2022 Consumer Confidence Report

For

Hinsdale Water Department

39 South Street

Hinsdale MA

MASSDEP PWSID#1132000

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Drinking Water Source

The Town of Hinsdale receives its drinking water from the 9 acre surface water reservoir the Belmont. The water is treated using a three bed slow sand filter system designed to remove any bacteriological concerns. The system was built in 1995. After the water is treated in the filter beds it is then pumped into the 500,000 gallon holding tank until demand is needed and then water flows into the distribution system.

Water System Improvements

We are always looking to make sure that we are supplying you with the safest drinking water we can. One way we achieve this is by completing monthly water sampling in the system. Another process we do to provide safe drinking water is annual hydrant flushing which helps remove any sediment deposits that may be in the distribution system pipelines. Finally we do yearly cleaning of the filter beds to remove any built up sediment deposits that may be in the filter beds.

Water Treatment Process

The chemical addition process begins when the raw water is treated with 12.5% Sodium Hypochlorite Solution as the water is pumped to the storage tank. When the water leaves the tank Sodium Hydroxide is added to raise the pH. Raising the pH helps with corrosion control in the distribution systems pipes and fittings. Bicarbonate of soda is also added at this point to increase the alkalinity which helps the effectiveness of the Sodium Hydroxide.

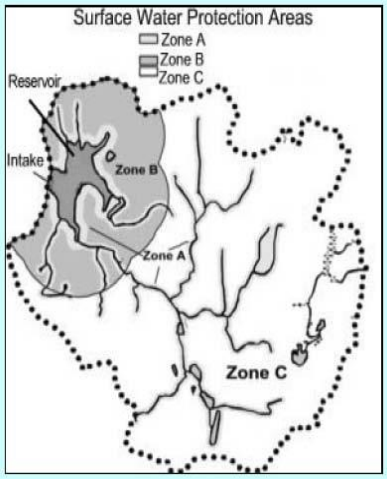
Potential Source of Contamination vs. Actual Contamination

The activities listed in Table 2 are those that typically use, produce, or store contaminants of concern, which, if managed improperly, are potential sources of contamination (PSC).

It is important to understand that a release may never occur from the potential source of contamination provided facilities are using best management practices (BMPs). If BMPs are in place, the actual risk may be lower than the threat ranking identified in Table 2. Many potential sources of contamination are regulated at the federal, state and/or local levels, to further reduce the risk.

What is a Watershed?

A watershed is the land area that catches and drains rainwater down-slope into a river, lake or reservoir. As water travels down from the watershed area it may carry contaminants from the watershed to the drinking water supply source. For protection purposes, watersheds are divided into protection Zones A, B and C.



Hinsdale is a small community. The Town was originally settled with farming and lumber/sawmill as the primary industry. The textile industry developed during the late 1800's. Hinsdale is currently mostly a residential community with few commercial and industrial businesses. Belmont reservoir is fed by two brooks. Most of the water shed is in made up of the Hinsdale Flats Watershed Resource Area. It holds the designation of an Area of Critical Environmental Concern. The Hinsdale Water Department owns approximately 22 acres of land that makes up about 8% of the water shed. The U.S. National Park Service owns approximately 50% of the water shed and the remaining percentage is privately owned.

What are "BMPs?"

Best Management Practices (BMPs) are measures that are used to protect and improve surface water and groundwater quality. BMPs can be structural, such as oil & grease trap catch basins, nonstructural, such as hazardous waste collection days or managerial, such as employee training on proper disposal procedures.

The Hinsdale Select Board members also are the Water Commissioners. The members are Ray Huntoon, Earl Peck and Bart Collins. Jamie Callahan is the Department of Public Works Superintendent. In case of a water break or home service emergency please call 413-655-2304 or Dalton Dispatch at 413-684-0300.

To review the Hinsdale Source Water Assessment and Protection Report it can be found at
https://www.mass.gov/service-details/the-source-water-assessment-protection-swap-program

Substances Found In Tap Water

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 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, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants -such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, and farming.

