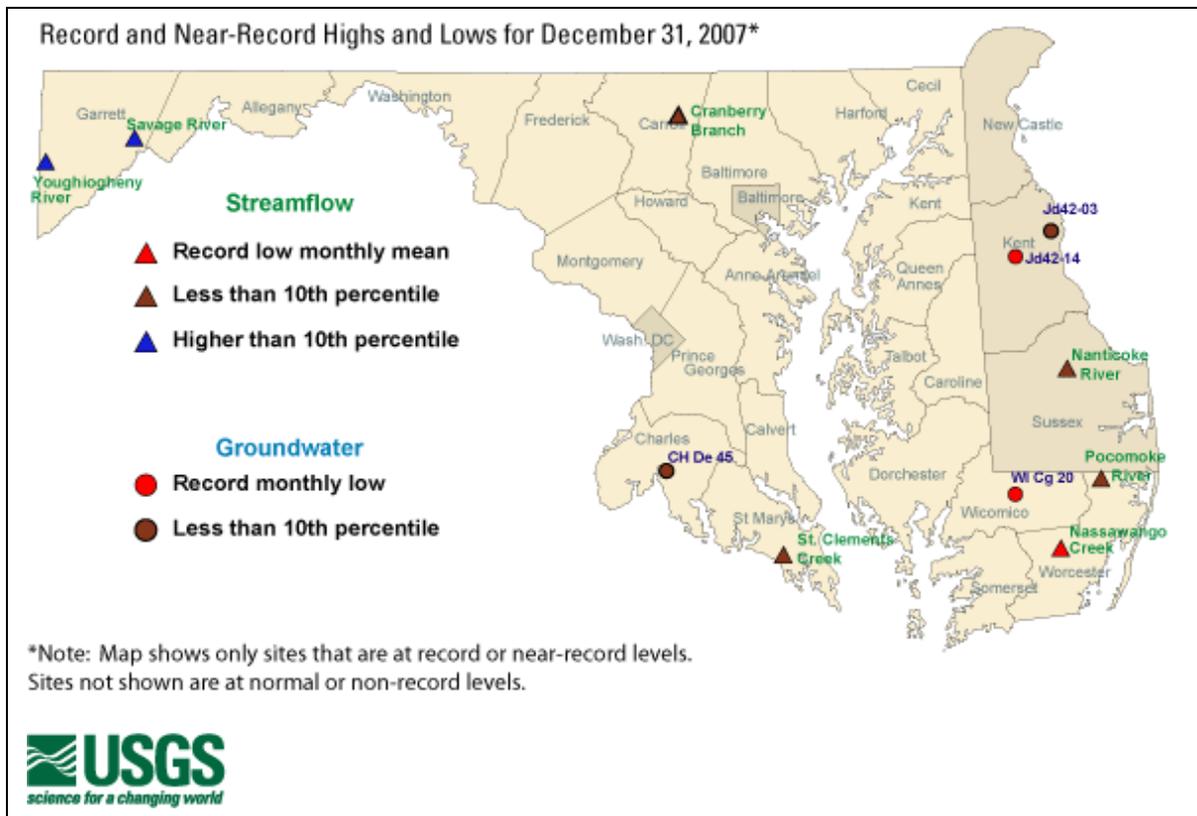


December 2007 USGS Maryland-Delaware-DC Water Conditions Summary

Above normal rainfall throughout Maryland, Delaware, and the District of Columbia in December caused many streamflow levels and some ground-water levels in stations monitored by the U.S. Geological Survey (USGS) to rise, and many reached the normal range. Water levels typically rise this time of year because of reduced water demands from vegetation and cooler temperatures leading to less evaporation. Ground water usually is recharged from late fall to spring, and helps to maintain streamflows during the typically dry period of late summer. Of the 28 climatic indicator wells used to measure ground water levels, 54% remain below normal in December, and record lows were set at two wells.

