



February 5, 2016

## Portsmouth Water Supply Status Report

### Overview

The following Portsmouth Water Supply Status Report provides the Portsmouth Water Division’s customers an assessment of our current water supply conditions. This report will be distributed routinely via the City of Portsmouth’s website at:

[www.Cityofportsmouth.com/publicworks](http://www.Cityofportsmouth.com/publicworks) - water

### Water Conservation Status

Customer Water Restrictions
N/A
<b>None</b>
Voluntary Measures
Odd/Even Watering
Two-days/Week Watering
No Outdoor Use

Based on current water supply conditions, there are **no water use restrictions** at this time.

The demand for water is typical for this time of year. Groundwater and surface water conditions are within ranges historically observed during January and February. Water supply resources are adequate and demand can be met without use restrictions.

The City of Portsmouth continues to encourage awareness of water use and the implementation of water efficiency measures. Information and tips regarding water efficiency can be accessed at the following website links:

<http://www.portsmouthwastewater.com/watersense.html>

<http://www.epa.gov/watersense/>

## Current Customer Water Demand

Current Water Demand
Below Normal
<b>Normal</b>
Above Normal
High
Very High
Historic High

Water demand is considered **Normal** at this time.

Customer water demand is a factor in the supply status assessment that is measured by the amount of water delivered through the water system. This factor reflects customer usage and variations caused by daily, weekly and seasonal changes in business, residential and irrigation demands.

Average daily water demand was 3.97 million gallons per day (MGD) in January, which is slightly lower than the ten-year mean January demand of 4.16.

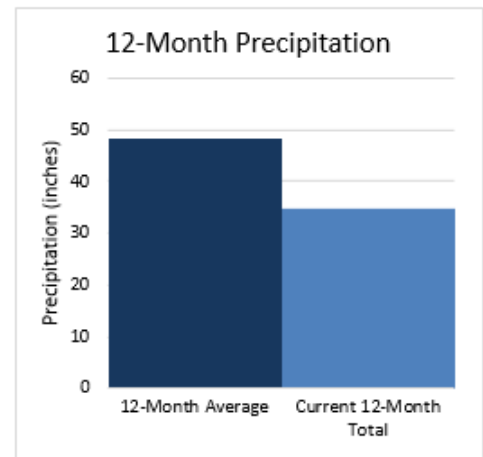
## Precipitation Status

Precipitation
Above Average
Average
Below Average
<b>Dry</b>
Very Dry
Drought

Total January precipitation in Portsmouth was 2.44 inches, which is 1.76 inches less than the historic January average. There were four storms in January, the largest storm yielded 1.68 inches of rain on January 10<sup>th</sup>. On the 16<sup>th</sup> there was a storm that deposited 0.48 inches of precipitation in a rain and snow mix.

In order to assess annual precipitation conditions, total precipitation over a rolling 12-month period is compared to the normal annual precipitation of 48.19". As the accompanying graphic shows, precipitation over the past 12-months equals 34.63" which is 13.56" below normal, 72% of the normal annual amount.

Due to these conditions, the precipitation status is currently considered **Dry**. A comprehensive chart of precipitation trends is attached to this document.



## Groundwater Levels

Groundwater Levels
Above Average
<b>Average</b>
Below Average
Low
Very Low
Drought

Currently the groundwater levels are within the **Average** range expected in the month of January and early February are generally stable.

Overall conditions of aquifer water levels are assessed with respect to water levels that are continuously monitored in the Portsmouth Water Supply wells. Based on historic water-level data, average water levels have been identified for a representative well in each well-field area for each month of the year. Assessments of the aquifer levels are made relative to average levels, historic low levels, and available drawdown in the wells.

## River Flow

River Flows
<b>Above Average</b>
Average
Below Average
Low
Very Low
Drought

Portsmouth Water System operators track the USGS stream flow gauges in the Oyster River and Lamprey River to assess flow conditions. The mean stream flow in the Oyster River at the USGS gauge was 26.0 cfs in January. This is 6.94 cfs (36%) greater than the 30-year January mean flow rate. The precipitation events that occurred on January 10<sup>th</sup> and 16<sup>th</sup> of January caused substantial increases in stream flow. On February 5, 2016, the Oyster River and Lamprey River were flowing at 41 cfs and 586 cfs, respectively, which are 315.38% and 287.25% of normal based on daily median flow.

At this time the current river flow rates are considered **Above Average** for this assessment.

## Reservoir Level

Reservoir Level
Above Average
<b>Average</b>
Below Average
Low
Very Low
Drought

The current stage of the reservoir is considered **Average** for this time of year.

As the surface water source for the Madbury Water Treatment Facility, the Bellamy Reservoir is monitored to assess and predict the overall amount of water available for the Treatment Facility. Reservoir water levels are compared to typical monthly levels to assess the reservoir conditions.

The Bellamy Reservoir has been flowing over the spillway since October and has maintained a stage within the typical range for this time of year.

## Water Supply Capability

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

Water Supply Capability is a measure used to identify any issues with the Portsmouth Water Supply System that would result in a limitation to the amount of water that could be supplied. These could be lack of supply, issues with source water quality, or mechanical failures of system components.

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, thus the water supply capability is considered **Below Normal** at this time.

## Further Updates and Information

This information will be distributed electronically on the City of Portsmouth's website in the Department of Public Work's "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 Resource Manager at 766-1538.

# Water Supply Status

## Portsmouth Water Division

February 5, 2016

Precipitation	Groundwater Levels	River Flows	Reservoir Level	Water Supply Capability	Current Water Demand	Customer Water Restrictions
Above Average	Above Average	<b>Above Average</b>	Above Average	Above Normal	Below Normal	N/A
Average	<b>Average</b>	Average	<b>Average</b>	Normal	<b>Normal</b>	<b>None</b>
Below Average	Below Average	Below Average	Below Average	<b>Below Normal</b>	Above Normal	Voluntary Measures
<b>Dry</b>	Low	Low	Low	Restrictions Necessary	High	Odd/Even Watering
Very Dry	Very Low	Very Low	Very Low	Additional Restrictions Necessary	Very High	Two-days/Week Watering
Drought	Drought	Drought	Drought	Emergency	Historic High	No Outdoor Use

# Precipitation - Portsmouth, NH - 1998 to 2016

