

Drinking Water Quality Report

To Our
Customers,

Each day when you turn on your tap, water flows out – seems simple, and most people never give it a second thought. But the water that flows from your tap is there as a result of the dedication of water department staff that work around the clock 365 days a year managing the extensive resources of the Cambridge Water Department – starting at our up country dams and reservoirs, gatehouses and spillways, through water supply conduits to the Fresh Pond reservoir, treatment at our state-of-the-art facility at Fresh Pond, and finally through the distribution network to reach your tap. The Cambridge Water Department is committed to providing an uninterrupted supply of high-quality drinking water to every tap while continuing to promote conservation of this precious resource and investment in your water system. In 2023 some of the key successes towards that goal included securing a \$1,000,000 grant for the Hobbs Brook Reservoir dam and gatehouse repairs, establishing new requirements to conserve our water supply per Massachusetts Department of Environmental Protection (MassDEP) updates to the Water Management Act, proactive PFAS (per- and polyfluorinated substances) testing and treatment, and updating our inventory of water service lines to “get the lead out.” **Read all the details inside!**

This report provides information on your drinking water supplied by the Cambridge Water Department, how it is treated, the quality of the water you receive, and how Cambridge water meets and surpasses all state and federal drinking water standards. It also contains key information on how you can learn more about our system – from source water to the service to your home.

I encourage you to contact the Water Department with questions, comments, or suggestions about any aspect of the City of Cambridge’s drinking water.

Sincerely,

Mark Gallagher, Managing Director
Cambridge Water Department | 617-349-4770

City of Cambridge Water Department



Distributed
June 2024
PWS ID# 3049000

For 24-Hour Emergency
Customer Service,
Call 617-349-4770

Water Quality Information From 2023

Cover Photos:
Hobbs Brook Reservoir Fall 2023 (top)
Treatment Facility Pumps (bottom)



How Is Your Water Purified?

Before drinking water is delivered to your home or business, the source waters of the Cambridge reservoir system undergo extensive treatment at the Walter J. Sullivan Water Purification Facility (WPF) at Fresh Pond Reservation. The water is treated to meet and surpass all state and federal drinking water standards.

The Cambridge Water Department's state-certified laboratory continuously monitors the effectiveness of the treatment process and makes adjustments throughout the five treatment stages, as needed, to ensure the highest quality water.



1. Pretreatment: The first steps in the treatment process combine preoxidation with ozone, coagulation, and dissolved air flotation (DAF) to remove manganese, natural color, sediment and particles, algae, protozoa, viruses, and bacteria.

2. Ozone: Fine bubbles of ozone are dissolved into the water to kill bacteria, viruses, and protozoa.

3. Filtration: The water passes through granular activated carbon (GAC) to remove organic compounds, including PFAS. Filtration also acts as a “polishing step” to remove additional particles, color, and protozoa.

4. Disinfection: Chlorine is used to provide the second step of disinfection for redundancy in the overall process, and monochloramine is added to maintain a disinfectant residual throughout the distribution system.

5. Post Treatment: The pH of the water is adjusted for corrosion control and fluoride is added for dental health.

Practice Makes Perfect – Water Conservation

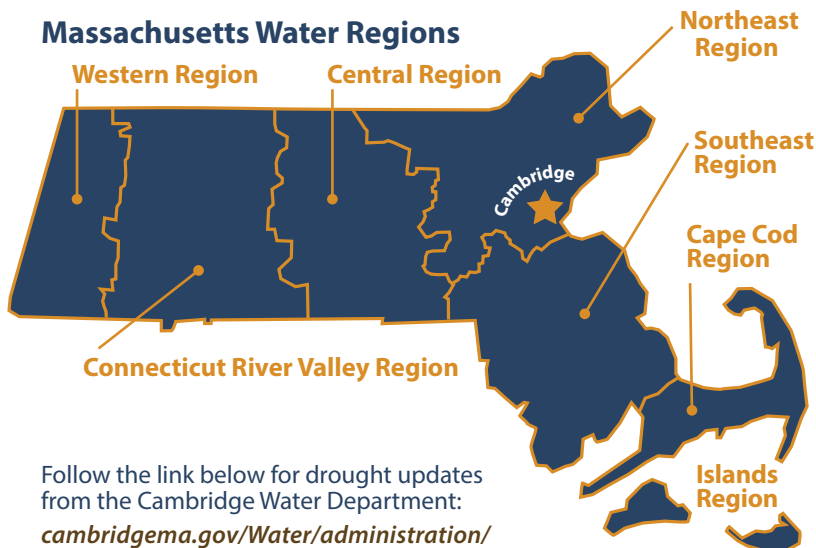
The word “drought” may conjure images of a dry and arid desert, but Massachusetts has experienced historic drought conditions four times in the past 25 years, as recently as 2022. Following a dry period in 1999, Massachusetts developed a Drought Management Plan and routinely updates Drought Status Maps, showing conditions ranging from Level 0 (Normal) to Level 4 (Emergency Drought) for seven geographic regions. Cambridge is located in the “Northeast Region.”

