



Potomac River System Drought and Water Supply Outlook September 2007

September 2007

The Washington metropolitan region gets nearly 90% of its drinking water from the Potomac River. Its supply is further augmented by water from the Jennings Randolph and Little Seneca Reservoirs, the Patuxent and Occoquan rivers, Goose Creek (a Potomac Tributary), Lake Manassas (which feeds the Occoquan), and groundwater resources.

Three major water supply agencies furnish about 95% of the metropolitan region's water. These are the Washington Aqueduct Division of the U.S. Army Corps of Engineers (WAD), Fairfax Water (FW) and the Washington Suburban Sanitary Commission (WSSC). A number of smaller agencies supply the remaining 5% of the water.

Some parts of the region get their water through distribution agencies, which purchase water wholesale from one or more water supply agencies.

DROUGHT STAGES

All jurisdictions are:

Normal

Except for the following cities and counties:

Mandatory Water Conservation

Town of Purcellville, VA
Town of Hamilton, VA
Town of Middleburg, VA

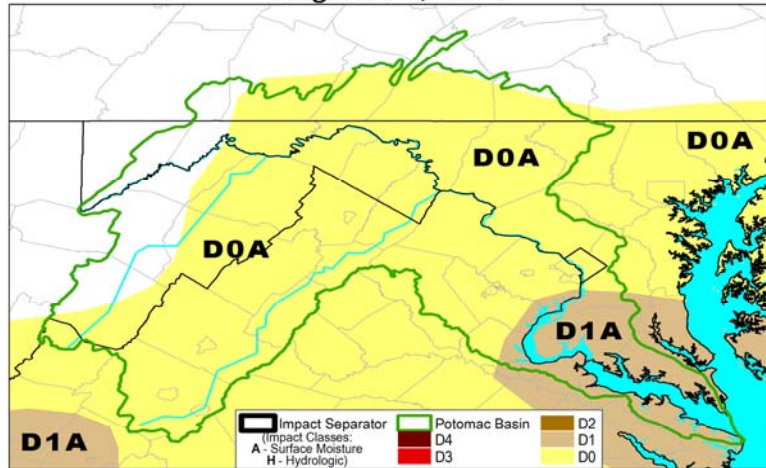
Voluntary Water Conservation

City of Frederick, MD
Town of Mt. Airy, MD
Loudoun County, VA
(Sanitation Authority Area)
City of Manassas, VA

NOAA DROUGHT MONITOR

The drought monitor released on August 28, 2007 indicates that 75% percent of the Potomac River basin is abnormally dry (D0) and 12% is moderately dry (D1), a significant improvement from last week.

Potomac Basin Drought Monitor August 28, 2007



Selected Basin-Average Indices on August 26, 2007			
	Raw Value	Anomaly	Percentile
Palmer Drought	-1.11	-1.16	33.7 [--]
Palmer Hydrologic	-1.95	-2.21	24.5 [D0]
Palmer Z	+0.79	+0.62	63.3 [--]
CPC Soil Moisture	n/a	n/a	42.5 [--]
1-Month Precipitation	5.04"	+1.39"	75.9 [--]
3-Month Precipitation	10.50"	-0.94"	40.6 [--]
6-Month Precipitation	19.79"	-2.74"	30.9 [--]
12-Month Precipitation	41.23"	-0.54"	59.5 [--]
24-Month Precipitation	79.04"	-4.54"	44.3 [--]
Basin Coverage: 75.1% D0 12.3% D1 Basin Average: 'D0.00'			

COG WATER SUPPLY AND DROUGHT STAGE - NORMAL

(with a few exceptions throughout our region; for additional details visit COG's website at: http://www.mwcog.org/environment/water/watersupply/current_conditions.asp)

The "Water Supply and Drought Awareness and Response Plan" provides a plan of action that would be implemented during drought conditions for the purpose of coordinating a regional response. It contains four stages (Normal, Watch, Warning, and Emergency) and is currently designed for those customers who use the Potomac River for their drinking water supply.

