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# City of Portsmouth

*Department of Public Works – Drinking Water Division*

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## **Portsmouth and Pease International Tradeport Drinking Water Status Report 2026 – First Quarter (January 1, 2026 – March 31, 2026)**

The City of Portsmouth’s water supply sources have continued to perform reliably despite ongoing drought conditions that began in June 2025. Although the Bellamy Reservoir, Portsmouth’s primary surface water source, reached levels lower than those observed during the 2022 and 2024 droughts, reservoir storage stayed above the more critical lows recorded in 2016 and 2020. Groundwater levels are currently below seasonal norms; however, the Bellamy Reservoir has fully recovered.

As a result, water treatment operations have temporarily shifted toward greater use of surface water withdrawals while local groundwater aquifers continue to recharge during the spring months. During the first quarter of the year, approximately 73 percent of the City’s total water supply was sourced from treated water from the Bellamy Reservoir. Seasonal conditions have also helped reduce overall demand, as cooler temperatures and decreased outdoor irrigation have contributed to lower water use.

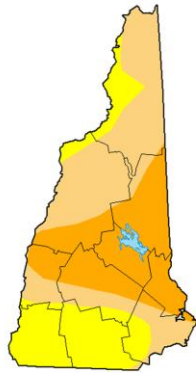
If drought conditions persist through late May or the start of June, water use restrictions will likely be introduced. In the meantime, the City’s Water Department encourages all customers to continue using water efficiently and to remain mindful of their water consumption to help protect this essential natural resource.

### **Precipitation and Weather**

As of March 31, 2026, drought conditions persisted across much of New Hampshire, though overall severity had moderated compared to fall 2025. According to the U.S. Drought Monitor, large portions of the state were classified under *Moderate Drought (D1)* conditions, with an interior band extending through central New Hampshire experiencing *Severe Drought (D2)*. Southern areas showed pockets of *Abnormally Dry (D0)* conditions. These drought designations reflect ongoing precipitation deficits and reduced soil moisture that continue to place stress on surface water resources, groundwater recharge, and ecological systems, reinforcing the need for continued water supply monitoring and conservation planning.

**U.S. Drought Monitor  
New Hampshire**

**April 14, 2026**  
(Released Thursday, Apr. 16, 2026)  
Valid 8 a.m. EDT

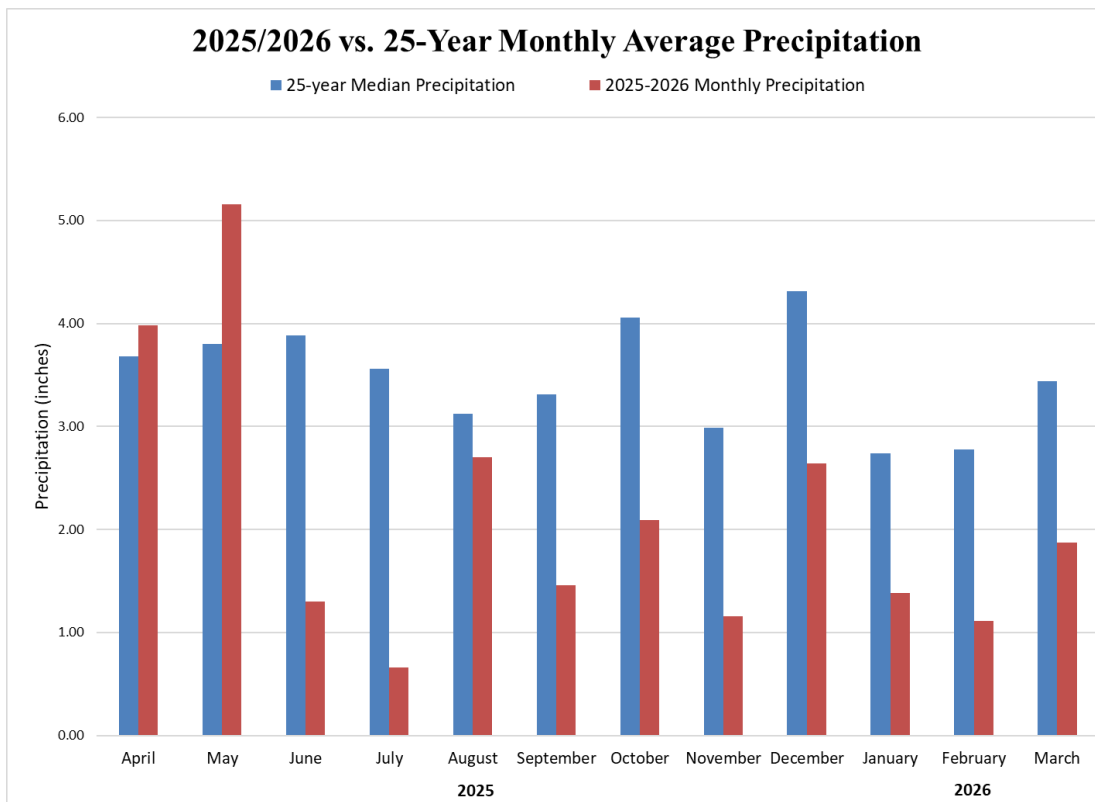


**Intensity:**  
 None  
 D0 Abnormally Dry  
 D1 Moderate Drought  
 D2 Severe Drought  
 D3 Extreme Drought  
 D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

