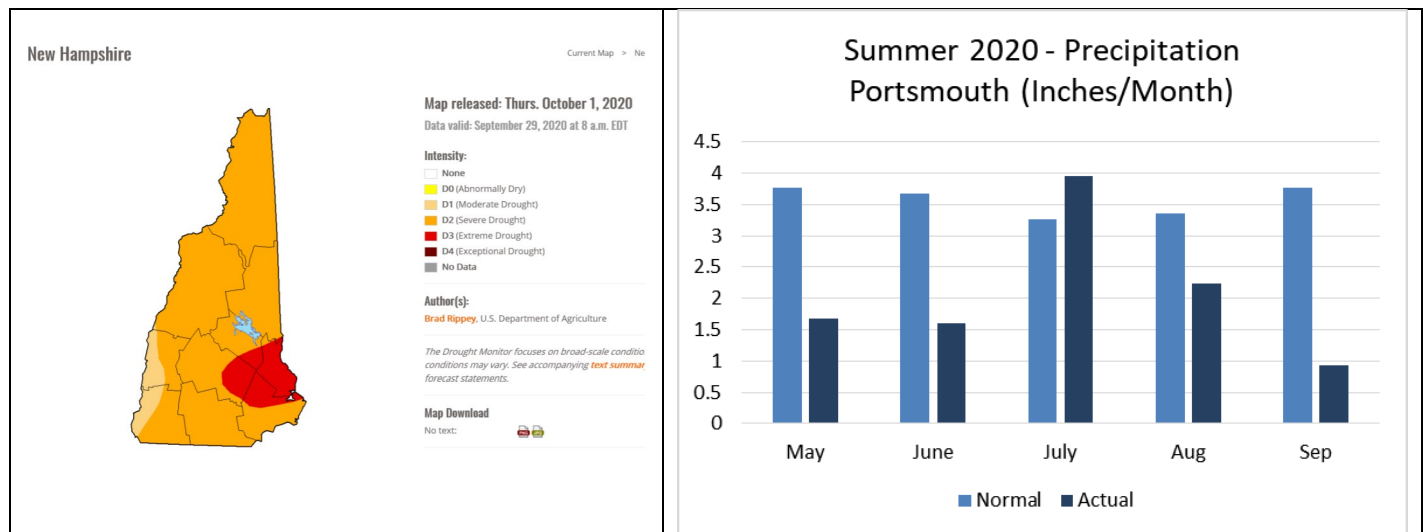


City of Portsmouth

Department of Public Works



October 7, 2020 Portsmouth Water Supply Status Report



EXTREME DROUGHT CONDITIONS FOR SEACOAST AREA

As the graphics show, the Seacoast area of New Hampshire has experienced a very dry summer, especially in the months of August and September. Combined, only three inches of rainfall were recorded during the last two months. We are currently in a Stage 3 – Extreme Drought. Fortunately, the odd/even water restrictions that the City of Portsmouth implemented on September 10, 2020 are working. We are thankful that our customers are complying with our request that they only irrigate from midnight to 10:00 am on odd days and refrain from irrigation on even days. Early in the month our water system was experiencing demands as high as 5 million gallons a day. By the end of September that demand was down to 3.7 million gallons.

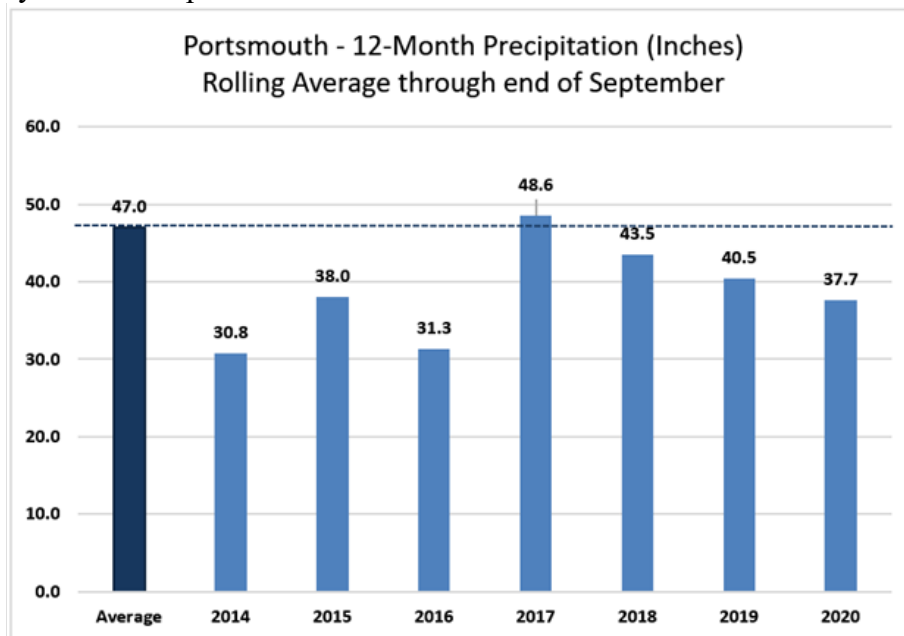
City water operations staff continue to participate in the New Hampshire Drought Management Team meetings, the most recent one was held on October 1, 2020. Here is their information: <https://www.des.nh.gov/organization/divisions/water/dam/drought/documents/20201001-drought-team.pdf>