A **WATCH** may be triggered when the metropolitan region enters into 'D1' or moderate drought intensity as determined by the National Weather Service Climate Prediction Center. Drought intensity conditions are determined by a mathematical index reflecting long-term (Palmer Drought Severity Index) and short-term (Crop Moisture Index) soil moisture. The decision on whether to invoke a WATCH is made by the Drought Coordination Committee pursuant to COG's Regional Water Supply and Drought Plan; should such a determination be made, the committee will also discuss additional voluntary water conservation recommendations beyond the year round Wise Water Use program, and associated press releases pertaining to the dry conditions. For additional information about the drought stages, visit the following link on COG's website:

http://www.mwcog.org/environment/water/watersupply/stage_legend.asp

Potomac River Cooperative System

During times of drought, natural flows on the Potomac June not always be sufficient to allow water withdrawals by the utilities while still maintaining a minimum flow in the river for sustaining aquatic resources. In such cases, a cooperative entity staffed by the Interstate Commission on the Potomac River Basin manages the water system as a whole. This group is known as the Section for Cooperative Water Supply Operations on the Potomac (CO-OP), and is formally associated with the three major supply agencies by the Water Supply Coordination Agreement of 1982.

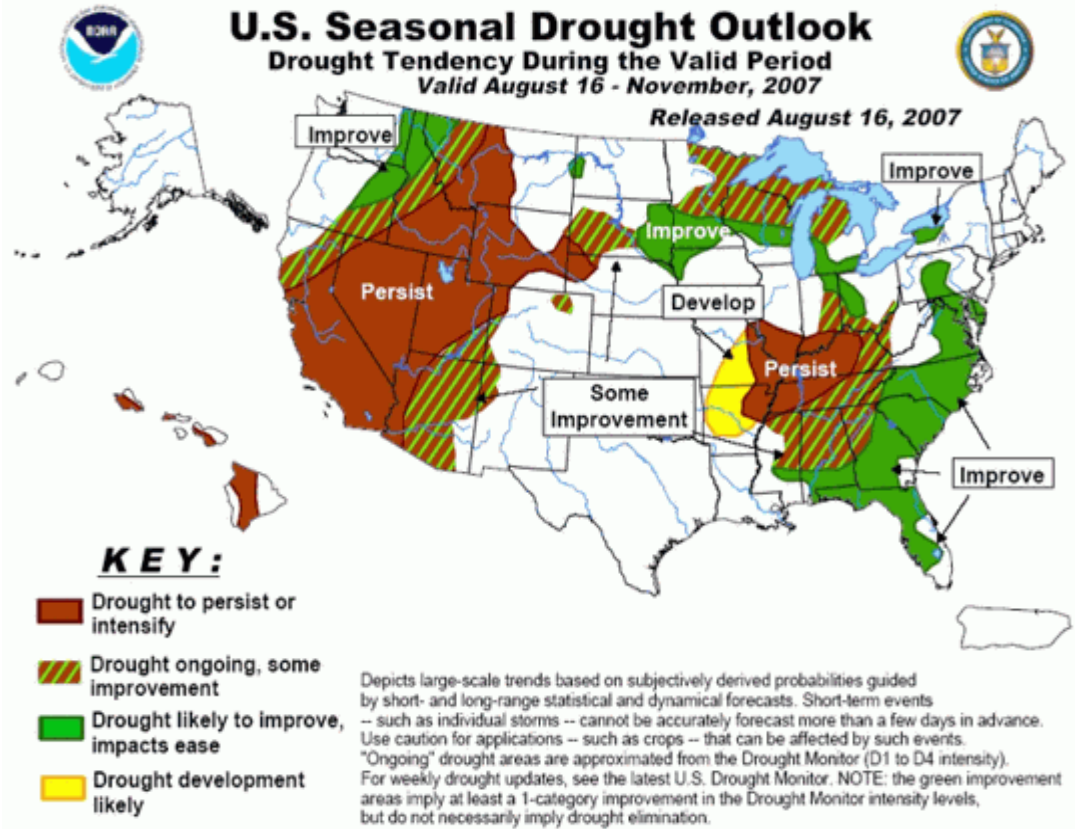
The three major supply agencies have paid for water storage held in two reservoirs in the Potomac Basin, which can augment water supply during low flow conditions so that the region's water supply demands can be met without violating recommended environmental flow-by. Jennings Randolph Reservoir in the upper reaches of the Potomac River Basin stores 13 billion gallons of water that June be allocated to water supply augmentation, but water released from the reservoir must travel for 7-9 days before reaching the Washington metropolitan region. Located in Montgomery County, Little Seneca Reservoir has 4 billion gallons of storage, which can quickly augment flow in stretches of the Potomac where the intakes for the major supply agencies are located.

