
City of Portsmouth

Department of Public Works



July 6, 2021 Portsmouth Water Supply Status Report

Voluntary Water Restrictions Continue

The Seacoast area of New Hampshire is currently in Stage 1 of drought conditions with abnormally dry conditions. Last month's hot and dry weather also increased our water supply demands. Therefore, the City of Portsmouth and Pease International Tradeport water systems are continuing to ask customers to voluntarily conserve water. The recent rainfall has helped reduce these demands, however, if dry conditions return, mandatory restrictions on non-essential water use may be required. They could include odd/even watering schedules. The following summary provides more detail.

The City of Portsmouth's Water/Stormwater Division encourages residents to "Think Blue" and consider some of these water-saving measures you can practice at home:

www.cityofportsmouth.com/publicworks/water/water-efficiency-information

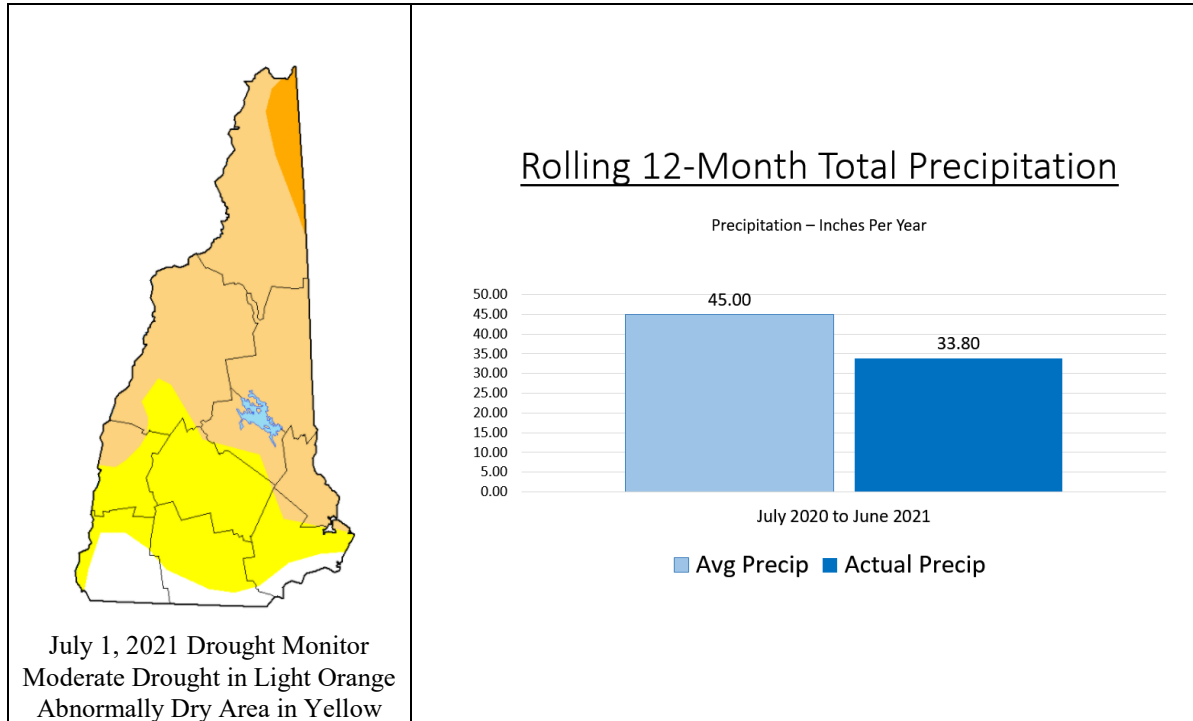
Other water efficiency tips can be found on the UNH Cooperative Extension and New Hampshire Department of Environmental Services websites at:

<https://extension.unh.edu/blog/water-conservation-fundamentals-gardening-and-landscaping>

<https://www.des.nh.gov/climate-and-sustainability/conservation-mitigation-and-restoration/water-conservation>