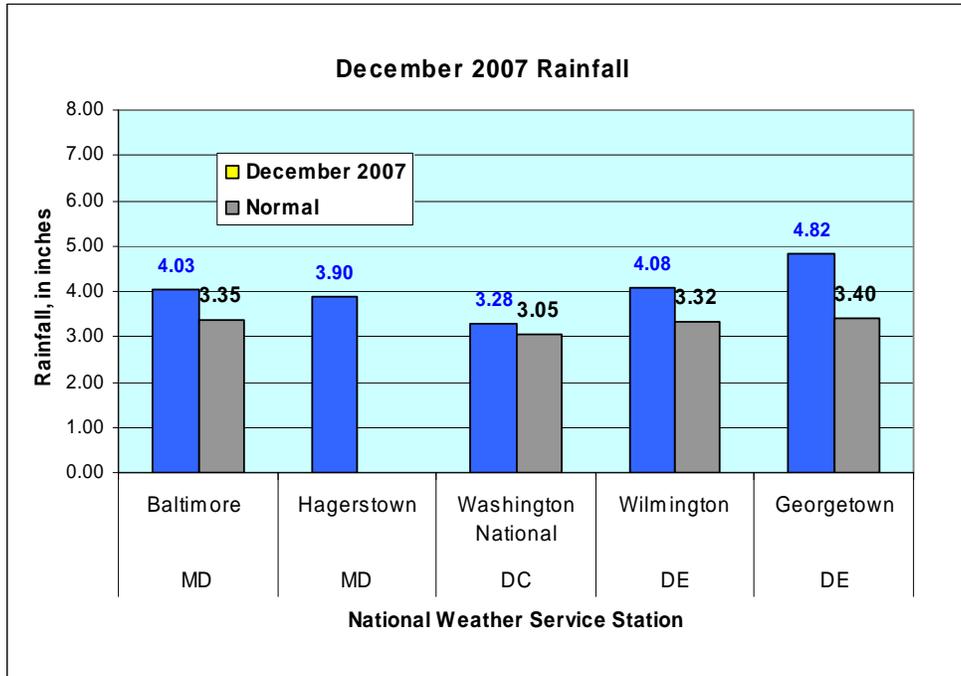
The recent rains helped streamflow levels rise, especially in western Maryland. Streamflow approached a record December high on the Youghiogheny and Savage Rivers in Garrett County. These streams are shown as blue triangle on the map below.



In contrast, the southern part of the Delmarva Peninsula did not receive as much rain. Notice the red and brown triangle and circle symbols on the map above indicating record lows and near-record lows. The Nassawango Creek near Snow Hill in Worcester County set a new record low for December, breaking the record set in 1965. According to hydrologists at the USGS, more rain or snow is needed in central and eastern Maryland to prevent low water levels next summer.

Precipitation

Rainfall in December was above normal at the National Weather Service stations in Maryland and Delaware. The Georgetown, Delaware weather station registered 1.42 inches above normal for a total of 4.82 inches. (source: National Weather Service).



Despite the above normal rainfall in December, annual rainfall deficits still exist in all but one county across Maryland, Delaware, and the District of Columbia. Garrett County, Maryland is the only exception that had no deficit. Based on preliminary data from the National Weather Service, the following counties have a deficit of more than 10 inches: Sussex County in Delaware, and Caroline, Dorchester, Howard, Montgomery, Somerset, and Wicomico Counties in Maryland.

