



# EXETER PUBLIC WORKS DEPARTMENT

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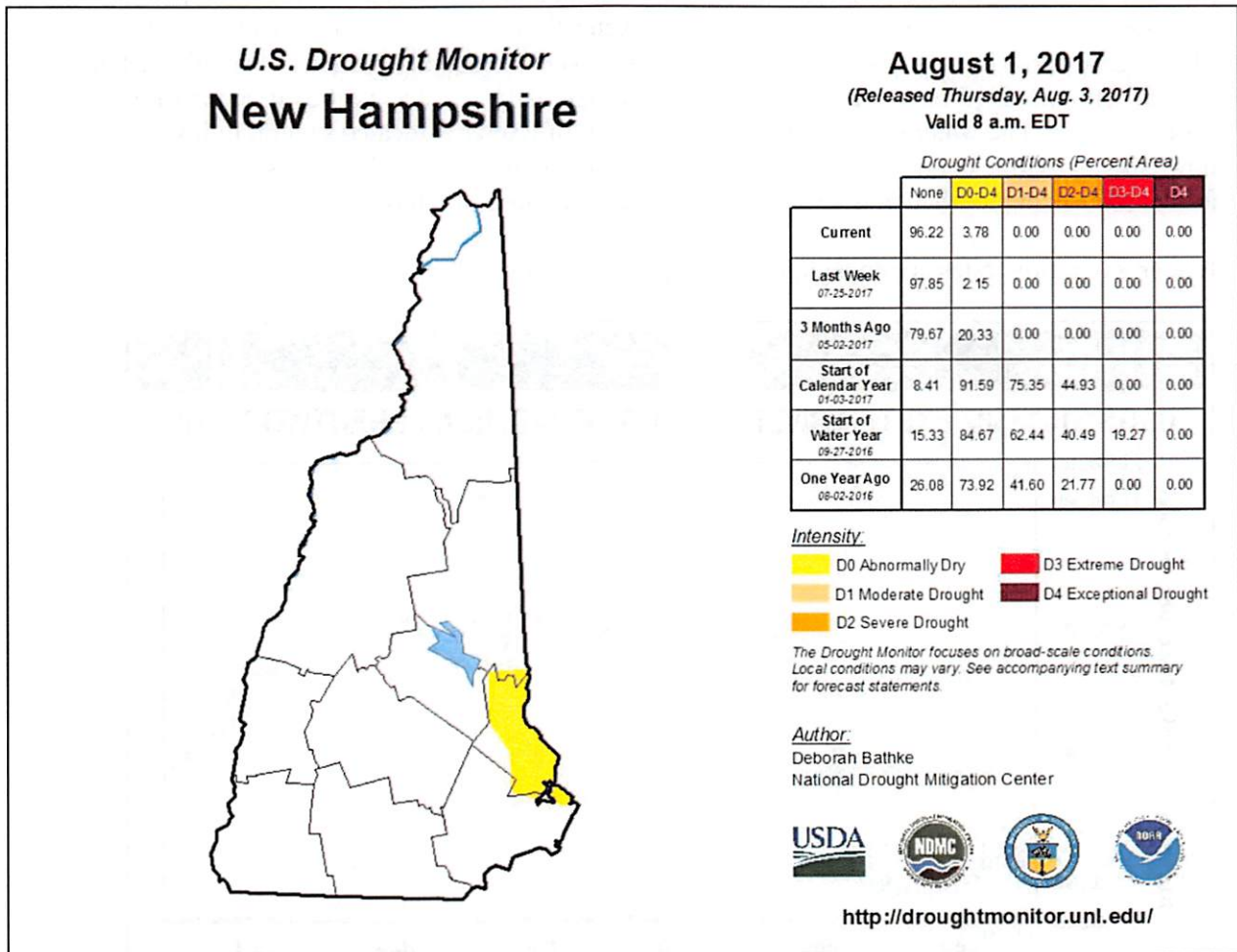
Water Resources Status Update

August 7, 2017

Jennifer Perry, Public Works Director

## New Hampshire Drought Monitor

The National Drought Summary for August 1, 2017 indicates there is no drought in New Hampshire, however, much of Strafford County and the northeast corner of Rockingham County are abnormally dry (D0).



Coastal Maine and Aroostook County are also abnormally dry. Washington County (furthest "Downeast") in Maine was downgraded to moderate drought (D1) in the last week.

