



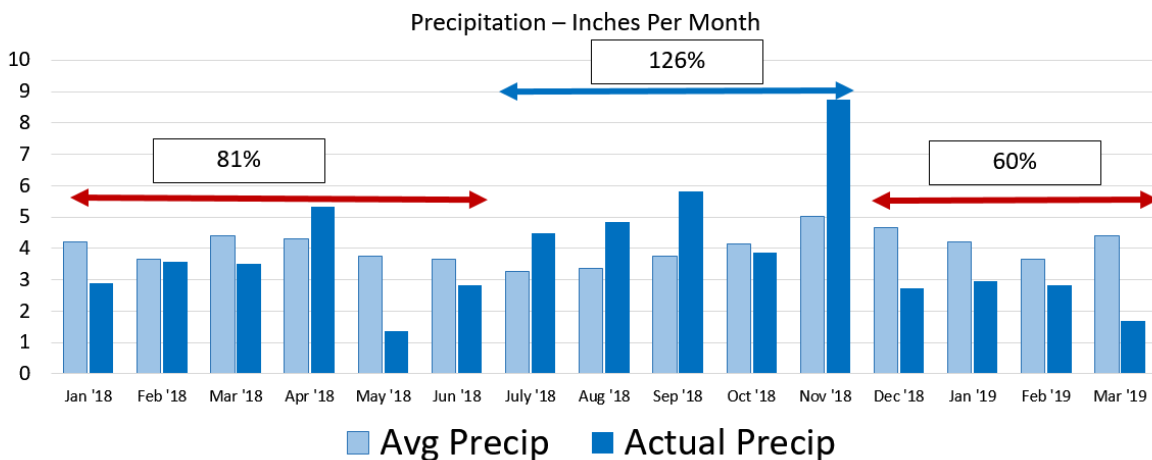
April 9, 2019

## Portsmouth Water Supply Status Report

### Overview

Current weather patterns are trending dryer than normal. Precipitation in March 2019 totaled less than two inches. Overall, since January 2019, precipitation has only been 60 percent of normal. Fortunately, an extended wetter than normal period occurred from July to December 2018. This helped to keep streamflows up and recharged the aquifers. The following graphic highlights the precipitation for the last fifteen months:

### Precipitation Trend – Last 15 Months



Through vigilant monitoring and operational changes, the Portsmouth water system is in good shape heading into the summer. However, if dryer than normal conditions persist, and they are accompanied by higher than normal customer demand, there may be need for additional efficiency measures. Staff will continue to track and assess these conditions and we will provide updates as warranted.

Currently there are no water restrictions in place. We continue to ask our water customers to please use water wisely, minimize waste, and incorporate water efficient fixtures and appliances whenever possible. The City also continues to offer water efficiency rebates of \$100 per low flow toilet and \$150 for the purchase of a high efficiency washing machine. These are available to all residential customers, including multi-family customers. To date, nearly 1,000 rebates have been issued. Additional information on this program can be obtained from the City’s water billing department or from the City’s website:

<https://www.cityofportsmouth.com/publicworks/water-efficiency-rebate-program>

**2018 Year in Review – Water Demand**

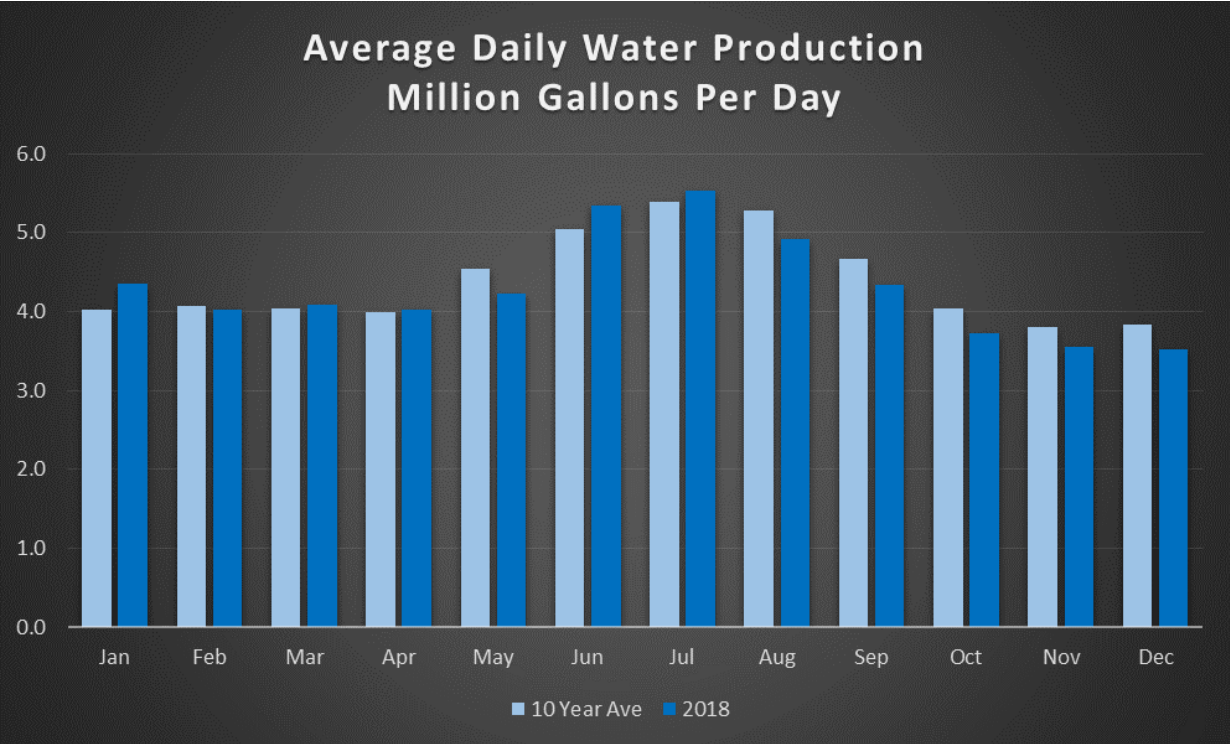
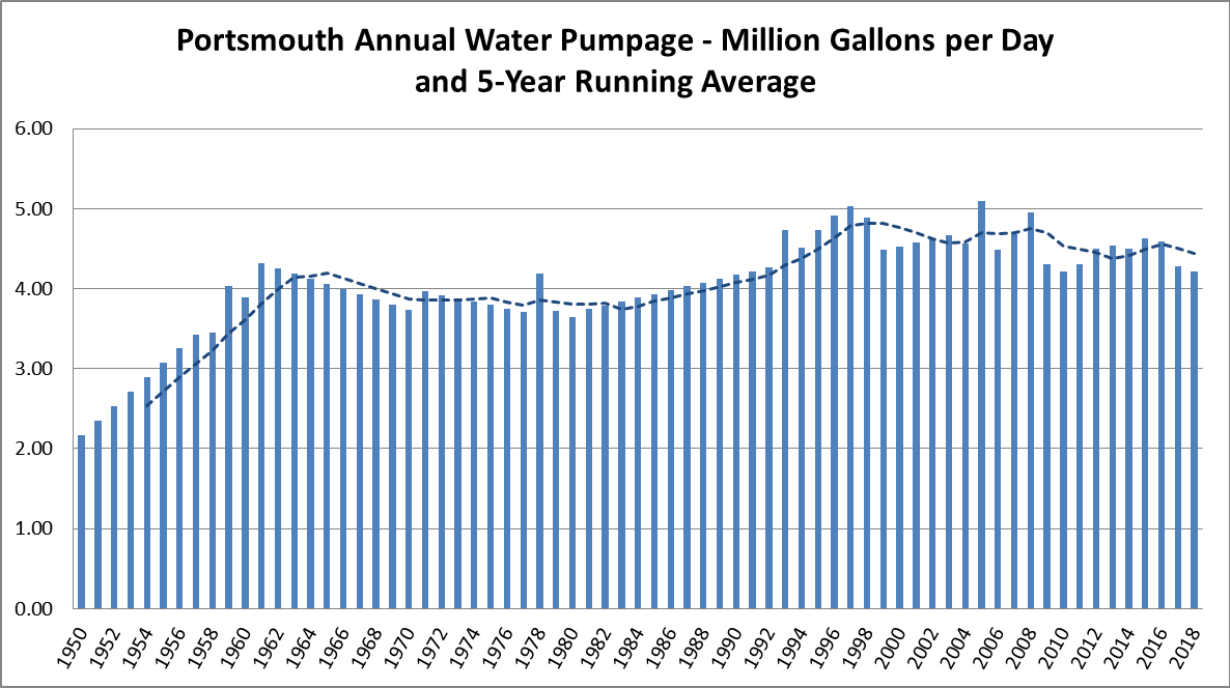
The following data shows the total amount of water produced by the Portsmouth and Pease Tradeport drinking water systems in 2018. The peak day was July 12, 2018, which occurred during an extended hot and dry weather period. Customer outreach, which included press releases, website updates and news coverage, helped to reduce system demand. Rainfall at the end of July also helped reduce demand.