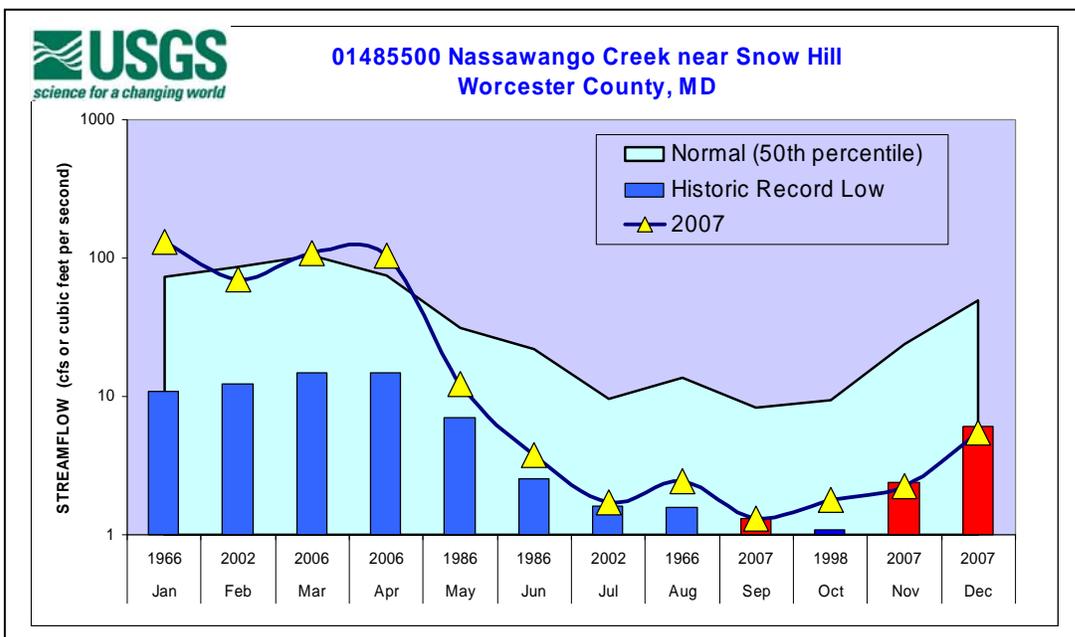
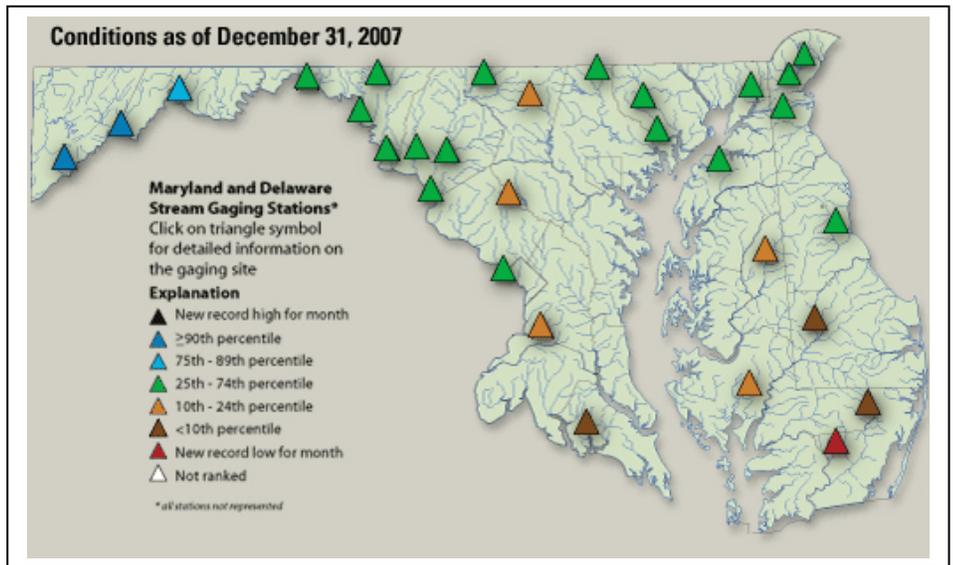
Streamflow

Streamflow at gages used by the USGS as climate indicators across the Maryland, Delaware, District of Columbia region ranged from above normal at 10% of stations to below normal at 30% of stations, leaving the remainder in the normal range.

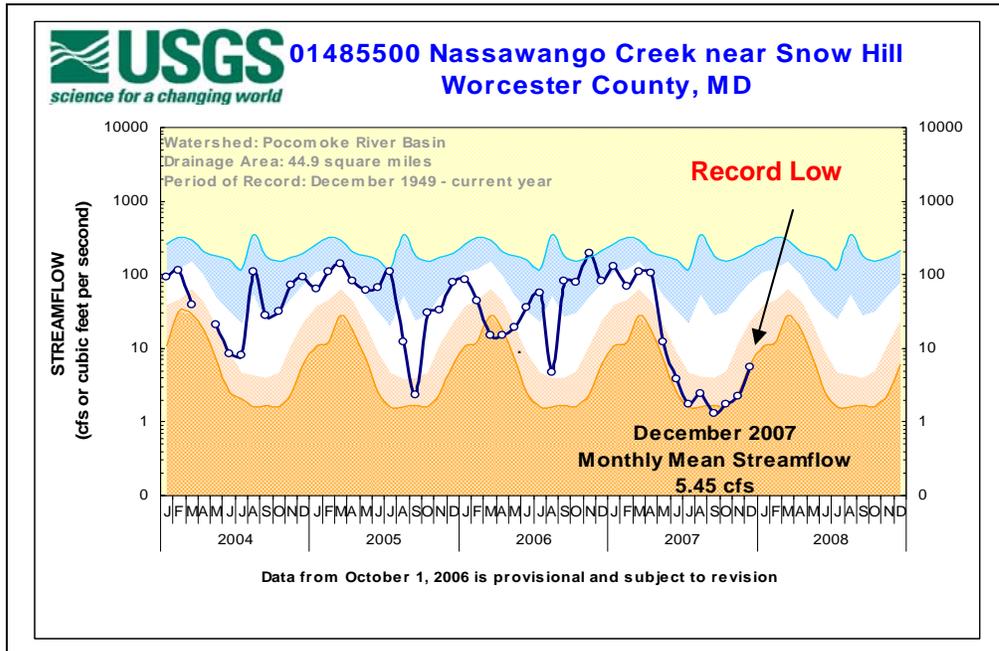
Streamflow on the Nassawango Creek near Snow Hill in Worcester County set a new record low for the second consecutive month.

