ANNUAL WATER QUALITY REPORT

Reporting Year 2025

Presented By
Elm Hill Water District

PWS ID#: MA2017001

About This Report

The Elm Hill Water District is forwarding you this 2025 annual water quality report. We are pleased to provide you with all this information as required by the U.S. Environmental Protection Agency (U.S. EPA) and the Massachusetts Department of Environmental Protection (DEP).

Where Does My Water Come From?

Elm Hill Water District provides drinking water to our district from the City of Worcester through two water mains. One is located at the Auburn - Worcester line on Pakachoag Street, and the second water main connection is located at the lower end of Upland Street at the Auburn - Worcester line. Our drinking water from Worcester originates from 10 surface reservoirs. This watershed comprises over 40 square miles located north and west of Worcester. All these reservoirs have a combined storage capacity of 7.3799 billion gallons. The first protection for any water supply system is a clean source of water. The City of Worcester maintains strict control over the land it holds for its water supply.

Think Before You Flush!

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of our waterways by disposing responsibly. To find a convenient drop-off location near you, please visit https://bit.ly/3IeRyXy.

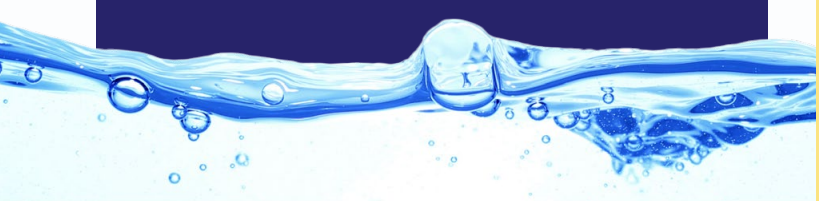
Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We hold monthly meetings at 7:00 p.m., usually on the first Tuesday of the month. Meetings and agenda items are posted at the town hall and library at least five business days before the meeting. We encourage all district members to attend these meetings.

About Our Monitoring Violation

In May 2025, we did not collect required water quality samples for total trihalomethanes (TTHM) and haloacetic acids (HAA5) at locations DBP1 and DBP2 by the required deadline. The samples were collected in June 2025. This was a monitoring violation only and does not indicate a problem with your drinking water quality. We have collected the required samples and returned to compliance.

Some people who drink water containing TTHMs or HAA5 in excess of the maximum contaminant level (MCL) over many years may experience problems with their liver, kidneys, or central nervous system and may have an increased risk of getting cancer.



Source Water Assessment

The DEP has prepared a Source Water Assessment Program (SWAP) report for the water supply sources serving this water system. The SWAP report assesses the susceptibility of public water supplies. A high susceptibility ranking was assigned to this system using the information collected during the assessment by the DEP due to land uses within the water supply protection areas of our wells (Zones I and II). The complete SWAP report is available at the Auburn Water Department, Auburn Board of Health, and online at mass.gov/service-details/the-source-water-assessment-protection-swap-program.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 about drinking water from their health-care providers. U.S. 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 by emailing the U.S. EPA at safewater@epa.gov.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Susan Zammarelli at (508) 755-5448.

Substances That Could Be in Water

Protecting our water sources, while important, is not enough to ensure that your tap water is safe to drink. To ensure that tap water is safe to drink, the U.S. EPA and DEP prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) and Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

The 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. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems; and

Radioactive Contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by emailing the U.S. EPA at safewater@epa.gov.

Lead in Home Plumbing

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed),and young children. Lead in drinking water is primarily from materials and parts used in service lines and home plumbing. Elm Hill Water District is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water, and wish to have your water tested, contact us at (508) 755-5448. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at https://www.epa.gov/safewater/lead.

To address lead in drinking water, public water systems were required to develop and maintain an inventory of service line materials by Oct 16, 2024. Developing an inventory and identifying the location of lead service lines (LSL) is the first step for beginning LSL replacement and protecting public health. Please contact us at (508) 755-5448 for access to the inventory or more information about any lead sampling that has been done.

Count On Us

Delivering high-quality drinking water to our customers involves far more than just pushing water through pipes. Water treatment is a complex, time-consuming process. Because tap water is highly regulated by state and federal laws, water treatment plant and system operators must be licensed and are required to commit to long-term, on-the-job training before becoming fully qualified. Our licensed water professionals have a basic understanding of a wide range of subjects, including mathematics, biology, chemistry, and physics. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to purify and clarify water.
- Monitoring and inspecting machinery, meters, gauges, and operating conditions.
- Conducting tests and inspections on water and evaluating the results.
- Maintaining optimal water chemistry.
- Applying data to formulas that determine treatment requirements, flow levels, and concentration levels.
- Documenting and reporting test results and system operations to regulatory agencies.
- Serving our community through customer support, education, and outreach.

So the next time you turn on your faucet, think of the skilled professionals who stand behind each drop!

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data is included, along with the year in which the sample was taken.

