

Water Supply Outlook

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 (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 below 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, most groundwater levels used for monitoring by ICPRB are above average. Precipitation in the prior year has been above average in the Potomac basin. Flow levels have been above average but have recently fallen to median. In the event that low-flow conditions develop this summer, the metro area is well-protected from a water supply shortage because of carefully designed drought-contingency plans.

ICPRB outlook:

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 Releases occur when predicted flow is less than demand: demand is equal to 400 to 500 MGD withdrawn during the summer months, plus a 100 MGD minimum flow recommendation at Little Falls.

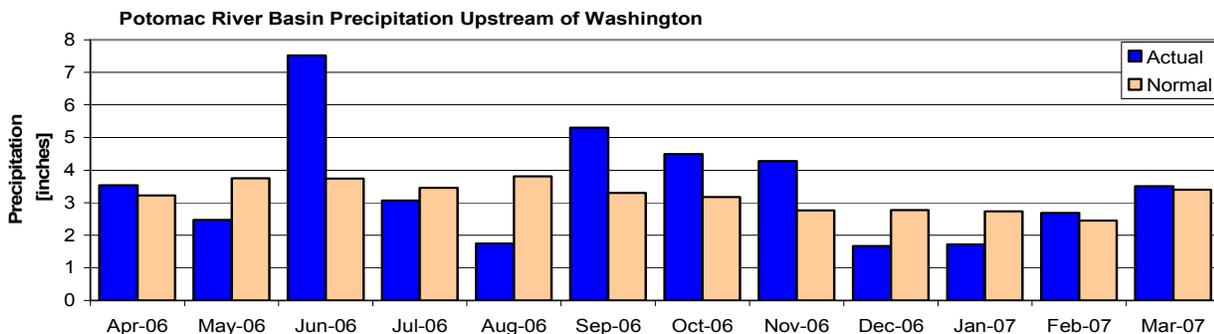
The conditional probability is estimated by analyzing the historical stream flow records and giving consideration to recent stream flow values, precipitation totals for the prior 12 months, current groundwater levels, and the current Palmer Drought Index. Past years in which watershed conditions most 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 four to six 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 April 1, 2007

Low flow threshold (MGD)	Historical probability of lower flow April 1 through December 31	Conditional probability of lower flow April 1 through December 31
1200	67%	61%
1000	52%	41%
800	27%	14%
700	16%	6%
600	10%	4%

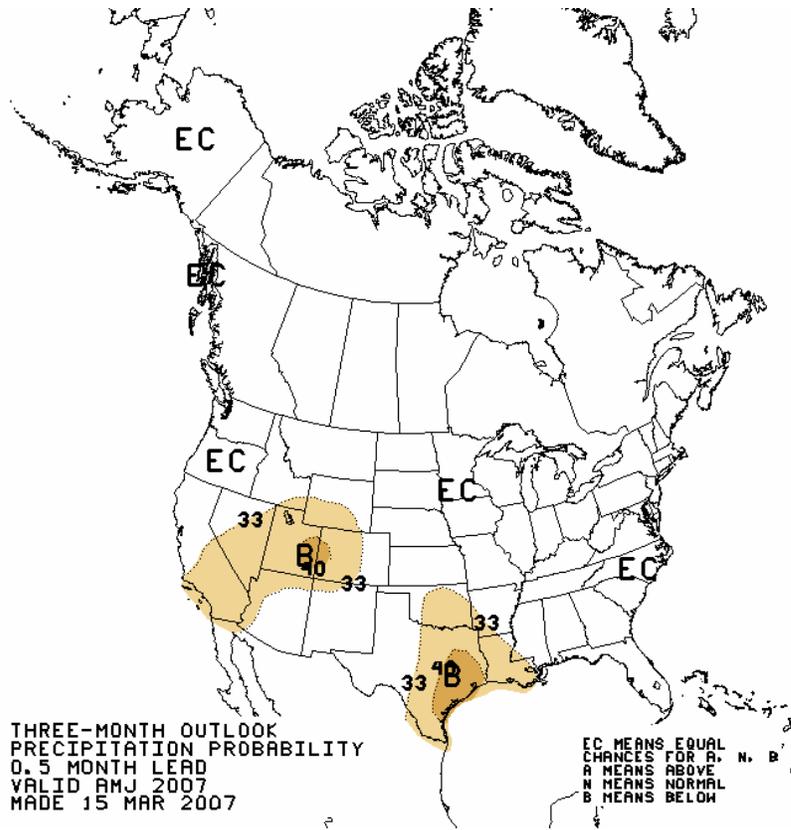
Precipitation summary for the Potomac basin:

The National Weather Service's Middle Atlantic River Forecast Center reports that precipitation in the Potomac basin upstream of Washington, D.C., has been 3.6 inches above average for the prior 12 months (since April 1, 2006), for a total of 42.0 inches. In the first three months of 2007, precipitation in the basin has been 0.67 inches below average for a total of 7.9 inches.



