



June 30, 2006
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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 drought is over, at least for now. Record precipitation has increased groundwater and soil moisture conditions to near normal levels. Flow levels are setting records for this time of year. 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, groundwater levels in the basin are near normal, 12 month precipitation in the Potomac Basin is near average, and recent precipitation in June is well above normal. In the event that low-flow conditions re-establish this summer, the metro area is well-protected from a water supply shortage because of carefully laid drought-contingency plans.

ICPRB outlook:

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 Releases occur when predicted flow is less than demand: demand is equal to 400 to 500 MGD withdrawn during the summer months, plus a 100 MGD minimum flow recommendation at Little Falls.

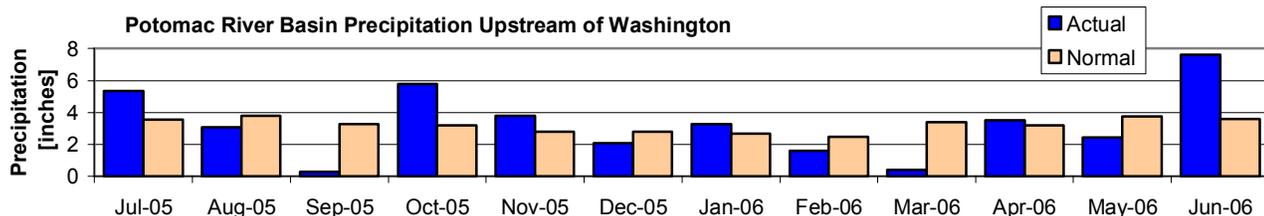
Past years in which watershed conditions most closely resemble current conditions are weighted more heavily in the determination of conditional probability. The historical probability is based on an analysis of the historical stream flow record without weighting for current conditions. The conditional probability of five to eight percent compares to a historical probability of ten to sixteen percent and is considered the more reliable indicator. The conditional probability for this outlook was estimated by analyzing the historical stream flow records and giving consideration to the precipitation total for the prior 12-months and to current groundwater levels.

Outlook for Potomac River at Little Falls – Watershed conditions as of June 1, 2006

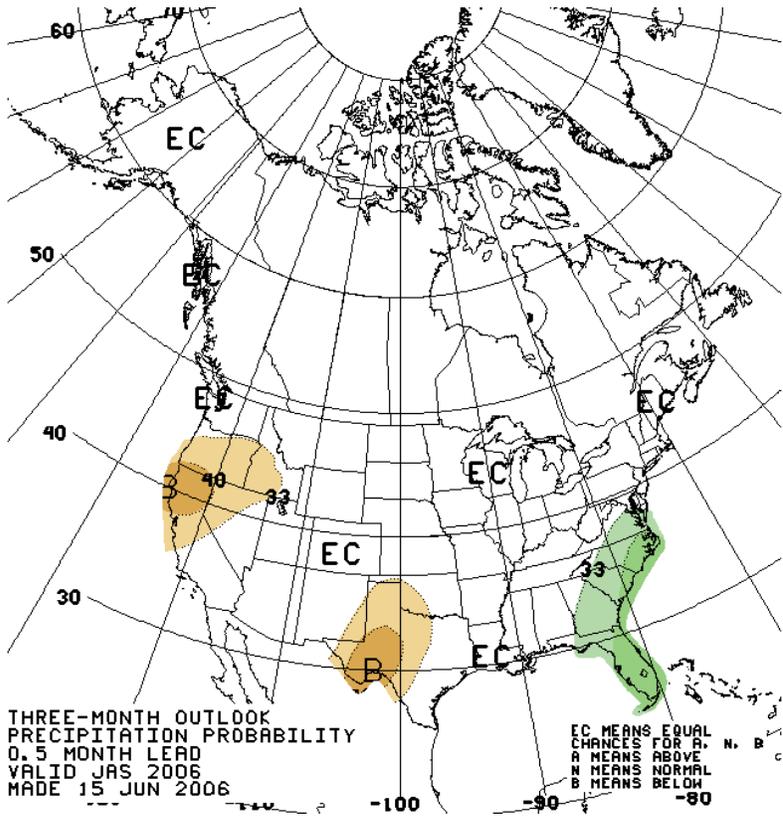
Low flow threshold (MGD)	Historical probability of lower flow June 1 through December 31	Conditional probability of lower flow June 1 through December 31
1200	67%	62%
1000	52%	41%
800	27%	15%
700	16%	8%
600	10%	5%

