

Drought Report **November 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

Another week of below normal precipitation in the mid-state to eastern portions of the state has exacerbated the already low stream flows, groundwater levels and declining soil moisture conditions. In the past week rainfall in Pennsylvania ranged from 0.1 inches in the northeast to 1.7 inches in the northern Ohio River Basin. Rainfall for the next 7 days is forecast to range from 0.2 inches in the southeast to 1.0 inches in the northwest. The projected rainfall unfortunately will not provide significant relief where it is needed most.

The 90-day precipitation departures ranged from greater than 75% below normal in the south central and eastern part of the state to 75% above normal in some western counties. Departures ranged from -6.2 inches in Bucks County to +8.1 inches in Jefferson County.

Groundwater levels continue their decline in the Delaware River Basin counties and middle Susquehanna River Basin counties. Two counties moved from “Watch” to “Warning” status in the southeast.

Instantaneous flows ranged from normal in the western part of the state with much below normal flows in the eastern part of the state.

The Delaware River Basin Commission (DRBC) continues to direct releases from Beltzville and Blue Marsh reservoirs for streamflow augmentation at the Delaware River at Trenton gage. The salt front is at RM 88.

The next meeting of the Commonwealth Drought Task Force meeting has been scheduled for Wednesday, November 30th at which time changes to the drought declarations will be discussed.

Drought Report Details

Precipitation – Over the last 7 days, county rainfall averages ranged from 0.1 inches in the northeast to 1.7 inches in the northwest Ohio River Basin. The 90-day precipitation deficit shows counties ranging from greater than 75% below normal to 75% above normal precipitation.

The precipitation indicators based on a 90-day departure indicate 15 counties are now in “Watch” (Bedford, Berks, Chester, Columbia, Cumberland, Delaware, Fulton, Huntingdon, Lackawanna, Lancaster, Lebanon, Lehigh, Luzerne, Schuylkill and York), 10 counties are in “Warning” (Carbon, Dauphin, Montgomery, Montour, Northampton, Northumberland, Philadelphia, Snyder, Union and Wayne) and 7 counties are in “Emergency” (Bucks, Franklin, Juniata, Mifflin, Monroe, Perry and Pike).

Since the last report 23 counties moved to a lower status with no counties improving.

Surface Water- Instantaneous streamflow across the Commonwealth ranged from normal to below normal with the lowest flows in the Delaware River Basin and Susquehanna River Basin. For this date there were 55 gages with instantaneous flow at less than the 10th percentile, compared to 39 gages last week. There were 5 gages recording record low instantaneous flows.

The 30-day running average streamflow indicators a renewed decline in streamflow with 17 counties in drought “Watch” (Bucks, Chester, Columbia, Dauphin, Fulton, Huntingdon, Lackawanna, Lancaster, Lebanon, Luzerne, Mifflin, Montour, Northumberland, Pike, Schuylkill, Sullivan and Wayne), 8 counties in “Warning” (Carbon, Delaware, Franklin, Lehigh, Monroe, Perry, Philadelphia and York) and 7 counties in “Emergency” (Adams, Berks, Cumberland, Juniata, Northampton, Snyder and Union). Since our last report 1 county improved and 10 counties moved to a lower status.

Groundwater – The 30-day moving average indicators for groundwater levels are showing 18 counties in drought “Watch” (Adams, Bedford, Bucks, Centre, Chester, Columbia, Cumberland, Franklin, Fulton, Juniata, Lancaster, Luzerne, Mifflin, Montgomery, Perry, Susquehanna, Wayne and York); 5 counties in “Warning” (Delaware, Montour, Philadelphia, Schuylkill and Union) and 9 counties in “Emergency” (Berks, Carbon, Dauphin, Lackawanna, Lebanon, Lehigh, Monroe, Northampton and Pike). Since our last report, 1 county improved and returned to “Normal” and 13 counties moved to a lower status.

Palmer Drought Severity Index – The Palmer soil moisture indicator is showing 47 counties in “Watch” (Adams, Allegheny, Armstrong, Beaver, Bedford, Berks, Blair, Bucks, Butler, Cambria, Carbon, Chester, Columbia, Cumberland, Dauphin, Delaware, Fayette, Franklin, Fulton, Greene, Huntingdon, Indiana, Juniata, Lackawanna, Lancaster, Lawrence, Lebanon, Lehigh, Luzerne, Lycoming, Mifflin, Monroe, Montgomery, Montour, Northampton, Northumberland, Perry, Philadelphia, Pike, Schuylkill, Snyder, Somerset, Union, Washington, Wayne, Westmoreland and York) and no counties in “Warning” or “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
Galeton Borough Water Authority, Potter County
Franklin County General Authority, Franklin County
Huntingdon Borough Water Department, Huntingdon County
Jay Township, Elk County
North Heidelberg Water, Berks County
Petersburg Commons Water System, Huntingdon County

Richfield Area Joint Authority, Juniata County
Shinglehouse Borough Water Department, Potter County
Timeless Towns, Adams County
Wellsboro Municipal Authority, Tioga County

Forecast – The 7-day forecast indicates approximately 0.2 inches of rain will occur in the southeast to 1.0 inches in the northwest.

