



# EXETER PUBLIC WORKS DEPARTMENT

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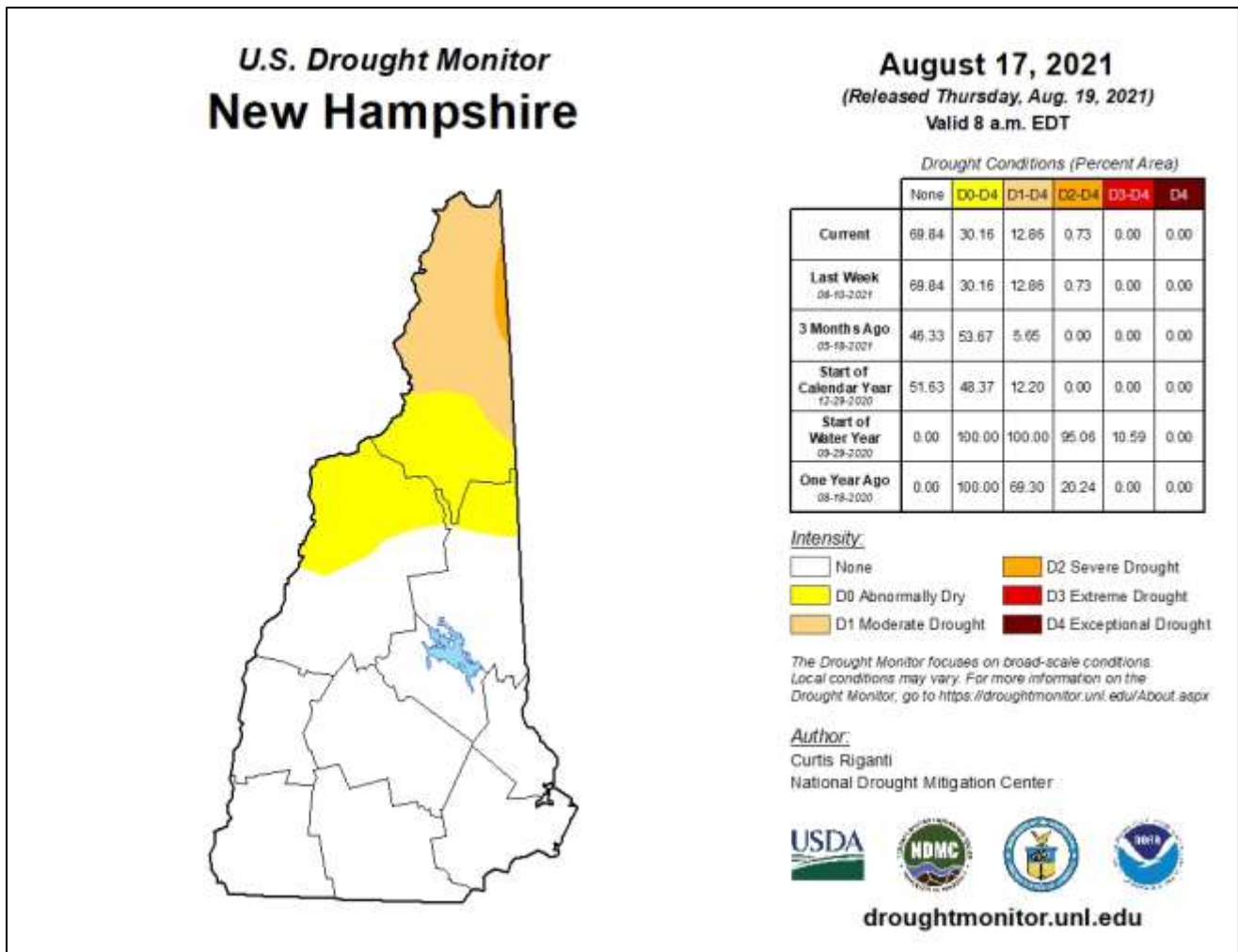
[www.exeternh.gov](http://www.exeternh.gov)

## MEMO

DATE: August 20, 2021  
 TO: Russell Dean, Town Manager  
 Exeter Select Board  
 FROM: Jennifer R. Perry, P.E., Public Works Director  
 RE: Water Resources Status Update & Recommended Water Use Restrictions

### New Hampshire Drought Conditions

The U.S. Drought Monitor dated August 17, 2021, indicates 30% of the State of New Hampshire is abnormally dry (D0), in moderate (D1) or severe drought (D2) condition. The Town of Exeter and the upper reaches of the Exeter River watershed along with the southern 70% of the state are no longer in any drought condition.



