

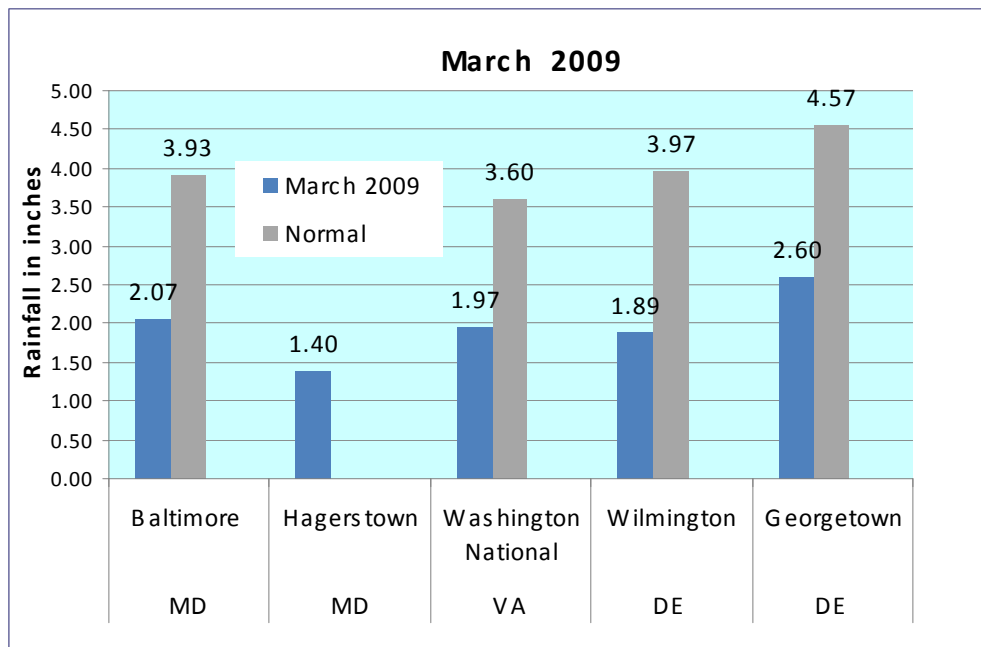
## March 2009 USGS Maryland-Delaware-DC Water Conditions Summary

During most of March, there was little precipitation until the last week. However, the rain was not enough to bring streamflow to normal levels. Streamflow at all of the stations used by the U.S. Geological Survey (USGS) to monitor water conditions across Maryland, Delaware, and the District of Columbia were below normal. Nine sites had the lowest March monthly mean streamflow on record and 27 sites were in the lowest 10<sup>th</sup> percentile. The low streamflow levels span across the region, even more than during the 2002 drought.

Groundwater levels were below normal in 21 of the 26 wells used by the USGS to assess response to climatic conditions. Water levels in 4 wells set new record monthly lows. Twelve wells were in the lowest 10<sup>th</sup> percentile, one above normal, and 4 at normal levels.

### Precipitation

Precipitation in March was 1-2 inches less than normal at weather stations across Maryland, Delaware, and the District of Columbia, according to data from the National Weather Service. The dry March follows the driest February on record. The Hagerstown weather station, had the least amount of precipitation with only 1.4 inches, but this station does not have enough record to calculate statistics.



In March, all counties in Maryland had precipitation 1-2 inches below normal, except for Dorchester, Somerset, and Worcester which were less than an inch below normal (data from MARFC). Delaware and the District of Columbia precipitation was also below normal in March. Rainfall for the last 365 days remains in the normal range throughout Maryland, Delaware, and District of Columbia.

