

## Water Supply Outlook

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

May 9, 2005

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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 at normal to above-normal levels, and precipitation in the prior year has been above-normal. In the unlikely event of a drought this summer, the metro area is well-protected from a water supply shortage because of carefully laid drought-contingency plans.

### **ICPRB outlook:**

As of May 1, there is a six to eight 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 six to eight 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 May 1, 2005***

Natural flow (MGD)	<i>Historical probability of lower flow May 1 through December 31</i>	<i>Conditional probability of lower flow May 1 through December 31</i>
1200	67%	61%
1000	52%	43%
800	27%	17%
700 (water supply releases possible)	16%	8%
600 (water supply releases possible)	10%	6%

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

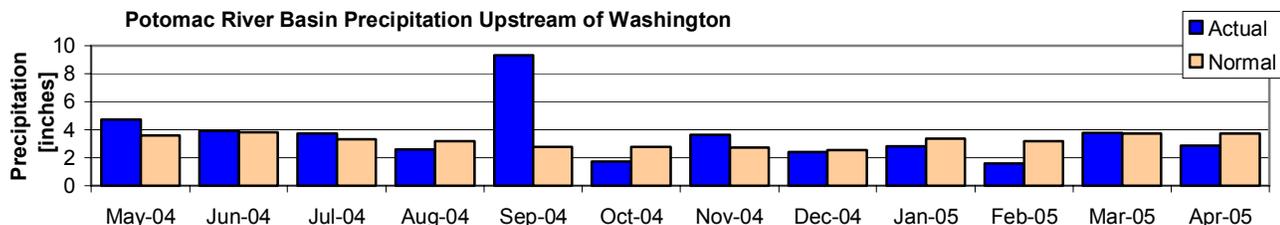
The Potomac flow was near median in April, with average daily flow at 16.0 billion gallons per day, 149-percent of normal for the month (Source: USGS). Washington area water suppliers withdrew an average of about 372 MGD from the Potomac in April, about 4 percent less than last year.

### **Reservoir Storage:**

Facility	Percent Full	Current usable storage, bg	Total usable storage, bg
WSSC's Patuxent reservoirs:	100	10.1	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	100	16.5	16.5
Savage Reservoir	89	5.6	6.2

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

The National Weather Service’s Middle Atlantic River Forecast Center reports that as of May 1, 2005, precipitation in the Potomac basin upstream of Washington, D.C. has been 4.6 inches above average for the prior 12 months (since May 1, 2004), for a total of 43.1 inches. In the first four months of 2005, precipitation in the basin totaled 11.8 inches which is 0.7 inches below normal. The Climate Prediction Center of the National Oceanic and Atmospheric Administration predicts approximately equal chances of Potomac basin precipitation being either above or below normal in June through August.



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

Monitoring wells show that groundwater levels are at normal or above-normal levels 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 most of 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 March was about 160 times the minimum flow recommendation of 100 MGD.

**Flow on the Potomac River at Point of Rocks 2005, and historical percentiles**