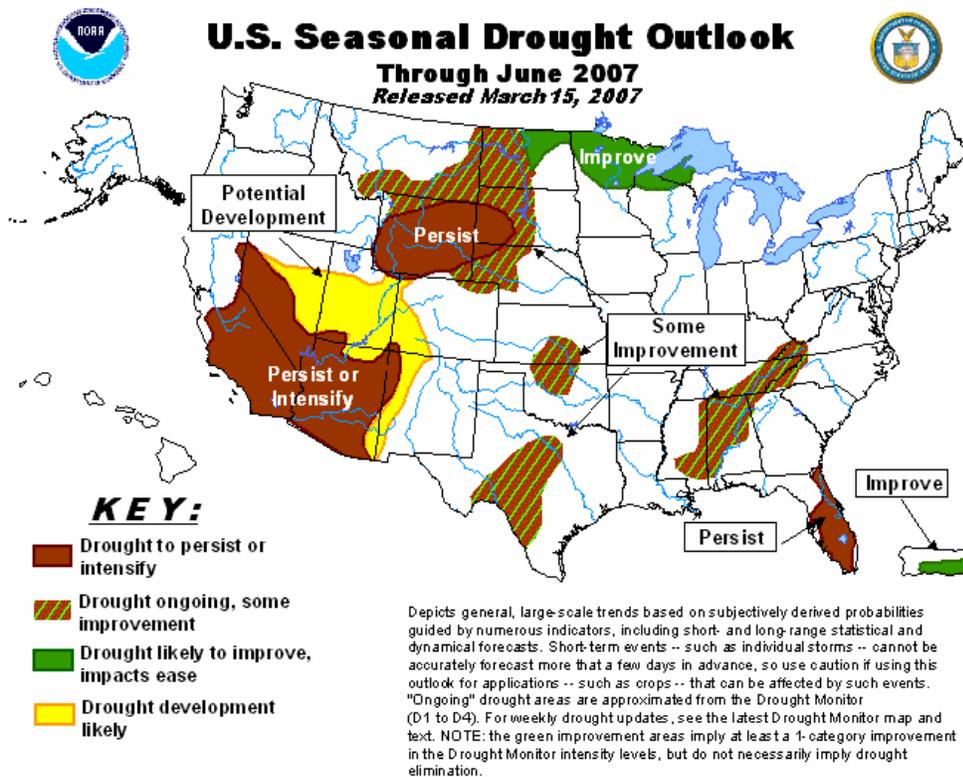
Data source: Middle Atlantic River Forecast Center, NWS

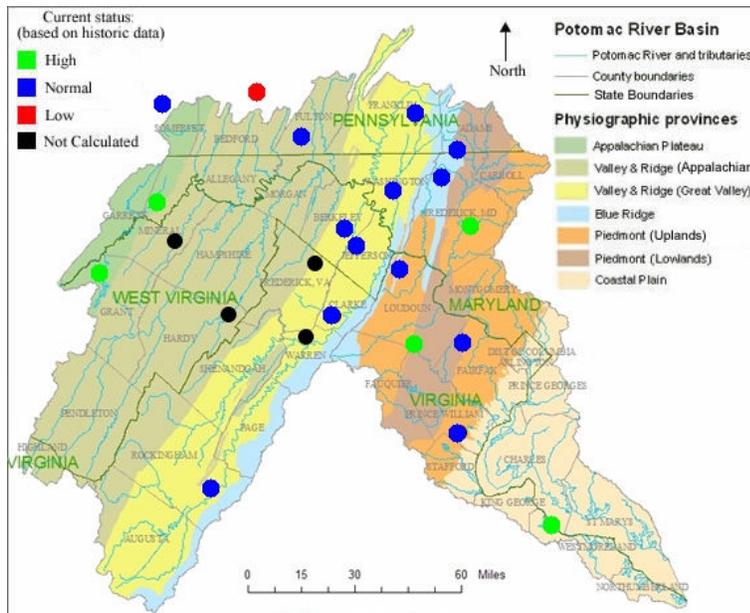
Precipitation and temperature outlook for April, May, and June:



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 April, May, and June. (Image source: CPC).

As of March 15, the CPC's drought outlook does not forecast drought conditions for the Potomac basin.