The bar chart below compares monthly precipitation totals for April 2025 through March 2026 with the 25-year monthly average for Portsmouth. Following above-average precipitation in April and May 2025, conditions shifted to predominantly drier-than-normal weather. From June 2025 through March 2026, monthly precipitation totals were consistently below the 25-year average, contributing to cumulative moisture deficits. Summer conditions were particularly dry, with July standing out as the driest month of the period, receiving 82 percent less precipitation than the historical average. While occasional precipitation events occurred later in the year, totals remained below normal through the winter months, reinforcing ongoing drought conditions entering early 2026.



The 12-month rolling average precipitation through March 2026 was 37% below normal at a total of 25.5 inches versus the normal of 40.5 inches.

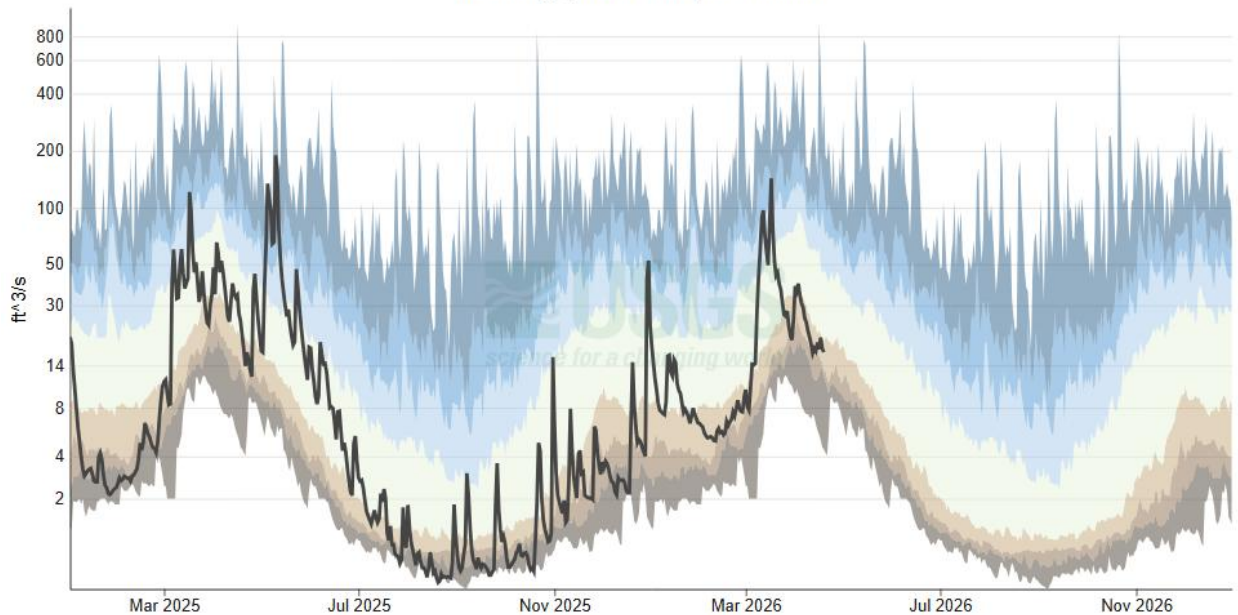
## River Flows and Reservoir Levels

The figure below illustrates daily mean streamflow in the Oyster River at the USGS New Durham gage, which is used by the City to inform assessments of inflows to the Bellamy Reservoir. Following near-normal conditions in early 2025, streamflows declined sharply beginning in early summer and entered the *much below normal* to *extremely low* percentile ranges. These suppressed flows persisted through much of the summer and fall, with the most prolonged low-flow period occurring between July and October 2025. This interval coincided with sustained precipitation deficits and above-average temperatures, resulting in reduced watershed runoff and baseflow contributions.

During late winter and early spring 2026, streamflows temporarily recovered in response to snowmelt and several precipitation events, with daily flows returning to the near-normal range. Despite this seasonal rebound, overall streamflow conditions remain closely tied to cumulative precipitation patterns, highlighting the hydrologic impacts of extended dry periods. The observed trends underscore the importance of continued monitoring of surface water conditions to support reservoir management and water supply planning.

