



# EXETER PUBLIC WORKS DEPARTMENT

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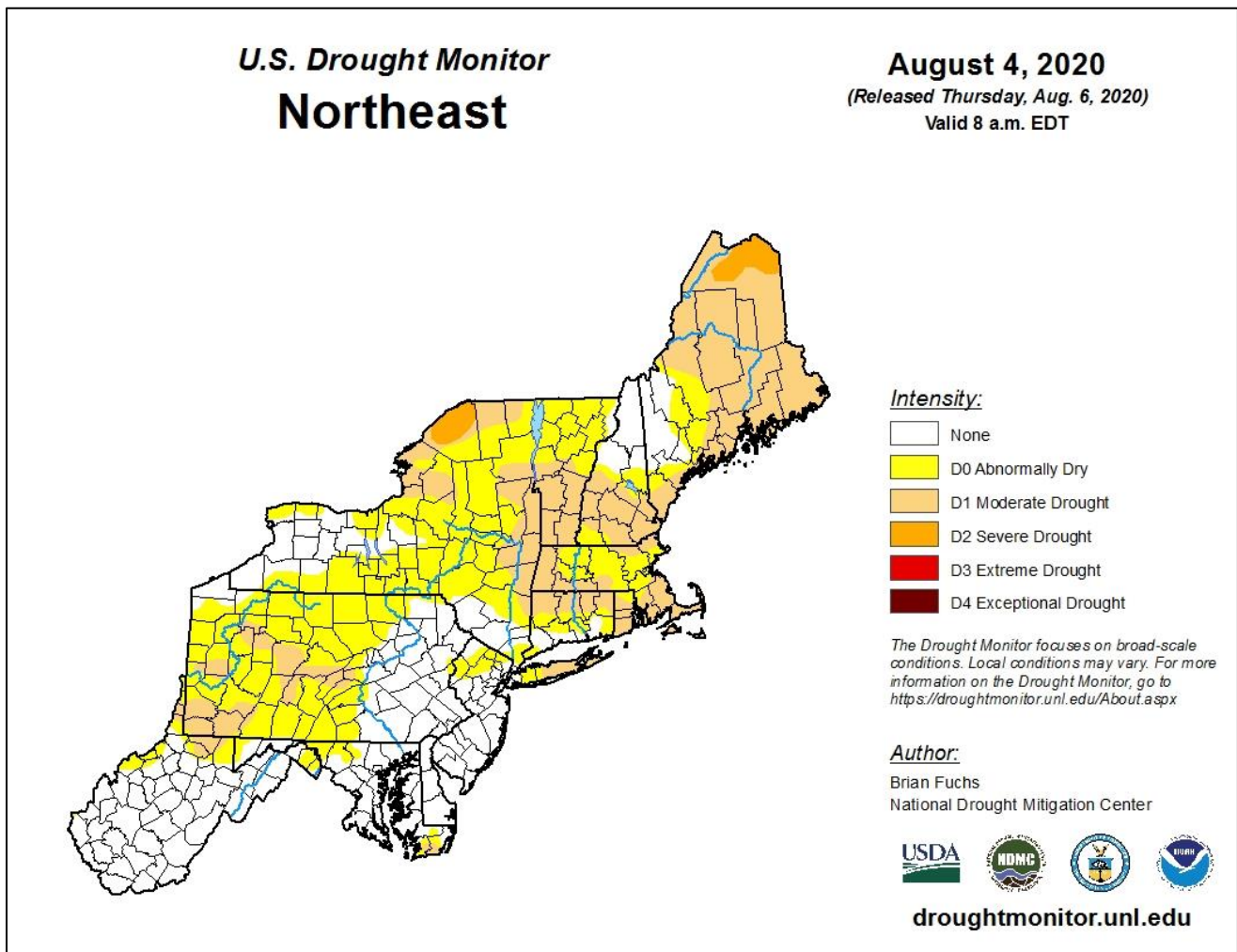
[www.exeternh.gov](http://www.exeternh.gov)

## MEMO

DATE: August 7, 2020  
TO: Russell Dean, Town Manager  
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 4, 2020, indicates moderate drought (D1) conditions persist in southern New Hampshire. Southeastern New Hampshire was rated abnormally dry (D0) May 26, 2020 and moderate drought (D1) June 23, 2020. The State has implemented the Drought Management Plan, advising public water systems to implement outdoor water use restrictions where needed, and encouraging private well owners to conserve water. Based upon recommendations from the Public Works Department, the Exeter Select Board issued Level 2 water restrictions effective July 7, 2020. We recommend those restrictions remain in place.