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 7.6 inches for the month of June (through June 29), 4 inches above normal. Precipitation is now 0.8 inches above average for the prior 12 months (July 1, 2005 through June 29, 2006), for a total of 39.4 inches.



Data source: Middle Atlantic River Forecast Center, NWS

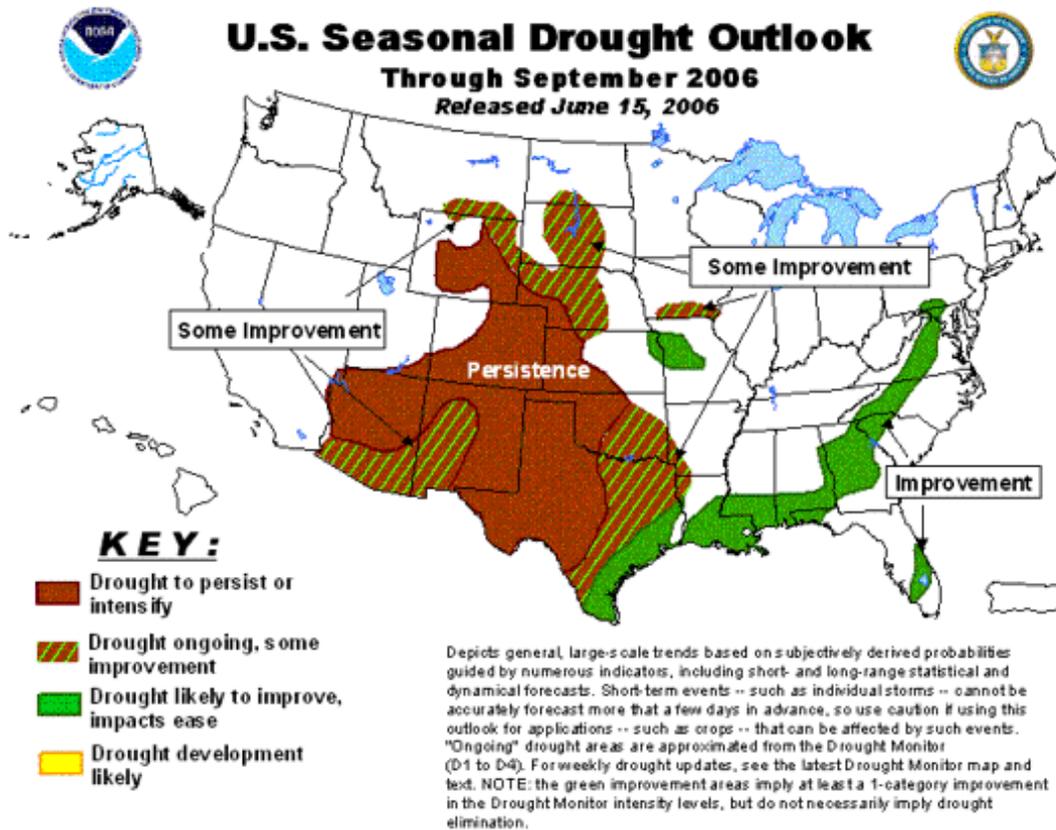


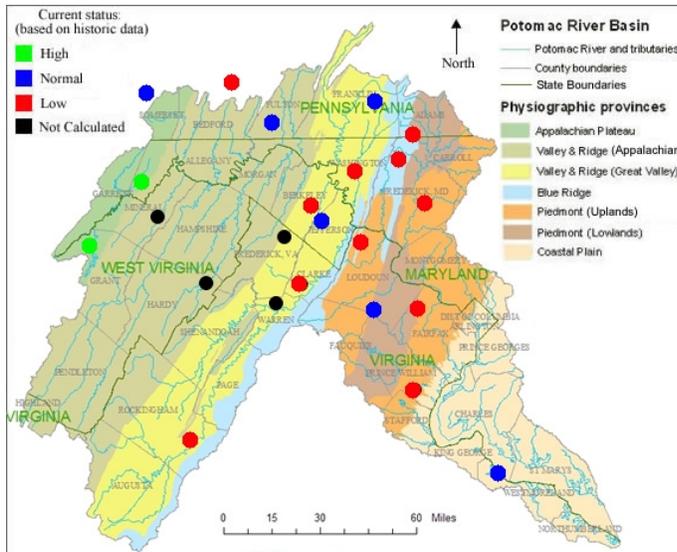
Precipitation and temperature outlook for June, July, August:

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 July, August, and September (see image to left).

(Image source: CPC. "EC" means equal likelihood or chance, the green area corresponds to above normal likelihood, and "B" corresponds to below normal likelihood.

As of June 15, the CPC predicted (somewhat presciently) that drought conditions would ease through September of this year per image below.





