

## **Drought Report** **August 16, 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**

Above normal precipitation in the northern half of the state over the past seven days resulted in improvements in instantaneous stream flows, increases in 30-day moving average stream flows for 15 counties as well as decreases in 90-day precipitation departures within the northcentral part of the state. In Potter County as an example, the 90-day precipitation departure went from -6.3 inches down to -4.3 inches. Although groundwater indicators generally remained constant from the previous week, monitoring well levels continue to decline state-wide.

7-day forecasts call for approximately 1 to 2 inches of precipitation with the highest rainfall amounts within the western half of the state.

The drought declarations issued by DEP in a press release on August 2, 2016 remain in effect at this time. Drought warning: Potter County; Drought watch: the counties of Armstrong, Bedford, Berks, Blair, Bradford, Cameron, Carbon, Center, Clarion, Clearfield, Clinton, Dauphin, Elk, Forest, Fulton, Huntingdon, Indiana, Jefferson, Juniata, Lawrence, Lebanon, Lehigh, Lycoming, McKean, Mercer, Mifflin, Northampton, Perry, Schuylkill, Snyder, Sullivan, Tioga, Union, and Venango.

Public water suppliers in the counties covered by the drought declarations were notified by email on August 9, 2016 or by paper mailing on August 11, 2016 of the drought declarations to remind them to update their Drought Contingency Plans (DCPs) and to seek water use reductions through voluntary conservation measures.

A Drought Task Force meeting remains scheduled for September 6<sup>th</sup> at PEMA for reviewing conditions and discussing proposed changes, if any, to declarations made on August 2<sup>nd</sup>.

### **Drought Report Details**

*Precipitation* –Over the last 7 days, there was varying precipitation across the state, county average rainfall was from 0.2 to 4.8 inches for the period August 8 to August 14. The more significant rainfall occurred in the northern half of the state. The 90-day precipitation deficit shows counties ranging from greater than 50% below up to 25% above normal precipitation.

The precipitation indicators based on a 90-day departure are showing 9 counties in “Watch” (Cameron, Centre, Juniata, Lycoming, Mifflin, Montgomery, Potter, Snyder and Sullivan), 2 counties in “Warning”

(Clinton and Tioga) and no counties in “Emergency. Twenty-three counties improved with 14 returning to “Normal” status.

*Surface Water*- Instantaneous streamflow varies across the Commonwealth with flows ranging from above normal in the western part of the state to below normal in the eastern portion. For this date there are 7 gages with instantaneous flow at less than the 10th percentile, compared to 31 gages last week. There is one gage reporting record low instantaneous flows.

The 30-day running average streamflow indicators are showing 22 counties in drought “Watch” (Armstrong, Berks, Blair, Carbon, Centre, Clarion, Clearfield, Clinton, Cumberland, Franklin, Fulton, Huntingdon, Jefferson, Juniata, Lehigh, Mifflin, Northampton, Perry, Schuylkill, Snyder, Sullivan and Union) and 2 counties in “Warning” (Bedford and Potter). Since our last report, 15 counties showed improvement.

*Groundwater* – The 30-day moving average indicators for groundwater levels are showing 23 counties in drought “Watch” (Bedford, Bradford, Carbon, Centre, Chester, Clinton, Cumberland, Delaware, Elk, Erie, Franklin, Fulton, Juniata, Lackawanna, Lancaster, Monroe, Montour, Perry, Philadelphia, Pike, Susquehanna, Union and Wayne); 7 counties in “Warning” (Berks, Columbia, Dauphin, Lebanon, Lehigh, Luzerne and Northampton) and 4 counties in “Emergency” (Lawrence, McKean, Mercer and Potter). Since our last report, 4 counties showed improvement with one returning to “Normal”..

*Palmer Drought Severity Index* – The Palmer soil moisture indicator is showing 24 counties in “Watch” (Cameron, Centre, Clarion, Clearfield, Clinton, Columbia, Crawford, Elk, Erie, Forest, Jefferson, Juniata, Lycoming, McKean, Mercer, Mifflin, Montour, Northumberland, Perry, Potter, Snyder, Union Venango and Warren) and 16 counties in “Warning” (Allegheny, Armstrong, Beaver, Bedford, Blair, Butler, Cambria, Fayette, Fulton, Greene, Huntingdon, Indiana, Lawrence, Somerset, Washington and Westmoreland).

*Public Water Supply Agencies (PWSA 's)* – The following water suppliers are on water use restrictions: Albion Boro Water System, Bedford Boro Water Authority, Driftwood Boro, Dubois Water Department, Huntingdon Boro Water Department, Petersburg Commons Water System, Shinglehouse Boro Water Department and Wellsboro Munic Authority.

*Forecast* – The 7-day forecast indicates approximately 1 to 2 inches of precipitation for the state, with the highest rainfall amounts forecasted to be in the western half of the state.