### Groundwater Levels

Groundwater levels for long-term monitoring wells in the region are near average. The USGS well in Epping is near the 75th percentile mean for the month of June. The USGS well in Deerfield is slightly below the median levels for the month of June (50th percentile).

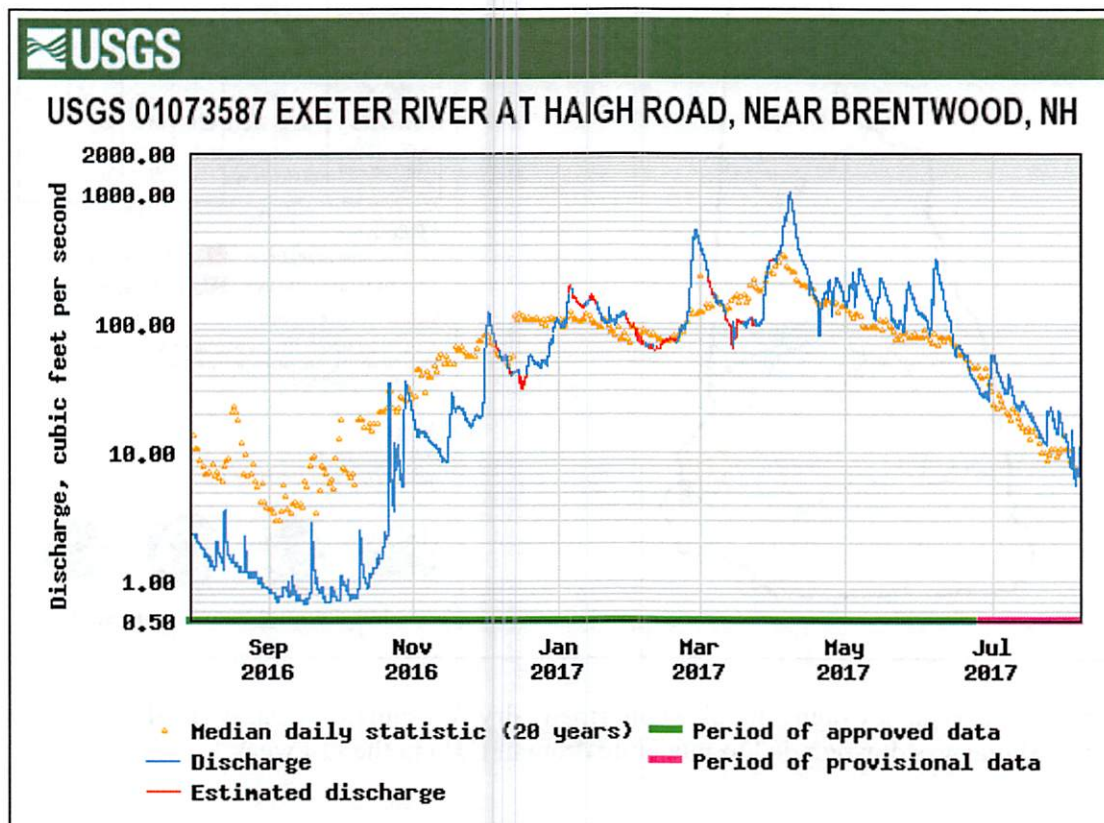
Gilman and Stadium wells have only been in production in their revitalized conditions for a little over a year. Their historical use is limited. Additional information will be provided as it becomes available. Current static levels are near static levels measured in 2009 during the early permitting and redevelopment phases of the wells.

Current groundwater levels are considered **Average**.