The streamflow in December exceeded the record set during the drought in 1965. The USGS has been collecting streamflow data on the Nassawango since 1949. The Nanticoke River in Sussex County, Pocomoke River in Worcester County, and St. Clements Creek in St. Mary's County also had very low streamflows in December.

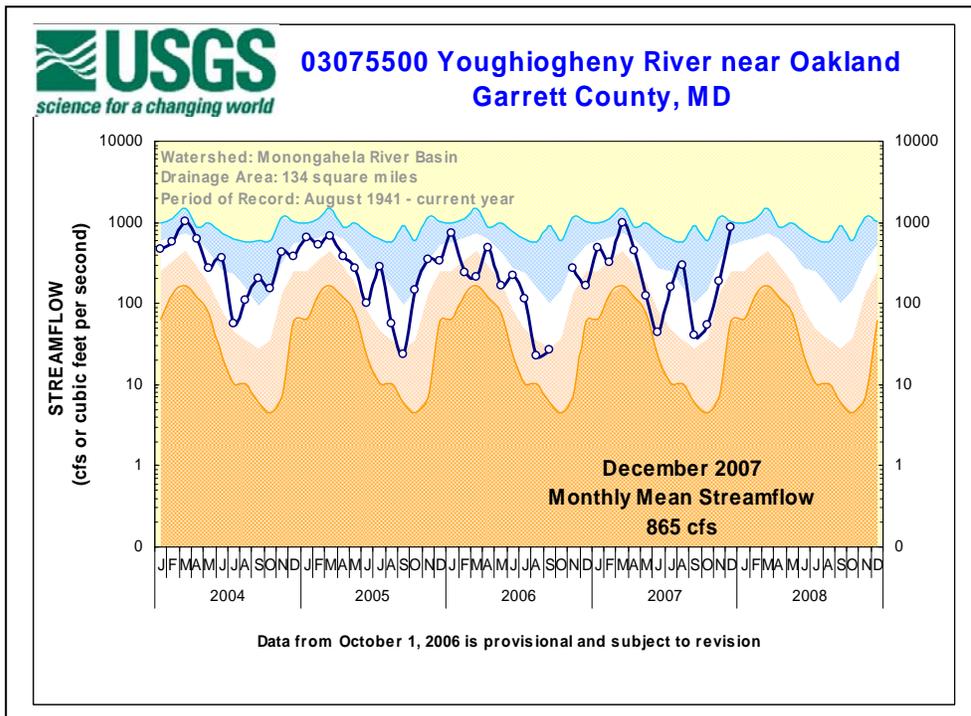
The graph below shows monthly streamflow for Nassawango Creek. The yellow triangles represent the 2007 monthly mean flows. The cyan color represents normal streamflow. The vertical bars indicate the historic monthly low streamflow level, including the year, which are shown in red where new record monthly low streamflow levels have been reached. Record lows have been set on the Nassawango Creek in September, November, and December 2007.



The 5-year hydrograph shows that the Nassawango Creek streamflow level has been below normal since May 2007. The water level has risen, but remains at record setting low levels.