**System Gallons Produced**

Total	1,576,286,703	
Ave Day	4,318,594	
Max Day	6,749,184	July 12, 2018
Min Day	2,627,195	December 25, 2018

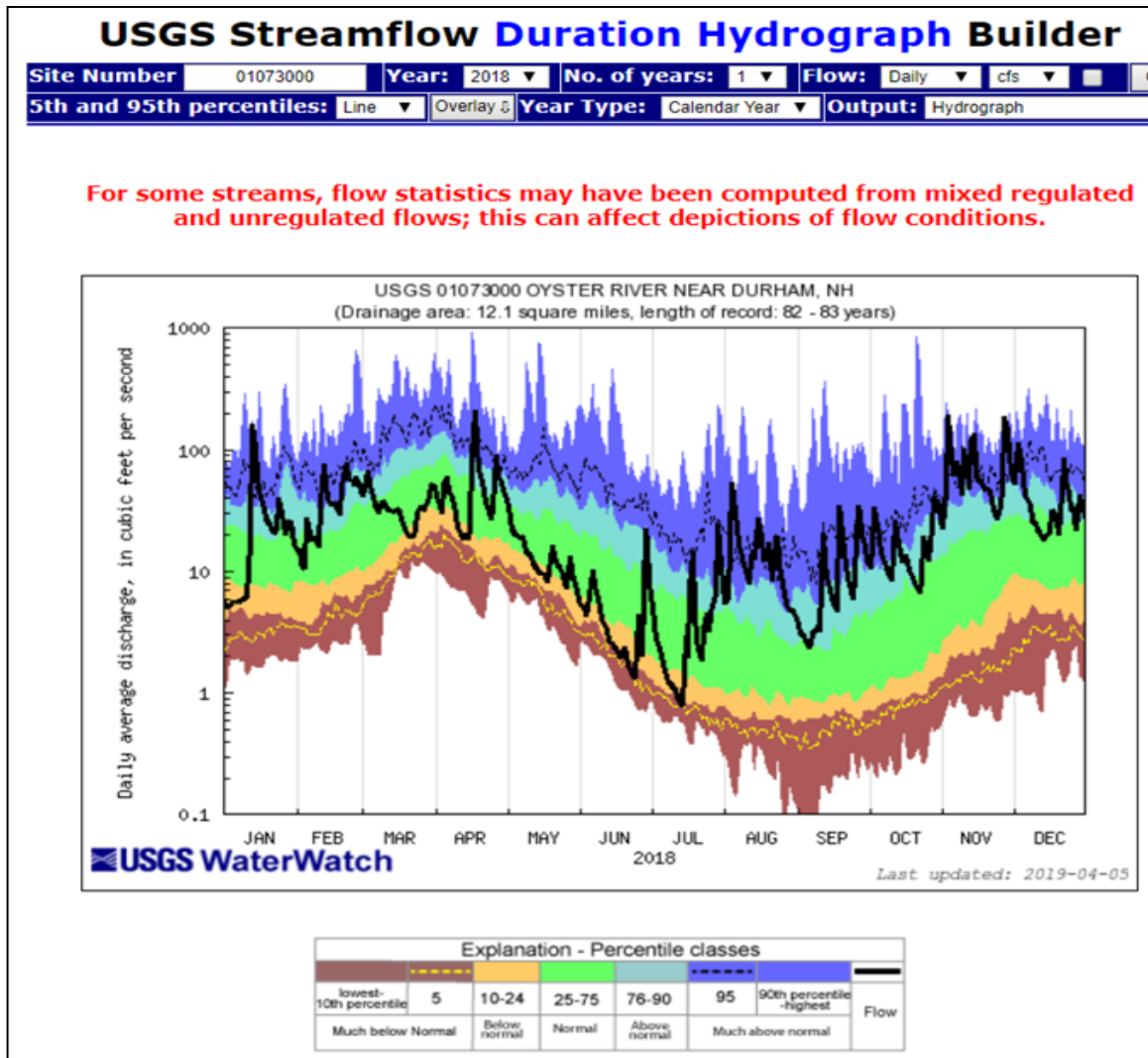
Million Gallons per Day	Number Days	Percent
Less than 3	4	1%
3 to 4	133	36%
4 to 5	161	44%
5 to 6	58	16%
Over 6	9	2%