Sources: National Weather Service

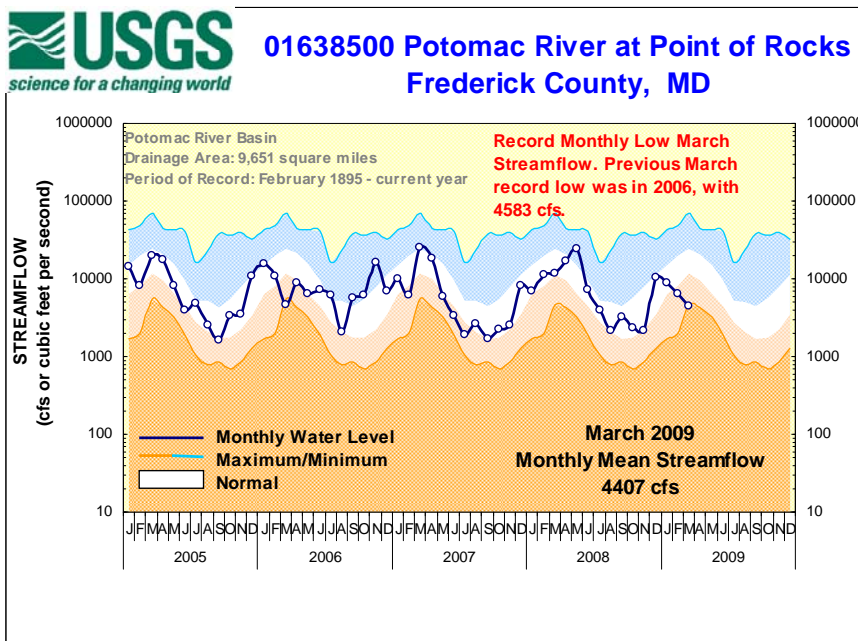
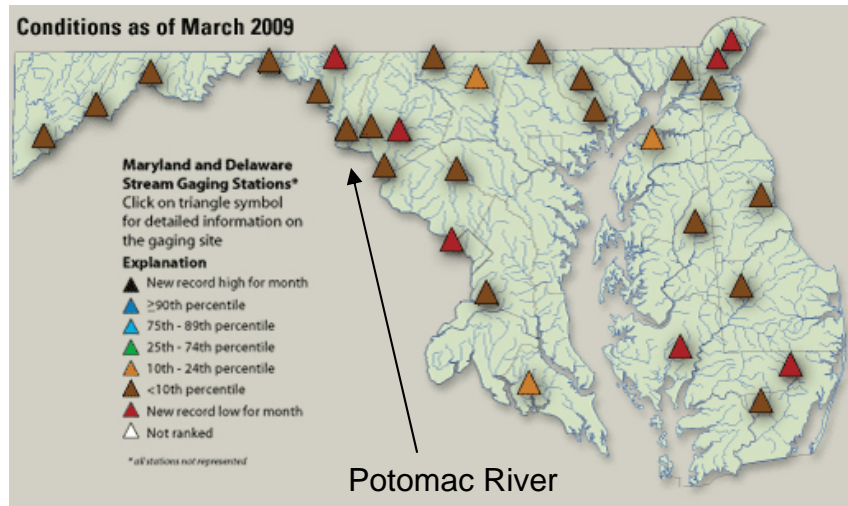
MD and DC: <http://www.weather.gov/climate/index.php?wfo=lwx>

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

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

## Streamflow

Nine of the 30 USGS streamflow stations used to assess climatic conditions in Maryland, Delaware, and the District of Columbia, were at the lowest March monthly mean streamflow on record. One of those sites is the Potomac River at Point of Rocks where data collection began on in 1895. Another 27 USGS streamflow stations had monthly mean streamflow in the lowest 10<sup>th</sup> percentile. The remaining 3 streams were also below normal.



The monthly mean streamflow for the Potomac River at Point of Rocks decreased sharply since December 2008 and was the lowest since record-keeping began in 1895. The 5-year hydrograph shows the monthly mean streamflow as a dark line and normal (between the 25<sup>th</sup> and 75<sup>th</sup> percentiles) as a white band.

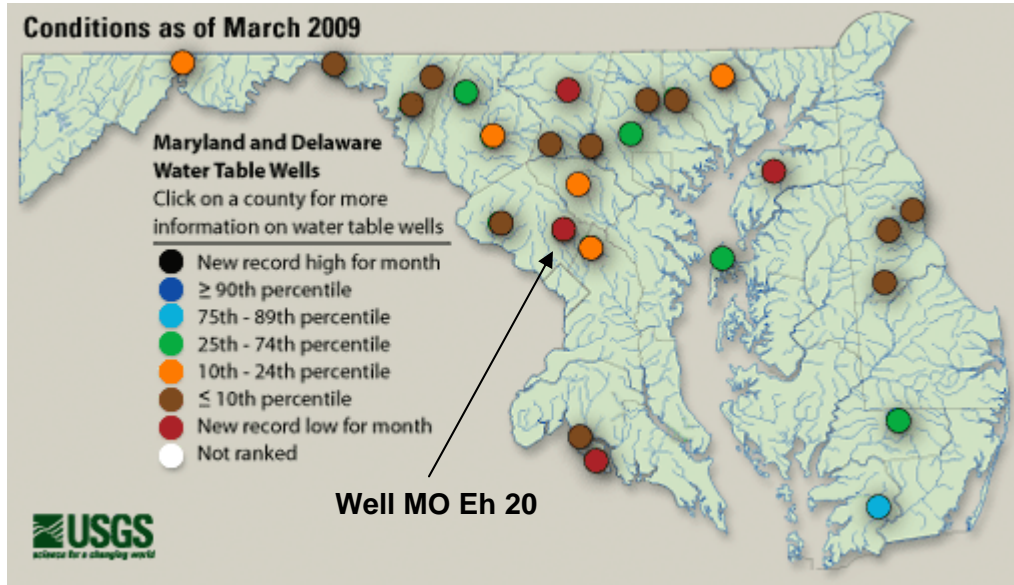
Five-year hydrographs can be viewed at: <http://md.water.usgs.gov/surfacewater/streamflow/>

The table below ranks the lowest monthly mean streamflows on the Potomac River at Point of Rocks, three of which have been during the last decade.