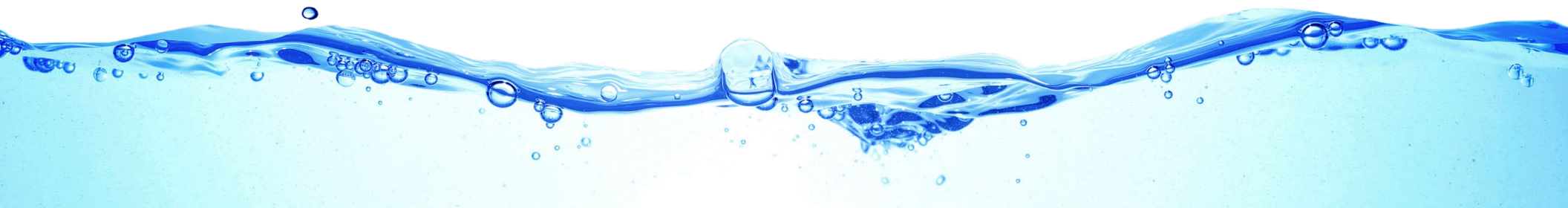
Our water supplier participated in the fifth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR5) program by performing additional tests on our drinking water. UCMR5 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water to determine if it needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data is available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2025	2	2	0.01	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2025	[4]	[4]	0.82	0.50–1.20	No	Water additive used to control microbes
E. coli (positive samples)	2025	TT	0	ND	NA	No	Human and animal fecal waste
Fluoride (ppm)	2025	4[1]	4	0.100	NA	No	Water additive that promotes strong teeth
Haloacetic Acids [HAA5] (ppb)	2025	60	NA	29	16–34	No	By-product of drinking water disinfection
Nitrate (ppm)	2025	10	10	0.291	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
PFAS6 (ppt)	2025	20	NA	3.3	NA	No	Discharges and emissions from industrial and manufacturing sources associated with the production or use of these PFAS, including production of moisture- and oil-resistant coatings on fabrics and other materials; Use and disposal of products containing these PFAS, such as firefighting foams
Total Organic Carbon [TOC] (ppm)	2025	TT	NA	2.7	2.09–4.37	No	Naturally present in the environment
Total Trihalomethanes [TTHMs] (ppb)	2025	80[2]	NA	64	8–114	No	By-product of drinking water disinfection
Turbidity[3] (NTU)	2025	TT	NA	0.254	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2025	TT = 95% of samples meet the limit	NA	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	RANGE LOW-HIGH	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2023	1.3	1.3	0.093	0.02–0.12	0/10	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2023	15	0	ND	ND–1.00	0/10	No	Corrosion of household plumbing systems; Erosion of natural deposits



SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2025	200	NA	49	29–2,050	No	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2025	250	NA	35.29	24.7–44.30	No	Runoff/leaching from natural deposits
Iron (ppb)	2025	300	NA	89	7–707	No	Leaching from natural deposits; Industrial wastes
pH (units)	2025	6.5–8.5	NA	7.44	6.990–8.590	No	Runoff and leaching from natural deposits; seawater influence
Sulfate (ppm)	2025	250	NA	11.4	8.2–20.2	No	Runoff/leaching from natural deposits; Industrial wastes
Zinc (ppm)	2025	5	NA	0.005	0.001–0.028	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED SUBSTANCES [4]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Alkalinity (ppm)	2025	13.1	8.3–18.4	Naturally occurring buffering capacity of water
Calcium (ppm)	2025	10.0	7.71–19.5	Natural sources and water treatment processes
Conductivity (µmho/cm)	2025	170	132–211	Indirect measure of dissolved solids
Hardness, Total [as CaCO3] (ppm)	2025	29.8	21.9–55.2	Naturally occurring indirect measure of calcium and magnesium
Orthophosphate (ppm)	2025	0.555	0.297–0.815	Added to water during treatment as corrosion inhibitor
Perfluorohexanoic Acid [PFHxA] (ppt)	2025	4.0	NA	Manmade chemical; breakdown product of stain- and grease-proof coatings on food packaging and household products
Perfluoropentanoic Acid [PFPeA] (ppb)	2023	0.0023	0.0014–0.0032	Manmade chemical; used in products to make them stain, grease, heat, and water resistant
Sodium (ppm)	2025	18	NA	Discharge from the use and improper storage of sodium-containing de-icing compounds or in water-softening agents
Temperature (degrees C)	2025	13.64	1.00–26.1	NA
Total Phosphate (ppm)	2025	0.907	0.69–1.2	NA

[1] Fluoride has an SMCL of 2.0 ppm.

[2] Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system and may have an increased risk of getting cancer.

[3] Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

[4] Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the U.S. EPA in determining their occurrence in drinking water and whether future regulation is warranted.

Definitions

90th %ile: Out of every 10 homes sampled, 9 were at or below this level. This number is compared to the Action Level to determine lead and copper compliance.

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

Herbicide: Any chemical(s) used to control undesirable vegetation.

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.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Pesticide: Generally, any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

ppt (parts per trillion): One part substance per trillion parts water (or nanograms per liter).

Removal ratio: A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

SMCL (Secondary Maximum Contaminant Level): These standards are developed to protect aesthetic qualities of drinking water and are not health based.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

µmho/cm (micromhos per centimeter): A unit expressing the amount of electrical conductivity of a solution.