Groundwater:

Monitoring wells show that groundwater levels are “normal” to “high” throughout the basin (Image source: United States Geological Survey, created 3/16/2007). The Great Valley has the best (highest) baseflow characteristics during droughts, and groundwater is “normal” in this physiographic province. In this graphic, USGS defines “high” as greater than 75th percentile, “normal” as between the 25th and 75th percentiles, and “low” as less than the 25th percentile.

Most wells tracked by ICPRB for drought forecasting were at above average levels in March.

Reservoir Storage:

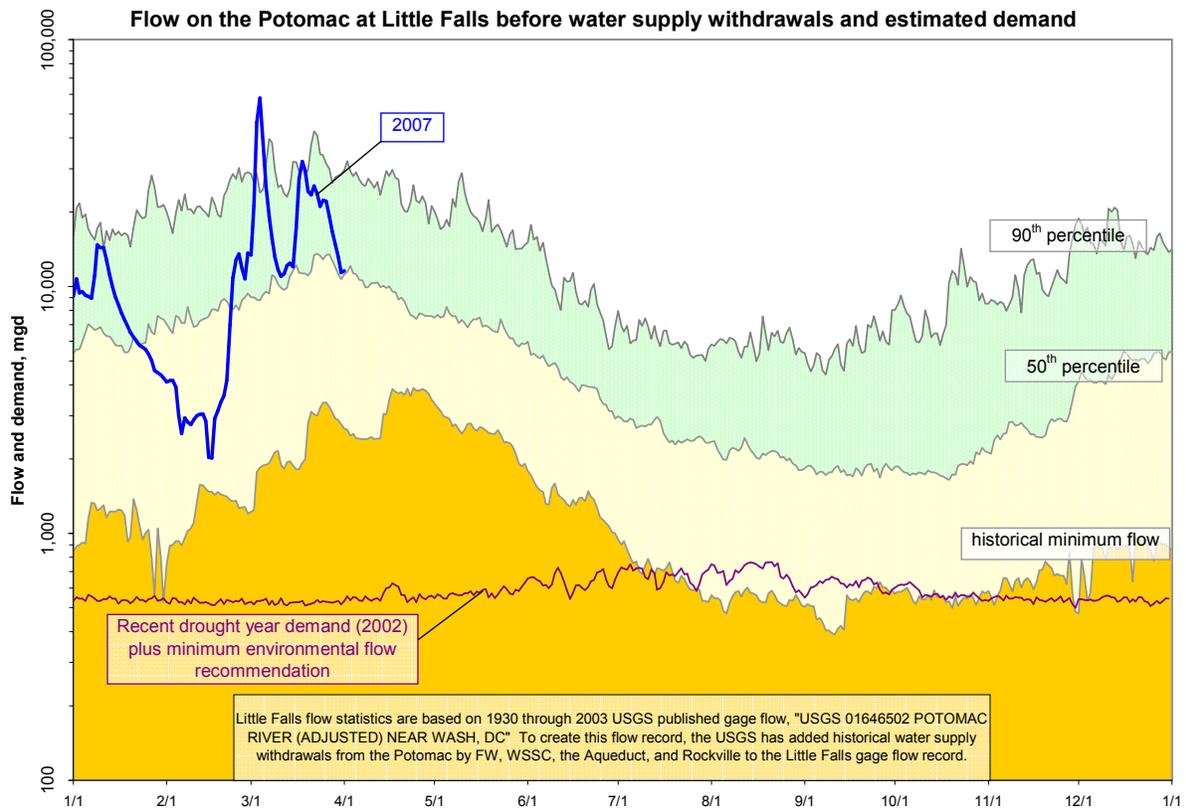
Facility	Percent Full	Current usable storage, bg	Total usable capacity, bg
WSSC’s Patuxent reservoirs	100	10.2	10.2
FW’s Occoquan Reservoir	100	8.0	8.0
Little Seneca Reservoir	100	3.8	3.8
Jennings Randolph water supply	100	13.3	13.3
Jennings Randolph water quality	94	15.7	16.5
Savage Reservoir	67	4.2	6.2

Estimated Potomac River flow

The estimated Potomac flow at Little Falls averaged 21.1 billion gallons per day in March, about twice the normal flow for March. Flows toward the end of March fell back to median levels. 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.

Environmental Flow-by

Average Potomac flow at Little Falls in March was well above the minimum flow recommendation of 100 MGD.



