

## Water Supply Outlook

[http://www.potomacriver.org/water\\_supply/status.htm](http://www.potomacriver.org/water_supply/status.htm)

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## Interstate Commission on the Potomac River Basin (ICPRB)

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*ICPRB, through its Section for Cooperative Water Supply Operations, coordinates water supply operations during times of drought and recommends releases of stored water. These operations ensure adequate water supplies for the major Washington metropolitan area water suppliers during droughts.*

### **Summary/conclusions:**

The probability of releases this summer and fall from the Washington metropolitan area's back-up water supply reservoirs is low. Generally, the use of Jennings Randolph and Little Seneca reservoirs is triggered by low flows brought about by a combination of low summer rainfall, low precipitation in the prior 12 months, and low groundwater levels. At present, groundwater levels in the basin are slightly above-normal on average, precipitation in the prior 12 months is near-normal, and last months' precipitation in the Potomac basin was well above-normal. In the unlikely event of a drought this fall, the metro area is well-protected from a water supply shortage because of carefully laid drought-contingency plans.

### **ICPRB outlook:**

As of August 1, there is a four to nine percent conditional probability that natural Potomac flow will drop below 600- to 700-million gallons per day (MGD) at Little Falls through December 31 of this year. Water supply releases from Jennings Randolph and Little Seneca Reservoirs would occur when predicted flow is less than demand. Demand is equal to a 100 MGD minimum flow recommendation at Little Falls plus about 400 to 500 MGD of water supply withdrawals during the summer months.

The conditional probability is estimated by analyzing the historical stream flow records and giving consideration to recent stream flow values, precipitation totals for the prior 12 months, current groundwater levels, and the current Palmer Drought Index. Past years in which watershed conditions most closely resemble current conditions are weighted more heavily in the determination of conditional probability. The historical probability is based on an analysis of historical stream flow records without weighting for current conditions. The current conditional probability of four to nine percent compares to a historical probability of ten to sixteen percent and is considered the more reliable indicator.

### **Outlook for Potomac River at Little Falls – Watershed conditions as of August 1, 2005**

Natural flow (MGD)	Historical probability of lower flow Aug. 1 through December 31	Conditional probability of lower flow Aug. 1 through December 31
1200	67%	66%
1000	52%	49%
800	27%	18%
700 (water supply releases possible)	16%	9%
600 (water supply releases possible)	10%	4%

### **Potomac River flow** (view graph at [http://www.potomacriver.org/water\\_supply/2005flow.htm](http://www.potomacriver.org/water_supply/2005flow.htm))

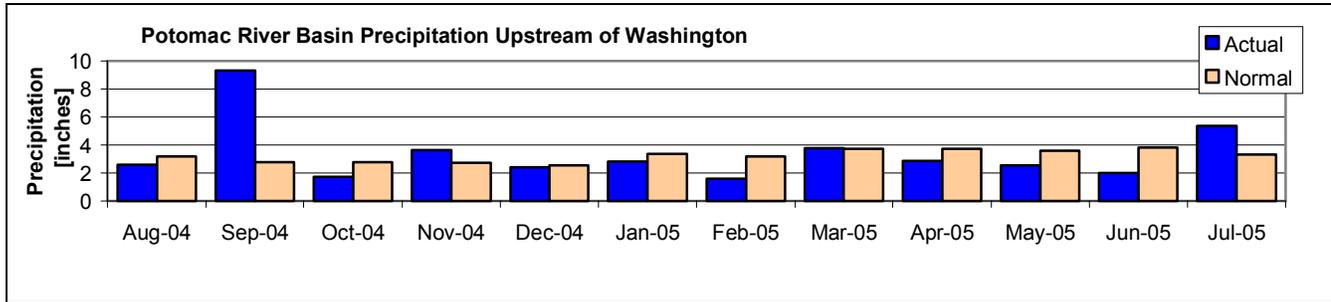
The Potomac flow was 60% above normal in July, averaging 5.2 billion gallons per day (bgd). Normal flow is 3.2 bgd. Flow varied from a high of about 17.4 bgd on July 9 to a low about 2.0 bgd on July 5. Washington area water suppliers withdrew approximately 441 MGD from the Potomac in July, about 8% less than July 2004. (Data Source: USGS).

### **Reservoir Storage:**

Facility	Percent Full	Current usable storage, bg	Total usable storage, bg
WSSC's Patuxent reservoirs:	92	9.3	10.1
FCWA's Occoquan reservoir:	100	8.0	8.0
Little Seneca Reservoir	100	3.8	3.8
Jennings Randolph water supply account	100	13.3	13.3
Jennings Randolph water quality account	87	14.5	16.5
Savage Reservoir	77	4.8	6.2

**Precipitation summary and long-term forecast:**

The National Weather Service’s Middle Atlantic River Forecast Center reports that precipitation in the Potomac basin upstream of Washington, D.C. has been 2.1 inches above average for the prior 12 months (since August 1, 2004), for a total of 40.6 inches. Rainfall in July was 5.4 inches, 1.8 inches above normal. The Climate Prediction Center of the National Oceanic and Atmospheric Administration predicts approximately equal chances of Potomac basin precipitation and temperature being either above- or below-normal in August through October.



**Drought Monitor, Soil moisture, and Groundwater:**

Monitoring wells show that on average, groundwater levels are slightly above-normal throughout the basin (Data Source: USGS). The current NOAA Drought Monitor shows non-drought conditions in the basin, and the Palmer Drought Severity Index shows near-normal conditions for the basin.

**Drought Status:**

The Metropolitan Washington Council of Government’s Drought Awareness Response Plan status is “Normal.”

**Environmental Flow-by**

Average Potomac flow at Little Falls in July was about 52 times the minimum flow recommendation of 100 MGD.

