

Drought Report

June 16, 2015

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.

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Precipitation – Over the past week, the majority of the state received more than an inch of precipitation, with the exception of the southeast portion of the state. The 90-day precipitation deficits are ranging from 2.1 to 4.1 inches for the south-central and southeastern portions of the state.

The precipitation indicators based on a 90-day departure have improved since the previous week: 13 counties in Drought “Watch” (Blair, Bucks, Carbon, Delaware, Huntingdon, Juniata, Lancaster, Lehigh, Mifflin, Monroe, Montgomery, Northampton, and Philadelphia), 1 county in Drought “Warning” (Franklin) and zero counties in Drought “Emergency”. The following changes have occurred from last week: Fulton, Lackawanna, Luzerne, Pike, Snyder, Union, and Wayne from “Watch” to “Normal”; Huntingdon and Monroe from “Warning” to “Watch”; and Delaware, Lancaster, and Philadelphia from “Normal” to “Watch”.

Surface Water- Instantaneous streamflow varies across the Commonwealth with most gages at or above normal flow, with the exception of the southeast portion of the state. The western portion of the state is currently experiencing extremely high flows. For this date there are only 3 gages with instantaneous flow at less than the 10th percentile, compared to 5 gages in this category as of last week.

The 30-day running average streamflow values show a vast improvement from the previous week, with 38 counties moving into a less severe status. The indicators are as follows: 22 counties in Drought “Watch” (Bedford, Blair, Bradford, Cameron, Carbon, Chester, Clearfield, Columbia, Greene, Juniata, Lycoming, Mifflin, Montour, Perry, Philadelphia, Potter, Snyder, Somerset, Tioga, Union, Washington, and Wayne), 2 counties in Drought “Warning” (Centre and Huntingdon) and 3 counties in Drought “Emergency” (Franklin, Lackawanna, and Luzerne). The remaining counties are in “Normal” status. The following changes have occurred since the last report: Armstrong, Beaver, Bucks, Butler, Cambria, Clarion, Elk, Indiana, Jefferson, Lancaster, Lehigh, Monroe, Montgomery, Northampton, Northumberland, Pike, Susquehanna, and Wyoming from “Watch” to “Normal”; Clinton, Cumberland, Fayette, and McKean from “Warning” to “Normal”; Forest and Westmoreland from “Emergency” to “Normal”; Cameron, Carbon, Chester, Greene, Mifflin, Perry, Philadelphia, Potter, Snyder, Tioga, Union, and Washington from “Warning” to “Watch”; and Carbon, Chester, Center and Huntingdon from “Emergency” to “Warning”. The 30-day average values for streamflow shown on the gage graphs are showing an overall increase in the 30-day average flow.

Groundwater – The 30-day moving average indicators for groundwater levels show similar conditions to the previous week, with 9 counties moving into a more severe status, and 9 counties moving into a less severe status. The indicators are as follows: 23 counties in drought “Watch” (Bradford, Cambria, Centre, Chester, Clinton, Cumberland, Dauphin, Delaware, Elk, Franklin, Indiana, Juniata, Lancaster, Lebanon, Lehigh, Mifflin, Northampton, Perry, Philadelphia, Schuylkill, Sullivan, Westmoreland, and Wyoming), 11 counties in drought “Warning” (Bedford, Carbon, Columbia, Fulton, Luzerne, McKean, Montour, Potter, Susquehanna, Union, and Wayne), and 6 counties in drought “Emergency” (Berks, Fayette, Lackawanna, Monroe, Pike, and Somerset). The following changes have occurred since the last report: Bedford, Clinton, Lehigh, and Northampton from “Normal” to “Watch”; Montour and Union from “Watch” to “Warning”; Fayette and Somerset from “Normal” to “Emergency”; Berks from “Warning” to “Emergency”; Lawrence and Mercer from “Watch” to “Normal”; Schuylkill from “Warning” to “Watch”; Juniata and Perry from “Emergency” to “Watch”; and McKean, Potter, Susquehanna, and Wayne from “Emergency” to “Warning”. Real-time data is currently showing either similar or higher groundwater levels than the 30-day moving average due to recent rainfall.

Palmer Drought Severity Index – The Palmer soil moisture indicator is displaying no changes from the previous week. The 11 counties in “Watch” are located in the southwest portion of the state and include: Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Lawrence, Somerset, Washington, and Westmoreland. There are no counties in “Warning” or “Emergency” for this date.

Public Water Supply Agencies (PWSAs) – There are no PWSAs on voluntary or mandatory restrictions related to drought at this time.

Forecast – The 7-day forecast indicates approximately 1 to 5 inches of precipitation for the state, with the highest rainfall amounts in the southeastern and southwestern portions of the state. The 8 to 14-day forecast indicates 0.66 to 2.33 inches of precipitation for the state, with highest rainfall totals in the northern portion of the state.

Summary – Overall conditions have improved from the previous week. Instantaneous streamflows have improved statewide, with the highest streamflows in the southwest and the lowest streamflows in the southeastern portion of the state. The 30-day moving average streamflow indicators have improved from the previous week, with 38 counties moving into a less severe status. The precipitation deficit shows improved conditions from the previous week, with the majority of the state receiving 1-3 inches of precipitation. The 30-day moving average groundwater well levels show similar overall conditions to the previous week with 9 counties moving to a more severe status and 9 counties showing improvement. Real-time data is showing equal or higher groundwater levels than the 30-day moving average in many cases, due to recent rainfalls. Continued precipitation in frequency and duration will be necessary in order for groundwater levels to recover to normal status.

DEP issued a press release on Mar. 24, 2015 for a drought watch declaration for 27 counties implementing the Drought Task Force recommendations from Mar. 10, 2015. The 27 counties in drought watch are: Berks, Bradford, Cambria, Carbon, Clinton, Columbia, Indiana, Lackawanna, Lawrence, Luzerne, Lycoming, McKean, Mercer, Monroe, Montour, Northumberland, Pike, Potter, Schuylkill, Snyder, Sullivan, Susquehanna, Tioga, Union, Wayne, Westmoreland, and Wyoming.

The most recent Drought Task Force meeting was held on June 8, 2015. Stay tuned for a press release regarding the status of the Drought Watch. The next Drought Task Force meeting is scheduled for July 9, 2015 at which time conditions will be assessed to determine if any action is necessary. Conditions will continue to be closely monitored.