Pesticides and herbicides -which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

Organic chemical contaminants -including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

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

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

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. 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 (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 some infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control and Prevention (CDC) guidelines on lowering 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 Hinsdale 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. 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 http://www.epa.gov/safewater/lead.

Important Definitions

Maximum Contaminant Level (MCL) – 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.

Maximum Contaminant Level Goal (MCLG) –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.

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

90th Percentile – Out of every 10 homes sampled, 9 were at or below this level.

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

Unregulated Contaminants

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

Massachusetts Office of Research and Standards Guideline (ORSG) – This is the concentration of a chemical in drinking water, at or below which, adverse health effects are unlikely to occur after chronic (lifetime) exposure. If exceeded, it serves as an indicator of the potential need for further action.

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

Running Annual Average (RAA) - The average of four consecutive quarters of data.

Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant (chlorine, chloramines, chlorine dioxide) allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a drinking water disinfectant (chlorine, chloramines, chlorine dioxide) below which there is no known expected risk to health.
MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Level 1 Assessment - A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment - A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

ppm = parts per million, or milligrams per liter (mg/l)
ppb = parts per billion, or micrograms per liter (ug/l)
ppt = parts per trillion, or nanograms per liter
pCi/l = picocuries per liter (a measure of radioactivity)
NTU = Nephelometric Turbidity Units
ND = Not Detected
N/A = Not Applicable
mrem/year = millirems per year (a measure of radiation absorbed by the body)

Water Quality Testing Results

Regulated Contaminant	Date(s) Collected	Highest Result or Highest Running Average Detected	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Source(s) of Contamination
Inorganic Contaminants							
Nitrate (mg/l)	8/17/2022	0.0514 ppm		10ppm	10ppm	no	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits

Turbidity	TT	Lowest Monthly % of Samples	Highest Detected Daily Value TT	Violation (Y/N)	Possible Source of Contamination
Daily Compliance (NTU)	5	-----	.21	no	Soil runoff
Monthly Compliance*	At least 95%	100%	-----	no	
Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality.					
*Monthly turbidity compliance is related to a specific treatment technique (TT). Our system filters the water so at least 95% of our samples each month must be below the turbidity limits specified in the regulations.					

Unregulated Contaminants						
Unregulated Contaminants	Date(s) Collected	Result or Range Detected	Average Detected	SMCL	ORSG	Possible Source
Chloroform (ug/l)	11/16/2022	41.8 ppb	n/a	n/a	70 ppb	Chlorination of drinking water.
Manganese (mg/l)	**11/21/2022**	**1870 ppb**	**346ppb**	**n/a**	**300 ppb**	**Natural sources as well as discharges from industrial use**
Dibromochloro Methane (ug/l	11/16/2022	2.64 ppb	n/a	n/a	n/a	Water that has been disinfected with chlorine
Sodium (mg/L)	8/17/2022	4.8 ppm	n/a	n/a	20 ppm	Occur naturally in groundwater, road salts, water softeners, natural salt deposits

Manganese is a naturally occurring mineral found in rocks, soil, groundwater, and surface water. Manganese is necessary for proper nutrition and is part of a healthy diet, but can have undesirable effects on certain sensitive populations at elevated concentrations. The United States Environmental Protection Agency (EPA) and MassDEP have set an aesthetics-based Secondary Maximum Contaminant Level (SMCL) for manganese of 50 ug/L (microgram per liter), or 50 parts per billion. In addition, MassDEP's Office of Research and Standards (ORS) has set a drinking water guideline for manganese (ORSG), which closely follows the EPA public health advisory for manganese.

Drinking water may naturally have manganese and, when concentrations are greater than 50 ppb, the water may be discolored and taste bad. Over a lifetime, the EPA recommends that people drink water with manganese levels less than 300 ppb and over the short term, EPA recommends that people limit their consumption of water with levels over 1000 ppb, primarily due to concerns about possible neurological effects. Children younger than one year old should not be given water with manganese concentrations over 300 ppb, nor should formula for infants be made with that water for more than a total of 10 days throughout the year. The ORSG differs from the EPA's health advisory because it expands the age group to which a lower manganese concentration applies from children less than six months of age to children up to one year of age to address concerns about children's susceptibility to manganese toxicity.