Water operations staff are continuously assessing our supply conditions and will provide additional updates as needed. Please check our City's website for the latest Water Supply Status Report:

www.cityofportsmouth.com/publicworks/water/supply-status

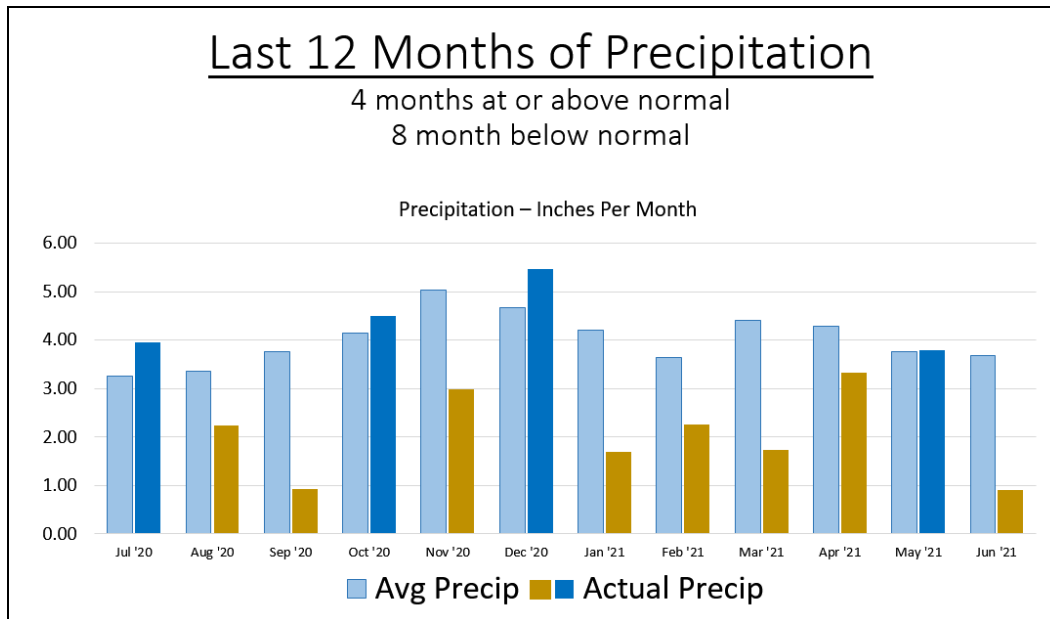


DRY CONDITIONS CONTINUE FOR SEACOAST AREA

The Seacoast area of New Hampshire continues to be dryer than normal with a current 12 inch deficit from normal. June was a very dry month, with only an inch of precipitation. The rain at the beginning of July has helped to reduce water demands and replenish the reservoir a bit.

