Water Supply Outlook

http://www.potomacriver.org/water_supply/status.htm

June 1, 2006

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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 (CO-OP), 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 users and for environmental flow levels.

Summary/conclusions:

The probability of releases this summer and fall from the Washington metropolitan area's back-up water supply reservoirs is higher than normal. 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 normal to below normal, 12-month precipitation in the Potomac Basin is below average, and basin precipitation in May is below normal. In the event that low-flow conditions continue through the summer, the metro area is well-protected from a water supply shortage because of carefully laid drought-contingency plans.

ICPRB outlook:

There is a fifteen to twenty-seven 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. Releases occur when predicted flow is less than demand: demand is equal to 400 to 500 MGD withdrawn during the summer months, plus a 100 MGD minimum flow recommendation at Little Falls.

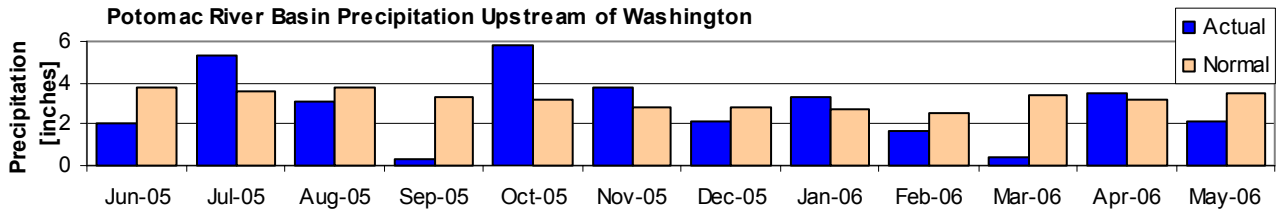
The conditional probability is estimated by analyzing the historical stream flow records and giving consideration to recent stream flow values, precipitation totals for the prior 12-months, current groundwater levels, and the current Palmer Drought Index. Past years in which watershed conditions most closely resemble current conditions are weighted more heavily in the determination of conditional probability. The historical probability is based on an analysis of the historical stream flow record without weighting for current conditions. The conditional probability of fifteen to twenty-seven 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 June 1, 2006

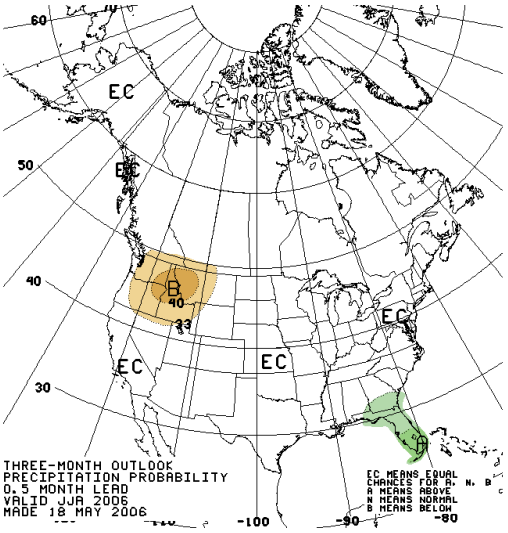
Low flow threshold (MGD)	*Historical probability of lower flow June 1 through December 31*	*Conditional probability of lower flow June 1 through December 31*
1200	67%	83%
1000	52%	70%
800	27%	43%
700	16%	27%
600	10%	15%

Precipitation summary for the Potomac basin:

The National Weather Service's Middle Atlantic River Forecast Center reports that precipitation in the Potomac basin upstream of Washington, D.C. was 1.3 inches below normal in May. Precipitation has been approximately 4.75 inches below average for the prior 12 months (June 1, 2005 through May 31, 2006), for a total of 33.8 inches.



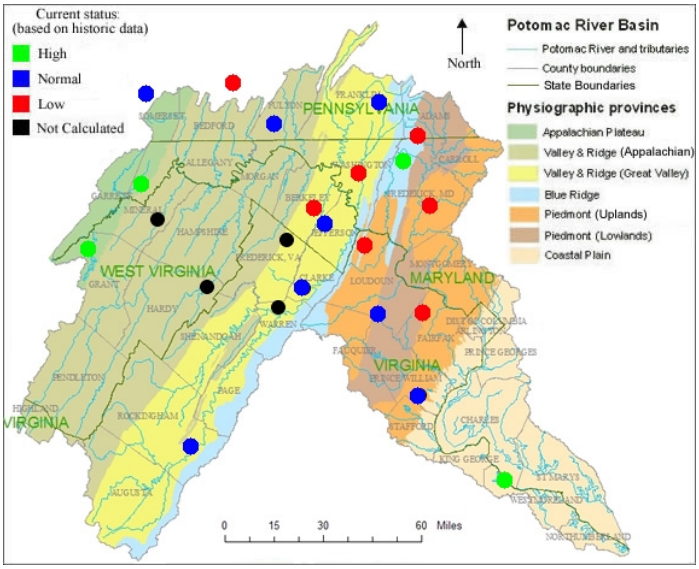
Data source: Middle Atlantic River Forecast Center, NWS



Precipitation and temperature outlook for May, June, and July:

The Climate Prediction Center (CPC) of the National Oceanic and Atmospheric Administration predicts approximately equal chances of Potomac basin precipitation and temperature being either above or below normal for June, July, and August.

