

October 11, 2022

Drought Report

Summary: October 11 – October 18

Preface

This report summarizes the various indicators utilized in drought monitoring; it is current to noon on October 11th, 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 to 2.7 inches. The 90-day precipitation departures shows counties ranging from 25% below up to 75% above normal precipitation.

This week’s rain saw broad improvement across the state with no counties declining in condition and several improving throughout the eastern and central portions of the state. Persistent rains, particularly in the eastern portion of the state have lifted the 90 day deficits. At present, according to this indicator, all Pennsylvania counties are now in the “Normal” condition.

Surface Water – For this date, there are three gages that show instantaneous flow at less than the 10th percentile while most indicators throughout the state read normal or higher. This indicator has not changed from last week with all counties reading ‘normal’ with all major waterways reaping the benefits of the recent rain.

Groundwater – Groundwater has been more varied throughout the commonwealth with Northampton County having declined in condition from “Normal” to “Watch”. This is typically a lagging indicator and shows the impacts of the recent rains reflected in prior reports. The well in Butler County is currently offline as it was impacted by pumping. The transducer has since been repositioned. In addition, it should be noted that several wells have reached maturity in their data collection, meaning that fewer counties reference another county’s observation well. This increases the granularity and accuracy of the data received from each county.

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 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 PWSs on voluntary water use restrictions and three on mandatory water use restrictions. Waterville Water Association in Lycoming County has reduced their restrictions from Mandatory to Voluntary.

The following PWSs implementing voluntary measures:

- BCI Municipal Authority (PWSID 6170052), Clearfield County
- Duncannon Water System (PWSID 7500019), Perry 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
- Palmerton Municipal Water Authority (PWSID 3130012), Carbon County
- Pennsylvania American Water Company – Bangor District (PWSID 3480038), Carbon County
- Tower City Borough Authority (PWSID 3540045), Clinton County
- South Renovo Water System (PWSID 4180059), Clinton County
- Waterville Water Association (PWSID 4410187), Lycoming County

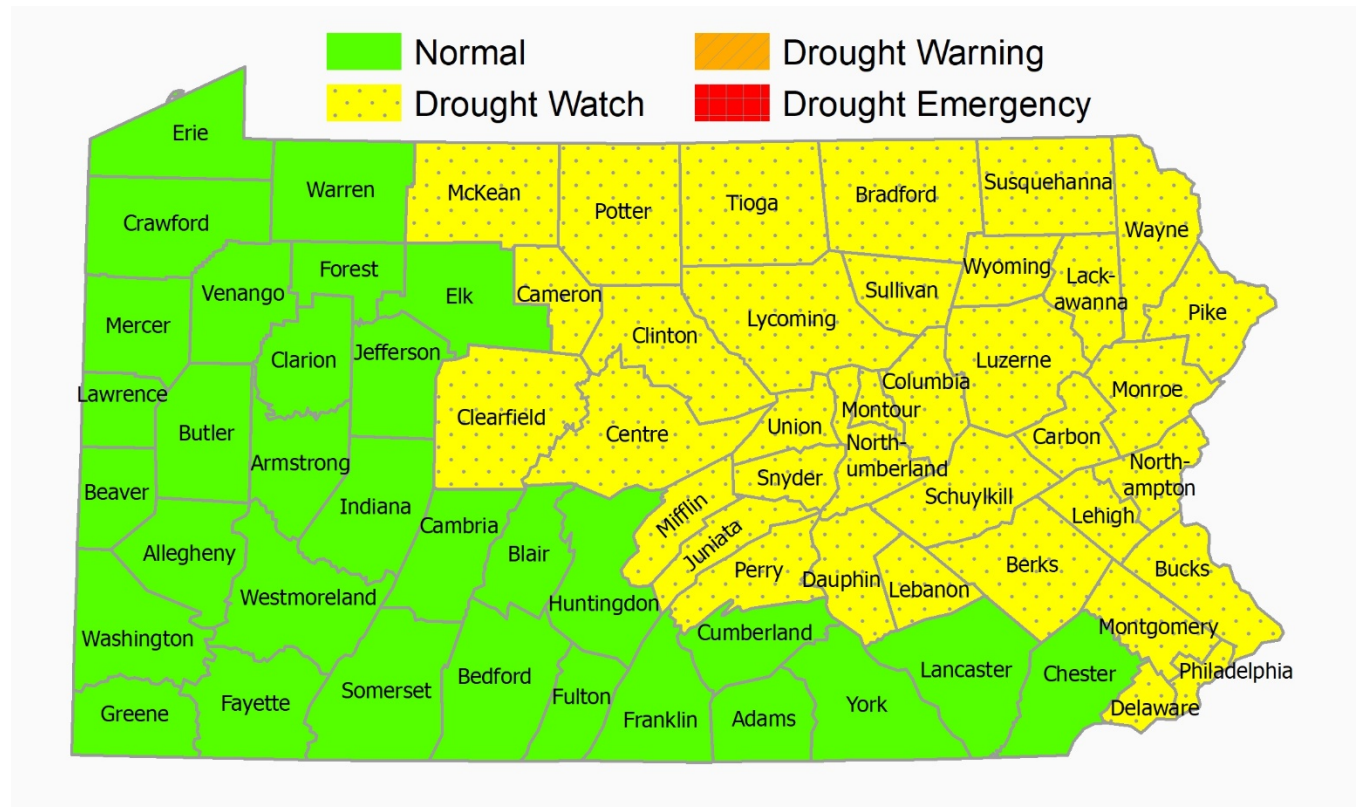
The following PWSs are implementing mandatory measures:

- Hazleton City Authority (PWS 2408001), Luzerne County
- Porter Township Municipal Authority (PWSID 4180055), Clinton County
- Veolia Water Pa Overbrook (PWSID 2400082), Luzerne County

Forecast – The 7-day forecast indicates approximately 0.5 to 2.33 inches of precipitation for the state, with the highest amounts in the northern and eastern portions of the state and the lowest in the southcentral portion. The 8 to 14-day forecast indicates 0.1 to 1.25 inches of precipitation for the state, with the highest amounts in the northwestern portion and the lowest values in the southern part of the state.

Summary – Though there was little precipitation in the western part of the state over the last week the eastern portion of Pennsylvania received sufficient rain to reduce remaining “Watch” indicators to “Normal”. Surface water and the Palmer Drought Severity Index have followed suit and are showing all counties as “Normal”. Groundwater, however, is a lagging indicator and has seen little change. Groundwater plays a critical role in water supply throughout Pennsylvania with many public water suppliers relying on wells as a primary or supplemental source. With persistent rain this will likely turn a corner in the future. Forecasts indicate that rainfall in the coming week will appear where it is most needed in the central and western portions of the state which should help to further boost groundwater indicators in that region. Public water suppliers (a key drought information resource) have seen minor alterations of their restrictions at present.

Below is a map of the current drought declarations:



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