Go to ICPRB's website (www.potomacriver.org) for more information on how CO-OP manages regional water supply coordination.

SEASONAL OUTLOOK THROUGH NOVEMBER 2007

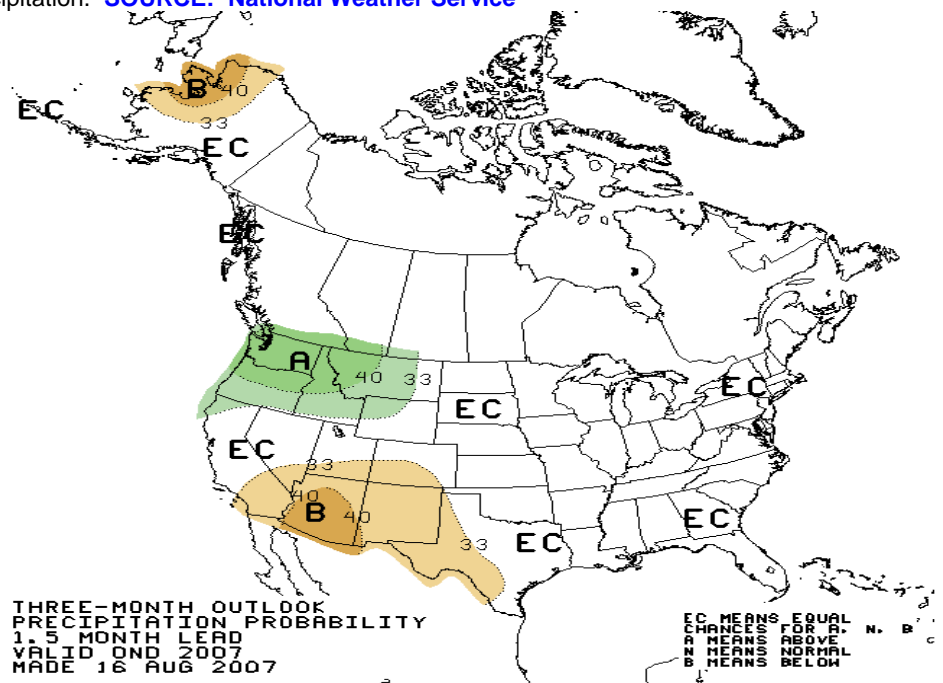
The seasonal outlook that predicts drought tendency through November 2007 indicates that the drought is likely to improve over the next few months.

SOURCE: NOAA, Climate prediction Center



CLIMATE PREDICTION CENTER - THREE MONTH PRECIPITATION OUTLOOK

The Climate Prediction Center of the National Weather Service produces three month precipitation forecasts for the United States. According to the October-November-December 2007 forecast, our region has an **equal** chance of above, normal, or below normal precipitation. SOURCE: National Weather Service



Additional Information:

United States Geological Survey
www.usgs.gov

**National Weather Service
Climate Prediction Center**
www.cpc.noaa.gov

**Interstate Commission on the
Potomac River Basin**
www.potomacriver.org/
water_supply/status.htm

**Metropolitan Washington
Council of Governments**
www.mwcog.org/
environment/water/
watersupply

**Potomac River Flow at Little
Falls**
www.waterdata.usgs.gov/
md/nwis/uv?01646500

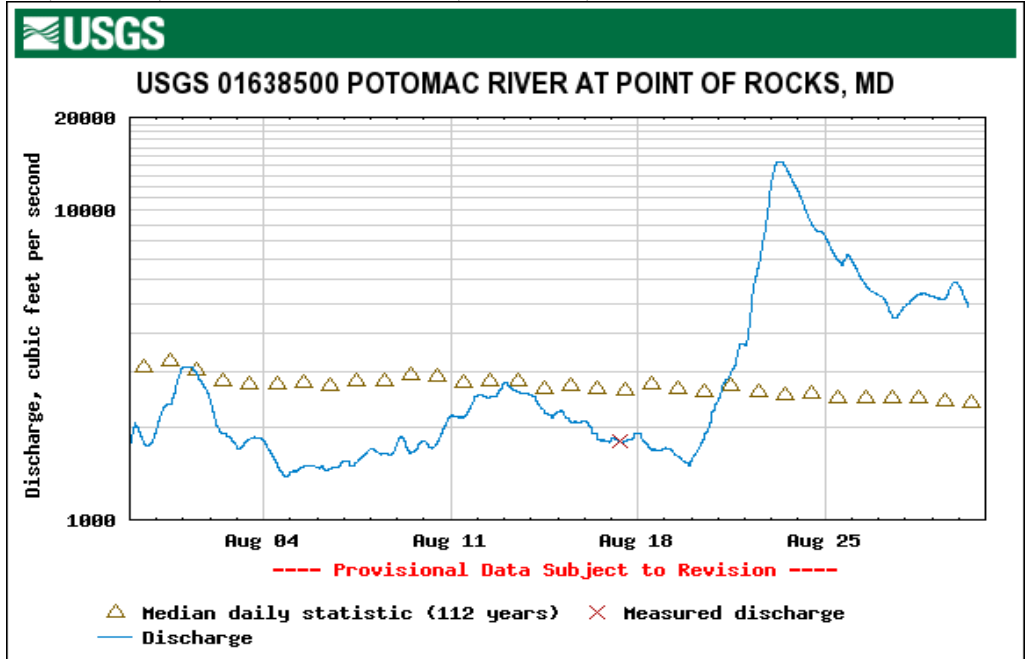
**Potomac River Flow at Point
of Rocks**
www.waterdata.usgs.gov/
md/nwis/uv?01638500

Wise Water Use Campaign
www.mwcog.org/
environment/water/
watersupply/wisewater.asp

**Ground Water Conditions,
Potomac River Basin**
http://pa.water.usgs.gov/potomac/

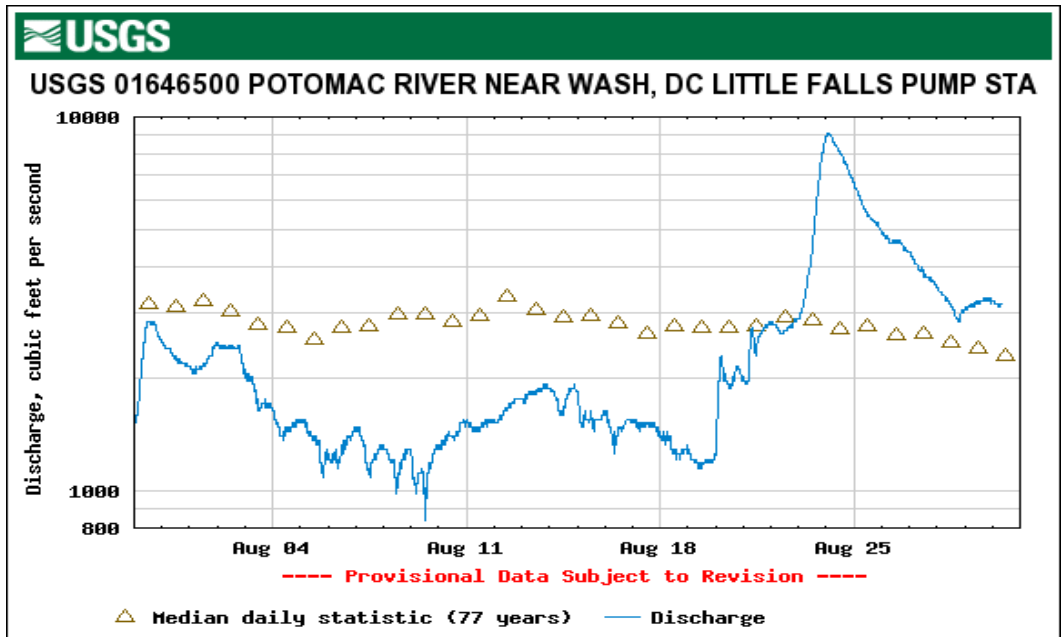
POTOMAC RIVER FLOW AT POINT OF ROCKS for the month of August 2007

As of August 30, 2007 an instantaneous daily flow reading at Point of Rocks was 4,880 CFS or 3,152 MGD, well above the median of 2,380 CFS/ 1,537 MGD.