### Oyster River Near Durham, NH - USGS-01073000

January 1, 2025 - December 31, 2026  
Discharge, cubic feet per second



**IMPORTANT** Data may be [provisional](#)

[Hide legend](#)

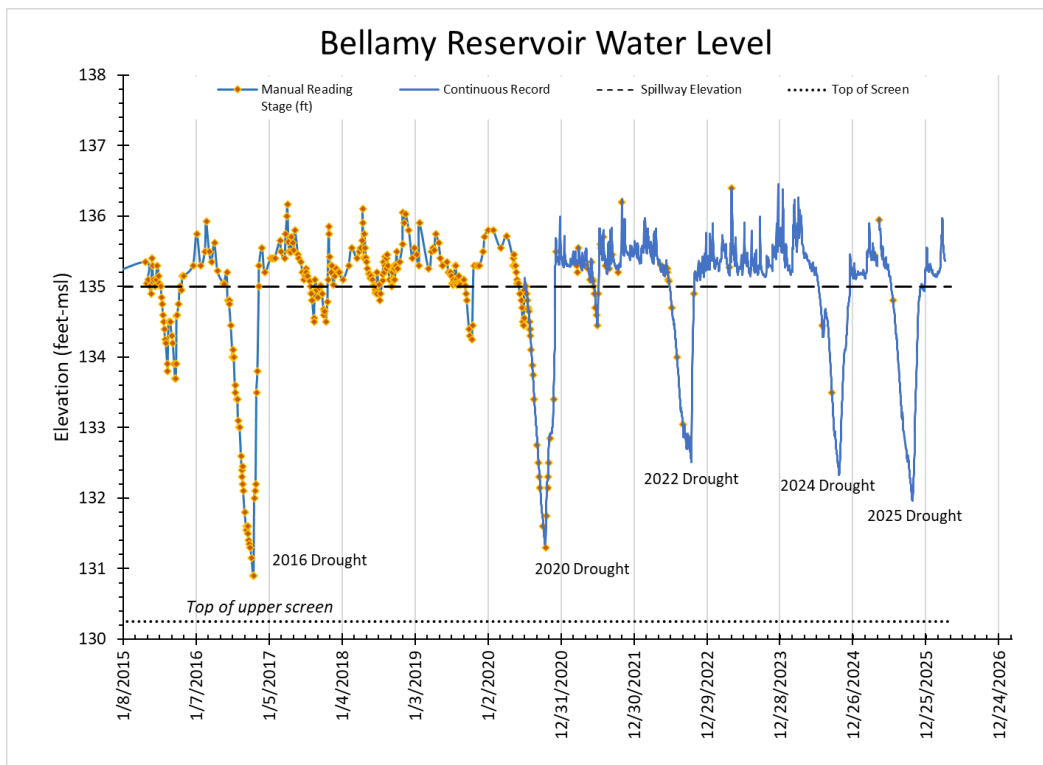
— Daily average (mean) for Discharge, cubic feet per second

Percentile ranges for daily averages (means) for each day of a year (with comparison to normal)

0-5 Extremely below	5-10 Much below	10-25 Below normal	25-75 Normal	75-90 Above normal	90-95 Much above	95-100 Extremely above
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The long-term record of Bellamy Reservoir water levels (see below) shows how the system has responded to several recent drought periods, including those in 2016, 2020, 2022, 2024, and 2025. Each drought year produced its own pattern of decline, with some years showing sharper or earlier drops than others. The 2025 drought followed this familiar pattern but did not produce the lowest or most severe water levels on record. However, it does stand out as the most prolonged period of reduced reservoir levels in the dataset.

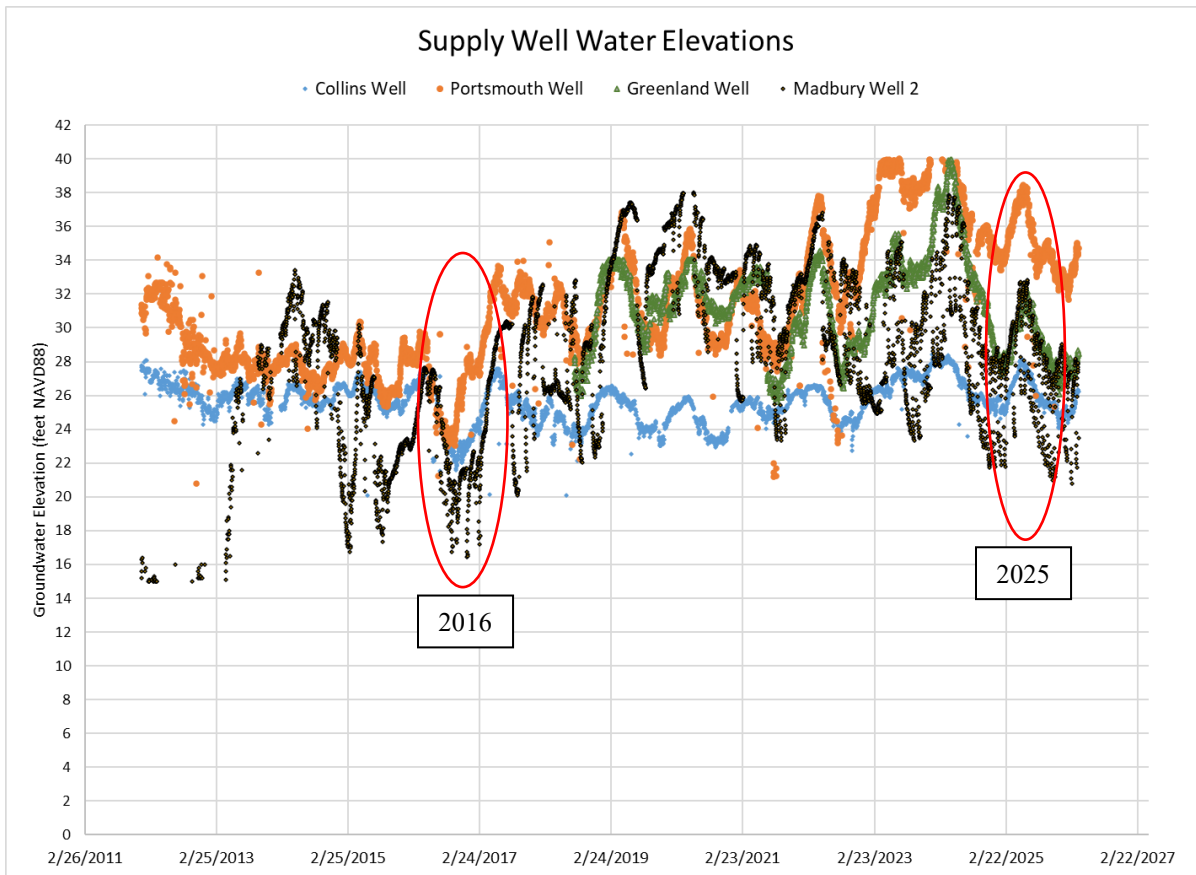
By early 2026, the reservoir has fully recovered from the late-2025 drought. Water levels have returned to a healthy range, rising back above key operational thresholds and aligning with the typical rebound pattern seen after past droughts. Winter precipitation, snowmelt, and early-season runoff have restored the reservoir’s level, and current conditions indicate that no lingering effects from the 2025 drought remain.



