

SUMMARY OF HYDROLOGIC CONDITIONS FOR THE UPPER DELAWARE RIVER BASIN SEPTEMBER 1999

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Adjusted streamflow in the upper Delaware River basin during September was excessive (greater than the 75th percentile). The maximum daily discharge of 23,200 cfs occurred on September 17. The minimum daily discharge was 1,440 cfs on September 9.

On the basis of a 13-station average, precipitation during September was 9.08 inches, which was 243 percent of the 58-year average. The maximum daily-average precipitation during September was 5.00 inches on September 17, resulting from the remnants of Hurricane Floyd. Precipitation in the upper Delaware River Basin during the past 12 months was 3.61 inches less than the long-term average. Precipitation during September was 5.34 inches greater than the long-term average for the month.

The monthly mean streamflow of the Delaware River at Montague, N.J. during September was 3,847 cfs (observed), which was 193 percent of the median. The flow at Montague, adjusted for diversions from the basin and change in storage in the major reservoirs was 5,154 cfs, or 422 percent of median (water years 1961-90).

Storage October 1, 1999 in Pepacton, Cannonsville and Neversink Reservoirs was 57.8 percent of capacity above the point of maximum depletion. The combined storage of 157 billion gallons was 6 billion gallons greater than that of one month ago and was 20 billion gallons less than that of one year ago. Median storage on the first day of October in 32 years of record is 178 billion gallons.

As part of a statewide network, the USGS operates 14 observation wells in the Pennsylvania part of the Delaware River Basin. Mean water levels during September were below average in 10 of the wells. Water levels in wells BK-929 (Bucks County) and WN-64 (Wayne County) set new record low levels for September. The lowest ground-water levels since the drought began in August 1998 were recorded during the first half of September. On September 5, 1999, the water level in well BE-623 (Berks County) set a new record low level for the period of record (January 1975 to date), regardless of month.

The Palmer Drought Severity Index (PDSI) is a meteorological index that is computed on the basis of precipitation, temperature, and soil-moisture conditions. At the end of September 1999, the PDSI indicated normal or near normal conditions in the New York, northern New Jersey, southeastern Pennsylvania, and northern Delaware parts of the Delaware River Basin.