### River Flow

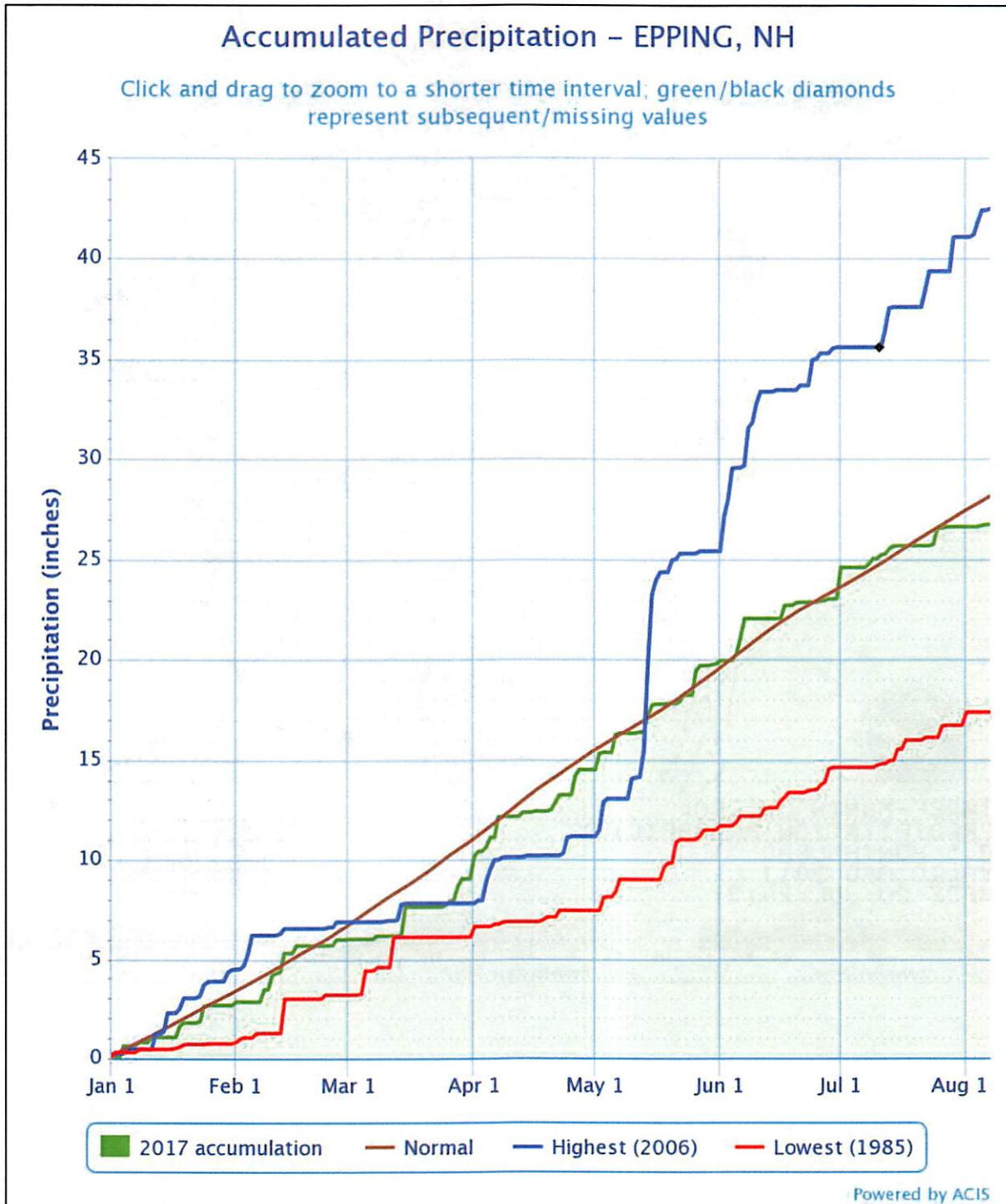
The months of June, July and August continue the period of declining flows after the spring runoff, however, flows in the Exeter River this year are an order of magnitude higher than a year ago. The USGS stream flow gauge on the Exeter River at Haigh Road in Brentwood (drainage area 63.5 square miles) indicates current instantaneous discharge is 7.4 cubic feet per second (cfs) (at 12:15 on 8/7/17). This gauge is occasionally affected by the operation of an upstream dam. 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 this location are 1.69 times higher than at the Haigh Road gauge, or approximately 12.5 cfs.

Exeter River flow rates are considered **Average** for this time of year.