per the new MassDEP regulations, water users in Cambridge will be required to follow the regional water use restrictions based on the Drought Condition shown on the Massachusetts Drought Management Status Map.

The Water Department typically monitors the drought status as part of managing our water supply and recommends customers practice corresponding water conservation measures. Starting in April 2025,

To be proactive, Cambridge is asking our customers to start “practicing” water conservation measures this summer in preparation for 2025, when these regulatory water use restrictions will be required.

Massachusetts Water Regions



Drought Condition	Outdoor Water-Use Restrictions (Non-essential)
0 Normal	No restrictions
1 Mild	1 day per week watering, after 5 p.m. or before 9 a.m. (to minimize evaporative losses)
2 Significant	Limit outdoor watering to hand-held hoses or watering cans, to be used only after 5 p.m. or before 9 a.m.
3 Critical	Ban on all non-essential outdoor water use
4 Emergency	Ban on all non-essential outdoor water use



Hobbs Brook Reservoir during the 2016 drought.

Follow the link below for drought updates from the Cambridge Water Department:

cambridgema.gov/Water/administration/droughtstatusandwaterconservation/droughtstatus

Where Your Water Comes From

Reservoirs – The Cambridge Water System extends across four towns and includes four bodies of water. The Hobbs Brook Upper Reservoir flows into the Hobbs Brook Lower Reservoir and connects with the Stony Brook Reservoir. The water then flows to Fresh Pond Reservoir through an underground aqueduct. The Stony Brook Reservoir watershed extends from Weston, north into the Town of Lincoln. The watershed for the Hobbs Brook Reservoirs includes areas of Waltham, Lexington, and Lincoln. The watershed for Fresh Pond Reservoir is completely within the City of Cambridge. The combined capacity of the Hobbs Brook and Stony Brook reservoir system is 3.1 billion gallons; an additional 1.3 billion gallons of water is stored in Fresh Pond Reservoir. Our water supply is backed up by interconnections to the Massachusetts Water Resources Authority (MWRA) system. For a more detailed map of our water sources and their protection areas, please visit cambridgema.gov/water.

Watershed Protection – As part of our ongoing commitment to protecting the water supply, we participated with the MassDEP in preparing a Source Water Assessment Program (SWAP) Report, completed in 2003. The SWAP Report assesses the susceptibility of our public water supply and notes the key land use and protection issues, including Zone A Land Uses, Residential Land Uses, Transportation Corridors, Hazardous Material Storage and Use, and Presence of Oil or Hazardous Materials Contamination Sites.

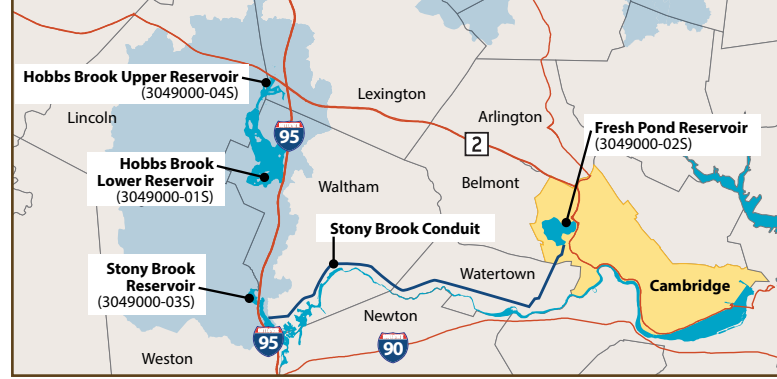
Update on PFAS Treatment and Analysis

Awareness about contaminants known as PFAS has increased as more testing and studies are undertaken to evaluate their effects on our environment. These chemicals are commonly found in a wide range of consumer goods and household products like cookware and food packaging due to their ability to resist water, grease, or stains. The PFAS family of chemicals are often referred to as “forever chemicals” because they degrade very slowly in the environment.