The State Department of Environmental Services has implemented the State’s Drought Management Plan to coordinate the State Drought Management Team of state, federal, regional and municipal agencies, including the Portsmouth DPW Water Division. Ongoing actions include: assessing reservoir impacts and adjusting operations, working with drinking water systems statewide and ensuring the public is informed of the impacts and conservation measures that should be employed now to avoid serious problems later in the summer. 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, including potentially replacing inefficient toilets and washing machines:

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

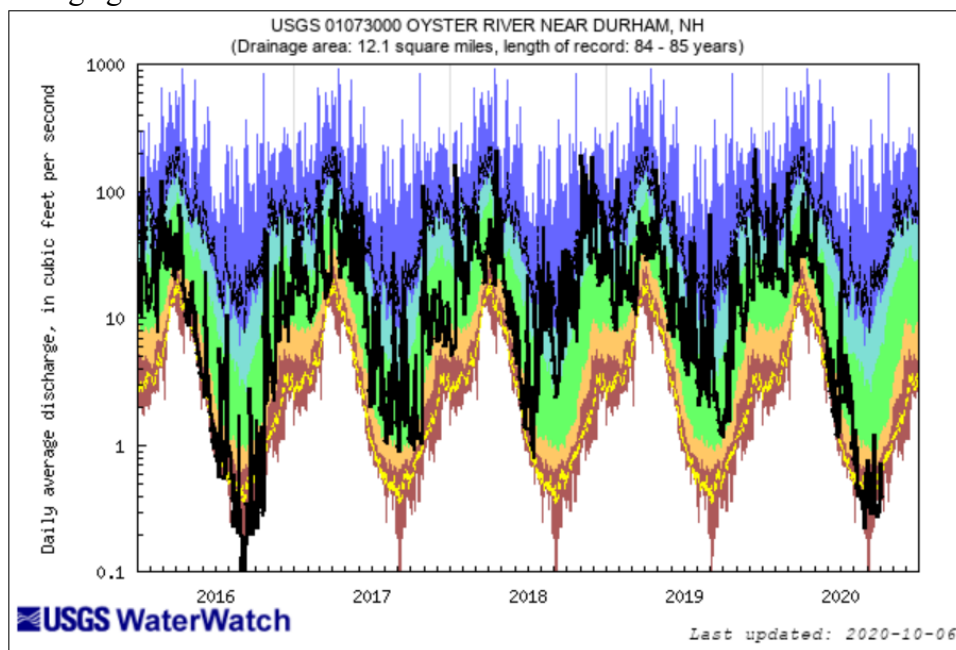
PRECIPITATION TREND

In comparing the last seven years of precipitation, our precipitation since October 2019 is below normal but much better than it was at this time during the drought of 2016. The fall of 2019 and spring of 2020 was fairly wet and helped our surface and groundwater sources of supply to be near normal conditions when the summer began. Our water supply conditions in our system reflect this, with our groundwater supplies doing a bit better than they were at this time in 2016. However, the drought of 2016 ended in October when storms contributed over 7 inches of rainfall that year. Currently, there are no projections for similar storm events in the weather forecast, however, this is New England so anything could happen. If it remains dry our water supply staff are currently preparing contingency plans such as activating our Madbury Well #5 which was recently permitted. The loss of the Haven Well is still impacting our operations. That well is anticipated to be reactivated next summer when the Pease Grafton Road water treatment system is complete.



RIVER FLOW

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 graphic shows the historical river flow from the last five years. The black line shows the recorded flow of the river compared with below, normal and above normal periods. This graphic shows how both 2020 and 2016 summer flows were much below normal. Again, as with the 12-month precipitation, the months preceding 2020 were at or above normal, which helped to recharge groundwater.