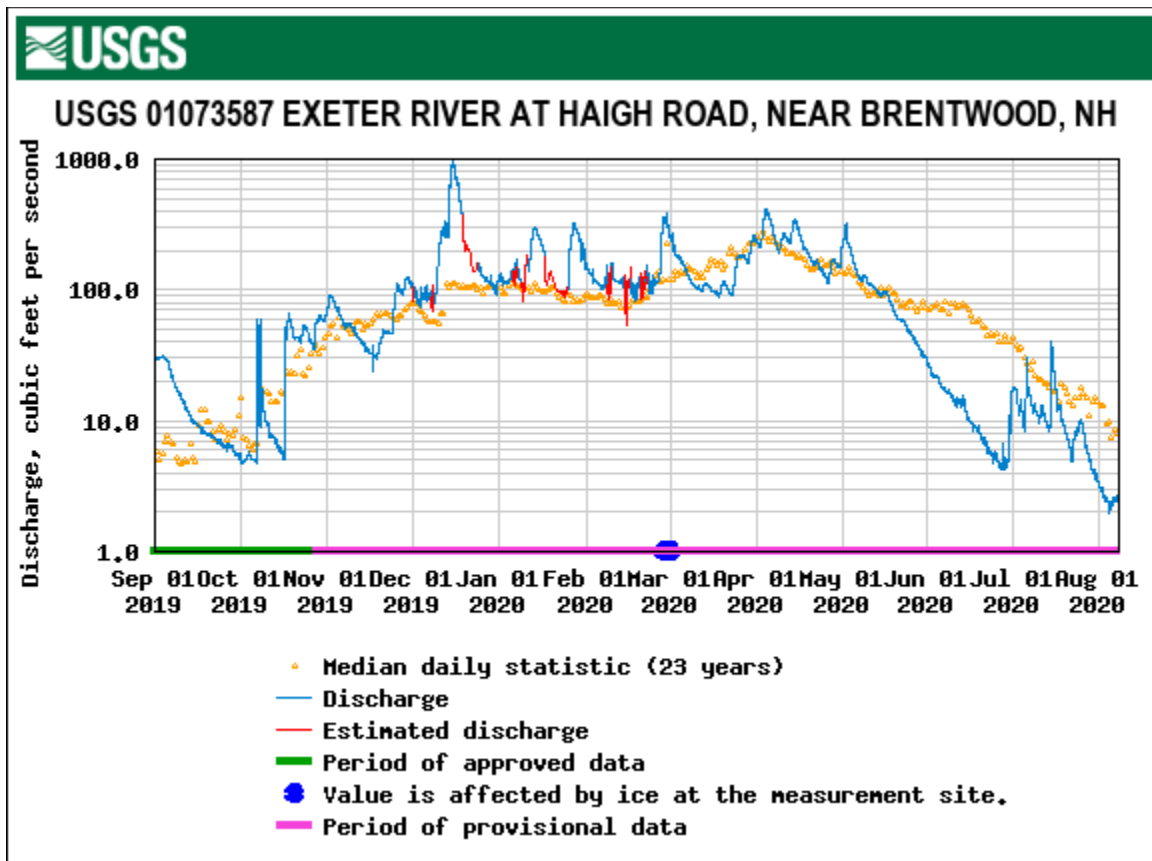


The U.S. Drought Monitor is jointly produced by National Drought Mitigation Center at University of Nebraska-Lincoln, U.S. Department of Agriculture, and National Oceanic and Atmospheric Administration. Map courtesy of NDMC.

### River Flow

July and August are typically periods of summer low 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 2.55 cubic feet per second (cfs) (at 9:15 pm on 8/7/2020) which is the 10th percentile mean for this site on this date. The water supply intake for the Town of Exeter is located several miles downstream, 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 4 cfs.

Exeter River flow rates are considered **much below normal** for this time of year.