### **Groundwater Levels and Status**

During the first quarter of 2026, groundwater levels across Portsmouth’s drinking water supply wells were generally stable and within normal seasonal ranges. As expected, reduced winter water use allowed groundwater withdrawals to be scaled back, giving aquifers time to recover following the previous summer and fall demand period. Groundwater levels rose or remained steady in most wells throughout the quarter, reflecting typical winter recharge conditions.

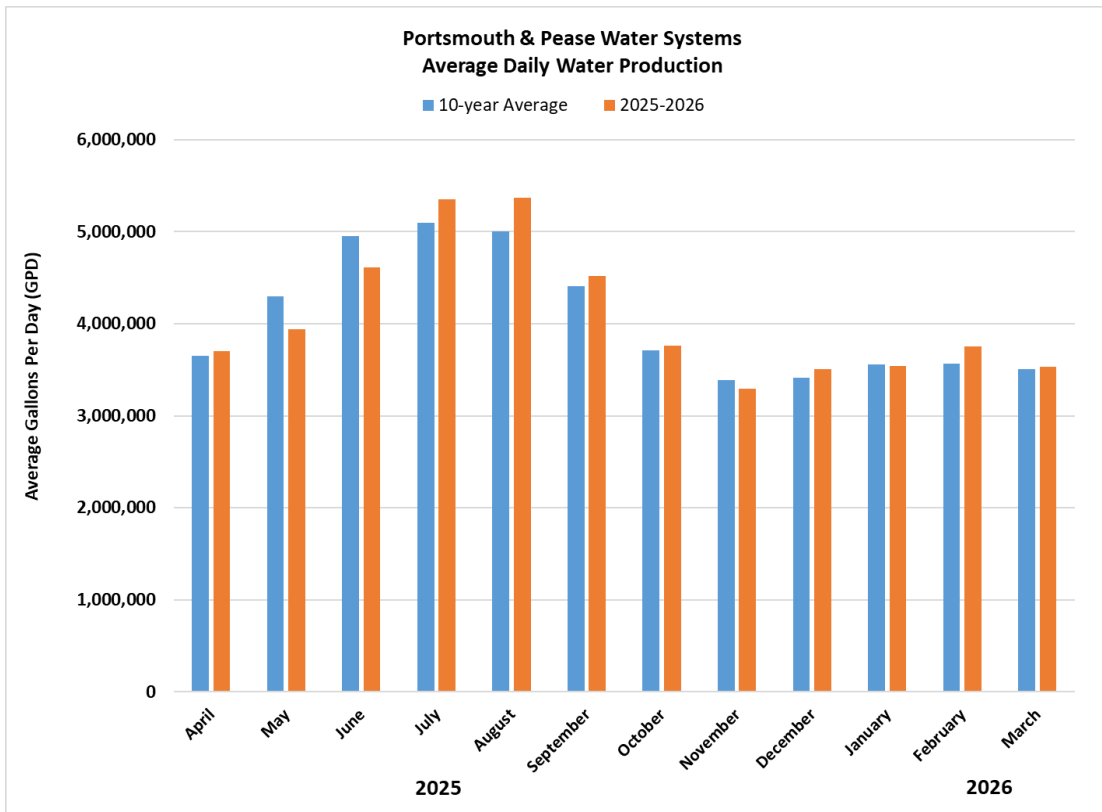
Wells that experience larger seasonal fluctuations, including the Madbury wells, showed recovery from late-season drawdowns as pumping decreased. Overall, groundwater levels during the first quarter remain higher than those observed during past drought conditions, including the extended low levels seen in 2016. With aquifers recharging and demand remaining low, the City’s groundwater supply entered spring 2026 in a comfortable position.