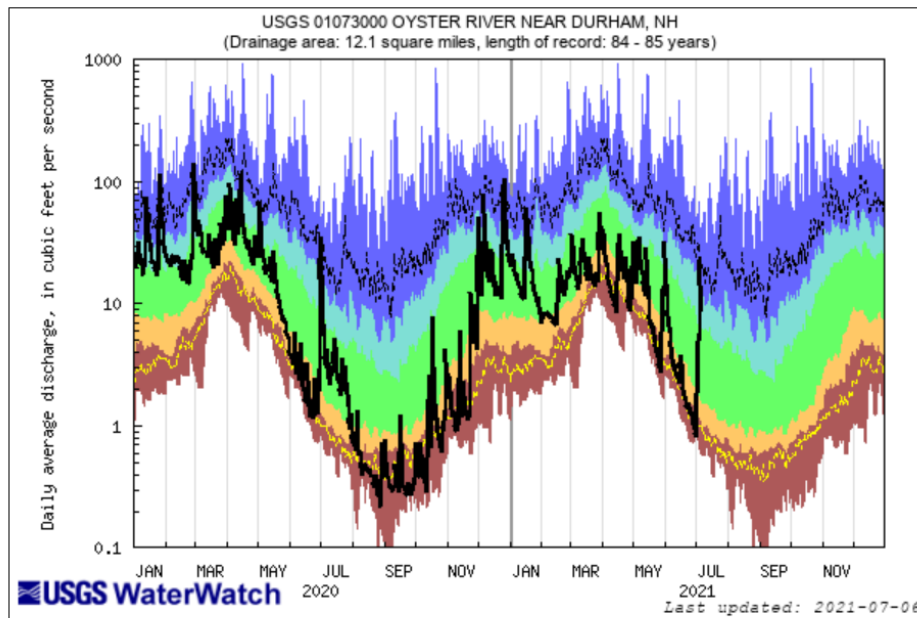
PRECIPITATION TREND

As shown in the previous graphic, our precipitation since July 2020 continues to be below normal. Currently, the drought outlook anticipates continued dry conditions. The following graphic provides more detail of how 8 of the