### Groundwater Levels

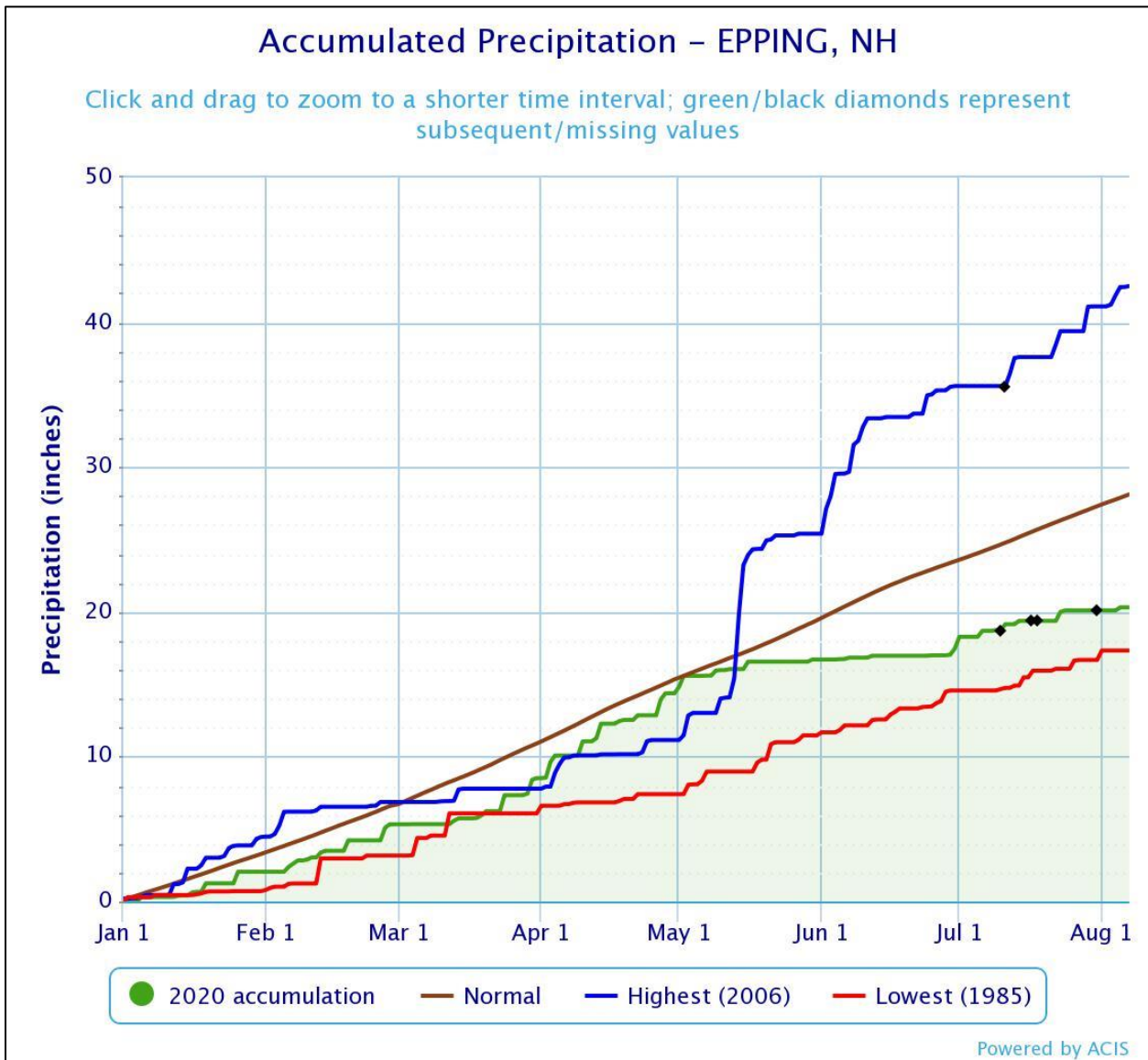
Groundwater levels for long-term monitoring wells in the region vary by location. The USGS wells in Epping, Concord and Nashua range from normal to below normal to low, respectively.

Current groundwater levels are considered **below normal** for this time of year.

