

# Watershed MANAGEMENT



## Drought Information Center

March 22, 1999

During the past week, precipitation was sparse in the northwest, with totals ranging from near zero in Erie down through Beaver Counties to 0.25 inch or less northwest of a line from Beaver to McKean County. Precipitation was heavier along the southern tier, ranging from 0.7 inch in Greene County to 1.75-2.25 inches in Somerset through Lancaster Counties. The Ridge and Valley Province received about 1.0-2.0 inch with the heaviest concentrations occurring in the lower Susquehanna River area. In the Delaware River basin, totals ranged from 1.2 inches in the upper basin to about 1.5-4.0 inches in the lower basin. So far in March, precipitation is about normal in the upper Ohio basin, about normal to 1.5 inch above normal in the lower Ohio basin, generally about 1.5-2.25 inch above normal in the Susquehanna basin, and about 1.5-3.5 inches above normal in the Delaware basin. Longer-term 3- and 6-month totals have returned to normal throughout the Delaware basin and eastern half of the Susquehanna basin. The Ohio and western Susquehanna basins continue to show long-term deficits, with the greatest deficits reflected in the northwestern counties.

Stream flows in the Delaware River basin have risen rapidly in response to yesterday's heavy precipitation. Flows, which were considerably below normal at nearly all gages on Friday, are now nearing their peaks from the storm and are well above normal. The Delaware River at Trenton is up from 10,300 cubic feet per second on Friday to 32,700 cfs this morning. The Lackawaxen River at Hawley rose from 710 to 1790 cfs. The Lehigh River at Bethlehem is up from 2400 to 4700 cfs, and the Schuylkill River at Philadelphia is up from 3100 to 21,800 cfs. In the Christina River watershed, Brandywine Creek at Chadds Ford rose from 352 to 3470 cfs in the wake of nearly 3 inches of precipitation.

In the Susquehanna River basin, reaction to yesterday's event is not as great. Flows remain nearer to last week's levels and have declined at many gages. The Lackawanna River at Old Forge rose from 543 to 1120 cfs in response to the heavier precipitation in the northeast. Most West Branch Susquehanna tributary gages declined, although the main stem is up at most gages, including Lewisburg where flows increased from 15,200 to 21,200 cfs over the weekend. Flows in the Juniata River watershed have generally risen, although the river at Newport declined from 13,400 to 12,000 cfs since Friday. In the lower basin, streams are swelled from the weekend event, as reflected by Swatara Creek near Hershey, up from 844 to 2530 cfs. Flows are above normal at nearly all gages, as the runoff occurs.

In the Ohio River basin, flows continue downward at all gages on the Allegheny River, including Natrona, where flows declined from 30,300 to 29,900 cfs since Friday. The Kiskiminetas River has risen from 4860 to 7000 cfs at Vandergrift. Flows have risen at most gages in the Monongahela River

watershed, although the main stem at Braddock fell from 56,200 to 34,400 cfs. The Beaver River watershed, which saw little of the weekend storm, has fallen noticeably; the river at Beaver Falls declined from 5570 to 3010 cfs. The Ohio River at Sewickley fell from 89,900 cfs to 64,700 since Friday. Most gages in the basin are reading above normal at this time, except particularly in the Beaver River watershed where all gages remain well below normal.

Ground water levels improved at all daily monitoring wells in both the Ohio and Susquehanna basins. In the Delaware basin, small gains and losses were about equally mixed.

The three-day forecast indicates the possibility of up to 0.25 inch of precipitation in the southeastern half of the state, near the end of the period. The five-day forecast shows a total of 0.25-0.5 inch in the Ohio and western half of the Susquehanna basin, increasing to 1.0 inch in the eastern Susquehanna basin and to 1.5 inch in the Delaware basin. The 5-10 day forecast adds 0.5-1.0 inch east of the Allegheny and Monongahela watersheds and 1.0-1.5 inches in and west of those watersheds, with temperatures to be in the normal range of 40-45 degrees.

Overall, most of the Commonwealth continued to recover during the past week, with the exception of the northwest, which again was skirted by precipitation events. The Department maintains its drought "watch" declaration in all counties at this time, with continued hope for full recovery by early April.