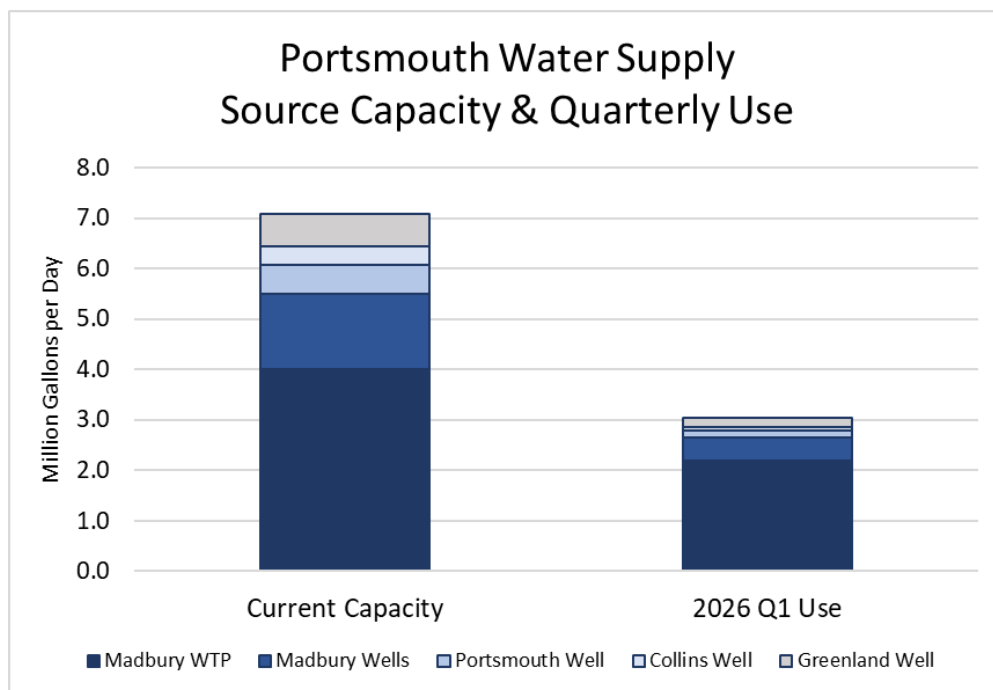
### **Current Water Production and Demand**

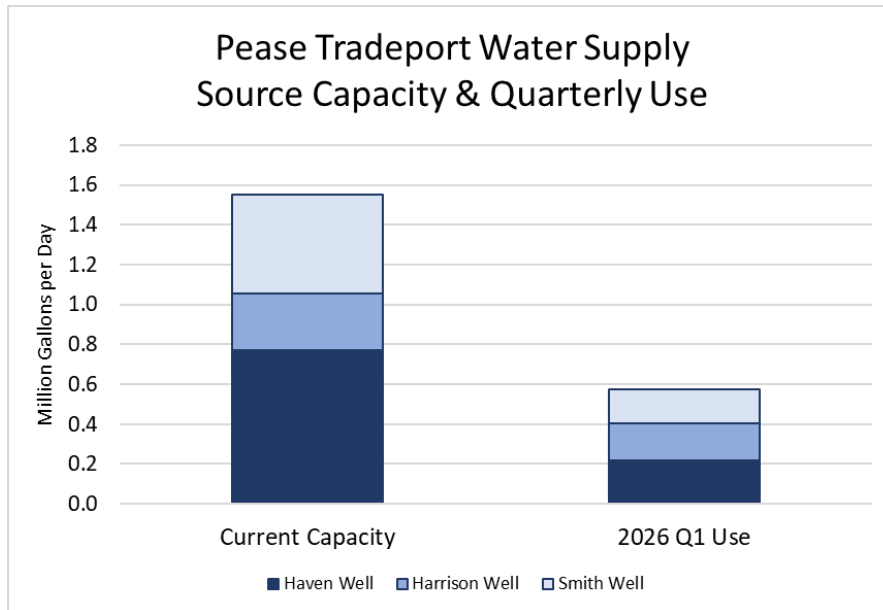
Average daily water production for the Portsmouth and Pease Water Systems during 2025 generally tracked near or above the 10-year average, with only a limited number of months falling below long-term norms. Production during May, June, and November 2025 was below the 10-year average, likely reflecting periods of increased precipitation and reduced outdoor water use during portions of the spring and late fall. From July through October 2025, water production exceeded the 10-year average, with peak demand occurring in July and August, consistent with warmer temperatures and increased seasonal water use. Production remained at or near average through December 2025.

Throughout quarter one of 2026, average daily production was largely consistent with historical winter demand patterns. January 2026 was slightly below the 10-year average, while production in February and March closely aligned with or modestly exceeded long-term averages. Overall, first-quarter demand reflects typical winter operating conditions and does not indicate elevated system stress entering the spring period.



The following charts illustrate the current quarter’s water production relative to the current supply capability for the Portsmouth and Pease Drinking Water System supply sources. Both systems are showing a good buffer of available supply versus demand. The current supply capability varies depending upon the conditions of the source including water levels and source water quality.





