

November 7, 2022

Drought Report

Summary: November 1 – November 7

Preface

This report summarizes the various indicators utilized in drought monitoring; it is current to noon on November 7th, 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 0.1 to 0.6 inches. The 90-day precipitation departures show counties ranging from 50% below up to 50% above normal precipitation.

This will be the third week of short rainfall throughout the state and though some surpluses remain in several counties due to higher rainfall earlier in the season, more counties are beginning to show meaningful deficits with a total of three counties now in “Watch” condition for this indicator throughout the state.

Surface Water – For this date, there are 14 gages that show instantaneous flow at less than the 10th percentile. Precipitation deficits are beginning to show more clearly in surface water gages throughout the state though many gages are still healthy, several more have begun to drop to ‘below normal’ (between the 10th and 24th percentiles) than were seen in last week’s report. This has led to several counties moving from “Normal” to “Watch” condition for this indicator.

Groundwater – Groundwater has been more varied throughout the commonwealth and is typically a lagging indicator. Several counties (14) in the commonwealth read “Watch” and four are now reading “Emergency”. These are scattered in the state and are reflective of declining precipitation and surface water indicators. It seems it will take more sustained rain to restore groundwater to pre-drought 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.

The following PWSs implementing voluntary measures:

- BCI Municipal Authority (PWSID 6170052), Clearfield County
- Driftwood Borough (PWSID 6120001), Cameron County
- Galetton 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

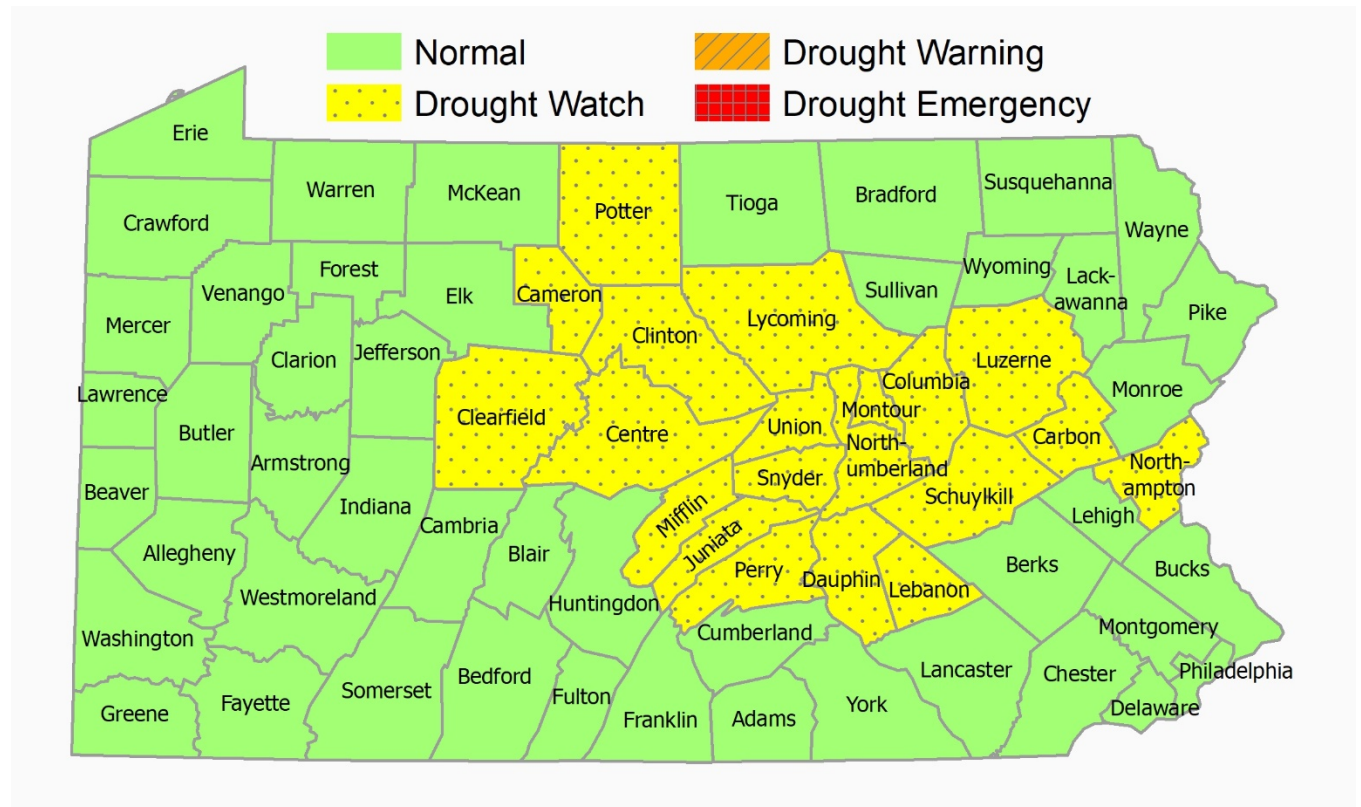
The following PWSs are implementing mandatory measures:

- 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 0.4 to 1.5 inches of precipitation for the state, with the highest amounts in the western portion of the state and the lowest in the central portion of the state. The 8 to 14-day forecast indicates 0.08 to 0.66 inches of precipitation for the state, with precipitation focused in the southeastern and northwestern portions of the state leaving band stretching from the southwest to the northeast with the least. Though forecasts for the coming week indicate increased precipitation much more sustained rains will be needed to overcome deficits statewide.

Summary – The sustained deficits in weekly precipitation have begun to take effect throughout the state, surface water, in particular, has seen much change. Groundwater, as well, is showing some issues in the longer term. Groundwater plays a critical role in water supply throughout Pennsylvania with many public water suppliers relying on wells as a primary or supplemental source. While some rain is forecast in the coming weeks much more will be needed to overcome present deficits. Additionally, public water suppliers are continuing to apply restriction measures to conserve supply.

Below is a map of the current drought declarations:



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