

Drought Report December 21, 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 16, 2016 - December 21, 2016

Overall, drought conditions across the Commonwealth showed some improvement, although groundwater continues in areas to be an issue with no groundwater indicators returning to normal conditions.

Precipitation in the northcentral and eastern Ohio River Basin portion of the state brought additional improvement to rainfall deficits. In the past week, rainfall in Pennsylvania ranged from 0.4 inches in the western portion of the state to 1.5 inches in the northcentral part of the state. Precipitation for the next 7 days is forecast to range from 0.25 inches in the central and eastern part of the state to 0.5 inches in the western portion of the state.

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 -4.4 inches in Carbon and Monroe County to +6.6 inches in Jefferson County.

Groundwater: Groundwater levels are responding to the rainfall from the last 2 weeks however they are moving upward in line with the expected increase and remain mostly in their current drought status.

Stream flows: Instantaneous flows ranged from normal to above normal in the west to below normal across the eastern part of the state.

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 76, which is 7 miles upstream of the normal location for December.

Commonwealth Task Force: The Department after meeting with the Commonwealth Drought Task Force on Friday, December 16, 2016, placed four more counties in Warning drought declaration status- Mifflin, Juniata, Snyder and Union Counties. Next meeting is scheduled for January 5, 2017.

Drought Report Details

Precipitation – Over the last 7 days, county rainfall ranged from 1 to 1.5 inches in the Upper Susquehanna River Basin to 0.4 to 0.6 inches in the Eastern and Western part of the state. 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 17 counties are now in “Watch” (Bucks, Carbon, Franklin, Lackawanna, Lancaster, Lebanon, Lehigh, Mifflin, Monroe, Montour, Northampton, Northumberland, Pike, Schuylkill, Snyder, Union and York), and 3 counties in “Warning” (Dauphin, Juniata and Perry) and no counties are currently in “Emergency”.

Surface Water- Instantaneous streamflow across the Commonwealth ranged from normal to above normal in the Ohio River Basin and above normal to below normal in the Susquehanna and Delaware River Basin. For this date there were 7 gages with instantaneous flow at less than the 10th percentile.

The 30-day running average streamflow indicators are showing 19 counties in drought “Watch”(Adams, Berks, Clinton, Dauphin, Franklin, Fulton, Huntingdon, Lackawanna, Lebanon, Lehigh, Luzerne, Monroe, Northampton, Northumberland, Perry, Philadelphia, Pike, Schuylkill and York), 5 counties in “Warning” (Carbon, Cumberland, Mifflin, Snyder and Union) and 1 county in “Emergency” (Juniata).

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

Palmer Drought Severity Index – The Palmer soil moisture indicator is showing all counties in Normal.

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:

Bloomfield Borough Water Authority, Perry County
Bedford Borough Water Authority, Bedford County
East Stroudsburg Water, Monroe County
Franklin County General Authority, Franklin County
Galeton Borough Water Authority, Potter County
Hanover Boro Water Department, York County
Huntingdon Borough Water Department, Huntingdon County
Mahanoy Township Authority, Schuylkill County
Mary D Community Association, Schuylkill 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.