### Water Efficiency

The City continues to offer water efficiency rebates of \$100 for the purchase of a low-flow toilet and \$150 for the purchase of a high-efficiency washing machine. These rebates are available to all residential Water customers, including multi-family customers. To date, the City has issued over 1,600 rebates. According to the NH Department of Environmental Services (NHDES), Portsmouth is currently the only public water system in New Hampshire offering these rebates.

Additional information on this program is available from the City’s water billing department and on the City’s website: <https://bit.ly/499rHj9>.



The City intends to continue with the rebate program and expand outreach efforts to focus on ways that customers can be more efficient with summertime water use for irrigation and cooling needs.

## Water Quality Information

The Portsmouth Water Division prepares Annual Water Quality Reports for the Portsmouth and Pease Drinking Water Systems to provide customers with important information about their drinking water. These reports summarize water quality monitoring results and explain where the City's drinking water comes from, what parameters are tested for, and how the water compares to state and federal drinking water standards. Reviewing the Annual Water Quality Report helps customers stay informed about the quality, safety, and reliability of their drinking water.

A bill insert including a link to the 2025 Water Quality Reports on the City's website will be distributed to all customers by the end of June 2026 but the reports are currently available at <https://portsnh.co/3Rn5yVi>.



The Portsmouth Water Division conducts routine monitoring and analysis of water quality parameters in accordance with the Federal Safe Drinking Water Act and regulations established by the New Hampshire Department of Environmental Services (NHDES). Water sources are regularly tested for a range of potential contaminants, including radioactive, biological, inorganic, volatile organic, and synthetic organic compounds. Key treatment parameters - such as turbidity, pH, chlorine, orthophosphate, and fluoride - are continuously monitored and recorded by Water System operators. Regulatory guidelines permit less frequent monitoring for certain substances whose concentrations typically remain stable over time. In such cases, the most recent available data is included in the report, along with the year the samples were collected.

## PFAS Water Quality Sampling and Tracking

The City’s work to track and treat PFAS contamination at the Pease International Tradeport and Portsmouth Water System continues. The term “PFAS” covers a broad group of perfluoroalkyl and polyfluoroalkyl substances found in many commercial products including firefighting foam. On September 30, 2019, the state’s NHDES established limits on the concentrations of four per- and polyfluoroalkyl substances (PFAS) in drinking water. The NHDES maximum contaminant levels (MCL) for drinking water and groundwater remain at 15 parts per trillion (ppt) for perfluorooctane-sulfonic acid (PFOS), 12 ppt for perfluorooctanoic acid (PFOA), 11 ppt for Perfluorononanoic Acid (PFNA), and 18 ppt for Perfluorohexane sulfonic acid (PFHxS). These limits were based on an annual rolling average of sample results collected throughout the state.

On April 10, 2024, the US EPA finalized regulations that limit acceptable concentrations of six PFAS compounds in drinking water; establishing nationally enforceable maximum contaminant levels for six PFAS substances in drinking water. Those compounds include: PFOA, PFOS, PFHxS, PFNA, and HFPO-DA contaminants with individual MCLs, and PFAS mixtures containing at least two or more of PFHxS, PFNA, HFPO-DA, and PFBS. The new regulation uses a Hazard Index MCL to account for the combined and co-occurring levels of these PFAS in drinking water. At that time, the US EPA gave public water systems until 2029 to comply with the MCLs.

On May 14, 2025, EPA announced the agency will keep the current National Primary Drinking Water Regulations (NPDWR) for PFOA and PFOS. As part of this action, EPA also announced its intent to extend the PFOA and PFOS Maximum Contaminant Level compliance deadlines and establish a federal exemption framework. On September 11, 2025, EPA filed a motion in federal court to eliminate enforceable drinking water standards for GenX, PFHxS, PFNA and PFBS.

The City of Portsmouth continues to comply with all standards regulating levels of PFAS in both the Portsmouth and Pease Drinking Water Systems. Until the EPA rules go into effect, currently proposed in 2031, Portsmouth, along with all community water suppliers in New Hampshire, must continue to comply with the NH PFAS MCLs established in 2019 by the NHDES for four regulated PFAS compounds. The City samples for PFAS in its water supply sources quarterly and periodically posts this data on the City’s website at: <https://portsnh.co/PFASTesting>.

PFAS Average – 12 Month Rolling New Hampshire Regulated Compounds - All Sources In Compliance (April 2025-March 2026)												
	EPA MCL (2024)	NH MCL	MADBURY WTP FINISHED	MADBURY WELL 2	MADBURY WELL 3	MADBURY WELL 4R	MADBURY WELL 5	PORTSMOUTH WELL	COLLINS WELL	GREENLAND WELL	PEASE WTP	
<b>12-MONTH ROLLING AVERAGE 2026 Q1</b>												
Perfluorohexanesulfonic acid (PFHxS)	10	18	0.0	0.4	0.4	0.4	1.1	7.7	2.2	1.9	0.0	
Perfluorooctanesulfonic acid (PFOS)	4	15	1.0	1.2	1.2	0.7	0.9	5.6	4.3	3.5	0.0	
Perfluorooctanoic acid (PFOA)	4	12	2.1	2.4	2.4	2.1	2.3	7.1	4.0	4.2	0.0	
Perfluorononanoic acid (PFNA)	10	11	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	10		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Perfluorobutanesulfonic acid (PFBS)			1.0	1.5	1.3	1.2	1.9	4.2	10.0	2.3	0.0	
<b>Hazard Index*</b>	<b>1</b>		0.0	0.0	0.0	0.0	0.1	0.8	0.2	0.2	0.0	