See EPA Drinking Water Health Advisory for manganese at: https://www.epa.gov/sites/production/files/2014-09/documents/support_cc1_magnese_dwreport_0.pdf and MassDEP Office of Research and Standards (ORSG) for manganese https://www.mass.gov/doc/massdep-office-of-research-and-standards-guideline-orsg-for-manganese/download?_ga=2.224281821.778819075.1638290958-632873118.1621443750

Corrective Action

Customers were notified on December 15th of the high Manganese levels. To correct the high manganese levels detected in late 2022 we took numerous steps to fix this. First we had the lines in the filter plant blown out and found large silt deposits that had formed on the inside of the pipes. We changed out a pump that wasn't operating at its full capacity. We finished scraping the last of the sand filters. In completing these step the manganese levels dropped within operable working range.

Regulated Contaminant	Date(s) Collected	Highest Result or Highest Running Average Detected	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Source(s) of Contamination
Total Trihalomethanes (TTHMs) (ug/l)	quarterly	50.2	23.7-50.2 ppb	80 ppb	n/a	no	By product of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	quarterly	39.7	2.39-39.7 ppb	60 ppb	n/a	no	By product of drinking water disinfection

Cross-Connection Control and Backflow Prevention

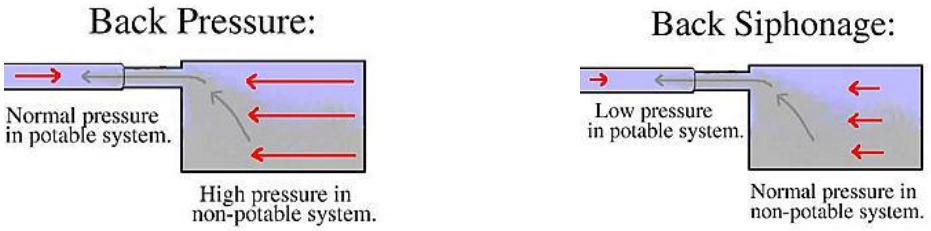
The Hinsdale Water Department makes every effort to ensure that the water delivered to your home and business is clean, safe and free of contamination. Our staff works very hard to protect the quality of the water delivered to our customers from the time the water is extracted via deep wells from underground aquifers or withdrawal point from a surface water source, throughout the entire treatment and distribution system. But what happens when the water reaches your home or business? Is there still a need to protect the water quality from contamination caused by a cross-connection? If so, how?

What is a cross-connection?
A cross-connection occurs whenever the drinking water supply is or could be in contact with potential sources of pollution or contamination. Cross-connections exist in piping arrangements or equipment that allows the drinking water to come in contact with non-potable liquids, solids, or gases (hazardous to humans) in event of a backflow.

What is a backflow?

Backflow is the undesired reverse of the water flow in the drinking water distribution lines. This backward flow of water can occur when the pressure created by equipment or a system such as a boiler or air-conditioning is higher than the water pressure inside the water distribution line (back pressure), or when the pressure in the distribution line drops due to routine occurrences such as water main breaks or heavy water demand causing the water to flow backward inside the water distribution system (back siphonage). Backflow is a problem that many water consumers are unaware of, a problem that each and every water customer has a responsibility to help prevent.

Example 1:



What can I do to help prevent a cross-connection?
Without the proper protection something as simple as a garden hose has the potential to contaminate or pollute the drinking water lines in your house. In fact over half of the country's cross-connection incidents involve unprotected garden hoses. There are very simple steps that you as a drinking water user can take to prevent such hazards:

- NEVER submerge a hose in soapy water buckets, pet watering containers, pool, tubs, sinks, drains, or chemicals.
- NEVER attach a hose to a garden sprayer without the proper backflow preventer.

- Buy and install a hose bibb vacuum breaker in any threaded water fixture. The installation can be as easy as attaching a garden hose to a spigot. This inexpensive device is available at most hardware stores and home-improvement centers.
- Identify and be aware of potential cross-connections to your water line.
- Buy appliances and equipment with backflow preventers.
- Buy and install backflow prevention devices or assemblies for all high and moderate hazard connections.