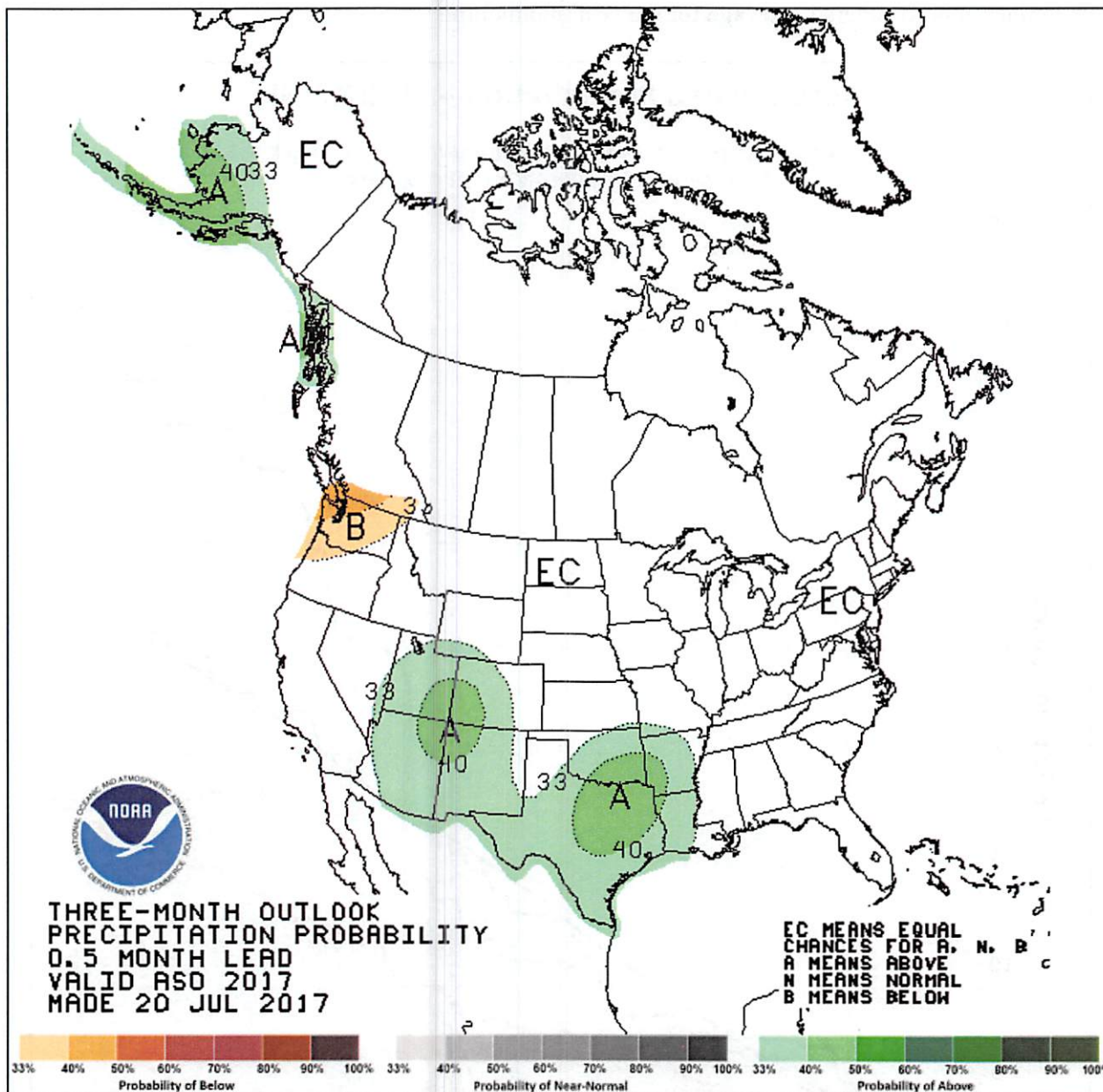
### Precipitation

Total precipitation received for the month of June was 3.25 inches, normal is 4.07 inches; July was 3.58 inches, normal is 3.81 inches. Precipitation since January 1 is 26.72 inches which is 1.4 inches below the normal of 28.12 inches (Source: National Weather Service NOWData for Epping, NH). Total annual precipitation averages 45.09 inches for this site (53 years of record). Precipitation is considered **Average** for the year and month.