**Precipitation**

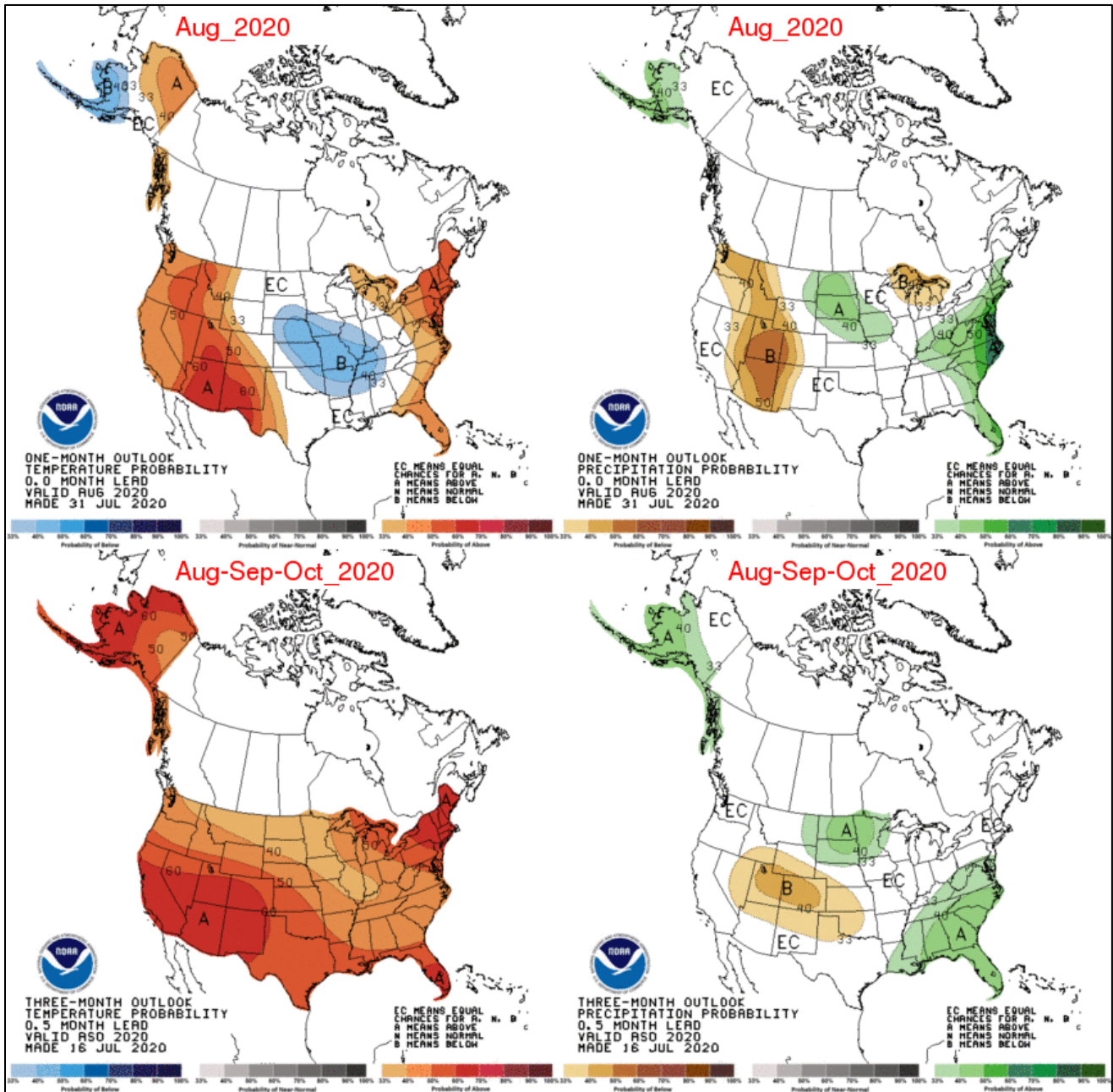
Total precipitation received since January 1 through July 31 is 20.1 inches which is 7.35 inches below the mean of 27.45 inches (Source: National Weather Service NOWData for Epping, NH). Total annual precipitation averages 48.11 inches for this site (55 years of record). The last precipitation event occurred on August 5 (0.21 inches) due to tropical storm Isaias, which passed west of us and resulted in lower than projected rainfall.

Precipitation is considered **below normal** for the year and month.