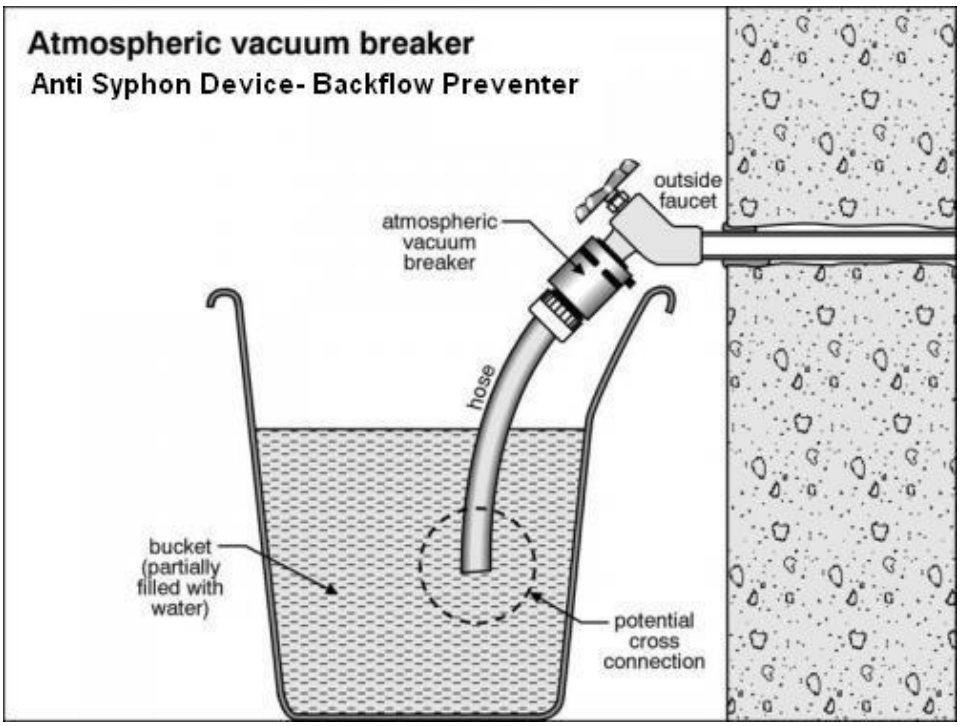
If you are the owner or manager of a property that is being used as a commercial, industrial, or institutional facility you must have your property's plumbing system surveyed for cross-connection by your water purveyor. If your property has NOT been surveyed for cross-connection, contact your water department to schedule a cross-connection survey.

Example 2:

What is a Cross Connection and what can I do about it?

A cross connection is a connection between a drinking water pipe and a polluted source. The pollution can come from your own home. For instance, you're going to spray fertilizer on your lawn. You hook up your hose to the sprayer that contains the fertilizer. If the water pressure drops at the same time you turn on the hose, the fertilizer may be sucked back into the drinking water pipes through the hose. This problem can be prevented by using an attachment on your hose called a backflow-prevention device.

The Hinsdale Water Department recommends the installation of backflow prevention devices, such as a low cost hose bib vacuum breaker, for all inside and outside hose connections. You can purchase this at a hardware store or plumbing supply store. This is a great way for you to help protect the water in your home as well as the drinking water system in your town! For additional information on cross connections and on the status of your water systems cross connection program, please contact 413-655-2307.



Running Toilet Facts

We all know the annoying sound of a constantly running toilet. We jiggle the handle and sometimes that works just fine. But it will need to be fixed once and for all eventually because a running toilet will run up your water bill. It's normal for your toilet to run for about 30 seconds after a flush; but if your toilet runs non-stop, you have a problem.

A running toilet could waste 3 to 4.5 gallons per minute. That's almost 300 gallons per hour, which adds up to 6,480 gallons per day. A leaking flapper—which may not make a noticeable running sound, but you'll notice an unpleasant change in your water bill. Be sure to address your running toilet and not allow it to continually run.