

October 18, 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 18th, 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 0.1 to 2.0 inches. The 90-day precipitation departures show counties ranging from 50% below up to 75% above normal precipitation.

This week saw improvement across the eastern and western portions of the state. The central region of the state, however, saw little rain leading Dauphin county to decline in indicator condition from “Normal” to “Watch”. Other than this there were no changes to indicator statuses across the state.

Surface Water – For this date, there are five gages that show instantaneous flow at less than the 10th percentile while most indicators throughout the state read normal or higher. A small but growing region in the northwestern portion of the state is suffering from below normal flows (see slide 7 in attached presentation). This is not severe enough to have impacted any county indicators but is worth keeping in mind for future reports. Statewide indicator has not changed from last week with all counties reading ‘normal’ with all major waterways reaping the benefits of the persistent rains throughout the majority of the state.

Groundwater – Groundwater has been more varied throughout the commonwealth with Potter and McKean Counties 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 has been brought online and is reading “Watch” after the transducer was 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 12 PWSAs on voluntary water use restrictions and two on mandatory water use restrictions. Veolia Water in Luzerne County has removed their restrictions entirely, returning to normal operations after a period of applying Mandatory restrictions.

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
- Mahandy Township Authority (PWSID 3540011), Schuylkill 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

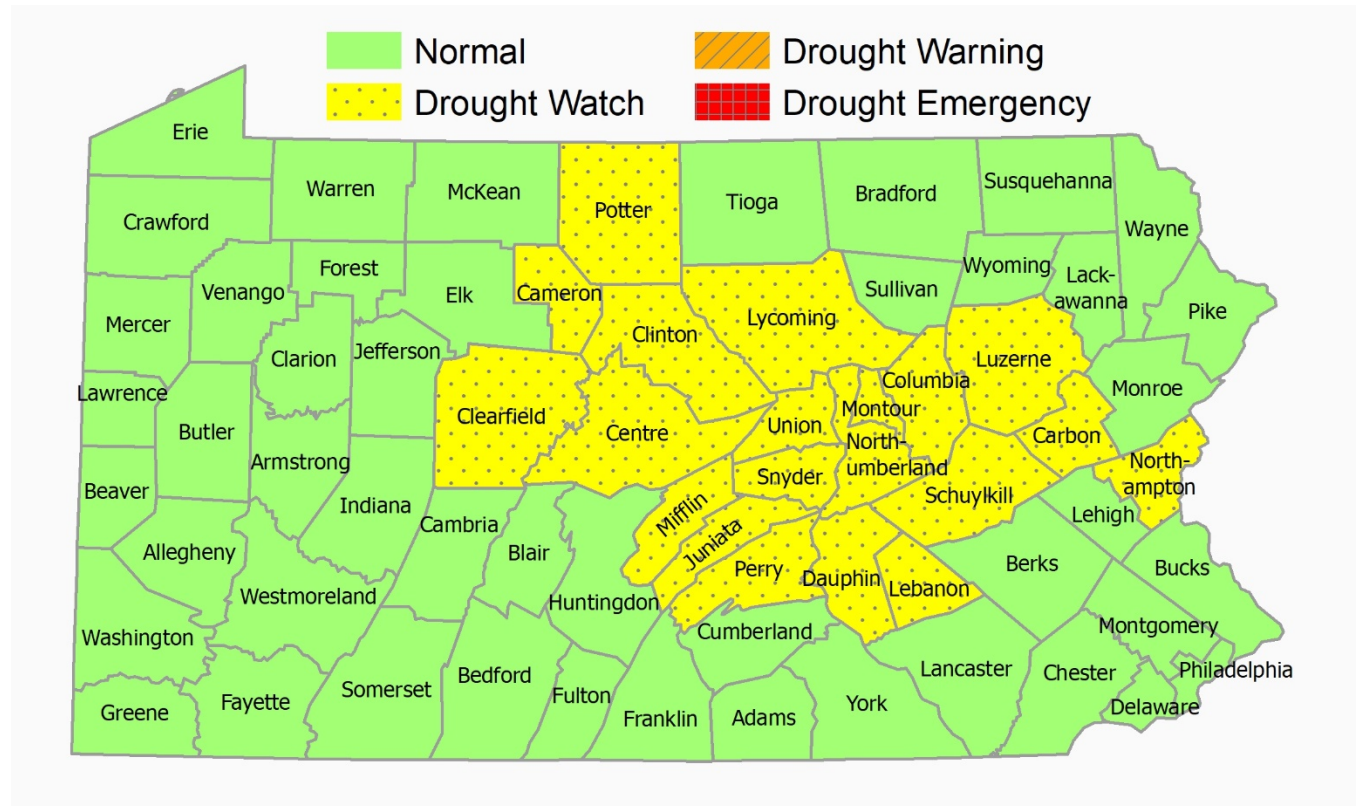
Forecast – The 7-day forecast indicates approximately 0.02 to 1.5 inches of precipitation for the state, with the highest amounts in the northeastern portion of the state and the lowest in the southcentral and southwestern portions. The 8 to 14-day forecast indicates 1.5 to 3.0 inches of precipitation for the state, with the highest amounts in the northwestern portion and the lowest values in the eastern part of the state.

Summary – Though there was little precipitation in the central part of the state and Dauphin’s decline from “Normal” to “Watch” for this indicator over the last week the eastern and western portions of Pennsylvania received sufficient rain to maintain “Normal” conditions even amounting to surpluses throughout many counties. 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. Forecasts indicate little rain in the coming week where it’s most needed in the center of the state but long term gains from otherwise persistent rains may yet alleviate this condition. Public water suppliers (a key drought information resource) have seen minor alterations of their restrictions at present with only one of the fifteen suppliers moving from mandatory restrictions back to normal operations. As a result of the persistent rains several counties were removed from drought watch status. 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
- Bucks
- Lackawanna
- Bradford
- Delaware
- Lehigh

- McKean
- Monroe
- Montgomery
- Philadelphia
- Pike
- Sullivan
- Susquehanna
- Tioga
- Wayne
- Wyoming

Below is a map of the current drought declarations:



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