

Drought Report **September 26, 2016**

Preface

This report summarizes the various indicators utilized in drought monitoring. Each parameter (groundwater, surface water, precipitation, and palmer index) has their own individual indicator for each county. When readings hit a pre-determined trigger level, the indicator is coded as “Normal”, “Watch”, “Warning”, or “Emergency” for that county. These indicators are used to evaluate the drought status of a particular county; they are not, themselves drought declarations. Drought declarations are determined by the Commonwealth Drought Coordinator, with support of the Drought Task Force, and given final approval by the Governor.

Summary

Very little precipitation fell in the last 7 days which has led to increases in precipitation departures, continued declines in instantaneous stream flows, and decreasing ground water levels.

Precipitation departures, increased during the last 7 days in the across the state and ranged from 0 to 0.5 inches. Groundwater levels fell during the last week with 5 counties moving from “Normal” to “Watch” over the last seven days.

Instantaneous flows on most streams have declined significantly across the state with the lowest flows occurring in the Susquehanna and Delaware River Basins. This is evident in that the 30-day average streamflow trigger has declined in 10 counties.

The Delaware River Basin Commission has resumed making releases from the Beltzville and Blue Marsh reservoirs to supplement streamflow in the lower portion of the basin to meet the Trenton Flow Objective. The River Master is making releases form the New York City reservoirs to meet the Montague Flow Objective. The Salt Front has moved 2 more miles upstream on the Delaware River.

On a positive note, the 7-day forecasts call for significant rainfall with projections ranging from 1.5 inches in the northeast to up to 7 inches in the lower Susquehanna River Basin.

The next Commonwealth Drought Task Force meeting remains scheduled for October 5th at PEMA.

Drought Report Details

Potter County remains in Drought Warning with the following counties in Drought Watch: Armstrong, Bedford, Berks, Blair, Bradford, Cameron, Carbon, Center, Chester, Clarion, Clearfield, Clinton, Cumberland, Dauphin, Elk, Forest, Fulton, Huntingdon, Indiana, Jefferson, Juniata, Lawrence, Lebanon,

Lehigh, Lycoming, McKean, Mercer, Mifflin, Northampton, Perry, Philadelphia, Schuylkill, Snyder, Sullivan, Tioga, Union, and Venango.

Precipitation – Over the last 7 days, there was varying precipitation across the state, county average rainfall was from 0.0 in several counties to 0.5 inches in Somerset County. The 90-day precipitation deficit shows counties ranging from 50% below to 10% above normal precipitation.

The precipitation indicators based on a 90-day departure are showing 14 counties in “Watch” (Adams, Bedford, Cameron, Chester, Clinton, Delaware, Fulton, Huntingdon, Northumberland, Perry, Philadelphia, Potter, Tioga and Union) and 5 counties in “Warning” (Blair, Juniata, Mifflin, Montgomery and Snyder) and no counties in “Emergency” status. There was improvement in 7 counties for precipitation and 3 counties declined from last week.

Surface Water- Instantaneous streamflow across the Commonwealth ranged from above normal to much below normal. For this date there are 5 gages with instantaneous flow at less than the 10th percentile, compared to 17 gages last week. There were no gages recording record low instantaneous flows.

The 30-day running average streamflow indicators are showing 15 counties in drought “Watch” (Bedford, Berks, Bradford, Carbon, Centre, Chester, Cumberland, Dauphin, Delaware, Lancaster, Lebanon, Lehigh, Monroe, Northumberland and Perry), 9 counties in “Warning” (Adams, Clinton, Franklin, Huntingdon, Juniata, Northampton, Potter, Snyder and Union) and 3 counties in “Emergency” (Fulton, Philadelphia and Tioga). Since our last report, 2 counties show improvement with 10 counties declining.

Groundwater – The 30-day moving average indicators for groundwater levels are showing 22 counties in drought “Watch” (Bedford, Carbon, Centre, Chester, Clinton, Columbia, Cumberland, Delaware, Elk, Erie, Franklin, Fulton, Juniata, Lackawanna, Lancaster, Luzerne, Monroe, Montour, Perry, Philadelphia, Pike and Union); 7 counties in “Warning” (Berks, Dauphin, Lebanon, Lehigh, McKean, Northampton and Potter) and 2 counties in “Emergency” (Lawrence and Mercer). Since our last report, there have no improvements in any counties with 5 counties declining.

Palmer Drought Severity Index – now appearing for this report period, all 67 counties of the Commonwealth now fall into at least one of three national level drought severity index classifications– “moderate”, “severe” or “extreme” drought. For Pennsylvania drought monitoring purposes, these classifications are identified as “Watch”, “Warning” and “Emergency”.

The Palmer soil moisture indicator is showing 37 counties in “Watch” (Adams, Berks, Bradford, Bucks, Carbon, Chester, Clarion, Crawford, Cumberland, Dauphin, Delaware, Erie, Forest, Franklin, Jefferson, Lackawanna, Lancaster, Lebanon, Lehigh, Luzerne, McKean, Mercer, Monroe, Montgomery, Northampton, Philadelphia, Pike., Potter, Schuylkill, Sullivan, Susquehanna, Tioga, Venango, Warren, Wayne, Wyoming and York), 19 counties in “Warning” (Bedford, Blair, Cambria, Cameron, Centre, Clearfield, Clinton, Columbia, Elk, Fulton, Huntingdon, Juniata, Lycoming, Mifflin, Montour, Northumberland, Perry, Snyder and Union) and for the first time during this drought period 11 counties are in “Emergency” (Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Lawrence, Somerset, Washington and Westmoreland). There were no changes to any counties since the last report.