The Cambridge Water Department began monitoring for PFAS in our drinking water supply more than a year before Massachusetts enacted standards in 2020, and well before federal standards were established in April 2024. To proactively address PFAS, Cambridge conducted a pilot study replacing the existing granular activated carbon (GAC) media in our filters, a “best available technology” for PFAS removal.

The new media has been a success! Since the installation of the new GAC, PFAS has been below both the Massachusetts and federal standards for over a year. To keep PFAS levels low and in compliance with all federal and state standards, we began a second round of GAC media replacement in April 2024 – resulting in our second quarter regulatory samples coming back as non-detect. We are in the process of becoming a certified laboratory for PFAS analysis (see our new analyzer shown above), furthering our ability to stay ahead of this emerging contaminant through real-time PFAS analysis of both our water supply and throughout the water treatment process.



A copy of the *Cambridge SWAP Report* can be found on the MassDEP website at mass.gov/doc/cambridge-water-department-swap-report/download or at the Cambridge Water Department.

Because of the developed nature and types of land uses within the Cambridge watershed, our source waters are considered as having “high” susceptibility to contamination. Susceptibility is a measure of a water supply’s potential to become contaminated by land uses and activities within its recharge (watershed) area. If a source is susceptible to contamination, it does not necessarily mean the source has poor water quality. The Cambridge Water Department has developed a MassDEP-approved Surface Water Supply Protection Plan to minimize contamination threats to our water supply. We are committed to implementing the major components of the program, which include:

- ♦ **Water Quality Monitoring** – an extensive, state-of-the-art water quality monitoring program in close coordination with the United States Geological Survey identifies threats in near real-time, and guides management decisions.
- ♦ **Site Monitoring Program** – to minimize potential impacts from activities in the watershed, regular site inspections and site plan review helps ensure compliance with relevant Massachusetts standards and regulations.
- ♦ **Emergency Response Planning** – ensuring dam safety and preventing the release of hazardous materials, maintain water supply security, help prevent emergencies, and guide rapid response.
- ♦ **Natural Resources Restoration** – restoring City-owned lands using natural systems based approaches helps to preserve water quality, improves recreational open and natural green spaces, provides wildlife habitat, and offers a much-needed refuge from hectic urban life.
- ♦ **Partnership Development** – relationship-building with other parties in the watershed is crucial for successfully executing innovative watershed management in our urbanized watershed with limited City ownership.

Want to learn more about Cambridge Water?

We would love to hear from you! Please visit the link below for the contact information to reach each of our divisions.
cambridgema.gov/Water/contactus

You can find the details of our award-winning
Source Water Protection Program here:
cambridgema.gov/Water/WatershedManagementDivision/SourceWaterProtectionProgram

Important Information from EPA & MassDEP about Sources of Drinking Water and Drinking Water Contaminants

Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- ◆ Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- ◆ Inorganic contaminants, such as salts and metals, can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming.
- ◆ Pesticides and herbicides may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses.
- ◆ Organic chemical contaminants include synthetic and volatile organic chemicals (VOCs) that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- ◆ Radioactive contaminants can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, MassDEP and the U.S. Environmental Protection Agency (EPA) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration (FDA) and the Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contamination.

The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at **800-426-4791**.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants,

people with HIV/AIDS or other immune system disorders, some elderly, and infants, can be particularly at risk from infections. These people should seek advice from their healthcare providers. EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline: **800-426-4791**.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Cambridge Water Department is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested for free. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at epa.gov/safewater/lead.

If I Had A Million Dollars...

The Cambridge Water Department continuously monitors and maintains our infrastructure to keep it in top working order – one reward for this preparedness was a \$1,000,000 grant under the EOE Dam and Seawall Removal or Repair Program in 2023!

This funding from the grant will help repair the Hobbs Brook Reservoir Dam outlet pipe, granite block foundation, and weir of the gatehouse. Built in 1897 and located in Waltham, Hobbs Brook is one of the key dams and gatehouses in our reservoir system.



Protect Your Drinking Water at Home!



A “cross connection” is a connection between a drinking water pipe and a polluted source.

The pollution can come from your own home.