Groundwater:

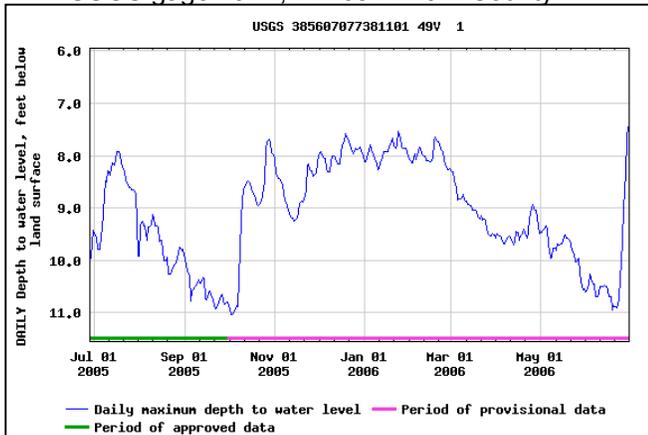
Most basin groundwater levels were at “low” levels as of June 15th (see image to left). Recent rainfall has allowed groundwater to recover significantly, as shown as shown in selected graphs below, provided by USGS.

As of June 1, 2006, 6 out of 7 real-time monitoring wells used for the ICPRB conditional forecasting were below the 25th percentile. As of June 30, only 1 out of the 7 real time wells was below the 25th percentile. Two of these wells are shown in the images below, illustrating a typical recovery.

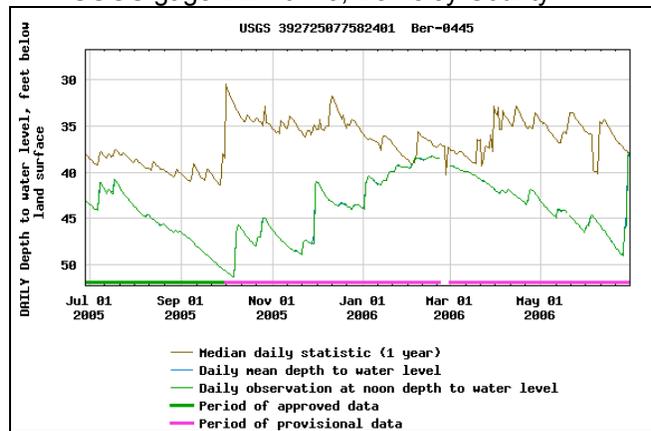
Image sources: United States Geological Survey. USGS defines “high” as greater than 75th percentile, “normal” as between the 25th and 75th percentiles, and “low” as less than the 25th

percentile.)