Total water production in 2018 was below the five year average and continues to trend lower than average as shown in the following chart. Average daily production by month was also below the ten year average as shown by the second chart. This trend can be attributed to efficient water usage of existing customers but is also due to the success of the leak detection program implemented by the water operations staff. We will continue to perform these detections on thirty percent of our system every year and will also perform specific analysis in areas we suspect are experiencing leaks.



## 2018 Year in Review – Streamflow, Reservoir and Groundwater Levels

The following graphic from the United States Geologic Service shows the water flow record for the Oyster River in 2018. This river has been gauged for over 80 years and the graphic below shows the 2018 flow compared with the average. Due to the lack of precipitation in the Spring, the beginning of the summer was very dry, leading to below normal conditions. Rainfalls in July, August and September increased flows to above normal levels which helped to recharge the Bellamy Reservoir and aquifers that supply water to our wells. Current conditions are good for these supplies, however, if the dry weather continues those levels will drop accordingly.



## Current Water Supply Capability

<b>Water Supply Capability</b>
Above Normal
Normal
<b>Below Normal</b>
Restrictions Necessary
Additional Restrictions Necessary
Emergency

The loss of the Haven Well as a water source (which contributed approximately 10% of the water system's overall capability) has reduced the amount of water that can be provided to the system in optimum conditions. Additionally, with the current Granular Activated Carbon (GAS) treatment system in place for the Harrison and Smith Wells at Pease those two sources are limited to a flow of 400 gallons per minute, which is approximately 75% of the well capacity. Water continues to be pumped from the Portsmouth system into Pease as necessary to meet that system's demands. As a result of this reduced capacity, the water supply capability is considered **Below Normal** at this time.

Construction of the Grafton Road Water Treatment Facility at Pease is underway and will take approximately two years to construct. With this treatment in place the Haven well will be brought back into service and water pumped from the Portsmouth to Pease system will not be necessary. Additionally, the future addition of well #5 in Madbury will increase the overall peak capacity of the Portsmouth portion of the water system once it is fully in service.

## Further Updates and Information

This information will be distributed electronically on the City of Portsmouth's website in the Department of Public Works > Operations > Water section. If anyone needs additional information or has questions contact Brian Goetz, Deputy Director of Public Works at 766-1420 or Al Pratt, Water Supply Operations Manager at 520-0622