

November 1, 2022

## **Drought Report**

**Summary: October 25 – November 1**

### **Preface**

This report summarizes the various indicators utilized in drought monitoring; it is current to noon on November 1<sup>st</sup>, 2022. Each parameter (precipitation, surface, 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 to 0.8 inches. The 90-day precipitation departures show counties ranging from 50% below up to 75% above normal precipitation.

Despite the general lack of precipitation throughout the commonwealth most counties remained in “Normal” status thanks to surplus rain delivered over the last few months, however Perry and Dauphin counties both declined for this indicator moving to “Watch” condition.

*Surface Water* – For this date, there are seven gages that show instantaneous flow at less than the 10th percentile while most indicators throughout the state read normal or higher. While this indicator is largely stable conditions over the past week have shown some decline with three new counties within the central region of the state declining into “Watch” status responding to two sustained weeks of anemic rainfall.

*Groundwater* – Groundwater has been more varied throughout the commonwealth and is typically a lagging indicator. Several counties (12) in the commonwealth read “Watch” despite those regions receiving rain in the last few months. Potter and McKean counties, who share an observation well, have both gone from “Watch” to “Emergency” for this indicator in the last week making three total counties in “Emergency” for groundwater conditions. With much of the state reliant on groundwater this indicator will be closely monitored and the reporting of Public Water Suppliers weighed considerably.

*Palmer Drought Severity Index* – The Palmer Drought Severity Index (PDSI) yielded no changes compared to last week’s report. This indicator is currently viewed with some skepticism, as a result, complex hard data such as precipitation, groundwater, restriction declarations by public water suppliers, and surface water data are the favored drought indicators in decision making.

*Public Water Supply Agencies (PWSAs)* – Presently, DEP is aware of 11 PWSAs on voluntary water use restrictions and three on mandatory water use restrictions. While Duncannon Water System has returned to normal operations Roulette Township in Potter County (currently reading “Emergency” for their

groundwater indicator) has begun to employ mandatory restriction measures citing well levels as a primary driver.

The following PWSs implementing voluntary measures:

- BCI Municipal Authority (PWSID 6170052), Clearfield County
- Driftwood Borough (PWSID 6120001), Cameron County
- Galeton Borough Water Authority (PWSID 6350010), Potter County
- Jersey Shore Area Joint Water Authority (PWSID 4410156), Lycoming County
- Lock Haven (PWSID 4180048), Clinton County
- Mahanoy Township Authority (PWSID 3540011), Schuylkill County
- Palmerton Municipal Water Authority (PWSID 3130012), Carbon County
- Pennsylvania American Water Company – Bangor District (PWSID 3480038), Carbon County
- South Renovo Water System (PWSID 4180059), Clinton County
- Tower City Borough Authority (PWSID 3540045), Clinton County
- Waterville Water Association (PWSID 4410187), Lycoming County

The following PWSs are implementing mandatory measures:

- Hazleton City Authority (PWS 2408001), Luzerne County
- Porter Township Municipal Authority (PWSID 4180055), Clinton County
- Roulette Township Water Authority (PWSID 6530007), Potter County

*Forecast* – The 7-day forecast indicates approximately 0.08 to 0.5 inches of precipitation for the state, with the highest amounts in the eastern portion of the state and the lowest in the southcentral portion of the state. The 8 to 14-day forecast indicates 0.02 to 0.5 inches of precipitation for the state, with precipitation focused in the southeastern portion of the state leaving much of the state dry.