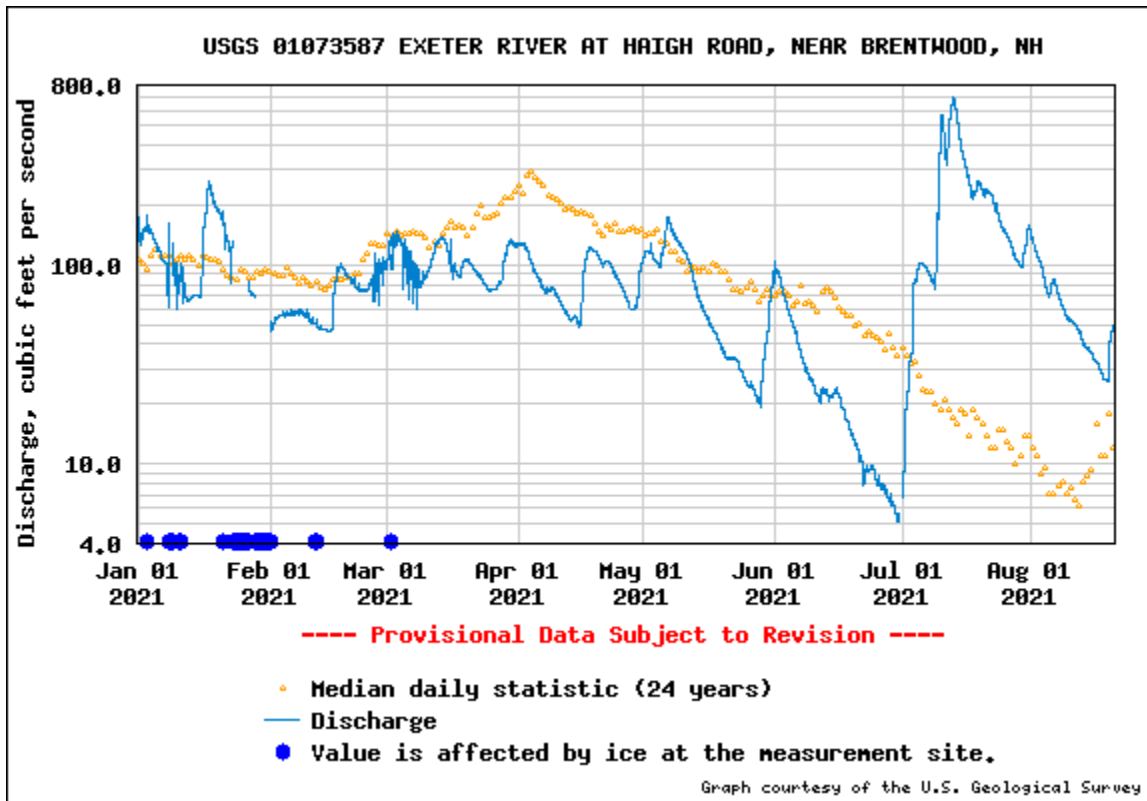
The U.S. Drought Monitor is jointly produced by National Drought Mitigation Center at University of Nebraska-Lincoln, U.S. Department of Agriculture, and National Oceanic and Atmospheric Administration. Map courtesy of NDMC.

<https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?NH>

### River Flow

The USGS stream flow gauge on the Exeter River at Haigh Road in Brentwood (drainage area 63.5 square miles) indicates current instantaneous discharge is 49.7 cubic feet per second (cfs) (at 12:15 on 8/20/2021) which is above the median. The water supply intake for the Town of Exeter is located several miles downstream of the gauging station, with a contributing watershed of 107 square miles. The flow rates at the intake location are estimated to be 1.69 times higher than at Haigh Road, or approximately 84 cfs (54 MGD).

The instantaneous Exeter River flow rate is **above average**.