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

Fire Conditions

The dry conditions led the Governor to issue a proclamation September 24, 2020. The following restrictions will be in effect until drought conditions improve:

- No open fires on public land except campgrounds
- Burning brush pile type fires is prohibited everywhere
- Unless prohibited by the local Forest Fire Warden, backyard campfires are allowed with a permit
- No smoking in public woodlands or on public trails

WATER QUALITY

The 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 2019 were recently mailed to each water system customer. They are also available at:

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

HYDRANT FLUSHING

The Portsmouth DPW Water Division began the routine flushing of the City’s water system fire hydrants and water mains on Monday, September 21. Flushing is scheduled between 7 pm and 11 pm, Monday through Thursday for six weeks. The flushing operation covers both public and private hydrants in Portsmouth, New Castle, Rye, Greenland and Newington. Crews open select fire hydrants, releasing water with enough velocity to carry sediment out of the pipes.

Residents are advised that when the Water Division trucks with flashing lights are working in a neighborhood, they should refrain from washing laundry to avoid any potential discoloration of clothing. While flushing can result in discolorations to tap water, the water remains safe to drink. When flushing is finished, water customers should run cold water to clear any discolored water in their plumbing systems. If the discoloration persists, customers should contact the Water Division through the Click ‘n Fix system to ensure prompt response.

The Water Division conducts the flushing program twice a year to remove sediment buildup, which is critical for maintaining water quality throughout the distribution system. Given the current drought conditions, flushing will be minimized and focused on areas with the greatest need for managing water quality.

PFAS TRACKING AND RESPONSE



July 2020 Photo of Pease Grafton Road PFAS Water Treatment Facility Construction



Delivery and Installation of Resin Filter Vessels in August 2020

Our efforts to track and treat the PFAS contamination at the Pease International Tradeport continue. PFAS stands for a broad group of perfluoroalkyl and polyfluoroalkyl substances, produced and found in many commercial products and also used in firefighting foam. Per- and polyfluoroalkyl substances (PFAS) are currently unregulated by the Safe Drinking Water Act. However, the EPA Health Advisory concentration standard is 70 parts per trillion (ppt) for perfluorooctane-sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA). In response to the discovery of PFOS in the Haven Well in May 2014 at levels that exceeded the EPA Provisional Health Advisory (200 ppt at that time), the Haven Well was removed from service. This well has remained disconnected from the Pease Tradeport water system since this finding. The source of

the PFAS at the Tradeport was aqueous film-forming foam that had been used to extinguish fires and in training exercises at the former Air Force Base. Since 2014, the Harrison Well and Smith Well on the Pease Tradeport water system, and Portsmouth Well #1 and Collins Well in the Portsmouth water system, have been routinely monitored for PFAS by the Air Force.

Activated carbon filters continue to treat the Harrison and Smith wells at Pease. A new treatment facility is currently under construction to treat those two wells together with the reactivation of the Haven well when the construction is completed in the summer of 2021. PFAS tracking of the other Portsmouth surface and groundwater drinking sources continues on a quarterly basis and all data is posted on the city's website.

The State of New Hampshire recently passed legislation to enforce their maximum contaminant level (MCL) regulations for four compounds (PFOA, PFOS, PFHxS and PFNA) that were originally set in 2019. The City has been and will continue to sample PFAS quarterly according to these regulations and post that data on the City's website.

SAFE WATER ADVISORY GROUP

The City Council voted on October 5, 2020 to create a Safe Water Advisory Group. This group will meet 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. This idea was developed in consultation with Portsmouth residents and safe water activists Andrea Amico and Lindsey Carmichael and Councilors Lazenby and Pearson over numerous meetings during 2018-19, and in 2020 with Councilor McEachern. The mission of this committee will be to review and communicate the latest science on the health and environmental effects of PFAS, to monitor federal and state level legislative changes, and to anticipate policy changes that could impact the city of Portsmouth. Participants will include two City Councilors, two to four community members, one Portsmouth Firefighter, two to three City of Portsmouth staff (Public Works, Health), one Portsmouth School Board member, one medical professional, one to two NH State legislators representing Portsmouth. Proposed activities of the group will include conducting reviews of periodic City well monitoring results, legislative trends in NH and other states, and current science on PFAS exposure. They will provide periodic reports back to the City Council as needed. It was suggested that the group meet quarterly or every other month. The first meeting is not anticipated to occur until after the November elections.

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.

