

**SUMMARY OF HYDROLOGIC CONDITIONS
IN THE
UPPER DELAWARE RIVER BASIN
September 2004**

Prepared by the
Office of the Delaware River Master
Milford, Pennsylvania

Adjusted streamflow in the upper Delaware River Basin during September was excessive for the third consecutive month. The maximum daily mean discharge of 116,000 cfs occurred on September 19. The minimum daily mean discharge was 2,840 cfs on September 7.

The observed monthly mean streamflow of the Delaware River at Montague, N.J. during September was 17,190 cfs, which is 862 percent of median and setting a new maximum for the month of September. The flow at Montague, adjusted for diversions from the basin and change in storage in the major reservoirs, was 18,300 cfs, or 1,212 percent of median (water years 1971-2000).

On the basis of an 11-station average, precipitation during September was 9.64 inches, which is 242 percent of the 63-year average. The maximum daily-average precipitation during the month was 4.54 inches on September 18, caused by the remnants of tropical storm Ivan. Precipitation in the upper Delaware River Basin during the past 12 months was 13.30 inches more than the long-term average. Precipitation during September was 5.65 inches more than the long-term average for the month.

Combined storage October 1, 2004 in Pepacton, Cannonsville, and Neversink Reservoirs was 100 percent of capacity above the point of maximum depletion. The combined storage of 272 billion gallons was 3 billion gallons more than that of one month ago and 2 billion gallons less than that of one year ago. Median storage on the first day of October in 37 years of record is 177 billion gallons. Pepacton, Cannonsville, and Neversink Reservoirs spilled 22, 21, and 2.6 billion gallons, respectively, in September. For the period of record, Pepacton Reservoir established a new maximum storage of 145.2 billion gallons on September 19.

As part of a statewide network, the USGS operates 12 observation wells in the Pennsylvania part of the Delaware River Basin. Mean water levels during September were above average in all of the wells. Water levels in 8 of the wells were below August 2004 levels, and water levels in 10 of the wells were above September 2003 levels.

HYDROLOGIC CONDITIONS IN THE UPPER DELAWARE RIVER BASIN

Compiled by the Office of the Delaware River Master, Milford, Pa.

(Preliminary data - subject to revision)

PRECIPITATION, IN INCHES

| | Dec. 1940 to Sept. 2003 | | October 2003 to September 2004 | | | | | |
|-------|-------------------------|------------|--------------------------------|------------|--------------------|------------|---------------------------|------------|
| | Average | | Actual | | Percent of average | | Excess (+) or deficit (-) | |
| | Amount | Cumulative | Amount | Cumulative | By month | Cumulative | By month | Cumulative |
| Oct. | 3.39 | 43.34 | 5.94 | 56.64 | 175 | 131 | +2.55 | +13.30 |
| Nov. | 3.79 | 39.95 | 4.38 | 50.70 | 116 | 127 | +.59 | +10.75 |
| Dec. | 3.37 | 36.16 | 4.90 | 46.32 | 145 | 128 | +1.53 | +10.16 |
| Jan. | 2.98 | 32.79 | 2.60 | 41.42 | 87 | 126 | -.38 | +8.63 |
| Feb. | 2.64 | 29.81 | 1.41 | 38.82 | 53 | 130 | -1.23 | +9.01 |
| Mar. | 3.35 | 27.17 | 2.22 | 37.41 | 66 | 138 | -1.13 | +10.24 |
| Apr. | 3.72 | 23.82 | 3.84 | 35.19 | 103 | 148 | +.12 | +11.37 |
| May | 4.21 | 20.10 | *4.81 | 31.35 | 114 | 156 | +.60 | +11.25 |
| June | 4.03 | 15.89 | 3.29 | 26.54 | 82 | 167 | -.74 | +10.65 |
| July | 4.03 | 11.86 | 6.12 | 23.25 | 152 | 196 | +2.09 | +11.39 |
| Aug. | 3.84 | 7.83 | 7.49 | 17.13 | 195 | 219 | +3.65 | +9.30 |
| Sept. | 3.99 | 3.99 | 9.64 | 9.64 | 242 | 242 | +5.65 | +5.65 |

Note: Amount shown in cumulative columns is total from month shown to present.

* Revised since last month.

STREAMFLOW, IN CFS DELAWARE RIVER AT MONTAGUE, N.J.

| Month | 1940-2002 | | | 2004 Monthly mean | Percent of median |
|----------------------|---------------|--------|------------|----------------------|----------------------|
| | Maximum | Median | Minimum | | |
| September (observed) | 9,167 (1960) | 1,994 | 892 (1941) | 17,190 | 862 |
| September (adjusted) | 10,720 (1960) | 1,428 | 324 (1964) | 18,300 | 1,282 |
| October (observed) | 15,690 (1955) | 2,348 | 807 (1941) | | |
| October (adjusted) | 18,570 (1955) | 2,147 | 322 (1964) | | |