

December 6, 2022

Drought Report

Summary: November 29 – December 6

Preface

This report summarizes the various indicators utilized in drought monitoring; it is current to noon on December 6th, 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 these declarations are voluntary and informational in nature. “Emergency” declarations follow a similar process but are given final approval by the Governor.

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Precipitation – Over the past week, there was varying precipitation across the state, ranging from 0.3 to 1.7 inches. The 90-day precipitation departures show counties ranging from 50% below up to 50% above normal precipitation.

Pennsylvania still benefits from surplus precipitation in prior weeks leading to relatively little change for this indicator with nearly all counties showing “Normal”. The 90 day precipitation departures still show healthy surpluses in many counties of the commonwealth with Perry county (which has changed its indicator status from “Normal” to “Watch” since the last report) as an acute exception. Though conditions are stable, there are lingering deficits in the central region of the state.

Surface Water – For this date, there are three gages that show instantaneous flow at less than the 10th percentile. There are no changes in this indicator since the last report with all counties reading “Normal”.

Groundwater – Groundwater has been more varied than other indicators throughout the commonwealth and is typically a lagging indicator. Several counties (17) read “Watch” for this indicator. As of this report the last county in “Emergency” (Fulton) was removed from this condition and improved to “Watch”. Additionally, there was improvement throughout the state with several counties returning to “Normal”. Despite these notable improvements two counties (Philadelphia and Delaware), which share an observation well, declined from “Normal” to “Watch” condition. This indicator is reflective of longer-term deficits that will require sustained rain to restore to “Normal” percentiles. 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 seven PWSAs on voluntary water use restrictions and two on mandatory water use restrictions. Since the last report, Driftwood (voluntary, Cameron County), Galeton Borough Water Authority (voluntary, Potter County), Jersey Shore Area Joint Water Authority (voluntary, Lycoming County), Porter Township Municipal Authority (mandatory, Clinton County) have all returned to normal operations. Despite further improvements in recent weeks this ground truth remains a critical resource in assessing drought conditions in the state.

The following PWSs implementing voluntary measures:

- BCI Municipal Authority (PWSID 6170052), Clearfield County
- Mahanoy Township Authority (PWSID 3540011), Schuylkill County
- North Heidelberg Water System, (PWSID 3060115), Berks 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

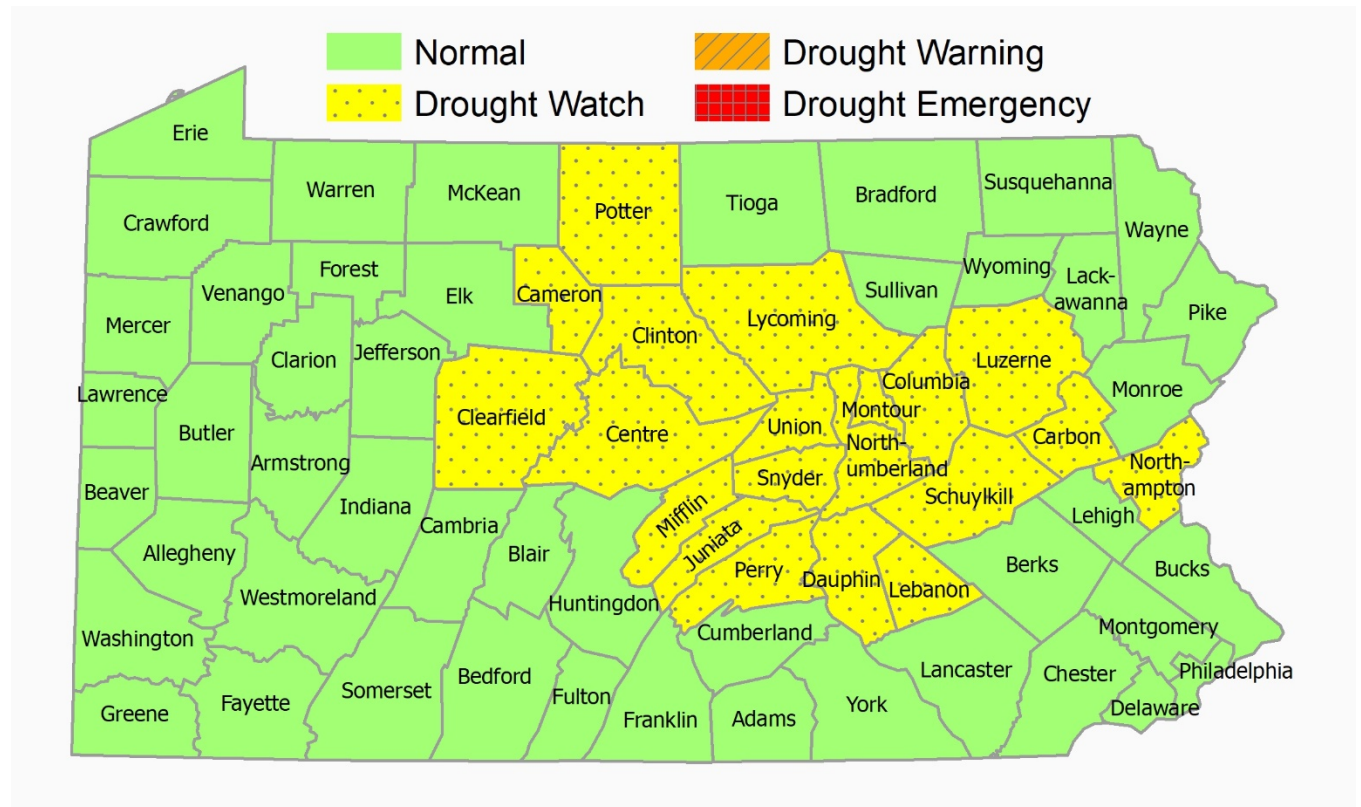
The following PWSs are implementing mandatory measures:

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

Forecast – The 7-day forecast indicates approximately 1.5 to 2.66 inches of precipitation for the state, with the highest amounts concentrated in the west of the state and the lowest in the central portion of the state. The 8 to 14-day forecast indicates 1.0 to 6.0 inches of precipitation for the state, with precipitation concentrated in the southeastern portion of the state and the northwestern portion of the state receiving the least.

Summary – In general, surpluses continue to grow with increasing precipitation throughout the commonwealth. Despite this, there remain some persistent deficits with groundwater. This lagging indicator remains problematic for several water suppliers throughout the state who continue to operate under voluntary or mandatory restrictions often citing well levels as the key driver in their decision making. Though a few suppliers have returned to normal operations there are still nine remaining suppliers employing some form of restriction. 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 rain is forecast in the coming weeks it will need to be sustained consistently to see lasting improvement.

Below is a map of the current drought declarations:



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