

August 22, 2022

## Drought Report

### Summary: August 15 – August 22

#### Preface

This report summarizes the various indicators utilized in drought monitoring; it is current to noon on August 22<sup>nd</sup>, 2022. Each parameter (precipitation, surface water, groundwater, 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 “Watch” and “Warning” declarations are determined by the Commonwealth Drought Coordinator and the Department of Environmental Protection (DEP), with support of the Drought Task Force; “Emergency” declarations follow a similar process but are given final approval by the Governor.

#### Drought Report

*Precipitation* – Over the past week, there was varying precipitation across the state, ranging from 0.0-1.5 inches. The 90-day precipitation departures shows counties ranging from 75% below up to 25% above normal precipitation. Note, however, that these readings are current as of August 20<sup>th</sup>, 2022 meaning that the recent precipitation that moved through the state on Sunday was not accounted for. This will be reflected in next week’s report.

The precipitation indicators based on a 90-day departure is showing 13 counties in drought “Watch” (Berks, Bradford, Clearfield, Franklin, Jefferson, Lackawanna, Lehigh, Luzerne, Northampton, Perry, Philadelphia, Pike, and Susquehanna), 14 counties in “Warning” (Bucks, Centre, Clarion, Clinton, Dauphin, Juniata, Lebanon, Lycoming, Mifflin, Montgomery, Potter, Schuylkill, Sullivan, and Wyoming), and six in “Emergency” (Cameron, Montour, Northumberland, Snyder, Tioga, and Union) condition. Since the last report two counties have improved from “Watch” to “Normal condition and 18 counties have declined in condition from “Warning” to “Emergency” (1), “Watch” to “Warning” (8), “Normal” to “Warning” (1), or from “Normal” to “Watch” (8). Though conditions statewide are declining with regard to precipitation there have been some gains in northwestern Pennsylvania which have improved conditions in McKean and Elk counties.

*Surface Water* – For this date, there are 27 gages showing instantaneous flow at less than the 10th percentile. The 30-day moving average streamflow indicators are showing 16 counties in drought “Watch” (Armstrong, Bradford, Columbia, Cumberland, Dauphin, Forest, Juniata, Lebanon, McKean, Monroe, Montour, Philadelphia, Susquehanna, Tioga, Westmoreland, and Wyoming), six counties in “Warning” (Berks, Northumberland, Pike, Snyder, Sullivan\*, and Union), and three in “Emergency” (Lycoming, Potter, and Schuylkill) condition. Since the last report three counties have improved from “Watch” to “Normal condition and eight counties have declined in condition from “Warning” to “Emergency” (2), “Watch” to “Emergency” (1), “Watch” to “Warning” (2), or from “Normal” to

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\* Sullivan county’s surface water gage is currently reading *error*. This has been raised with USGS. For now given the trends in the system prior to this error we are considering it to be under “Warning” conditions.

“Watch” (3) condition. Surface water is following similar patterns to the precipitation indicators throughout the state which saw gains in the northwest but persisting dryness elsewhere.

*Groundwater* – The 30-day moving average indicators for groundwater levels are showing 14 counties in drought “Watch” (Allegheny, Bradford, Columbia, Juniata, Lackawanna, Luzerne, Mifflin, Monroe, Montour, Perry, Pike, Sullivan, Union, and Wyoming), three counties in “Warning” (Dauphin, Lebanon, and Schuylkill), and five counties in “Emergency” (Huntingdon, Lawrence, McKean, Mercer, and Potter) condition. Since the last report eight counties have declined from “Watch” to “Warning” (3), or from “Normal” to “Watch” (5) condition.

*Palmer Drought Severity Index* – The Palmer soil moisture indicator is displaying 13 counties in drought “Watch” (Adams, Berks, Bucks, Chester, Cumberland, Dauphin, Delaware, Franklin, Lancaster, Lebanon, Montgomery, Philadelphia, and York), 34 counties in “Warning” (Allegheny, Armstrong, Beaver, Bedford, Blair, Butler, Cambria, Carbon, Columbia, Fayette, Fulton, Greene, Huntingdon, Indiana, Juniata, Lackawanna, Lawrence, Lehigh, Luzerne, Lycoming, Mifflin, Monroe, Montour, Northampton, Northumberland, Perry, Pike, Schuylkill, Snyder, Somerset, Union, Washington, Wayne, and Westmoreland), and 20 counties in “Emergency” (Bradford, Cameron, Centre, Clarion, Clearfield, Clinton, Crawford, Elk, Erie, Forest, Jefferson, McKean, Mercer, Potter, Sullivan, Susquehanna, Tioga, Venango, Warren, and Wyoming) condition. Since the last report nine counties have declined from “Warning” to “Emergency” (5), or from “Watch” to “Warning” (4) condition. The movement from “Watch” to “Warning” has taken place in Palmer Region 2 on the eastern central part of the state, the decline from “Warning” to “Emergency” took place in Palmer Region 7 in the central portion of the state. The Palmer Drought Severity Index (PDSI) is currently viewed some skepticism, as a result, hard data such as precipitation, ground water, and surface water data are the favored drought indicators in decision making.

*Public Water Supply Agencies (PWSAs)* – Presently, DEP is aware of six PWSs on voluntary water use restrictions and two on mandatory water use restrictions.