(Image source: CPC. "EC" means equal likelihood or chance, and "A" and "B " correspond to above and below normal likelihoods, respectively.



Groundwater:

Groundwater levels are at "normal" to "low" levels throughout the basin as shown in the image at left (as of May 15th). The Great Valley has the best (highest) baseflow characteristics during droughts.

(Image sources: United States Geological Survey. USGS defines "high" as greater than 75th percentile, "normal" as between the 25th and 75th percentiles, and "low" as less than the 25th percentile.)

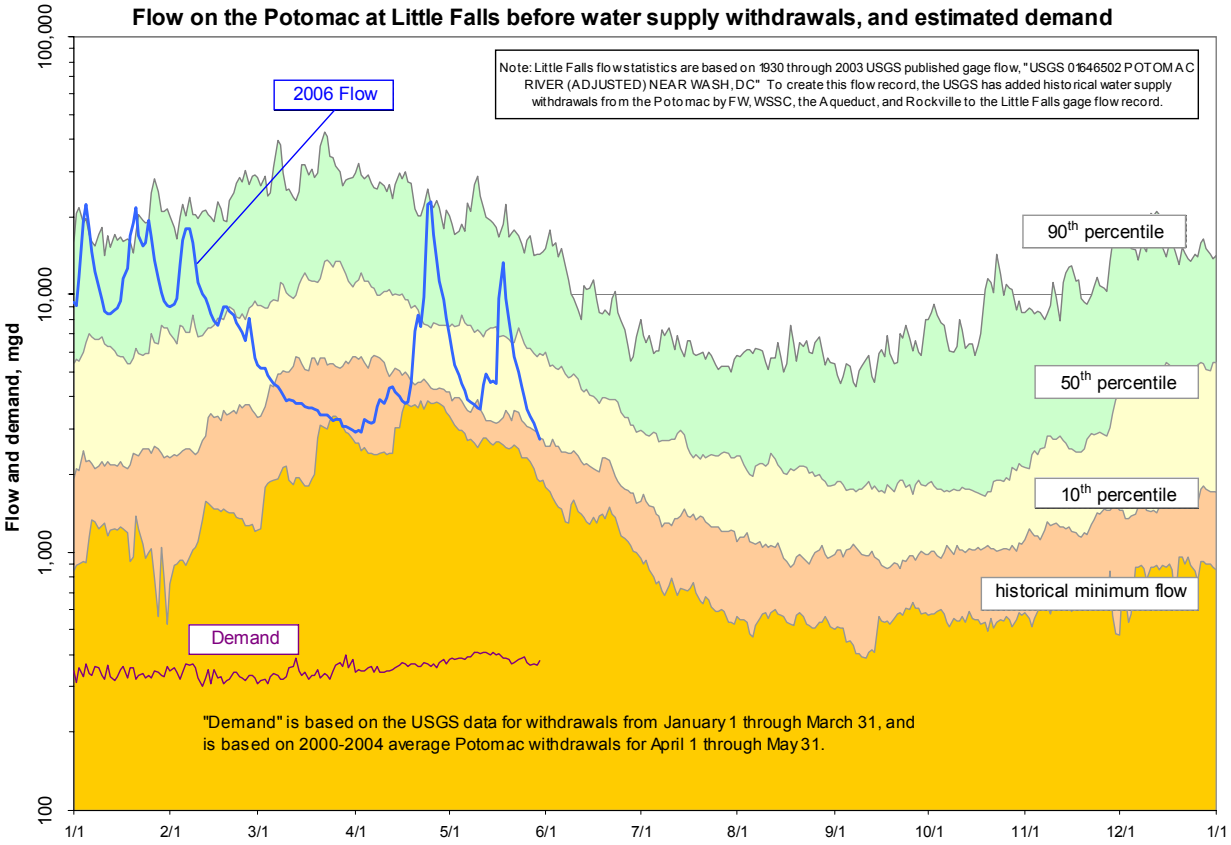
Reservoir Storage:

Facility	Percent Full	Current usable storage, bg	Total usable capacity, bg
WSSC's Patuxent reservoirs	70	7.2	10.2
FCWA's Occoquan Reservoir	100	8.0	8.0
Little Seneca Reservoir	100	3.8	3.8
Jennings Randolph water supply	100	13.3	13.3
Jennings Randolph water quality	100	16.5	16.5
Savage Reservoir	100	6.2	6.2

Note: Patuxent reservoirs are drawn down for maintenance.

Potomac River flow

Estimated daily Potomac flow is currently near the 10th percentile levels. (See graphic below.) Estimated flow is the flow that would have occurred before water supply withdrawals, and is based on estimated withdrawal data and on provisional Little Falls gage data.



