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Subject: Drought Update - Was the rain enough?
Date: Thursday, July 15, 2021 10:47:47 AM

July 2021

Drought Update

Summary

- Recent rains provided 3" - 6" in much of the southern half of the state, but much less in the north, where the rain was most needed. As a result, drought and abnormally dry conditions have receded north.
- At the end of June, groundwater level monitoring indicated that most wells in the network were below average and had dropped since the end of May. Due to the growing season and warm summer temperatures, most rain received goes to plants and evaporation or runoff. Significant groundwater recharge will not occur until the Fall.
- Streamflows have recovered in the majority of the state, except for the north.
- Over the next 7-days the forecast is for 1.5" to 2.5" of rain across the state. The last week of July is likely to be dryer and forecasts indicate it is a toss up of how much rain will be received through August. Above normal temperatures are favored for this time period.
- There is good news. The seasonal drought outlook published today indicates a strong confidence that drought removal will be likely through the state by the end of October, except for a sliver in northeast Coos County.

The Message

Given the recent rain and the 7-day forecast for rain, lawn watering should not be necessary. As groundwater levels are already low and August is an unknown in terms of precipitation, please urge residence to shut off irrigation systems until watering is absolutely necessary.

NHDES is urging systems to maintain outdoor water use restrictions. Implementing mandatory restrictions is prudent in areas experiencing moderate drought, particularly in areas which experience a significant increase in outdoor water use in the summer. Those areas experiencing abnormally dry conditions should be messaging water conservation to residents and customers, as well as be implementing restrictions based on availability of supplies and increases in demand.

Currently 86 water systems have restrictions in place.

Community water systems and municipalities should report restrictions to NHDES for posting on the NHDES website using the electronic reporting form.

Guidance:
Implementing Restrictions at Public Water Systems
Lawn Water Restriction Guidance for Municipalities

NHDES Drought Management Information Center

Low-Income Residential Drought Assistance Program

Drought Conditions

U.S. Drought Monitor
Today's drought monitor indicates areas of the state experiencing drought conditions has contracted over the past week.

- 4% of NH is experiencing severe drought (D2).
- 27% of NH is experiencing moderate drought (D1) conditions.
- 29% of NH is experiencing abnormally dry conditions.
- 40% of NH is experiencing normal conditions.

US Drought monitor map of NH comparison between July 13 2021 and July 6 2021.

NWS Northeast River Forecast Center: Precipitation Deficits

While month to date precipitation departures are above normal across the state, departures at the 60-day and 90-day timescales continue to be below normal in the northern half of the state.

Map of the northeast showing precipitation departure from normal between July 1 and July 12.

Drought Impacts

June NH Geological Survey Monthly Groundwater Level Report

Assessment of the state's monitoring network of wells at the end of June indicated declines in groundwater levels. Most wells were showing levels below their monthly averages and overall there was a downward trend of levels since the end of May.

NH USGS WaterWatch Stream Flows

A month ago, 28-day average stream flows were indicative of hydrologic drought across most of the state. Today 28-day average stream flows are only indicative of hydrologic drought in approximately 30% of the state in the north.

Forecasts and Outlooks

Precipitation and Temperature Forecasts

Over the next 7 days, there is potential for the majority of the state to receive between 1.5" to 2.5". Below normal precipitation is favored in the following two weeks. Equal chances of above normal, normal, and below normal precipitation is forecast for August. Above normal temperatures are favored through this time period.

Maps of the US precipitation and temperature forecasts for August.

Seasonal Drought Outlook

The U.S. Seasonal Drought Outlook for July 15 through October 31 indicates drought removal is likely, except for the very northeast corner of Coos County where drought is expected to remain but improve.

The US Seasonal Drought Outlook map for July through October 2021.

Seasonal drought outlook legend.

Additional Resources

Regional Forecast - National Weather Service Forecast Discussion
Precipitation and Temperature Outlooks - NWS Climate Prediction Center

Visit the NHDES Drought Management Webpage