USGS gage 49V1, Prince William County



USGS gage BER 0445, Berkeley County



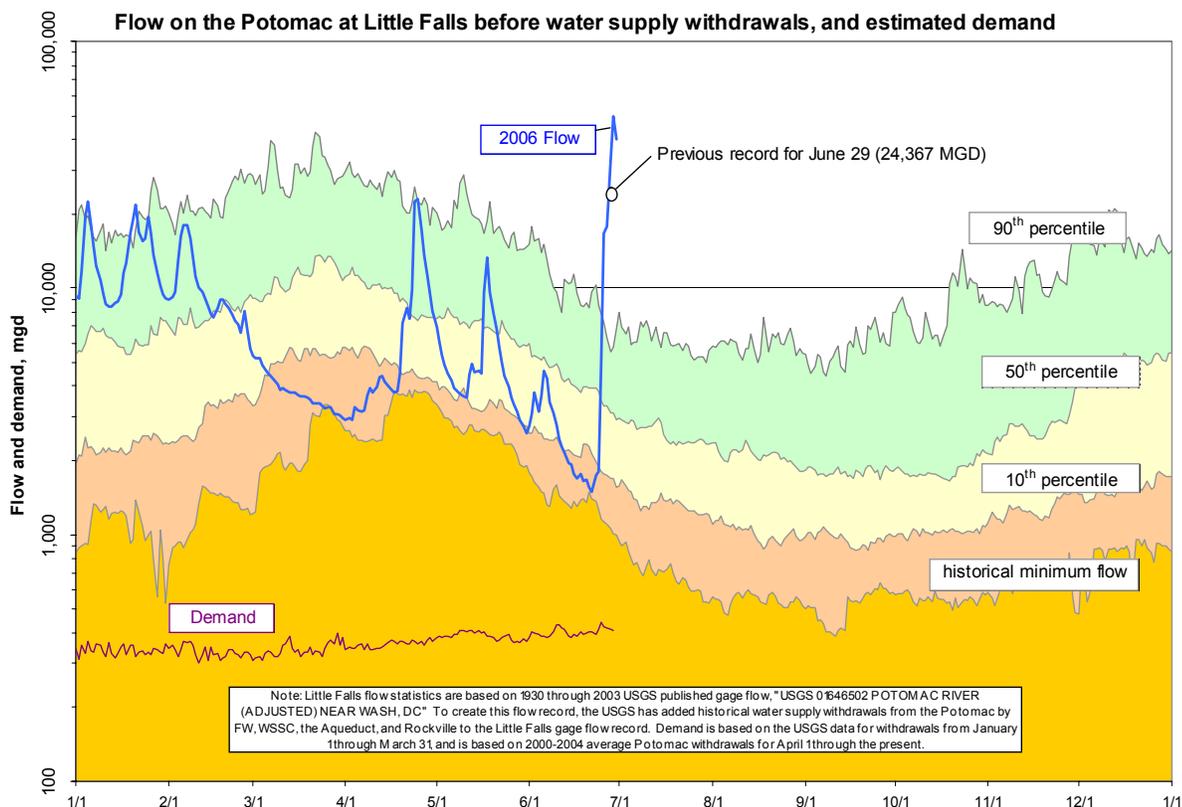
Reservoir Storage:

Facility	Percent Full	Current usable storage, bg	Total usable capacity, bg
WSSC's Patuxent reservoirs	90	9.1	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 at Little Falls increased from near record lows to record high levels for this time of year. (See graphic, next page.) 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 in normal status. (See image on next page, at top.) The Palmer Drought Severity Index shows much of the basin in moderate drought status, as of June 24th. (See image on next page, at bottom.) However, soil moisture conditions have recovered significantly due to the extreme precipitation in late June.