POTOMAC RIVER FLOW AT LITTLE FALLS for the month of August 2007

As of August 30, 2007 an instantaneous daily flow reading at Little Falls was 3,170 cubic feet per second (CFS) or 2,048 million gallons per day (MGD), above the daily median of 2,300 CFS/ 1,486 MGD.



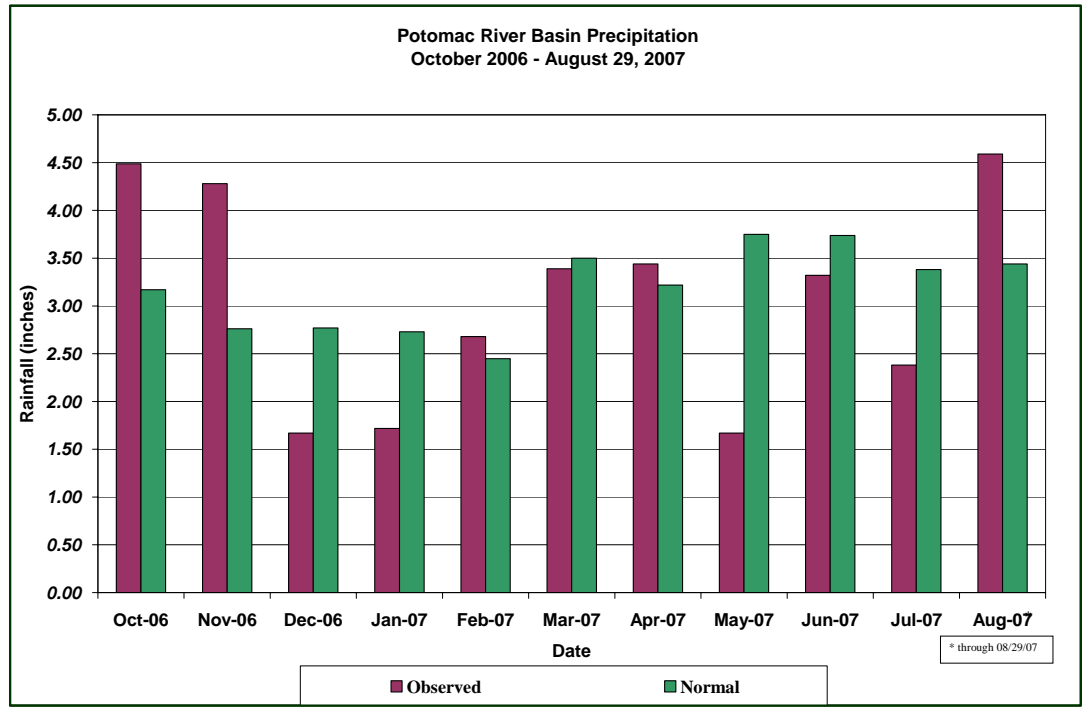
POTOMAC BASIN PRECIPITATION DATA – AUGUST 2007