The following PWSs implementing voluntary measures:

- BCI Municipal Authority (PWSID 6170052), Clearfield County
- Driftwood Boro (PWSID 6120001), Cameron County
- Jersey Shore Area Joint Water Authority (PWSID 4410156), Lycoming County
- Lock Haven (PWSID 4180048), Clinton County
- Palmerton Municipal Water Authority (PWSID 3130012), Carbon County
- Pennsylvania American Water Company – Bangor District (PWSID 3480038), Carbon County

The following PWSs are implementing mandatory measures:

- Galeton Borough Water Authority<sup>†</sup> (PWSID 6350010), Potter County
- Waterville Water Association (PWSID 4410187), Lycoming County

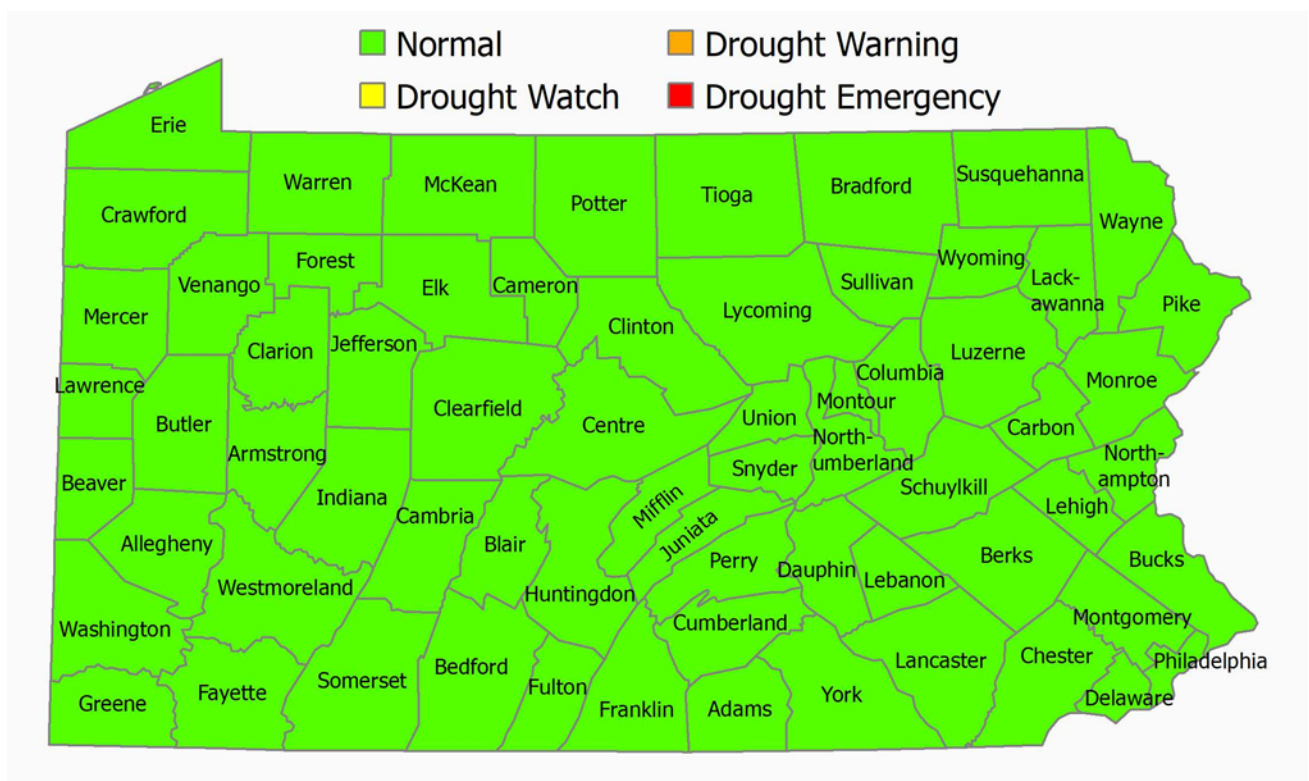
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<sup>†</sup> Report amended on August 23 to reflect the addition of this PWS to the ‘Mandatory Restrictions’ list. The PWS had declared this restriction at an earlier date but it had only come to DEP’s knowledge as of the late afternoon on 08/22/2022.

*Forecast* – The 7-day forecast indicates approximately 0.83 to 1.75 inches of precipitation for the state, with the highest amounts in the northern and western portions of the state and the lowest values in the southeastern portion of the state. The 8 to 14-day forecast indicates 1.75 to 4.0 inches of precipitation for the state, with the northern portion of the state receiving the most precipitation and the southeastern portion receiving the least.

*Summary* – The 90-day precipitation departures are showing 13 counties in drought “Watch”, 14 counties in “Warning”, and six in “Emergency” condition. Instantaneous streamflow varies across the Commonwealth, however, there are 27 gages showing instantaneous flow at less than the 10th percentile. The 30-day moving average streamflow indicators are showing 16 counties in “Watch”, six counties in “Warning”, and three counties in “Emergency” condition. The 30-day moving average groundwater well levels are showing 14 counties in “Watch”, three counties in “Warning”, and five counties in “Emergency” condition. The 14 counties showing “Watch” indicators for groundwater are based on eight wells, the three counties in “Warning” are based on two wells, and the five counties in “Emergency” are based on three wells since several counties have groundwater monitoring indicators that reference a neighboring county.

A Drought Task Force meeting has been scheduled for Tuesday, September 6 at 1pm. Conditions will continue to be closely monitored.



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