

Drought Report December 7, 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: December 2, 2016 - December 7, 2016

Precipitation in the central and eastern portion of the state brought additional improvement to rainfall deficits. In the past week, rainfall in Pennsylvania ranged from 0.3 inches in the northwestern portion of the state to 3.0 inches in the southeast. Precipitation for the next 7 days is forecast to range from 1.5 inches in the northwest to 0.75 inches in the southeastern portion of the state. It is important to note that this was the first rainfall to occur in the eastern part of the state to bring much needed relief and more is necessary to end drought condition for groundwater and surface water.

Precipitation: The 90-day precipitation departures ranged from greater than 50% below normal in east and central part of the state to 75% above normal in some western counties. Departures ranged from -5.3 inches in Monroe County to +6.8 inches in Jefferson County.

Groundwater: Groundwater levels continue their decline in the Delaware River Basin counties and middle and lower Susquehanna River Basin counties.

Stream flows: Instantaneous flows ranged from normal to below normal across the state and are still responding to recent rainfall.

DRBC: On November 23, 2016, the Delaware River Basin Commission (DRBC) placed the Delaware River Basin on a “Drought Watch” stage and issued a special permit for coordinated operation of regional reservoirs, out-of-state diversions, and Delaware River flow objections in response to persistent dry conditions. http://www.nj.gov/drbc/home/newsroom/news/approved/20161123_newsrel_drought-mgt-special-permit.html. The DRB continues to operate under these conditions. The salt front moved downstream to RM 88, which is 19 miles upstream of the normal location for November.

Commonwealth Task Force: The next meeting of the Commonwealth Task Force is scheduled for December 16, 2016 at PEMA headquarters.

Drought Report Details

Precipitation – Over the last 7 days, county rainfall ranged from 2 to 3 inches in the Delaware and Susquehanna River Basins to 0.3 inches in the Ohio River Basin. The 90-day precipitation deficit shows counties ranging from greater than 50% below normal to 75% above normal precipitation.

The precipitation indicators based on a 90-day departure indicate 14 counties are now in “Watch” (Bucks, Carbon, Cumberland, Franklin, Huntingdon, Lackawanna, Lancaster, Monroe, Northampton, Northumberland, Pike, Union, Wayne and York), 6 counties are in “Warning” (Dauphin, Juniata, Mifflin, Montour, Perry and Snyder) and no counties are currently in “Emergency”.

Surface Water- Instantaneous streamflow across the Commonwealth ranged from normal to below normal across the state. For this date there were 23 gages with instantaneous flow at less than the 10th percentile. In spite of the recent rains, there were 3 gages recording record low instantaneous flows.

The 30-day running average streamflow indicators are showing 32 counties in drought “Watch”(Adams, Armstrong, Bedford, Chester, Clarion, Clearfield, Clinton, Columbia, Dauphin, Elk, Forest, Fulton, Greene, Indiana, Jefferson, Lackawanna, Lancaster, Lawrence, Lebanon, Lehigh, Luzerne, Montour, Northumberland, Philadelphia, Pike, Potter, Schuylkill, Susquehanna, Washington, Wayne, Wyoming and York), 8 counties in “Warning” (Berks, Carbon, Franklin, Huntingdon, Lycoming, Monroe, Northampton and Perry) and 6 counties in “Emergency” (Cumberland, Juniata, Mifflin, Snyder, Sullivan and Union).

Groundwater – The 30-day moving average indicators for groundwater levels are showing 11 counties in drought “Watch” (Bedford, Centre, Columbia, Elk, Fulton, Huntingdon, Juniata, Luzerne, Perry, Schuylkill and Snyder); 15 counties in “Warning” (Adams, Armstrong, Bucks, Butler, Chester, Clarion, Cumberland, Franklin, Lancaster, Montgomery, Northumberland, Susquehanna, Venango, Wayne and York) and 16 counties in “Emergency” (Berks, Carbon, Dauphin, Delaware, Lackawanna, Lebanon, Lehigh, Mifflin, Monroe, Montour, Northampton, Philadelphia, Pike, Sullivan, Union and Wyoming).

Palmer Drought Severity Index – The Palmer soil moisture indicator is showing 20 counties in “Watch” (Allegheny, Armstrong, Beaver, Butler, Columbia, Fayette, Greene, Indiana, Juniata, Lawrence, Lycoming, Mifflin, Montour, Northumberland, Perry, Snyder, Somerset, Union, Washington and Westmoreland) and 5 counties in “Warning” (Bedford, Blair, Cambria, Fulton and Huntingdon).

Public Water Supply Agencies (PWSA's) – Since the last report New Bloomfield Water Authority and East Stroudsburg Water were identified as implementing water restrictions.

The following 19 water suppliers are on water use restrictions:

Albion Borough Water System, Erie County
Bedford Borough Water Authority, Bedford County
East Stroudsburg Water, Monroe County
Galeton Borough Water Authority, Potter County

Franklin County General Authority, Franklin County
Hanover Boro Water Department, York County
Huntingdon Borough Water Department, Huntingdon County
Jay Township, Elk County
Mahanoy Township Authority, Schuylkill County
Mary D Community Association, Schuylkill County
New Bloomfield Water Authority, Perry County
North Heidelberg Water, Berks County
Petersburg Borough Water Department, Huntingdon County
Richfield Area Joint Authority, Juniata County
Schuylkill Haven Borough, Schuylkill County
Schuylkill County Municipal Authority, Schuylkill County
Shinglehouse Borough Water Department, Potter County
Timeless Towns, Adams County
Wellsboro Municipal Authority, Tioga County

Forecast – The 7-day forecast indicates approximately 0.75 inches of precipitation will occur in the southeast to 1.5 inch in the northwest.

