

Drought Report December 29, 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 22-29, 2016

Precipitation: Although precipitation received over the past two weeks has reduced precipitation departures across the state, drought conditions still exist in the Delaware Basin and the Middle and Lower Susquehanna Basins.

Precipitation departures for the last seven days ranged from 0 in a few eastern counties to 2.1 in the southwest.

As of 8am on December 29th, 72-hour cumulative precipitation ranged from averages of 0.25 inches in the eastern 2/3 of the state to 0.5 in the far west. The colder weather is beginning to limit recharge to groundwater along with the lack of rain. Streamflow will be next to be affected by colder weather as snow fall will limit runoff.

Precipitation for the next 7 days is forecast to be generally 1.0 inches (liquid equivalent) in the southcentral part of the state to 1.5 inches in the northwest.

The 90-day precipitation departures ranged from 50% below normal in the south central and eastern part of the state to 75% above normal in Greene County. Departures ranged from -4.3 inches in Carbon and Monroe County to +7.2 inches in Jefferson County. There are 16 counties having Drought “Watch” indicators and 3 counties having Drought “Warning” indicators for precipitation.

Groundwater: Groundwater usually rises at this time from recharge before the ground becomes frozen. However, the levels measured at 30-day averages that have taken place are not rising high enough to move out of drought status. There are currently 21 groundwater wells in Drought “Watch”, 16 in Drought “Warning” and 9 in Drought “Emergency” indicator status.

Stream Flows: Streamflow continues to improve with 16 counties having Drought “Watch” indicators and 5 counties having Drought “Warning” indicator status. Levels are rising with rainfall but then drop off quickly after the rainfall event. Sustained periods of rainfall with help maintain streamflow and will result in improvements in the overall 90-day streamflow average.

Instantaneous streamflow levels range from Below to Much Above normal in the west and from Normal to Much Below normal in the east.

Soil Moisture: Palmer Soil Moisture Index levels are all at “Normal” status state-wide.

Public Water Supplies: The following Public Water Supply Agencies (PWSA) have been identified as implementing either voluntary or mandatory restrictions.

Bedford Borough Water Authority, Bedford County
Bloomfield Borough Water Authority, Perry County
East Stroudsburg Borough, Monroe County
Franklin County General Authority, Franklin County
Galeton Borough Water Authority, Potter County
Hanover Borough Water Dept., York County
Huntingdon Borough Water Department, Huntingdon County
Kutztown Municipal Waterworks, Berks County
Mahanoy Township Authority, Schuylkill County
Mary D Community Assoc., Schuylkill County
North Heidelberg Water, Berks County
Petersburg Commons Water System, Huntingdon County
Richfield Area Joint Authority, Juniata County
Schuylkill County Municipal Authority, Schuylkill County
Schuylkill Haven Borough, Schuylkill County
Shinglehouse Borough Water Department, Potter County
Timeless Towns of America, Adams County
Wellsboro Municipal Authority, Tioga County

DRBC: On November 23rd, the Delaware River Basin Commission (DRBC) issued a special permit for coordinated operations of regional reservoirs, out-of-basin diversions, and Delaware River flow objectives with a current “Watch” basin-wide drought status in response to persistent dry conditions. This status still remains in effect as of this date. Recent increased flow and snow melt into the estuary has resulted in the salt front moving downstream to River Mile 75, which is 6 miles upstream of the normal location for December.

Commonwealth Drought Task Force: The Commonwealth Drought Task Force will be meeting at PEMA this Friday, December 16th to review conditions including updates from River Basin Commissions and precipitation forecasts from the National Weather Service. Recommendations will be discussed on potential changes to county drought declarations.

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