

## **Drought Report October 13, 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**

Rainfall last week from the remnants of Hurricane Matthew did not reach Pennsylvania. Consequently, average rainfall for the period October 3-6, 2016 ranged from 0.0 inches in the northeast and northwest to 1.7 inches in the southwest part of the state.

The 90-day precipitation departures reflect the variation of rainfall with some counties improving and others dropping by up to 0.5 inches. Most groundwater monitoring levels fell during the last week with an overall 3 additional counties moving into a drought status over the last seven days.

Instantaneous flows on most streams are again declining across the state with the lowest flows in the east and highest in the southwest.

The Delaware River Basin Commission (DRBC) reports that flows in the central and upper Delaware Basin range from normal to much below normal. Rainfall which fell in the New Jersey side of the basin helped to push the salt front downstream 3 miles to River Mile 83, which is 11 miles upstream of the normal location for this time of year. DRBC reports hydrologic conditions and weather forecasts are indicating a trend towards a basin-wide drought.

In the Susquehanna, releases are being made at several reservoirs to meet flow objectives.

The 7-day forecasts call for minimal rainfall with projections ranging from 0.01inches in the southeast to 0.5 inches in the northwest.

The Drought Task Force held an informational meeting on October 5<sup>th</sup> due to the uncertainty of Hurricane Matthews track. The next full meeting will be held on October 19<sup>th</sup> at PEMA at which time any changes to the drought declaration will be discussed.

### **Drought Report Details**

There have been no changes to the declared drought counties. 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. The counties will be reviewed for any further action during the next Drought Task Force meeting.

*Precipitation* – Over the last 7 days, county rainfall averages ranged from 0.0 inches in the northwest and eastern part of the state to 1.7 inches in the southwest. The 90-day precipitation deficit shows counties ranging from 50% below to 75% above normal precipitation.

The precipitation indicators based on a 90-day departures indicates one county, Snyder, in “Watch” status.

*Surface Water*- Instantaneous streamflow across the Commonwealth ranged from above to much below normal. For this date there were 19 gages with instantaneous flow at less than the 10th percentile, compared to 3 gages last week. There 2 gages recording record low instantaneous flows.

The 30-day running average streamflow indicators are showing 12 counties in drought “Watch” (Bradford, Carbon, Clinton, Forest, Lehigh, McKean, Monroe, Philadelphia, Potter, Snyder, Tioga and Union) and 1 county in “Warning” (Northampton). There are no counties in “Emergency”. Since our last report, 1 county moved from “Normal” to “Watch”.

*Groundwater* – The 30-day moving average indicators for groundwater levels are showing 28 counties in drought “Watch” (Bedford, Bucks, Cambria, Centre, Chester, Clinton, Columbia, Cumberland, Dauphin, Delaware, Elk, Franklin, Fulton, Indiana, Lackawanna, Lancaster, Lebanon, Luzerne, Monroe, Montgomery, Montour, Philadelphia, Pike, Schuylkill, Sullivan, Union, Westmoreland, and Wyoming); 6 counties in “Warning” (Berks, Carbon, Lehigh, McKean, Northampton and Potter) and 2 counties in “Emergency” (Lawrence and Mercer). Since our last report, 3 counties returned to “Normal” and 4 counties declined to “Watch”.

*Palmer Drought Severity Index* – The Palmer soil moisture indicator is showing 20 counties in “Watch” (Bedford, Blair, Bradford, Cambria, Cameron, Centre, Clearfield, Clinton, Elk, Fulton, Huntingdon, Lackawanna, Luzerne, Monroe, Pike, Sullivan, Susquehanna, Tioga, Wayne and Wyoming) and 21 counties in “Warning” (Allegheny, Armstrong, Beaver, Butler, Clarion, Crawford, Erie, Fayette, Forest, Greene, Indiana, Jefferson, Lawrence, McKean, Mercer, Potter, Somerset, Venango, Warren, Washington and Westmoreland). There are no counties in “Emergency”.

*Public Water Supply Agencies (PWSA's)* – The following water suppliers are on water use restrictions:

Albion Borough Water System, Erie County  
Bedford Borough Water Authority, Bedford County  
Dubois Water Department, Clearfield County  
Galeton Borough Water Authority, Potter County  
Huntingdon Borough Water Department, Huntingdon County  
Jay Township, Elk County  
Petersburg Commons Water System, Huntingdon County  
Shinglehouse Borough Water Department, Potter County

Wellsboro Municipal Authority, Tioga County

*Forecast* – The 7-day forecast indicates approximately 0.1 inches in the southeast to 0.5 inches of precipitation in the northwest.

