

ANNUAL WATER QUALITY REPORT

Reporting Year 2024



Presented By
Middleton Water Department



Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2024. Included are details about your source of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and providing you with this information because informed customers are our best allies.

Where Does My Water Come From?

The Town of Danvers is responsible for the treatment and supply of all drinking water for both Middleton and Danvers. The Vernon C. Russell Water Treatment Plant, located at Middleton Pond, opened in 1976. On average, 2.92 million gallons are pumped per day. There are also secondary reservoirs at Emerson Brook in Middleton and Swan Pond in North Reading. In addition to these surface water supplies, the Town of Danvers has two water supply wells. Well 1 is located in Middleton, and Well 2 is located in Danvers. If necessary, water can also be purchased from the cities of Beverly and Peabody through interconnections in the distribution system.

The Town of Danvers is responsible for the treatment and supply of drinking water, and the Middleton Water Department is responsible for water quality and maintenance throughout the town. The Middleton distribution system has roughly 44 miles of water lines and 442 fire hydrants. Throughout the year, personnel perform maintenance of the system such as sampling, flushing of hydrants, service and inspections, Dig-Safe mark-outs, gate valve exercise, and much more. In 2024 roughly one million gallons of water was flushed through the system as preventative maintenance.

Middleton has 1,946 service connections that distribute drinking water to 7,228 residents and local businesses. The Middleton Water Department tests weekly for coliform bacteria, quarterly for stage 2 disinfection by-products, and every three years for lead and copper. The water quality data in this report is in addition to the data that can be found in the 2024 Danvers Water Quality Report at danversma.gov/waterquality.

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. Environmental Protection Agency (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 from the Safe Drinking Water Hotline at (800) 426-4791 or epa.gov/safewater.



About Our Monitoring Violation

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of our regular monitoring are an indicator of whether our drinking water meets health standards. During the monitoring period of July 1 through September 30, we did not complete all monitoring or testing for lead and copper and therefore cannot be sure of the quality of our drinking water during that time. We have already taken steps to ensure that adequate monitoring and reporting will be performed in the future so that this oversight will not be repeated. You may find the results of our lead and copper sampling efforts in the data table in this report.

Source Water Assessment

The Source Water Assessment and Protection (SWAP) program, established under the federal Safe Drinking Water Act, requires every state to inventory land use within the recharge area of all public water supply sources. The state has determined that the risk of contamination is generally low to moderate. A source's susceptibility to contamination does not imply poor water quality. Source water protection, monitoring, and treatment ensure that safe water is delivered to the tap. Residents can help protect the water sources by being careful in the use and storage of hazardous materials such as paints, solvents, pesticides, and fertilizers, practicing good septic system maintenance, and disposing of hazardous household chemicals properly. Residents are also encouraged to report any suspicious or inappropriate activities to the local police department. A complete SWAP report is available for review at the Middleton Public Works office.

The Benefits of Fluoridation

Fluoride is naturally occurring in many water supplies in trace amounts. In our system, the fluoride level is adjusted to an optimal level averaging 0.7 part per million (ppm) to improve oral health and prevent tooth decay. At this level, it is safe, odorless, colorless, and tasteless. There are over 4 million people in Massachusetts water systems and 184 million people in the U.S. who receive the health and economic benefits of fluoridation.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Tony Bertone, Water Department Supervisor, at (978) 777-0407.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA and Massachusetts Department of Environmental Protection (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 which may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be 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 calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

What's a Cross-Connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air-conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed industrial, commercial, and institutional facilities in the service area to make sure that potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test backflow preventers to make sure that they provide maximum protection. For more information on backflow prevention, contact the Safe Drinking Water Hotline at (800) 426-4791.

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. Middleton Water Department 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 it is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling 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, or doing laundry or a load of dishes. If you have a lead or galvanized service line requiring replacement, you may need to flush your pipes for a longer period. If you are concerned about lead and wish to have your water tested, contact Middleton Water Department at (978) 777-0407. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at 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 October 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. The lead service inventory may be accessed by contacting Tony Bertone, Water Department Supervisor, at (978) 777-0407. Please contact us if you would like more information about the inventory or any lead sampling that has been done.

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.

We 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.

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) | 2024 | 1.3 | 1.3 | 0.03 | 0-0.07 | 0/20 | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead (ppb) | 2024 | 15 | 0 | ND | 0-0.016 | 0/20 | No | Corrosion of household plumbing systems; Erosion of natural deposits |

Why save water?

Although 80 percent of the Earth's surface is water, only 1 percent is suitable for drinking. The rest is either saltwater or permanently frozen, and we can't drink it, wash with it, or use it to water plants.

Which household activity wastes the most water?

Most people would say the majority of water use comes from showering or washing dishes; however, toilet flushing is by far the largest single use of water in a home (accounting for 40% of total water use). Toilets use about 4 to 6 gallons per flush, so consider an ultra-low-flow (ULF) toilet, which requires only 1.5 gallons.

Should I be concerned about what I'm pouring down my drain?

If your home is served by a sewage system, your drain is an entrance to your wastewater disposal system and eventually to a drinking water source. Consider purchasing environmentally friendly home products whenever possible, and never pour hazardous materials (e.g., car engine oil) down the drain. Check with your health department for more information on proper disposal methods.

How long can I store drinking water?

The disinfectant in drinking water will eventually dissipate, even in a closed container. If that container housed bacteria prior to filling up with the tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water can be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

How long does it take a water supplier to produce one glass of treated drinking water?

It can take up to 45 minutes to produce a single glass of drinking water.

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 which a water system must follow.

NA: Not applicable.

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

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).

Safeguard Your Drinking Water

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain it to reduce leaching to water sources, or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use U.S. EPA's Adopt Your Watershed to locate groups in your community.
- Organize a storm drain stenciling project with others in your neighborhood. Stencil a message next to the street drain reminding people "Dump No Waste – Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.