Source: Middle Atlantic River Forecast Center

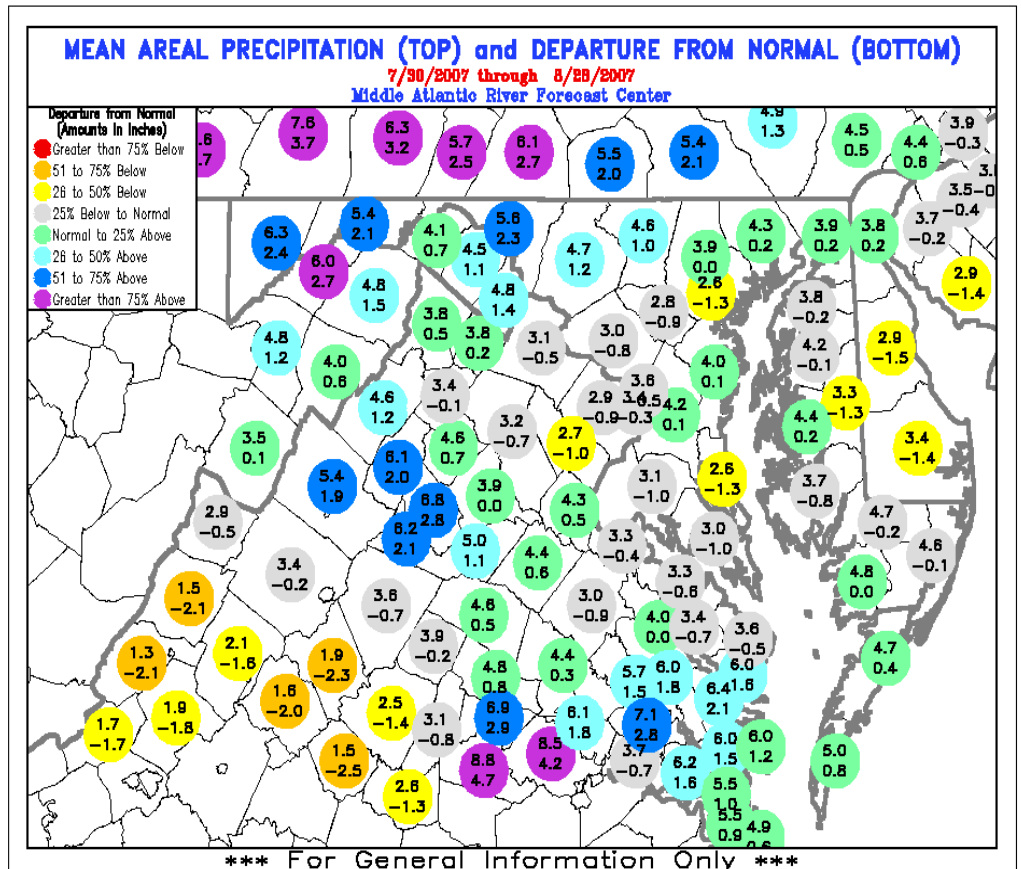
Date	Precipitation Deviation from Normal
October 1, 2006 –August 29, 2007 (hydrological year)	1.28 inches below normal
January 1, 2007 – August 29, 2007	3.02 inches below normal
August 1-29, 2007	1.15 inches above normal

National Weather Service
 Middle Atlantic River Forecast Center –
 Current Stages in the Potomac River
<http://www.erh.noaa.gov/marfc/potomac.htm>