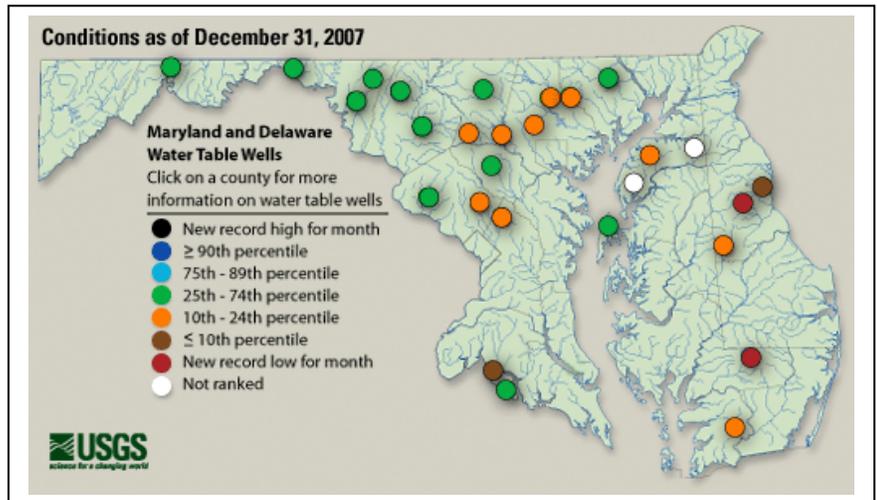


Streamflows in western Maryland were exceptionally high and streamflow on the Youghiogheny and Savage Rivers in Garrett County approached record December highs. This hydrograph for the Youghiogheny River shows the steep climb in streamflow level in December. Wills Creek in Allegany County was also above normal.

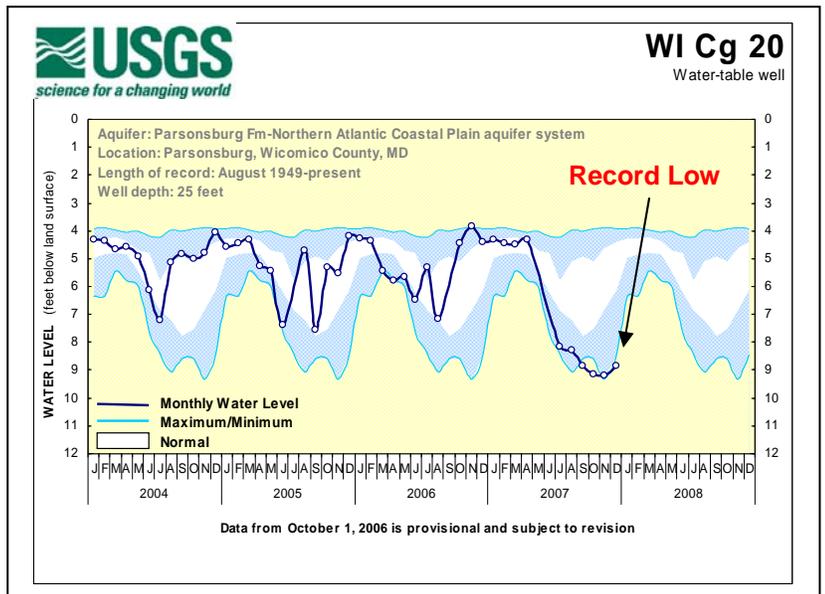


Ground Water

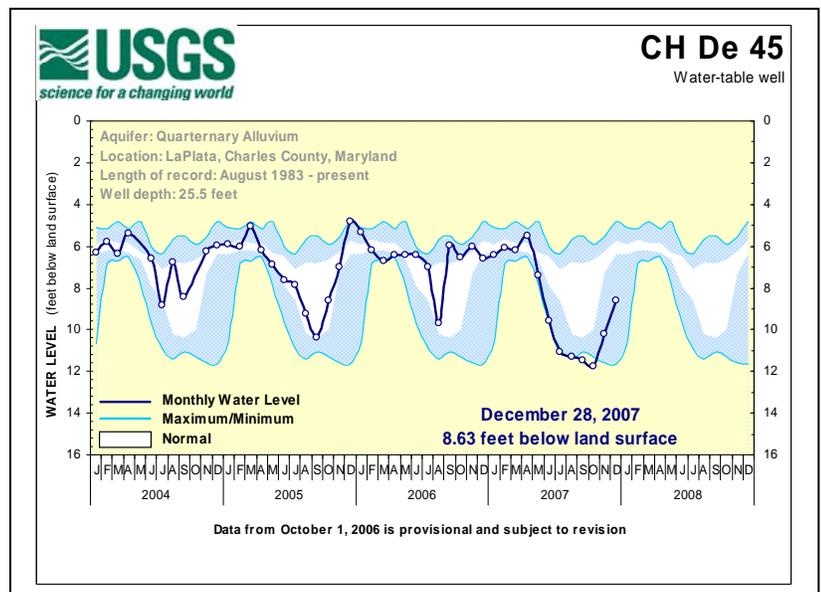
Ground-water levels were below normal in more than half of the unconfined wells used by the USGS to assess response to climatic conditions. The areas with the lowest ground-water levels are the Delmarva Peninsula and Southern Maryland. Water levels in wells in Kent County Delaware, and Wicomico County in Maryland rose slightly, but still reached their lowest December levels since record-keeping began.