Drought Status:

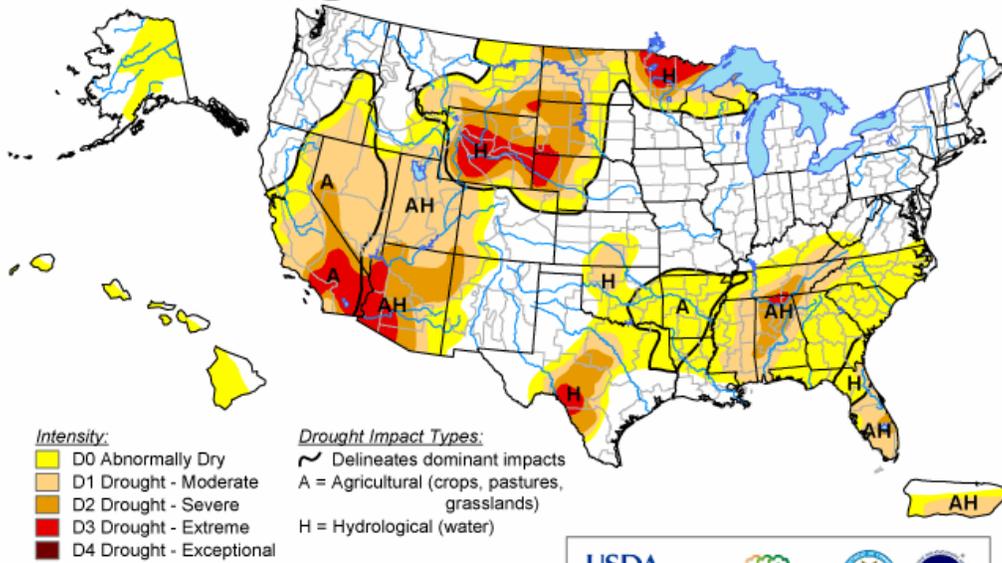
The Metropolitan Washington Council of Government’s Drought Awareness Response Plan status is “Normal.” The drought status would change to “Watch” if the CPC’s drought monitor shows the entire Potomac basin in D-1 status (see below).

Drought Monitor and Soil moisture

The latest Drought Monitor (see next page) from the NOAA Climate Prediction Center (CPC) indicates normal conditions for the Potomac Basin (i.e., no drought status shown). The Palmer Drought Severity Index shows near-normal to above normal soil moisture conditions in the basin (see bottom graphic on the next page).

U.S. Drought Monitor

March 27, 2007
Valid 8 a.m. EDT



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



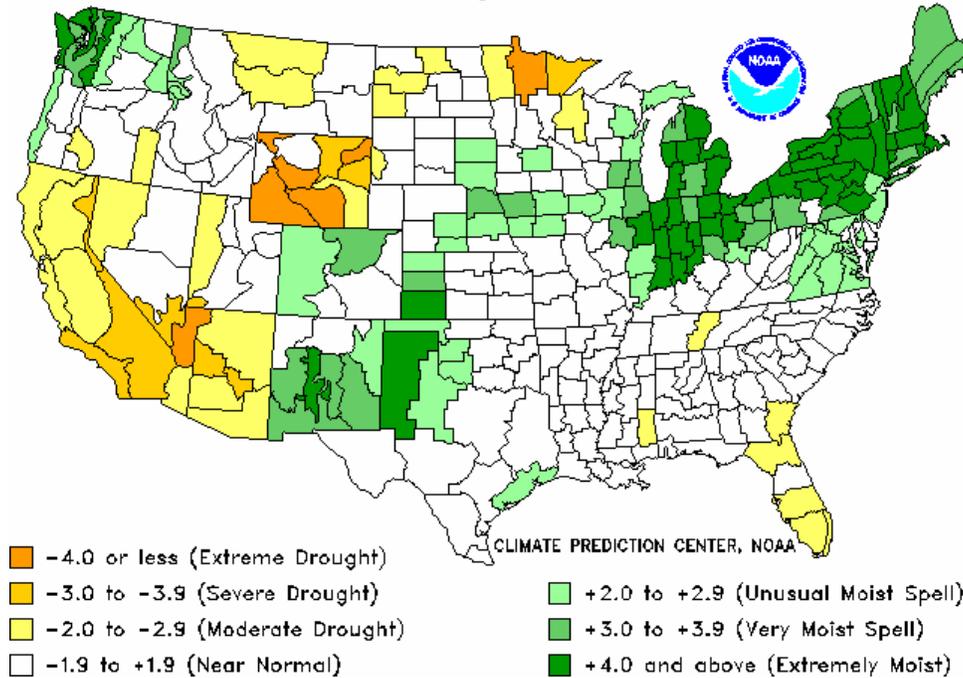
Released Thursday, March 29, 2007
Author: Brad Rippey, U.S. Department of Agriculture

<http://drought.unl.edu/dm>

Drought Severity Index by Division

Weekly Value for Period Ending 24 MAR 2007

Long Term Palmer



Information provided by the USGS, the Middle Atlantic River Forecast Center, and the National Weather Service.