

December 13, 2022

## **Drought Report**

### **Summary: December 6 – December 13**

#### **Preface**

This report summarizes the various indicators utilized in drought monitoring; it is current to noon on December 13<sup>th</sup>, 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 0.1 to 1.5 inches. The 90-day precipitation departures show counties ranging from 50% below up to 50% above normal precipitation.

Deficits over the last few weeks have chipped away at the surpluses gained earlier in the year, as a result six counties have moved into “Watch” and two into “Warning” for this indicator. These counties are concentrated in the south-central portion of the state. Precipitation deficits do not necessarily translate directly into water supply issues but can serve as an early warning. These deficits will be closely monitored.

*Surface Water* – For this date, there are three gages that show instantaneous flow at less than the 10th percentile. Two counties located in the south-central region of the state are displaying “Watch” for this indicator.

*Groundwater* – Groundwater has been more varied than other indicators throughout the commonwealth and is typically a lagging indicator. Several counties (11) read “Watch” for this indicator signaling improvement throughout the state with several counties returning to “Normal”. 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. There are no changes from the prior week’s report. 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:

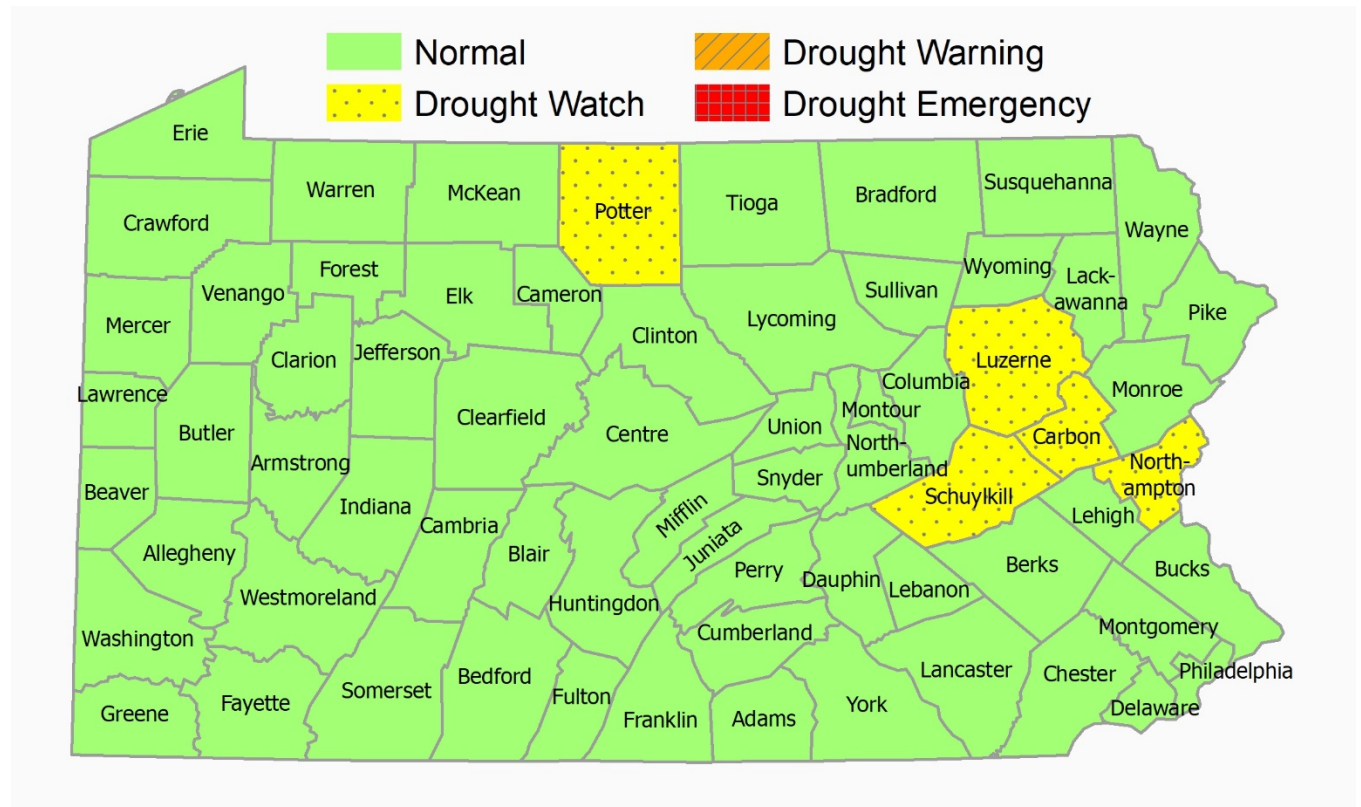
- Hazleton City Authority (PWS 2408001), Luzerne County
- Roulette Township Water Authority (PWSID 6530007), Potter County

*Forecast* – The 7-day forecast indicates approximately 0.66 to 1.75 inches of precipitation for the state, with the highest amounts concentrated in the east of the state and the lowest in the western portion of the state. The 8 to 14-day forecast indicates 1.0 to 2.0 inches of precipitation for the state, with precipitation concentrated in the eastern portion of the state and the western portion of the state receiving the least.

*Summary* – Recent dips in precipitation through the state have begun to impact surface water at a few county gages but prior rains appear to be yielding some gains in groundwater wells throughout the state. Despite this, there remain some persistent deficits with some observation wells in “Watch” condition as well as groundwater supplied public water suppliers employing restrictions. 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.

At the most recent drought task force meeting which took place on Thursday December 8, 2022 it was determined by the Drought Coordinator with concurrence among the task force that 15 of the remaining 20 counties would be removed from Drought Watch declaration status and return to Normal condition. The five remaining counties all have water suppliers who continue to employ restrictions within them. A map indicating these statuses is attached in this report.

Below is a map of the current drought declarations:



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