The 5-year hydrograph for the unconfined well in Wicomico County shows that the water level is at record lows in September, October, and December. Streamflow levels have been collected at this well for 58 years.

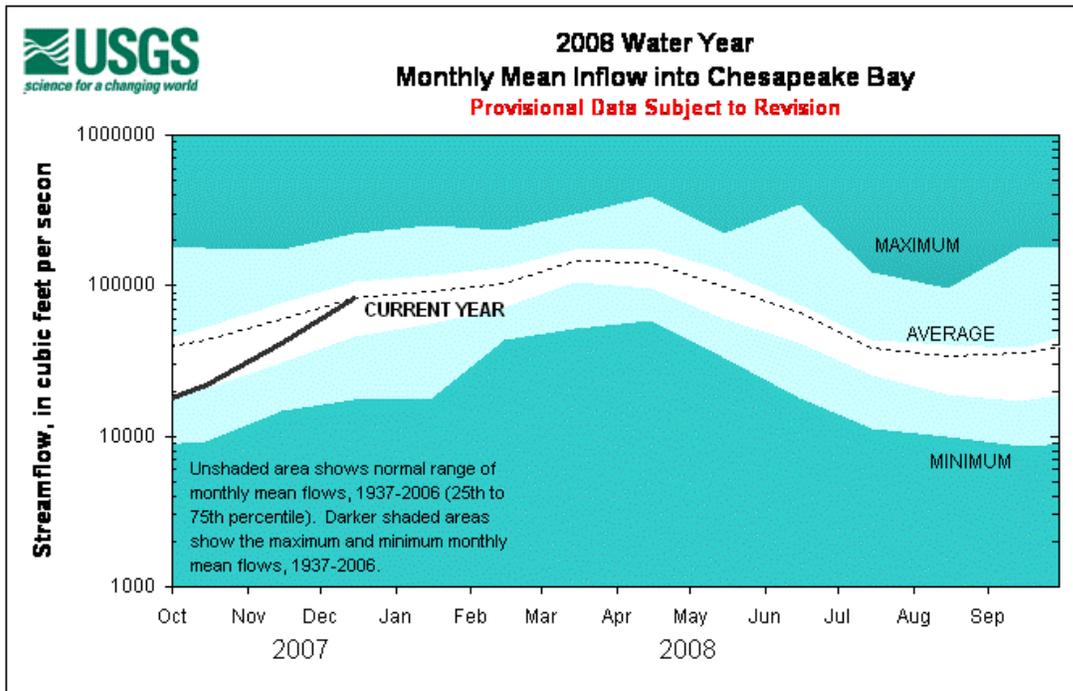


The water level in the Charles County well showed significant recovery over the last two months, but still remains much below normal.



Chesapeake Bay Freshwater Flow

The estimated mean monthly flow to the Chesapeake Bay for December was 83,800 cfs (cubic feet per second) or about 101 percent of the long-term mean for December. Average December flow is 83,200 cfs.



Reservoirs

Water available from the Baltimore reservoir system (Loch Raven, Liberty, and Prettyboy) was 51.6 billion gallons or 68% of the available storage at the end of December. Water stored in the Triadelphia and Duckett Reservoirs, which serve Montgomery and Prince George's Counties, was at 58% of the normal capacity at the end of December.

December 2007	Percent available /normal storage	Volume (billion gallons)	Source
Baltimore Reservoirs			Baltimore City
Loch Raven	79%	16.3	
Liberty	74%	25.6	
Prettyboy	58%	9.6	
Total	68%	51.6	Increase 2% since November
Patuxent Reservoirs			Washington Suburban Sanitary Commission (WSSC)
Triadelphia	71%	3.99	
Duckett	44%	2.18	
Total	58%	6.17	Increase 5% since November