Watershed MANAGEMENT 

Drought Information Center

September 4, 2001

On August 24, Secretary David E. Hess announced the expansion of the drought watch to 22 additional counties. A drought watch is now designated for 45 counties. These counties are indicated on the drought status map and in the news release at http://www.dep.state.pa.us/dep/subject/hotopics/drought.

For the month of August 2001, 47 of 67 Pennsylvania counties had below normal precipitation. Departures from normal precipitation range from –1.90 inches (Philadelphia and Perry County) to 1.10 inches (Allegheny, Bradford and Sullivan County). The August average departure from normal precipitation for the state as a whole is –0.55 inches. Cumulative rainfall for the period January through September 4, 2001 ranged from 20.1 inches (Bedford County) to 33.2 inches (Bucks County). For the first 4 days of September 15 of 67 counties have below normal precipitation, with average rainfall for the period being approximately 1.0 inch. Normal for the first 4 days of September would be approximately 0.45 inches. The departure from normal for the state during the last 30 days was –0.11 inches.

Thunderstorms have occurred at various locations across the state resulting in isolated heavy rainfall. This type of event produces significant runoff, leading to sudden increases in flow. This flow usually dissipates after the storm and begins to decrease again. There are minimal benefits to groundwater from this kind of rainfall event.

Compared to August 7, in the Delaware Basin, the main-stem of the Delaware River is down from 3,970 to 3,160 cfs at Trenton. The Lackawaxen River is up from 34 to 45 cfs at Hawley. The Lehigh River is down from 1,070 to 738 cfs at Bethlehem. The Schuylkill River is down from 812 to 558 cfs at Philadelphia and the Brandywine Creek is down from 94 to 90 cfs at Chadds Ford. The New York City Delaware River Basin storage (September 4) is 13.12 % below normal and 57.103 billion gallons above the drought warning level.

Over the past four weeks in the Susquehanna Basin, the main stem Susquehanna River is down from 1,510 to 1,100 cfs at Towanda, up slightly from 1,400 to 1,430 cfs at Wilkes-Barre, and up from 4,740 to 5,930 cfs at Harrisburg. The West Branch Susquehanna River is up from 491 to 1,010 cfs at Lock Haven, from 825 to 1,990 cfs at Williamsport, and from 1,200 to 2,570 at Lewisburg. The Juniata River is down from 1,110 to 750 cfs at Newport.

For the Ohio Basin, the Allegheny River is down from 4,210 to 3,750 cfs at Natrona. The main-stem Ohio River is down from 10,100 to 8,760 cfs at Sewickley. The Kiskiminetas River is up from 488 to 524 cfs at Vandergrift. The Monongahela River is down from 4,930 to 3,760 cfs at Braddock and the

Beaver River is up from 881 to 971 cfs at Beaver Falls.

Instantaneous streamflow readings for September 4 at 1:45 a.m. indicate that there were 39(out of 155 reporting) stream gages registering flows below the 25th percentile, 8 less that the 10th percentile and 2 at record lows.

USGS July 2001 end-of-month summary figures showing percent of wells where water level is above average decreased in all three major river basins. The percent of wells where water level was above average was about 38%, 10% and 30% for the Delaware, Susquehanna and Ohio River basins, respectively. Groundwater levels continue to decrease across the state due to the lack of any sustained rainfall. Compared to the August 6 readings, 7 of 33 groundwater monitoring wells show an increase in levels with the remaining decreasing. Increases range from 0.03 (Allegheny County) to 15.64 (Pike County) feet. Decreases range from 0.03 (Adams County) to 5.05 (Butler County) feet.

For the period September 5th through September 14th, 0.75 inches of rainfall is predicted to fall in the eastern part of the state with 1.25 inches predicted to fall in the western portion of the state. Currently there are no tropical depressions or hurricanes predicted to affect the east coast.