For example, to spray fertilizer on your lawn, you hook your hose up to the sprayer that contains the fertilizer. If the water pressure drops (say, because of fire hydrant use in the City) when the hose is connected to the fertilizer, the fertilizer may be sucked back into the drinking water pipes through the hose. It is easy to prevent cross connection issues like this by installing a Hose Bib Vacuum Breaker. These inexpensive and easy to install devices can be purchased at most local hardware stores.

For additional information on cross connections and Cambridge's cross-connection program status, please contact us:

Call: 617-349-4025

Email: backflow@cambridgema.gov

Online: <https://www.cambridgema.gov/Water/administration/crossconnectioncontrol>

Compound		Units	Highest Level Found	Range of Detections (low–high)	Highest Level Allowed (MCL or MRDL)	Ideal Goal (MCLG or MRDLG)	Violation	How It Gets In The Water
Regulated Compounds	Barium	ppm	0.038	Single sample	2	2	NO	Erosion of natural deposits
	Chlorine (as monochloramine)	ppm	2.3 ^[1]	0.6 – 3.4 ^[2]	4	4	NO	Water disinfectant
	Copper	ppm	0.035 ^[3]	0.003 – 0.042 ^[4]	AL = 1.3	1.3	NO	Corrosion of household plumbing systems
	Fluoride ^[5]	ppm	0.83	0.57 – 0.83	4	4	NO	Added to water to promote strong teeth
	Gross Alpha	pCi/L	1.03	Single sample	AL = 15	0	NO	Erosion of natural deposits
	Lead	ppb	8 ^[3]	ND – 14 ^[4]	15	0	NO	Corrosion of household plumbing systems
	Nitrate as Nitrogen	ppm	0.71	0.01 – 0.71	10	10	NO	Naturally present in the environment
	Nitrite as Nitrogen	ppm	0.01	ND – 0.010	1	1	NO	Runoff from fertilizer use
	PFAS6 ^[6]	ppt	6	ND – 6	20	N/A	NO	Human-made chemicals. †Full details below
	Radium	pCi/L	0.75	Single sample	5	0	NO	Erosion of natural deposits
	Total Haloacetic Acids	ppb	8.06 ^[1]	2.56 – 9.42 ^[2]	60	0	NO	Byproduct of water disinfection
	Total Trihalomethanes	ppb	11.8 ^[1]	3.9 – 18.8 ^[2]	80	0	NO	Byproduct of water disinfection
Turbidity ^[7]	NTU	0.28	0.03 – 0.28	TT = 0.3 95% of samples <0.3	N/A	NO	Suspended matter from soil runoff	
Compound		Units	Highest Level Found	Range of Detections (low–high)	Highest Guidance Level (SMCL or ORSG)	Ideal Goal (MCLG or MRDLG)	Violation	How It Gets In The Water
Secondary/Guidance Compounds	Calcium	ppm	22	Single sample	–	–	NO	Naturally occurring minerals
	Chloride	ppm	180	Single sample	250	–	NO	Erosion of natural mineral deposits and road salting activities
	Chloroform	ppb	6.4	ND – 6.41	70	–	NO	Byproduct of drinking water disinfection
	Magnesium	ppm	4.6	Single sample	–	–	NO	Naturally occurring minerals
	Sodium ^[8]	ppm	106	Single sample	MA DEP Guideline	N/A	NO	Road salt
	Sulfate	ppm	35	Single sample	250	–	NO	Erosion of natural mineral deposits
	Total Dissolved Solids	ppm	380	Single sample	500	–	NO	Naturally occurring minerals
Unregulated Contaminant		Units	Average Detected (Range Detected, low–high)		Possible Sources			
Bromoform		ppb	2.1 (0.72 – 2.1)		Byproduct of drinking water disinfection			
Bromodichloromethane		ppb	6.5 (0.54 – 6.53)		Byproduct of drinking water disinfection			
Chlorodibromomethane		ppb	5.5 (1.38 – 5.47)		Byproduct of drinking water disinfection			
Perfluorohexanesulfonic acid (PFHxA)		ppt	2.7 (2 – 2.72)		† Human-made chemicals. Used as surfactants: to make products stain- or water-resistant, in firefighting foam, for industrial purposes, and as a pesticide. Used in fluoropolymers (such as Teflon), cosmetics, greases and lubricants, paints, adhesives, and photographic films.			
Perfluorobutanesulfonic acid (PFBS)			3.6 (2 – 3.6)					