<https://waterdata.usgs.gov/usa/nwis/uv?01073587>

### Groundwater Levels

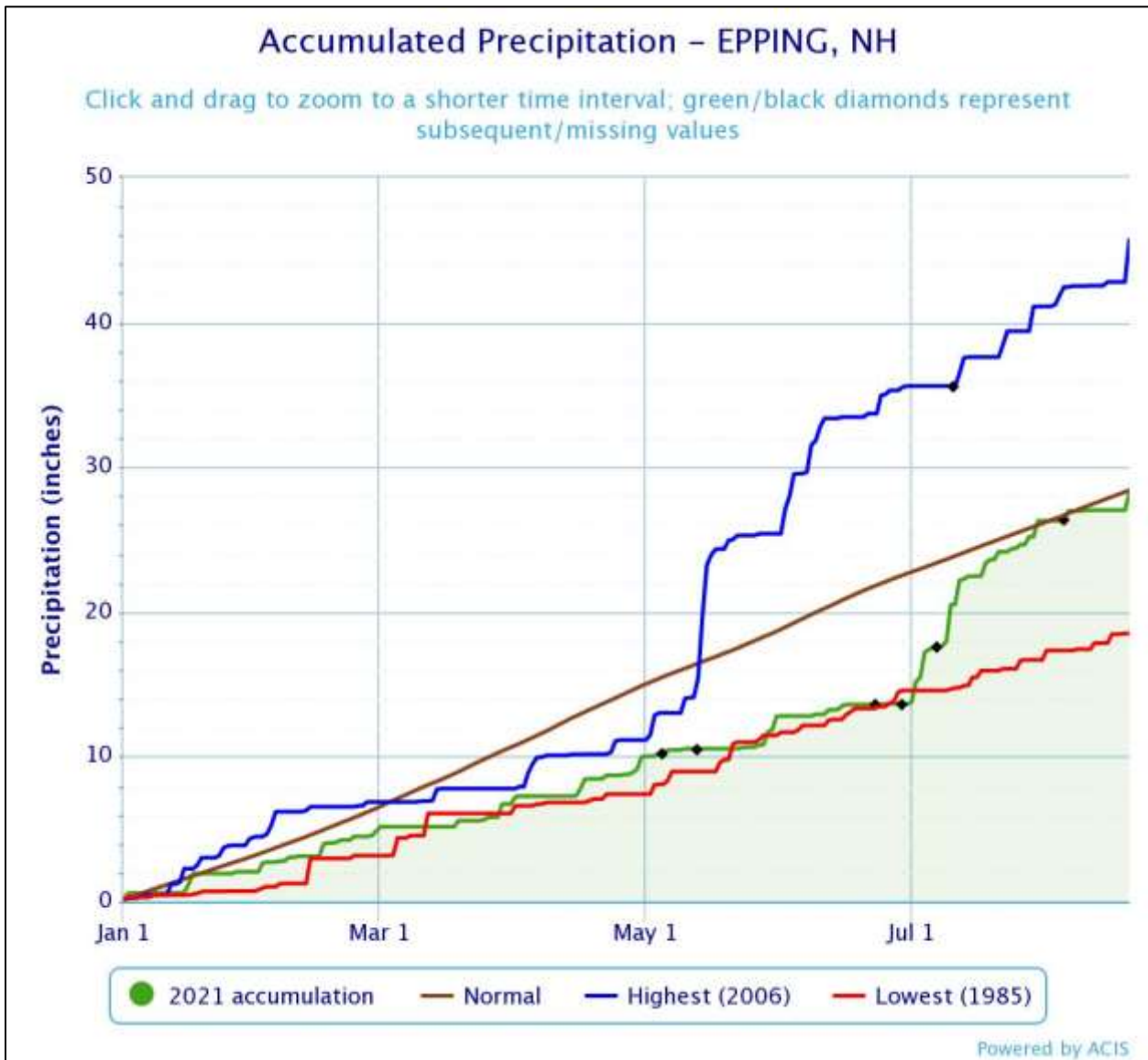
Groundwater levels in the southern part of the state have started to recover from the dry conditions that began in May 2020, although groundwater levels for long-term monitoring wells in the region vary by location. The USGS wells in Concord and Nashua are experiencing above normal groundwater levels; Epping Deerfield, Franklin, Greenfield, and Ossipee are average.

Current groundwater levels are ranging from **below normal to average with the majority increasing**.

### Precipitation

July 2021 was the rainiest July on record. Rainfall received in the past 6 weeks has erased the rainfall deficit since May 2020 and have alleviated drought conditions. Total precipitation received since January 1 through August 20 is 28.21 inches which is essentially the average of 28.4 inches (Source: National Weather Service NOWData for Epping, NH). Total annual precipitation averages 46.95 inches for this site (57 years of record).