last 12 months have been dryer than normal. The good news is that April and May 2021 were near average and we have already received 2.7 inches of rainfall so far in July:



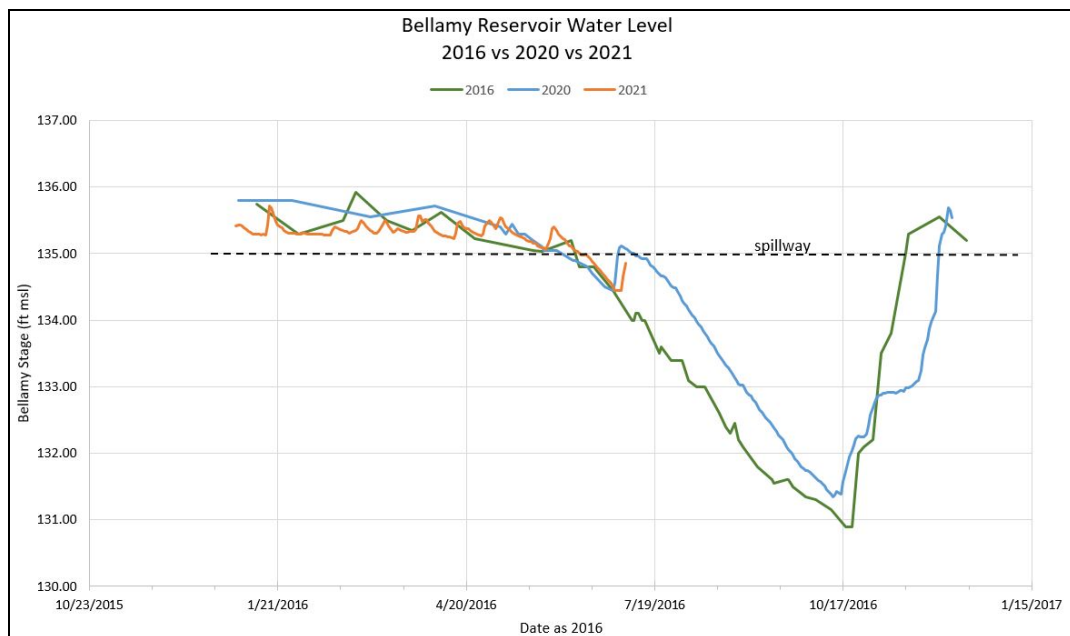
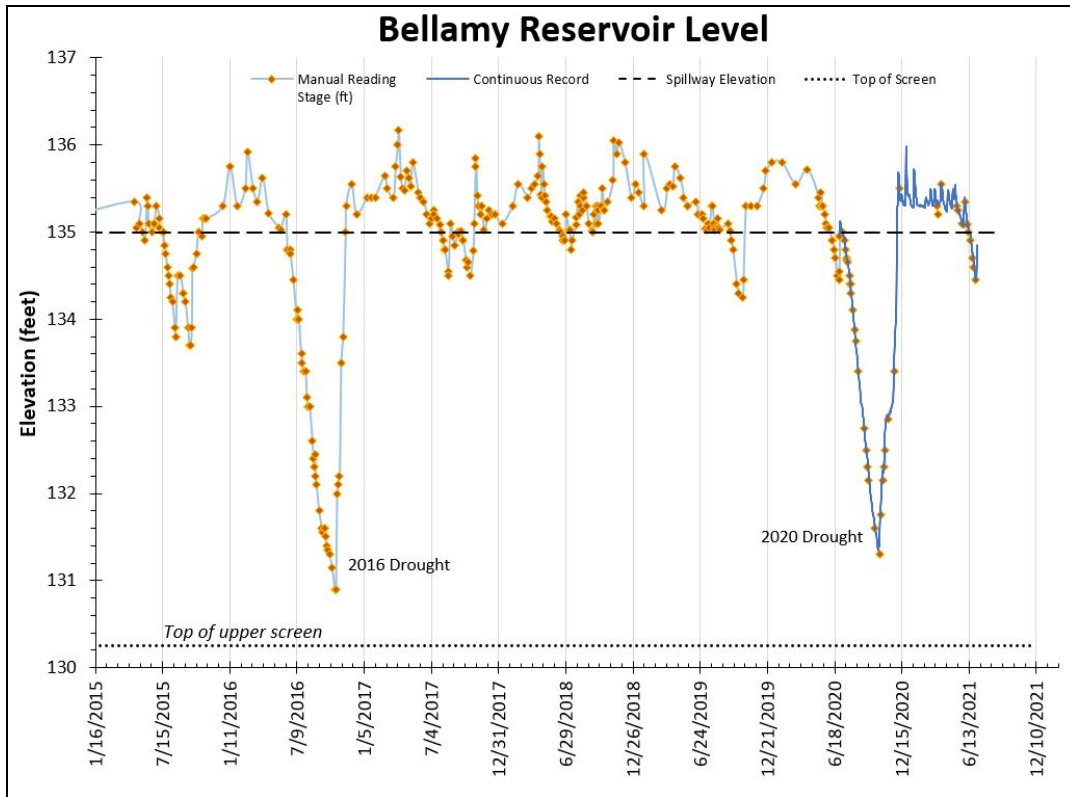
RIVER FLOW AND RESERVOIR LEVEL

