

Potomac River System Drought and Water Supply Outlook July 2006

(reporting period of June 1- 28, 2006)

July 2006

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.

For additional details visit: www.mwcog.org/environment/water/ watersupply/system.asp

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NOAA DROUGHT MONITOR

The drought monitor released on June 20, 2006 indicated that 72% of the Potomac River Basin was abnormally dry (D0) with the remaining 28% under moderate drought conditions. Due to the significant rainfall in our region, our abnormally dry conditions have vanished, as illustrated by the June 27th drought monitor. Local climatological data at National Airport reported **10.51 inches** of rain from Sunday, June 25 to Wednesday, June 28. Combined with the rainfall totals earlier in the month (for a total of 14.02 inches) that's **11 inches above normal** for the month of June. The Middle Atlantic River Forecast Center reported that the Potomac River Basin was 3.99 inches above normal.

SOURCE: NOAA, http://www.drought.unl.edu/dm/monitor.html



http://drought.unl.edu/dm

Released Thursday, June 29, 2006 Author: Ned Guttman/Liz Love-Brotak, NOAA/NESDIS/NCDC

Potomac Basin Drought MonitorPotomac Basin Drought Monitor



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 SEPTEMBER 2006

The seasonal outlook through September 2006 for our region indicates our region will not experience abnormally dry conditions. **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 August-September-October 2006 forecast, our region has an **equal chance** of above, normal, and below normal precipitation. **SOURCE: National Weather Service, CPC**



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

www.waterdata.usgs.gov/ md/nwis/uv?01638500

of Rocks

Potomac River Flow at Point

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

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

COG WATER SUPPLY AND DROUGHT STAGE

NORMAL

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. Additional details can be found at :

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

PROBABILITY OF RESERVOIR RELEASES

There is a five to eight percent conditional probability that Potomac flow will drop below 600- to 700-million gallons per day (MGD) at Little Falls through December 31 of this year: at these flow levels, water supply releases from Jennings Randolph and Little Seneca Reservoirs become more likely. Currently, water supply storage is 100% full at Jennings Randolph and Little Seneca Reservoirs.

SOURCE: ICPRB: June 30, 2006

POTOMAC RIVER FLOW AT POINT OF ROCKS

Flow at Point of Rocks	CFS		MGD	
2006 Flow	June 1*	June 29**	June 1*	June 29**
Current flow *	3,350	56,900	2,164	36,757
Minimum Daily Flow on this date*	1,920	1,260 (1966)	1,240	814 (1966)
Mean Daily Flow on this date*	9,953	5,620	6,430	3,631
Maximum Daily Flow on this date*	73,800	34,400 (1995)	47,675	22,222 (1995)
CFS = cubic feet per second, MGD = million gallons per day *Based on 110 years of record. **Based on 111 years of record				

POTOMAC RIVER FLOW AT POINT OF ROCKS -JUNE 2006

∎USGS



POTOMAC BASIN PRECIPITATION DATA – JUNE 2006

Date	Precipitation (inches)
October 1, 2005 – June 28, 2006	3.35 inches above normal
January 1, 2006– June 28, 2006	0.35 inches above normal
June 2006 (as of June 28, 2006)	7.48 inches total - 3.99 inches above normal

Local Climatological Data at National Airport reported **10.51 inches** of rain from Sunday, June 25 to Wednesday, June 28. Combined with the rainfall totals earlier in the month (for a total of 14.02 inches) that's **11 inches above normal** for the month of June. **Source: Middle Atlantic River Forecast Center**



GROUND WATER LEVELS – JUNE 2006

Most of the ground water observation wells monitored throughout the region for the month of June (as of June 16, 2006) were at low levels; two wells in the western portion of the Potomac basin (in West Virginia) were high. Groundwater levels observed from wells in Maryland (one in the Catoctin mountains and the other in Hagerstown) rose significantly during the past week. SOURCE: USGS



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

Prepared by the Department of Environmental Programs

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