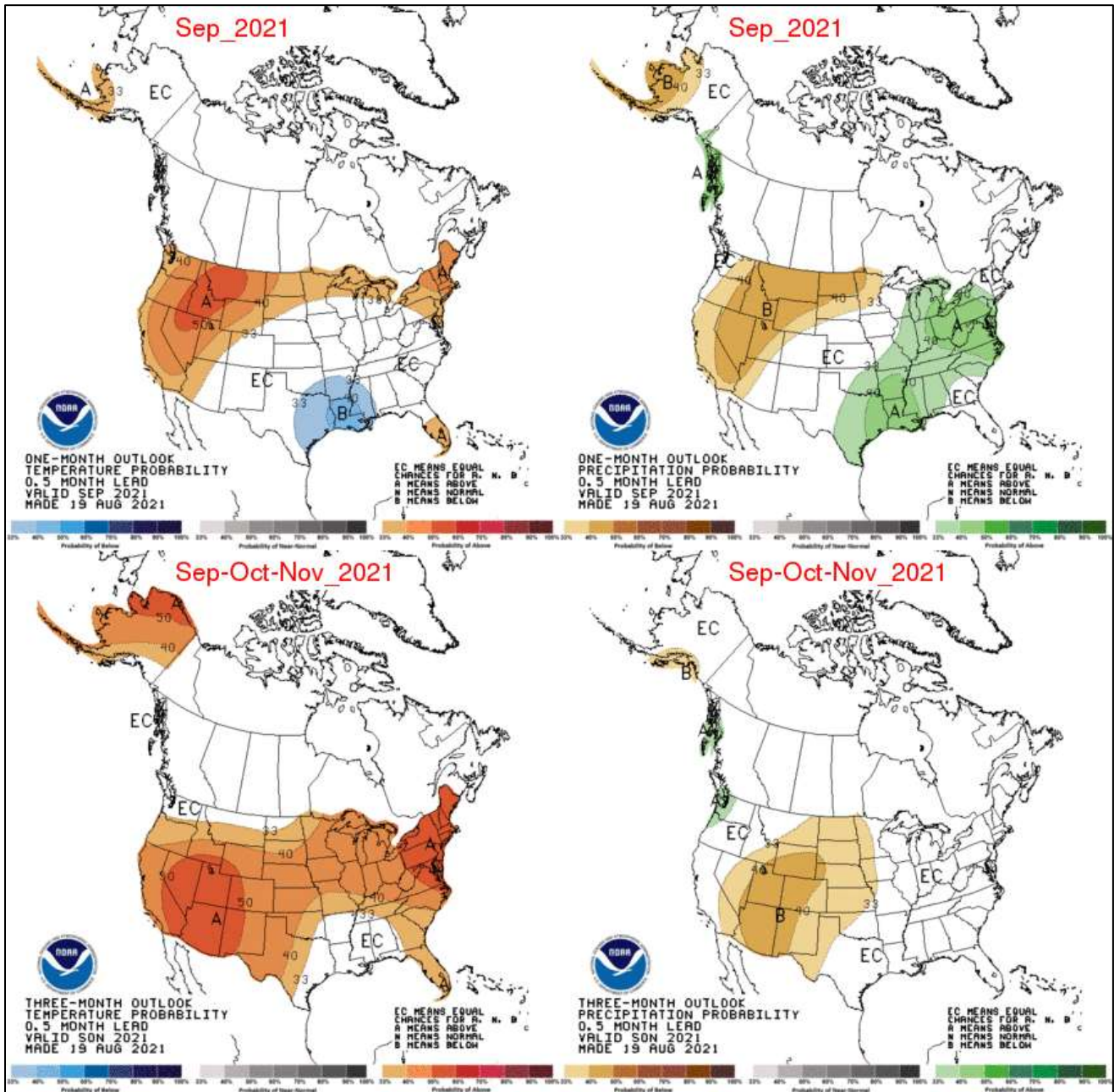
There is a **no longer a precipitation deficit**; precipitation is **average** for the year.



NOAA/National Weather Service, Gray/Portland Office. NOWData for Epping, NH.