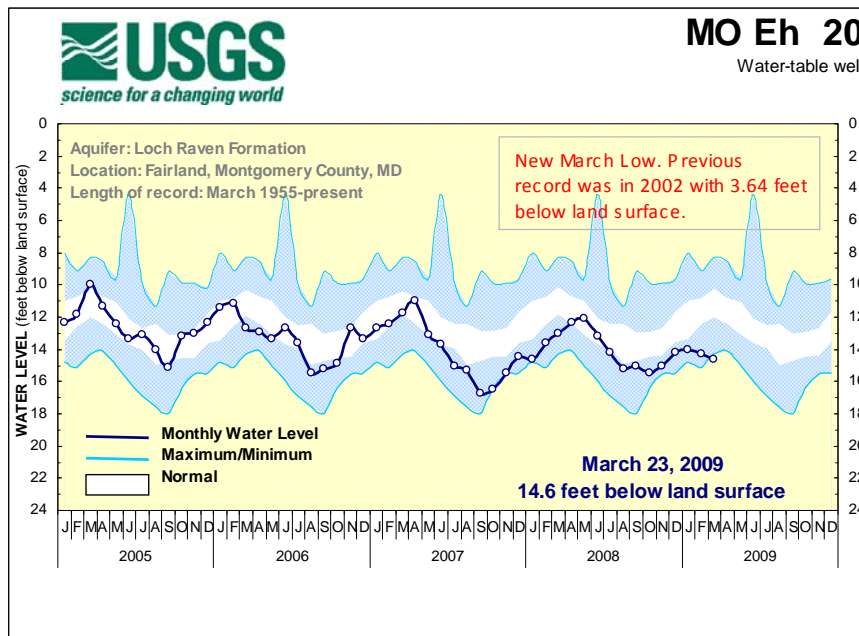
Rank	Potomac River at Point of Rocks	Streamflow in cfs
1	2009	4407
2	2006	4583
3	1931	5400
4	2002	5460
5	1990	5748

## Groundwater

Groundwater levels were below normal in 21 of the 26 wells used by the USGS to assess climatic conditions in March. Wells in Carroll, Charles, Kent, and Montgomery Counties had the lowest March groundwater level on record. Water levels in the wells in Delaware were in the lowest 10<sup>th</sup> percentile. Groundwater levels rose to normal to above normal in Somerset and Wicomico Counties after several months of being below normal.



The water level in the well in Montgomery County, Maryland continues to be below normal and it is the lowest March measurement, breaking the previous record set in 2002. 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)

## Reservoirs

Water available from the Baltimore reservoir system (Loch Raven, Liberty, and Prettyboy) dropped only 0.24 in the available storage (69.42 billion gallons) at the end of March 2009.

Water stored in the Triadelphia and Duckett Reservoirs, which serve Montgomery and Prince George's Counties, also showed little change in the normal capacity at the end of March, 2009. The level in Triadelphia is being kept low for gate maintenance.

March 2009	Percent available /normal storage	Volume (billion gallons)	Source
<b>Baltimore Reservoirs</b>			<b>Baltimore City</b>
Loch Raven	98%	20.69	Dropped 1% since February, 2009
Liberty	86%	30.88	No change since February, 2009
Prettyboy	100%	17.85	No change since February, 2009
<b>Total</b>	<b>92%</b>	<b>69.42</b>	Small decline since February, 2009
<b>Patuxent Reservoirs</b>			<b>Washington Suburban Sanitary Commission (WSSC)</b>
Triadelphia	51%	2.89	
Duckett	76%	3.74	
<b>Total</b>	<b>64%</b>	<b>6.63</b>	Little change since January, 2009

**March**

AL Ah 1
BA Ce 21
BA Dc 444
BA Ea 18
CH Bg 12
CH De 45
CL Ad 47
CL Ec 75
FR Bd 96
FR Df 35
HA Bd 31
HA Ca 23
HO Cd 79
Jd42-03
Jd42-14
KE Bc 185
KE Bg 34
KE Cb 100
Mc51-01
MO Cc 14
MO Eh 20
PG Bc 16
QA Ec 1
SO Cf 2
WA Be 2
WA Bk 25
WA Ci 82
WI Cg 20

**March**

0
1
4
5
12
4
26
4%
15%
62%

Mar-09
Antietam
Big Elk
Brandywine
Catoctin
Chicamacomico
Choptank
Christina
Conococheague
Cranberry Branch
Deer Creek
Little Falls at Blue
Marsh Run
Monoc Bridge
Monoc Jug
Morgan Creek
Nanticoke
Nassawango
Patuxent
Piscataway
Pocomoke
Poto Han
Poto Rocks
Poto LF
Savage
St Clements
St Jones
WhiteClay
WillsCk
Winters
Yough

March
3
18
9
30
0%
0%
90%