Notes

- [1] Highest level detected is based on running annual average of individual samples.
- [2] Values in the range are based on individual samples, rather than averages.
- [3] The Action Level (AL) and the highest level found are based on the 90th percentile of the samples.
- [4] Values in the range are based on individual samples, rather than 90th percentile.
- [5] EPA's MCL for fluoride is 4 ppm. Fluoride also has a secondary contaminant level (SMCL) of 2 ppm.
- [6] The highest level detected is based on a quarterly average of monthly samples. The range is based on individual monthly results.
- [7] Turbidity is a measure of treatment performance and is regulated as a treatment technique (TT); 100% of samples met the TT requirement.
- [8] An 8-ounce glass of Cambridge water contains approximately 25 milligrams of sodium, well within the FDA's "very low sodium" category.

Terms & Abbreviations

90th Percentile – Nine out of every 10 homes were at or below this level.

AL: Action Level – The concentration of a contaminant that, if exceeded, triggers treatment or other requirements, which a water system must follow.

MCL: Maximum Contaminant Level – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL: Maximum Residual Disinfectant Level – The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG: Maximum Residual Disinfectant Level Goal – The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

N/A: Not Available – An ideal goal has not been established by EPA or MassDEP for this compound.

ND: Not Detected

NTU: Nephelometric Turbidity Unit – A measure of the turbidity (or clarity) of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

ORSG: Massachusetts Office of Research and Standards Guideline – Guidance values developed by MassDEP ORS in absence of any other federal standards or guidance.

ppb: Parts per Billion or micrograms per liter – (µg/L). One part per billion is the equivalent of \$1 in \$1,000,000,000.

ppm: Parts per Million or milligrams per liter – (mg/L). One part per million is the equivalent of \$1 in \$1,000,000.

ppt: Parts per Trillion or nanograms per liter – (ng/L). One part per trillion is the equivalent of \$1 in \$1,000,000,000,000.

SMCL: Secondary Maximum Contaminant Level – Concentration limit for a contaminant which may have aesthetic effects such as taste, odor, or staining.

TT: Treatment Technique – A required process intended to reduce the level of a contaminant in drinking water. Turbidity is a measure of treatment performance and is regulated as a treatment technique. 95% of our turbidity readings each month must be below 0.3 NTU.



Cambridge Water Department
250 Fresh Pond Parkway
Cambridge, MA 02138

Presorted
Standard
US Postage
Paid
North Reading, MA
Permit No. 215



ECRWSS POSTAL PATRON

An interactive electronic version of this report
is available here:



<https://tinyurl.com/cwd2023ccr>



facebook.com/CambridgeWaterDept



x.com/CambWaterDept



<https://www.cambridgema.gov/Water>

FREE
learn more



Lead and Copper Water Sampling Kit

Tap water sampling kits are free for Cambridge residents, and are available at the self-service kiosk located in the Water Treatment Plant lobby located at 250 Fresh Pond Parkway.

Call or visit for more information:

call

617
349-4770



visit

[cambridgema.gov/Water/WaterOperationsDivision/TestMyWater](https://www.cambridgema.gov/Water/WaterOperationsDivision/TestMyWater)



We need
YOUR
help!



GET THE LEAD OUT

Did you know that the Cambridge Water Department is working on developing a comprehensive list of the pipe materials that connect from the water main to every residence in the City?

The goal of this inventory is to identify and remove all lead service lines. Therefore, we need your help – the best way to gather data on every service is to have you take a quick look at the pipe near your water meter and send us information – a quick and easy task that will only take 10 minutes.



Typical Water Meter.

To get started please scan the QR code
or visit:

<https://tinyurl.com/cwdserviceline>



This report contains very important information about your drinking water. Please translate it or speak with someone who understands it.

本报告含有关于您所在社区的水质的重要信息。请您找人翻译一下或请能看懂这份报告的朋友给您解释一下。

Este informe contiene información muy importante acerca de su agua potable. Pídale a alguien que traduzca esta información a usted o hablar con alguien que entiende esta información. Ce rapport contient des renseignements très importants sur votre eau potable. Demander à quelqu'un pour traduire cette information à vous ou à parler avec quelqu'un qui comprend cette information.

If you have any additional questions about your water supply, please contact Julie Greenwood-Torelli, Director of Water Operations, at 617-349-4773.