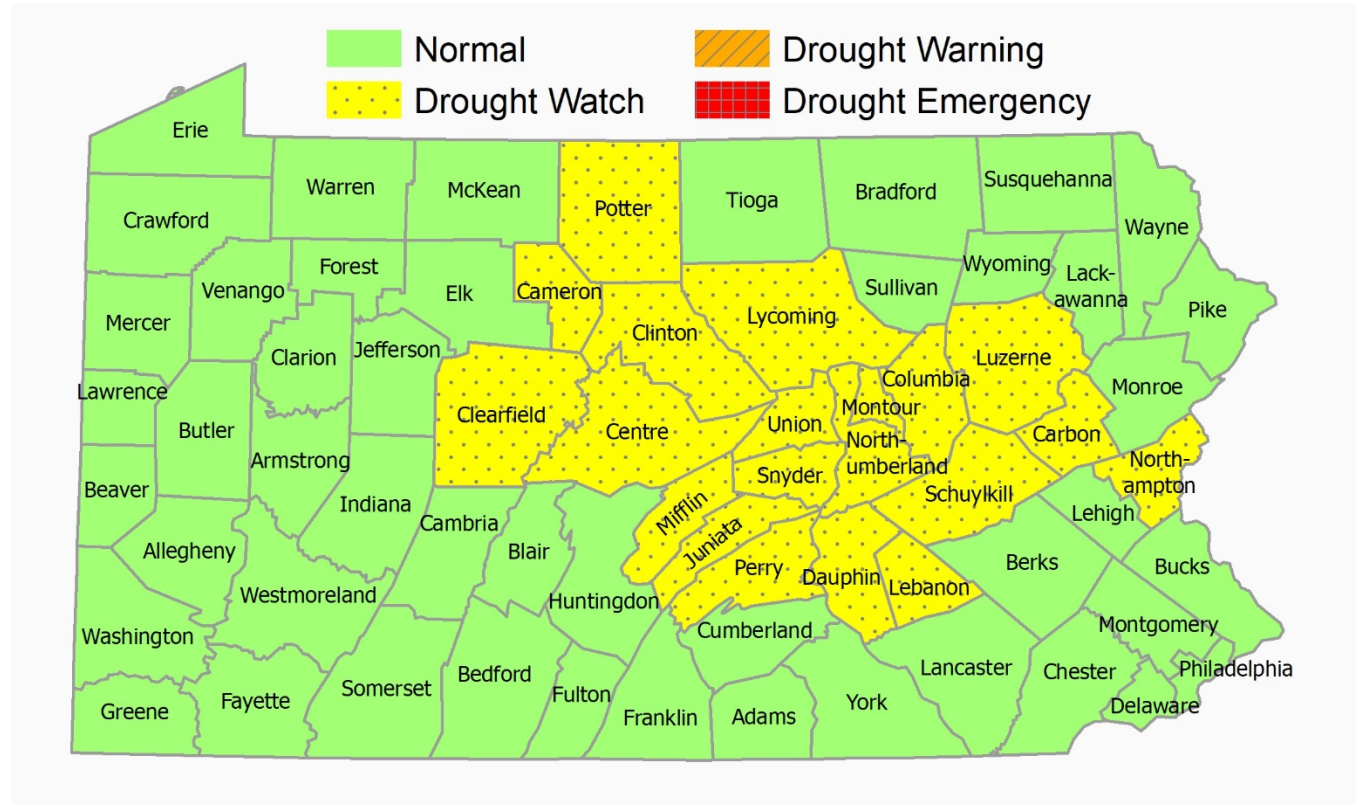
*Summary* – Though there was little rain throughout the week since the last report precipitation conditions remain relatively stable owing to the persistent rains that have occurred over the last few months. Despite some small changes, surface water also remains steady, and PDSI is unchanged. Groundwater, however, is a lagging indicator and has yet to see much change from its condition during drier months. Groundwater plays a critical role in water supply throughout Pennsylvania with many public water suppliers relying on wells as a primary or supplemental source. Forecasts do not appear optimistic in the coming weeks which is discouraging. While some public water suppliers have returned to normal operations one supplier has begun their drought contingency measures with mandatory restrictions. This particular supplier is located in Potter County and is citing well levels as a key driver of their decision.

As a result of otherwise persistent rains, several counties were removed from drought watch declaration status at the last Drought Task Force Meeting on October 17, 2022. The ones that remain suffer from continued issues with groundwater or have public water suppliers who maintain current restrictions. The counties lifted from Watch status are listed below:

- Berks
- Bradford
- Bucks
- Delaware
- Lackawanna
- Lehigh
- McKean
- Monroe
- Montgomery
- Philadelphia
- Pike
- Sullivan
- Susquehanna
- Tioga
- Wayne

- Wyoming

Below is a map of the current drought declarations:



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