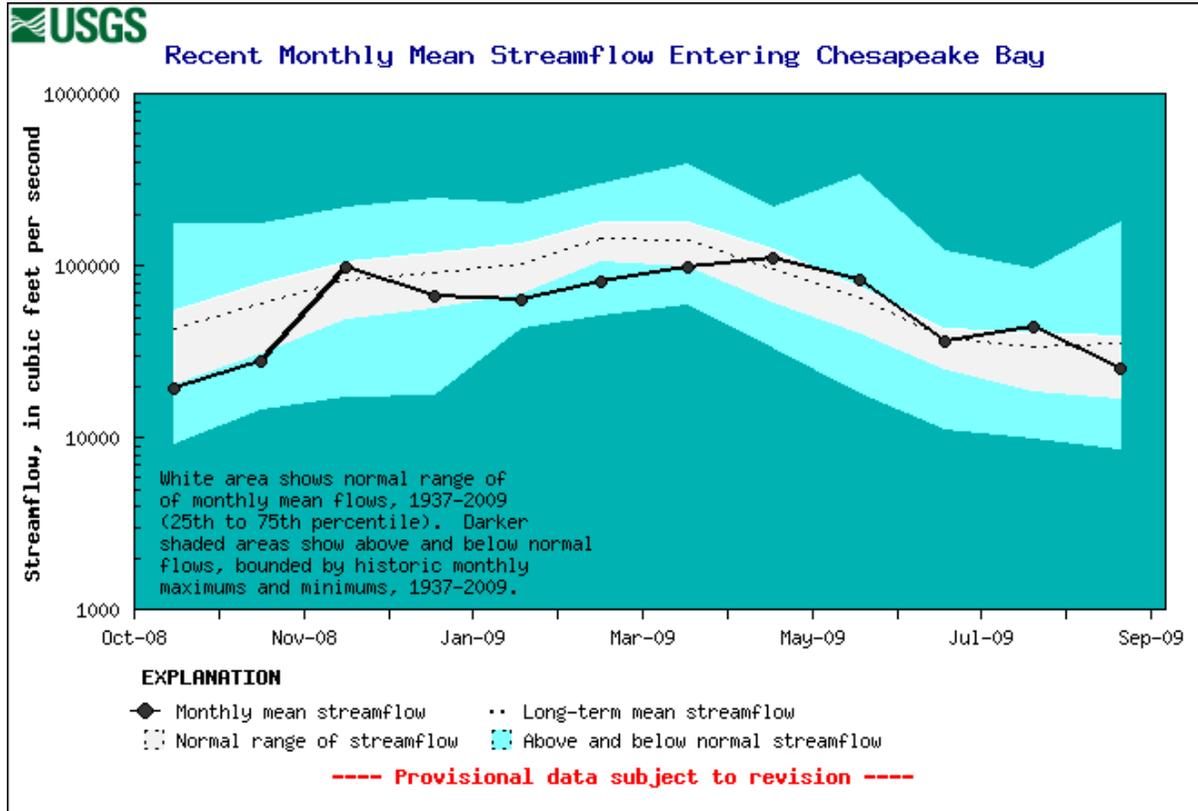
The groundwater level in well HA Bd 31 in Harford County, Maryland rose from normal to above normal in September. The 5-year hydrograph shows the water level as a dark line and normal (between the 25<sup>th</sup> and 75<sup>th</sup> percentiles) as a white band.



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)

## Estimated Streamflow Entering Chesapeake Bay

The estimated monthly mean streamflow entering the Chesapeake Bay for September 2009 was 25,200 cubic feet per second (cfs), which is in the normal range. Normal September streamflow entering the Bay is between 17,000 and 39,100 cfs, the 25th and 75th percentiles, respectively, of all September values. Average (mean) monthly streamflow for September is 35,600 cfs. These statistics are based on a 73-year period of record.



## Reservoir Levels

Water available from the Baltimore reservoir system (Loch Raven, Liberty, and Prettyboy) was 75.50 billion gallons in available storage at the end of September 2009.

Water stored in the Triadelphia and Duckett Reservoirs, which serve Montgomery and Prince George's Counties, was 87% of capacity at the end of September 2009.

September 2009	Percent available /normal storage	Volume (billion gallons)	Source
<b>Baltimore Reservoirs</b>			<b>Baltimore City</b>
Loch Raven	100%	21.20	
Liberty	99%	36.49	
Prettyboy	100%	17.81	
<b>Total</b>	<b>100%</b>	<b>75.50</b>	
<b>Patuxent Reservoirs</b>			<b>Washington Suburban Sanitary Commission (WSSC)</b>
Triadelphia	92%	5.13	
Duckett	82%	4.10	
<b>Total</b>	<b>87%</b>	<b>9.23</b>	