POTOMAC BASIN PRECIPITATION DATA –AUGUST 2007



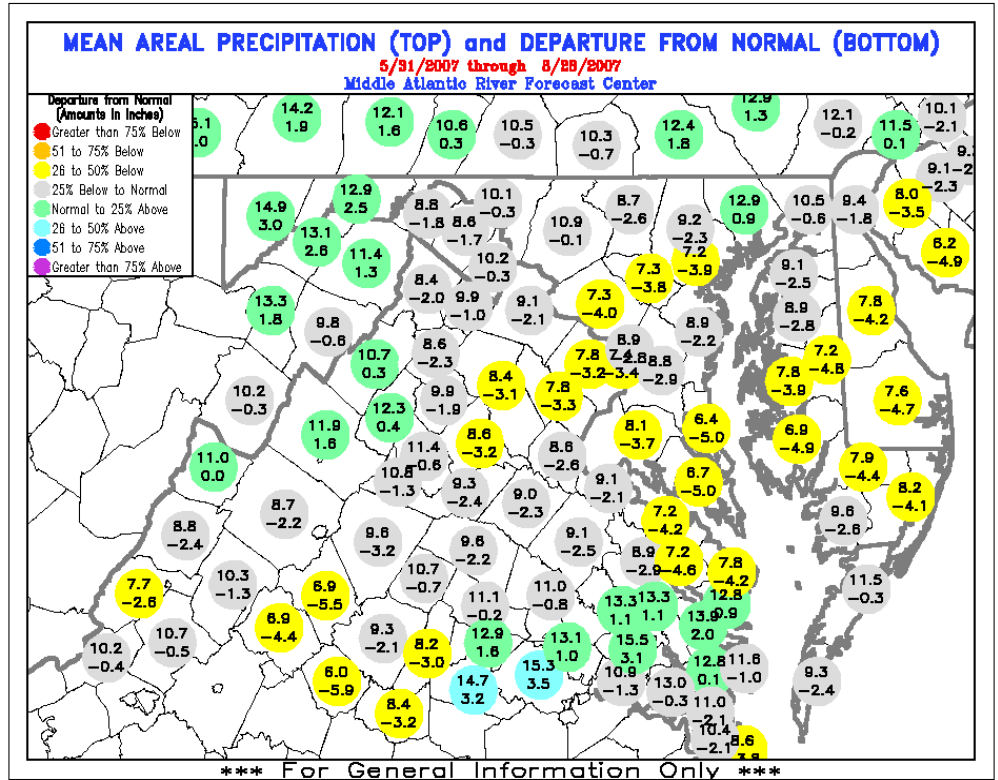
POTOMAC RIVER BASIN PRECIPITATION- DEPARTURE FROM NORMAL – 30 DAY



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POTOMAC RIVER BASIN PRECIPITATION- DEPARTURE FROM NORMAL - 90 DAY



RESERVOIR STATUS

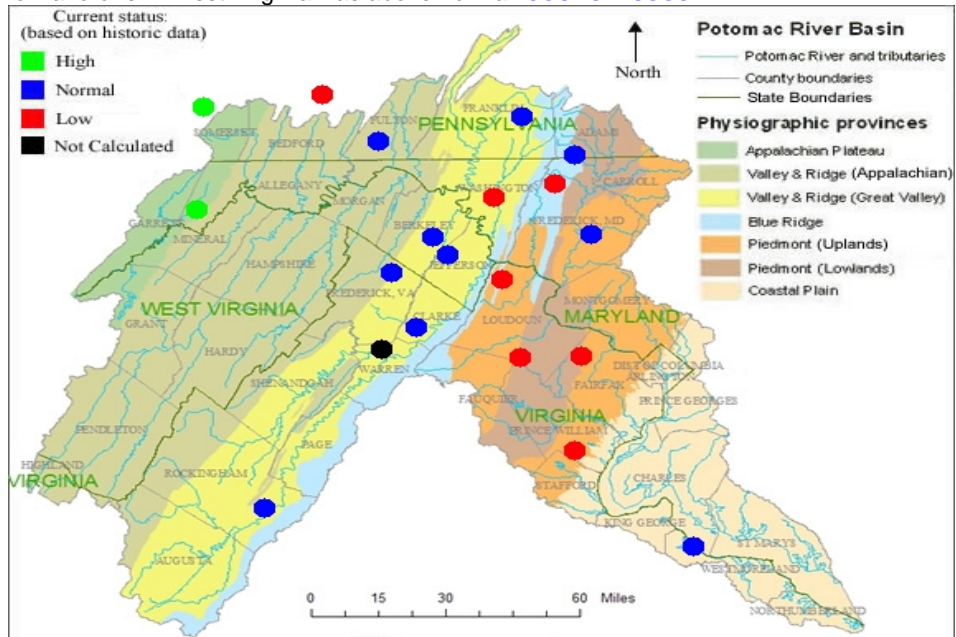
There is a 7 to 15 percent conditional probability that Potomac flow will drop below 600 to 700 million gallons per day at Little Falls. Currently, water supply storage is 100% full at Jennings Randolph and Little Seneca Reservoirs.

SOURCE: ICPRB, August 2007

GROUND WATER LEVELS - AUGUST 2007

Ten of the ground water observation wells monitored throughout the region for the month of August (in the Potomac River Basin as of August 28, 2007) were at normal levels, six were low and one in West Virginia was above normal.

SOURCE: USGS



Prepared by the Department of Environmental Programs

August 30, 2007

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