### Drought Outlook

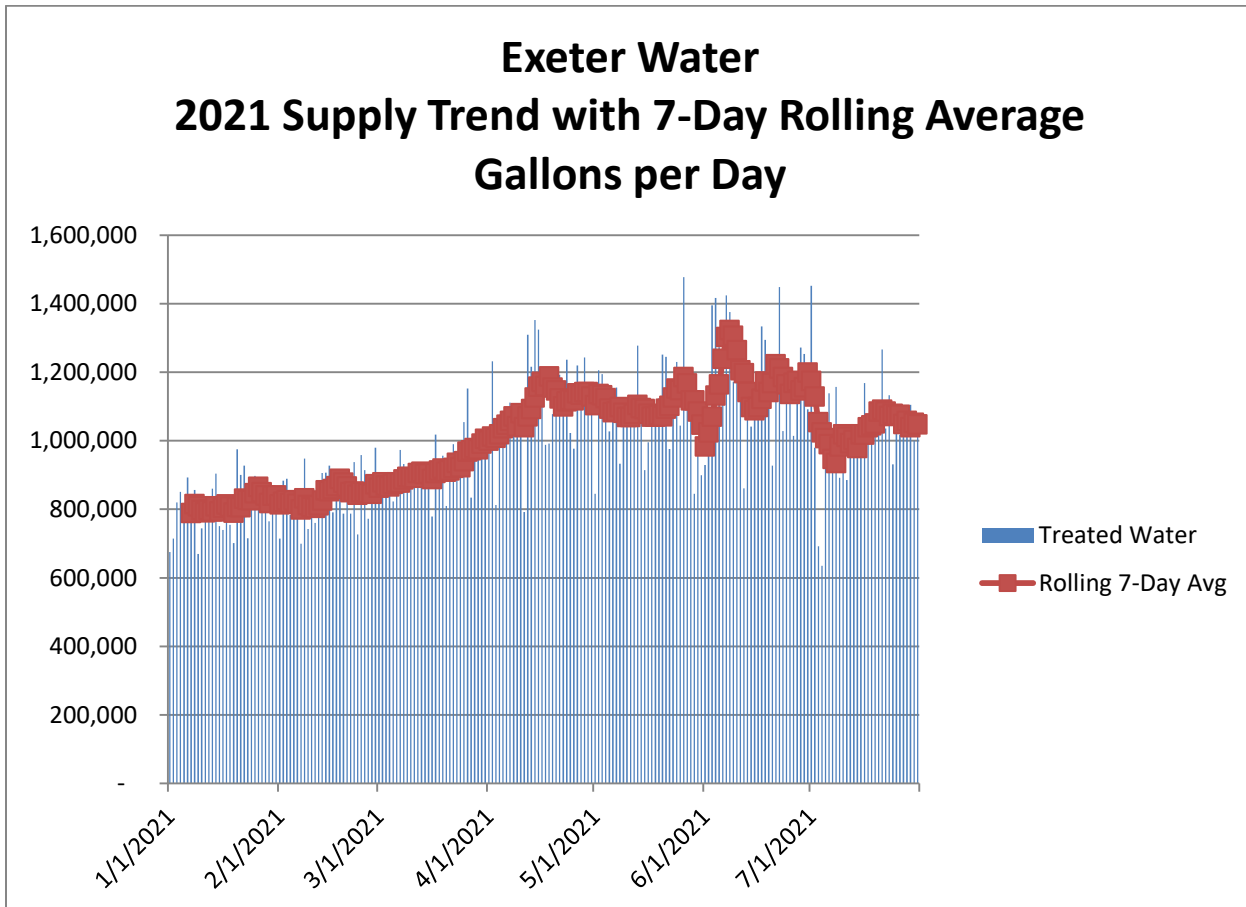
September and the 3 month outlook (September, October, November) **temperatures** are predicted to continue to be **above normal**. September and the 3 month outlook (September, October, November) precipitation is predicted equal chance for above, normal or below normal precipitation.



[http://www.cpc.ncep.noaa.gov/products/predictions/multi\\_season/13\\_seasonal\\_outlooks/color/churchill.php](http://www.cpc.ncep.noaa.gov/products/predictions/multi_season/13_seasonal_outlooks/color/churchill.php)  
[https://www.cpc.ncep.noaa.gov/products/predictions/multi\\_season/13\\_seasonal\\_outlooks/color/page2.gif](https://www.cpc.ncep.noaa.gov/products/predictions/multi_season/13_seasonal_outlooks/color/page2.gif)

**Exeter Water Supply**

Water usage or demand in the Exeter public water system is at summer, irrigated flows, but has decreased and leveled off with the high rainfall amounts in July. The seven day average on July 31 was 1.05 MGD. To date in 2021 the surface water treatment plant (SWTP) produced 141 MG, supplying 67% of demand. The groundwater treatment plant (GWTP) produced 71 MG, supplying 33% of demand.



**Summary**

Exeter and the upper reaches of the Exeter River watershed are no longer in drought. Temperatures have been above average since May 2020 and are predicted to continue to be above average through November 2021. Record setting rainfall in July has erased the precipitation deficit and accumulation for the year is now average. Surface water flows are above average. Groundwater levels continue to recover. Exeter water usage reflects summer demands.

**Recommendations**

We recommend removing outdoor water use restrictions. Water users are always encouraged to practice effective water conservation. For helpful tips on water use and conservation go to <https://www.epa.gov/watersense>.