[Drought Status:](#)

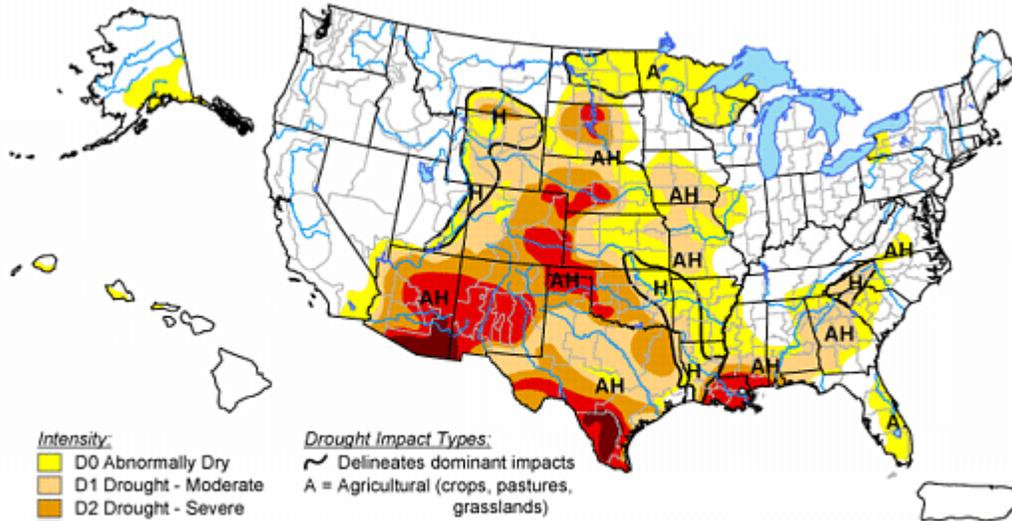
The Metropolitan Washington Council of Government's Drought Awareness Response Plan status is "Normal." The drought status would change to "Watch" if the CPC's drought monitor shows the entire Potomac basin in D-1 status.

[Environmental Flow-by](#)

Average Potomac flow at Little Falls in June, as of June 29, was approximately 9,177 cubic feet per second (5,930 MGD), approximately 59 times the minimum flow recommendation of 100 MGD.

U.S. Drought Monitor

June 27, 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.



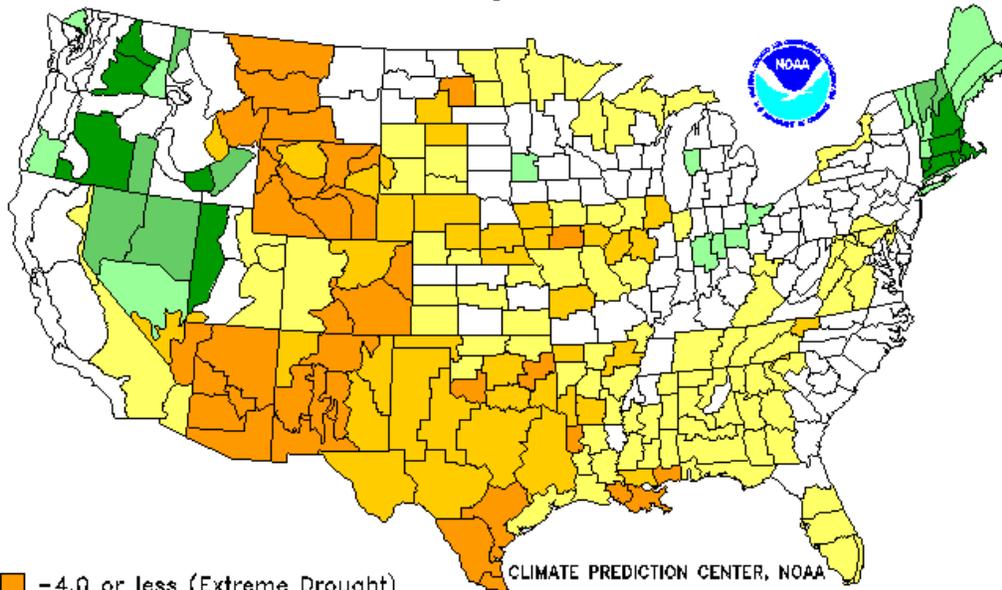
Released Thursday, June 29, 2006

<http://drought.unl.edu/dm> Author: Ned Guttman/Liz Love-Brotak, NOAA/NESDIS/NCDC

Drought Severity Index by Division

Weekly Value for Period Ending 24 JUN 2006

Long Term Palmer



- CLIMATE PREDICTION CENTER, NOAA
- 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)