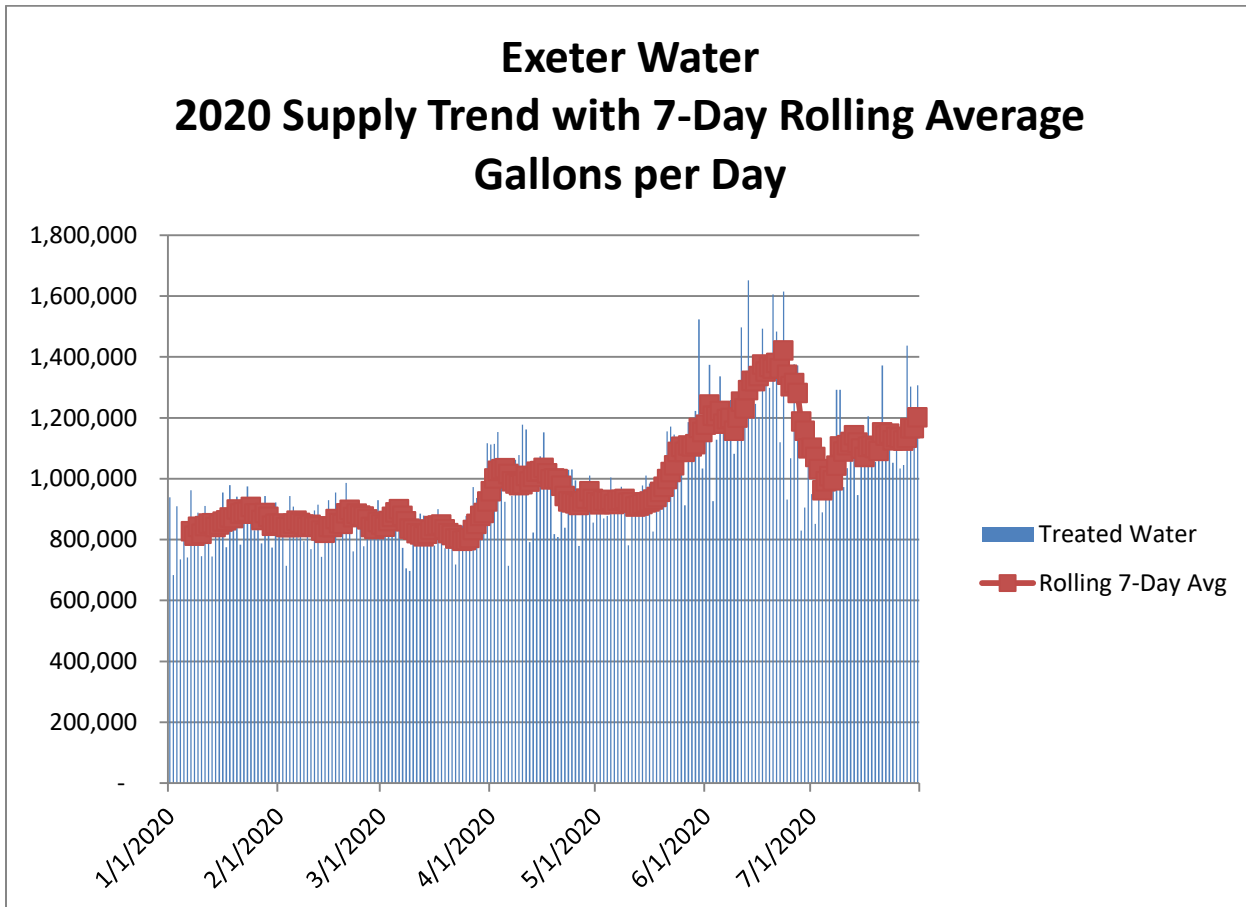
### Temperature and Precipitation Forecast

August and the 3 month outlook (August through October) temperatures are predicted to continue to be **above normal**. The three month outlook from NOAA indicates above normal precipitation for August and equal chances for above, normal or below normal precipitation for August through October for the New England region.



### Exeter Water Supply

Overall, water usage or demand in the Exeter public water system is **up 29% since May 1, primarily due to outdoor water use**. The seven day average in early May was 928,000 gallons per day; on July 31 it was 1,201,304 gallons per day. To date in 2020 the surface water treatment plant (SWTP) produced 145,301,760 gallons, supplying 69% of demand. The groundwater treatment plant (GWTP) produced 65,462,262 gallons, supplying 31% of demand.



### Summary

Temperatures have been above average since May and are predicted to continue through October. Precipitation is well below normal. Surface waters and groundwater levels are declining and much below normal. The southern half of New Hampshire is in moderate drought (D1). Water usage is up 29%, primarily due to outdoor water use, despite the Town of Exeter Level 2 outdoor water restrictions effective July 7, 2020.

### Recommendation

In accordance with Exeter Town Ordinance 1610, Water Use Restrictions, the Public Works Department recommends Level 2 water restriction remain in place to conserve and maintain adequate reserves of the public water supply. Level 2 restriction limits landscape watering by odd numbered addresses on odd numbered days, even numbered addresses on even numbered days, and only allows landscape watering between 7 pm and 8 am. Water users are encouraged to practice effective water conservation. For helpful tips on water use and conservation go to <https://www.epa.gov/watersense>.