Drought Monitor and Soil moisture

The current Drought Monitor from the NOAA Climate Prediction Center (CPC) shows that the Potomac basin upstream of Little Falls is mostly in a moderate drought status ("DO" status). (See image on next page, at top.) The Palmer Drought Severity Index shows much of the basin in moderate drought status. (See image on next page, at bottom.)

Drought Status:

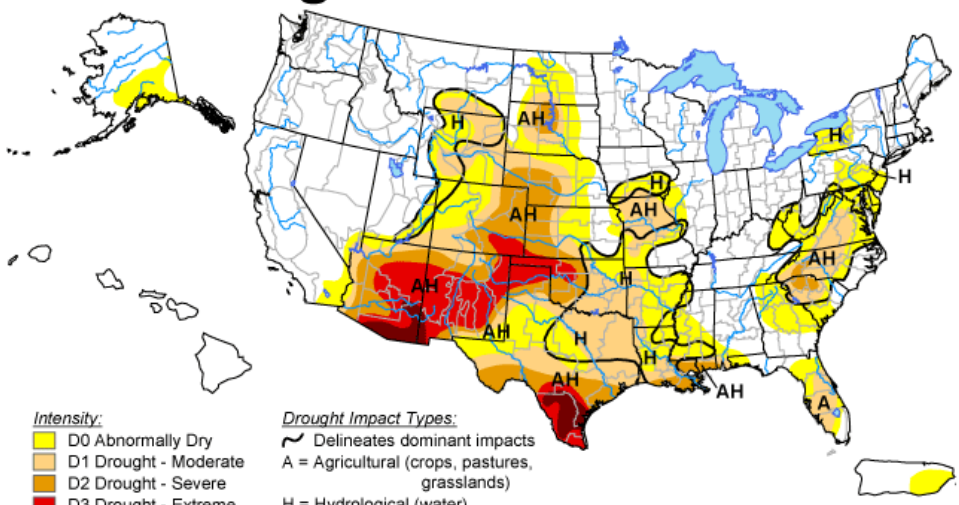
The Metropolitan Washington Council of Government's Drought Awareness Response Plan status is "Normal." The drought status would change to "Watch" if the CPC's drought monitor shows the entire Potomac basin in D-1 status.

Environmental Flow-by

Average Potomac flow at Little Falls in May was approximately 7,313 cubic feet per second (4,730 MGD) approximately 73 times the minimum flow recommendation of 100 MGD.

U.S. Drought Monitor

May 30, 2006
Valid 8 a.m. EDT



Intensity:
- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:
- Delineates dominant impacts
- A = Agricultural (crops, pastures, grasslands)
- H = Hydrological (water)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

USDA National Drought Mitigation Center

Released Thursday, June 1, 2006

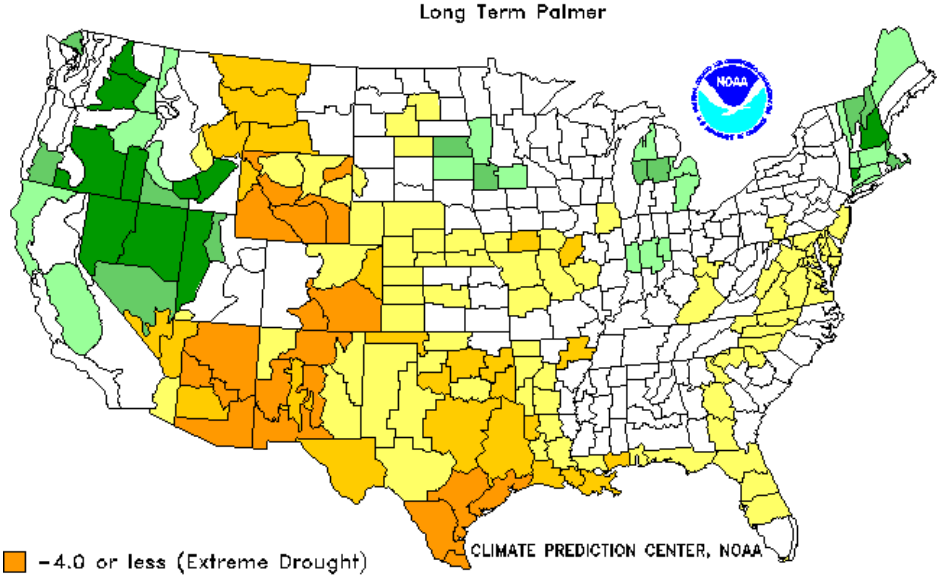
Author: Brian Fuchs, National Drought Mitigation Center

http://drought.unl.edu/dm

Drought Severity Index by Division

Weekly Value for Period Ending 27 MAY 2006

Long Term Palmer



- −4.0 or less (Extreme Drought)
- −3.0 to −3.9 (Severe Drought)
- −2.0 to −2.9 (Moderate Drought)
- −1.9 to +1.9 (Near Normal)
- +2.0 to +2.9 (Unusual Moist Spell)
- +3.0 to +3.9 (Very Moist Spell)
- +4.0 and above (Extremely Moist)