\* Hazard Index MCL = (HFPO-DA/10)+(PFBS/2000)+(PFNA/10)+(PFHxS/10)

According to the City’s ongoing monitoring, the following water sources have detection averages above the projected EPA finalized MCLs:

- Portsmouth well: 5.6 ppt of PFOS, 7.1 ppt of PFOA
- Collins well: 4.3 ppt of PFOS, 4.0 ppt of PFOA
- Greenland well: 4.2 ppt of PFOA
- The Pease Water Treatment Facility continues to remove these compounds from the system’s supply wells.

The Pease Tradeport’s dual treatment system of ion exchange and granular activated carbon continues to perform very well. After four years of operation and over 1 billion gallons of water treated, the levels of the regulated compounds remain below laboratory method detection levels.

**Disinfection Byproducts (TTHMs & HAAs)**

Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAAs) are regulated disinfection byproducts that can form when chlorine, used to disinfect drinking water, reacts with naturally occurring organic material in the source water. At the Madbury Water Treatment Facility, the treatment process removes an average of 64% of total organic carbon (TOC) before disinfection. This exceeds U.S. Environmental Protection Agency (EPA) requirements, which call for 45 to 50% TOC removal for surface water sources such as the Bellamy Reservoir. Even with this level of treatment, some organic material remains and can react with chlorine, resulting in the formation of disinfection byproducts. During quarter one of 2026, the highest system-wide average concentrations measured in Portsmouth were 45 parts per billion (ppb) for TTHMs and 55 ppb for HAAs, both of which remain within EPA regulatory limits.

Elevated HAA levels observed in 2025 are linked to the severe summer drought. Drought conditions can increase dissolved organic carbon in surface waters, which is more difficult to remove through conventional filtration. To address this, the Portsmouth Water Division is considering the replacement of current sand and anthracite filter media with granular activated carbon (GAC). This upgrade will significantly improve the removal of dissolved organic material and further reduce the potential for HAA formation after disinfection. In the meantime, Water Division staff are actively evaluating treatment performance and adjusting pre-treatment processes as needed. By comparison, the Pease Water System consistently reports near non-detect levels of TTHMs and HAAs due to both its source water quality and its existing use of granular activated carbon treatment.

**TTHM & HAA5 Running Average – 2026 – Portsmouth Water System**

<b>Quarter I 2026</b>		<b>TTHM</b>	<b>HAA5</b>
		<i>MCL's =&gt;</i>	
		<i>Reference</i>	
		80	60
		ppb	ppb
<b>Locational Running Average</b>		<b>Locational Running Average</b>	<b>Locational Running Average</b>
321	30 SPINNAKER WAY	<b>40</b>	<b>55</b>
325	1550 WOODBURY PLAZA	<b>33</b>	<b>51</b>
323	120 SPAULDING TURNPIKE	<b>37</b>	<b>52</b>
324	WATER STREET	<b>45</b>	<b>53</b>

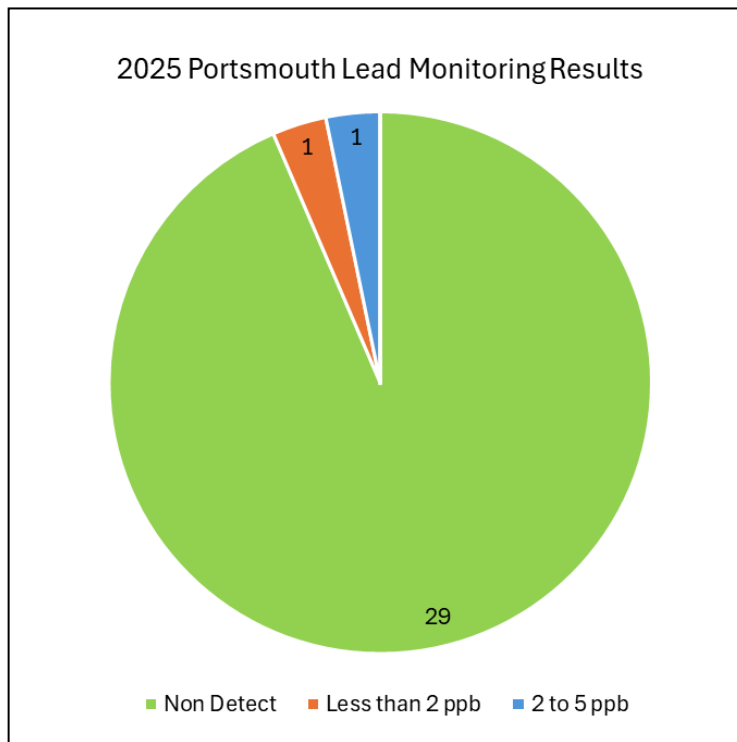
**TTHM & HAA5 Running Average – 2025 – Pease Water System**