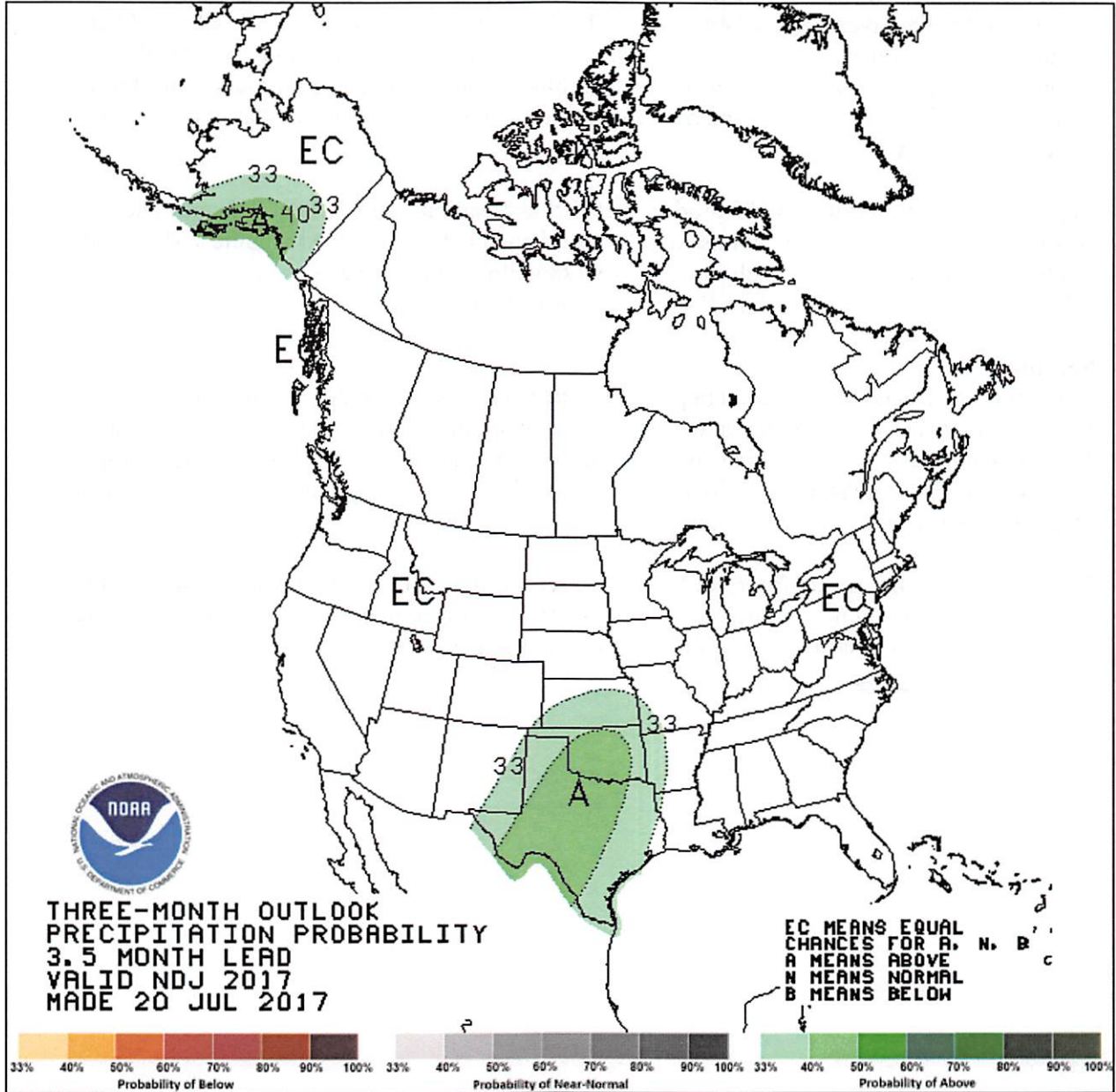


### Precipitation Forecast

The three month outlook from NOAA indicates equal chances for above, normal or below normal precipitation for August through October for the New England region.



The outlook for November 2017 through January 2018 is equal chances for above, normal or below normal precipitation for the New England region.



[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)

### **Water Supply**

The Reservoir on Dearborn Brook (Waterworks Pond) was the source of water for the surface water treatment plant (SWTP) for most of the month of June 2017; the annual seasonal switch over to the Exeter River occurred on June 26. The SWTP produced 18,859,668 gallons of water, or supplied 58% of demand in June. The groundwater treatment plant (GWTP) produced 13,667,739 gallons, or 42% of demand. The combined volume surface and groundwater for the month was 32,527,407 gallons, which averages out to 1,084,247 gallons per day. This is a 16% increase from May.

July flows held steady: the SWTP produced 19,206,089 gallons, still 58% of demand. The GWTP produced 14,107,389 gallons, still 42% of demand. The combined volume surface and groundwater for the month of July was 33,313,478 gallons, which averages out to 1,074,628 gallons per day. This is a less than 1% decrease from June.

### **Summary**

Water resources and precipitation are proving to be average so far in 2017. June and July are following typical seasonal patterns, with decreased precipitation and stream flows in June and July compared to spring time highs of April. Groundwater levels are at or near average for this time of year. The state is not in drought, but abnormally dry conditions exist north of Exeter in Strafford County and along the Maine coast.

On June 5, 2017, the Exeter Board of Selectmen removed the Level 1 voluntary outdoor water restriction, effective June 12, 2017. Water users are encouraged to continue to practice effective water conservation. For helpful tips on water use and conservation go to <https://www.epa.gov/watersense>.