Portsmouth Water System operators track the USGS stream flow gauges in the Oyster River and Lamprey River to assess flow conditions. These gauged watersheds are used to assess the relative recharge to the Bellamy Reservoir through its tributaries, the Bellamy River and Mallego Brook. The following graph shows the current flow trend versus average flow for this time of year.



Explanation - Percentile classes					
lowest-10th percentile	5	10-24	25-75	76-90	95 90th percentile - highest
Much below Normal	Below normal	Normal	Above normal	Much above normal	Flow

The following graphics show the current water level in the reservoir and how they compare with the previous droughts of 2016 and 2020. Our water operations staff can utilize this data to project what the anticipated water levels may be later this summer based on weather conditions:

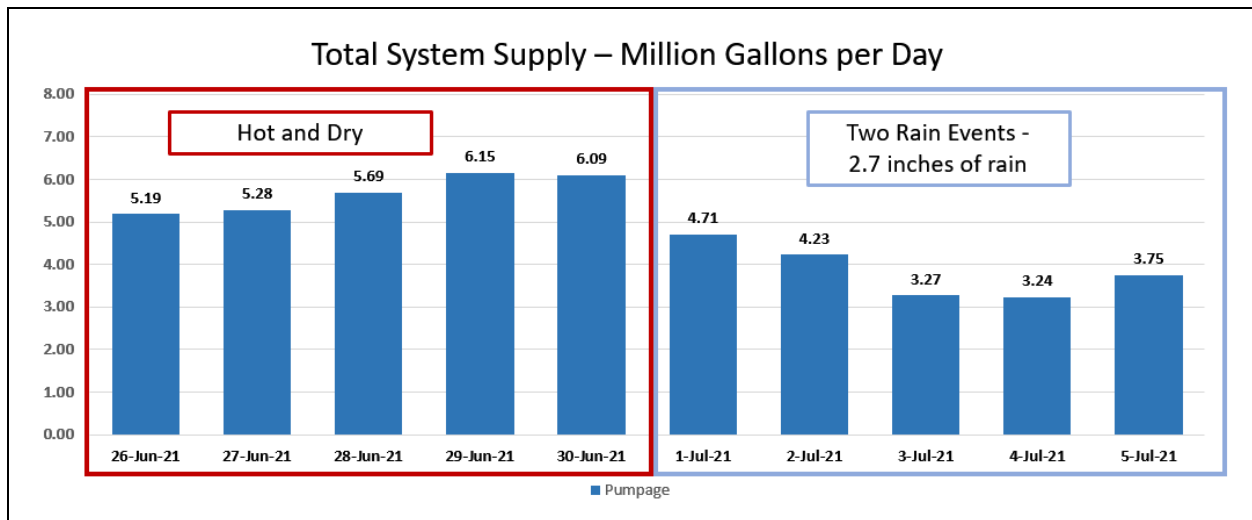


GROUNDWATER LEVELS AND SUPPLY CAPABILITY

The integrated management of our water system allows our system operators the potential to utilize surface water when that source is of sufficient quantity and quality. Last month’s water supply update included detail about how we are withdrawing about 30 percent less water from our groundwater sources than we were ten to fifteen years ago. This has helped preserve the availability of water from these sources. Currently our groundwater well conditions are either a little above normal or at normal levels. Additionally, the completion of the Pease Water Treatment Facility will enable the Haven Well to be reactivated in the near future once the state’s Drinking Water and Groundwater Bureau reviews and approves the water quality and performance data of the treatment system. This well is capable of supplying 534 gallons-per-minute (767,000 gallons-per-day) of water.

WATER DEMAND

Customer water demands generally increase during hot and dry weather events. This is attributed to both irrigation and facilities that utilize water for cooling purposes. The following graphic shows the effect that the recent rainy and cooler weather has had on our water system demands:



SUMMARY OF WATER SUPPLY PARAMETERS:

Water Supply Status Portsmouth Water Division July 6, 2021							
State Drought Status	Precipitation	River Flows	Reservoir Level	Groundwater Levels	Water Supply Capability	Current Water Demand	Customer Water Restrictions
None	Above Average	Above Average	Above Average	Above Average	Above Normal	Below Normal	N/A
Abnormally Dry	Average	Average	Average	Average	Normal	Normal	None
Moderate Drought	Ju	Below Average	Below Average	Below Average	Below Normal	Above Normal	Voluntary Measures
Severe Drought	Dry	Low	Low	Low	Restrictions Necessary	High	Odd/Even Watering
Extreme Drought	Very Dry	Very Low	Very Low	Very Low	Additional Restrictions Necessary	Very High	No Outdoor Use
Exceptional Drought	Drought	Drought	Drought	Drought	Emergency	Historic High	Emergency Measures

WATER QUALITY

Portsmouth Water Division routinely monitors water quality parameters and performs water quality sampling and analysis as directed by the Federal Safe Drinking Water Act and the New Hampshire Department of Environmental Services. Water sources are monitored for radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. Critical water treatment parameters for turbidity, pH, chlorine, orthophosphate and fluoride are continually monitored and tracked by our system operators. The regulations require us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are reported, along with the year in which the sample was taken. Annual Water Quality Reports for both water systems detail these efforts. The reports for 2020 were recently mailed to each water system customer. They are also available at:

cityofportsmouth.com/publicworks/water/drinking-water-quality

SAFE WATER ADVISORY GROUP

The City Council voted on October 5, 2020 to create a Safe Water Advisory Group. This group meets to gather advisory input from local stakeholders, scientists and activists focused on the PFAS (Per- and Polyfluoroalkyl Substances) contamination that has impacted the City of Portsmouth with legislative, health advisory and fiscal changes. The next meeting will be held in September 2021. Additional information, meeting schedules and archives can be found on the City's webpage at:

www.cityofportsmouth.com/citycouncil/safe-water-advisory-group

Further Updates and Information

This information will be distributed electronically on the City of Portsmouth's website at:

www.cityofportsmouth.com/publicworks/water.

If anyone needs additional information or has questions contact Al Pratt, Water Supply Operations Manager at 520-0622 or Brian Goetz, Deputy Director of Public Works at 766-1420.