DATE	SITE	MCL's =>	TTHM	HAA5
Quarter III 2025		Reference	80	60
ID #			ppb	ppb
<b>Q3</b>	<b>Locational Running Average</b>		Locational Running Average	Locational Running Average
321	135 CORPORATE DRIVE		<b>2</b>	<b>ND</b>
322	14 MANCHESTER SQUARE		<b>4</b>	<b>ND</b>

**Lead Sampling**

The City of Portsmouth has maintained a Lead and Copper Corrosion Control Program since 2003 and continues to meet all state and federal regulatory requirements. The purpose of this program is to reduce the potential for drinking water to corrode pipes, fixtures, or solder that may contain lead or copper, which can allow these metals to enter the water. Portsmouth’s water sources do not contain measurable levels of lead. As a result, any lead or copper that may be present in drinking water typically comes from household plumbing, fixtures, or service lines within privately owned buildings rather than from the water supply itself.

In 2025, water samples collected from 31 residential locations across the Portsmouth water system showed measurable lead at only two homes. These results were 1 part per billion (ppb) and 3 ppb - well below the EPA action level of 15 ppb. The remaining 29 samples showed no detectable lead. The next sampling round to meet regulatory compliance will occur during quarter three of 2026. Historic and present-day results confirm that Portsmouth’s corrosion control practices continue to be effective in protecting public health.



Lead is not present in Portsmouth's drinking water as it leaves the City's wells, treatment facilities, or the water mains beneath public streets. In some cases, however, lead can be found in older service lines that connect homes to the water system or in plumbing materials inside certain homes and businesses. Many homes in Portsmouth and neighboring communities were built before lead-based solder was banned in 1986. For this reason, the City encourages residents, especially households with children under six or individuals who are pregnant, to consider having their drinking water tested by a certified laboratory.

The City actively manages water chemistry through its Corrosion Control Program at treatment facilities and wells to reduce the likelihood that lead from private plumbing materials enters drinking water. While these measures significantly lower risk, trace amounts of lead may still be possible in homes that contain lead-based plumbing components. Information about the Corrosion Control Program can be accessed on the City website: <https://portsnh.co/LeadCopperProgram>.

### **Service Line Inventory Efforts**

The U.S. Environmental Protection Agency (EPA) Lead and Copper Rule Revision required all public water suppliers including the City of Portsmouth to submit a baseline inventory of every service line and its material composition by October 16, 2024. The City of Portsmouth Water Division submitted this inventory for the Portsmouth and Pease Tradeport Water Systems and notified customers whose water service line material was identified as galvanized steel or whose service line material has not been identified. These notifications are intended to raise awareness of service line materials and help customers avoid possible exposure to lead from their household plumbing in their drinking water.

No lead service lines have been identified in the Portsmouth or Pease Water Systems.

Customers who received a notification letter are being asked to assist the City by following the directions outlined in the notice. The information letters include:

- A statement that the service line material is either galvanized steel and requires replacement, or is unknown;
- Information on replacing galvanized steel service lines requiring replacement;
- Actions to take if the material of the water service line is unknown;
- An explanation of the health effects of lead; and
- Steps to reduce any exposure to lead.

In accordance with the federal regulation, letters must be sent to property owners on an annual basis until service lines that might contain lead are removed, or the public water system is able to verify that a service line does not contain lead. These notification letters will be sent to homeowners again in October 2026. Those who do not receive a letter by the end of the year should be assured that the Water Division has determined that their service line material does not contain lead.

More detailed information about this inventory effort can be found on the City website: <https://portsnh.co/servicelineinventory>.

### **Safe Water Advisory Group (SWAG)**

The Safe Water Advisory Group (SWAG) was created with the approval of City Council on October 5, 2020. Its starting mission was 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. Since 2020, the group has evolved to review topics beyond PFAS, such as the City's drinking water quantity, quality, preservation and conservation efforts, water infrastructure projects, and public health aspects of water quality. The SWAG met four times in 2025 and continues to support and provide public education about these drinking water topics. Video recordings and minutes from SWAG meetings are posted on the City's YouTube channel and website: <https://bit.ly/3PxnXLd>.

The 2026 Portsmouth City Council voted to renew the SWAG for another 2 years. The public is invited to attend meetings and encouraged to be involved with the community and informed of all aspects of the City's water supply.

### **Further Updates and Information**

This information is updated on the City of Portsmouth's website in the Department of Public Works > Operations > Water section. More detailed updates on capital improvement projects can be found here: <https://www.portsmouthnh.gov/publicworks/projects>

For additional information or questions contact Mason Caceres, Assistant Water Resource Manager at [mecaceres@portsmouthnh.gov](mailto:mecaceres@portsmouthnh.gov) / 603-312-3804 or Al Pratt, Water Resource Director at [anpratt@portsmouthnh.gov](mailto:anpratt@portsmouthnh.gov) / 603-520-0622.