Allan Kent
Chairman

Kevin Rudden
Matthew O'Brien

TOWN OF MENDON
WATER COMMISSION

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2017 Annual Drinking Water Quality Report
Consumer Confidence Report (CCR)
FOR THE
Mendon Water Commission
Mendon, Massachusetts
Mendon Public Water Supply (PWS) ID Number: 2179000
Hopedale PWS ID Number: 2138000

Consecutive System Interconnected on Cape Road at the Town Line between Hopedale and Mendon
AND at Dudley Road, Mendon at the intersection with Westcott Road, Hopedale.

The Mendon Water Commission has prepared this report to provide important information about the town's public water system, including all drinking water testing between January 1 and December 31, 2017. If you have any questions regarding this report, please contact Dan Byer, Municipal Clerk for the Water Commission, at the phone number or email address above. The Town of Mendon has been purchasing water from the Town of Hopedale since June 1, 2005. Consumer Confidence Reports for both Mendon and Hopedale are available in both Town Halls or can be found at: http://www.mendonma.gov/water/ccr

Water Commission Meetings:

The Mendon Water Commission encourages you to attend their meetings. The Commission typically meets the first Thursday of the month in the Mendon Town Hall. Please check the Town of Mendon website (www.mendonma.gov/town-calendar) or contact the Water Commission office to confirm meeting dates. Also, if a situation warrants, public hearings will be held and you will be notified through the news media and/or by U.S. Postal Service mail.

Water Commissioners during 2017:
Allan Kent, Chairman *(Term Expires May 2020)*
Dean D'Alessandro *(Term Expires May 2018)*
Kevin Rudden *(Term Expires May 2019)*

Water Commission Staff during 2017:
Timothy Watson, Certified Water Operator (Jan.-June)
White Water, Inc. (July-Dec.)
Dan Byer, Municipal Clerk

Water Sources:

The water within Mendon's public water system comes from the Town of Hopedale. This water comes from several wells in a few locations. The main location is the well field on Mill Street within the Hopedale golf course. At this location, more than 30 wells are being pumped by a vacuum system which supplies the majority of water to be treated. Additionally, water comes from 5 separate wells located around the treatment plant itself. More information about the watershed is available on the U.S. Environmental Protection Agency (EPA) Surf Your Watershed website at: www.epa.gov/surf

Source Name	MassDEP Source ID#	Location of Source
Mill St. Well Field	2138000-01G	Within Hopedale Golf Course
Greene St. Gravel Packed Well	2138000-02G	Within Water Treatment Plant
Greene St. Gravel Packed Well 1	2138000-03G	Within Water Treatment Plant
Greene St. Gravel Packed Well 2	2138000-04G	Within Water Treatment Plant
Greene St. Bedrock Well	2138000-05G	Within Water Treatment Plant
Greene St. Bedrock Well	2138000-06G	Within Water Treatment Plant

Treatment:

Our water is supplied as listed above. From there, the raw water is sent to our treatment plant, where it is immediately disinfected with chlorine gas, the pH is adjusted, and a coagulant is added to assist in removing minerals and contaminants (i.e. iron, manganese, etc.) while going through our green sand plus filters. This filtered water is then sent through an ultra violet system, deactivating any viruses the water may contain, then flows to our clear well where the water is chlorinated a final time before being sent out to our distribution system. Our water system makes every effort to provide you with safe and pure drinking water.

Water Quality Monitoring:

Water quality is constantly monitored by the Mendon Water Commission, Hopedale Water Department, and Mass Department of Environmental Protection (MassDEP), based on a sampling schedule set forth by MassDEP. This helps to determine the effectiveness of existing water treatment and whether any additional treatment is required. Beyond Hopedale's testing, the water within the Mendon system itself is monitored monthly for coliform bacteria and yearly for by-products of chlorine: trihalomethanes and haloacetic acids. Lead and copper testing is done every other year and asbestos is tested for every seven years.

Here are some examples of potential contaminants that are monitored and treated:

- Gross Alpha Particle Activity
- Asbestos
- Haloacetic Acids
- Chlorine
- Inorganics
- Iron
- Lead & Copper
- Manganese
- Nitrate
- Nitrite
- Perchlorate
- Radium 226 & 228
- Secondary Contaminants
- Synthetic Organic Compounds (SOCs)
- Trihalomethanes
- Turbidity
- Volatile Organic Compounds (VOCs)

Source Water Assessment:

As part of the Source Water Assessment Program (SWAP), MassDEP conducted assessments of our drinking water sources for the purposes of determining their susceptibility to potential contamination. A susceptibility ranking of "high" was assigned to this system, due to potential threats to water quality in the area, such as pesticides, fertilizers and chemical or fuel spills. The complete SWAP report is available online at: http://www.mass.gov/eea/docs/dep/water/drinking/swap/cero/2138000.pdf More information is listed in the "Ways to Protect Your Water Supply" section on measures that can be taken to reduce these threats.

Substances Found in Tap Water:

In order to ensure that 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).

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 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 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 storm water runoff, and residential use.
- **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 be the result of oil and gas production and mining activities.

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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 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).

Water Quality Testing Results:

The presence of the following contaminants does not necessarily indicate that the water poses a health threat. The water quality information presented in the tables is from the most recent round of testing done in accordance with the regulations. All data shown were collected during the last calendar year, unless otherwise noted in the tables.

	Date Collected	90th Percentile	AL	MCLG	# of sample sites	# of sites above AL	Exceeds AL? (Y/N)	Possible Sources of Contamination
Lead (ppb)	9/21/17	4	15	0	5	0	N	Corrosion of household plumbing systems, erosion of natural deposits
Copper (ppm)	9/21/17	0.635	1.3	1.3	5	0	N	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives

	Highest # Positive in a Month	MCL	MCGL	Violation? (Y/N)	Possible Source of Contamination
Total Coliform	0	0	0	N	Naturally present in the environment
Fecal Coliform or E. Coli	0	*	0	N	Human and animal fecal waste

Turbidity*	TT	Lowest Monthly % of Samples	Highest Detected Daily Value	Violation? (Y/N)	Possible Source of Contamination	*Turbidity is a measure of the cloudiness of the water. It is a good indicator of water quality.
Daily Compliance (NTU)	1	----------	0.22	N	Soil runoff	**Monthly turbidity compliance is related to a specific treatment technique (TT).
Monthly Compliance**	At least 95% <0.3	100%	----------	N		Our system filters the water so at least 95% of our samples each month must be below the turbidity limits specified in the regulations.

Regulated Contaminant	Date(s) Collected	Amount Detected	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Source(s) of Contamination
Inorganic Contaminants							
Barium (ppm)	5/17/17	0.06	NA	2	2	N	Discharge of drilling wastes or metal refineries, erosion of natural deposits
Nitrate (ppm)	5/17/17	0.55	NA	10	10	N	Runoff from fertilizer, leaching from septic tanks, erosion of natural deposits
Perchlorate (ppb)	9/19/17	0.08	NA	2	NA	N	Rocket propellants, fireworks, munitions, flares, blasting agents
Radioactive Contaminants							
Gross Alpha (pCi/l) (minus uranium)	4/26/2012	0.71	NA	15	0	N	Erosion of natural deposits
Radium 226 & 228 (pCi/l) (combined values)	1/25/2012	0.84	NA	5	0	N	Erosion of natural deposits

Regulated Contaminant	Date(s) Collected	Result	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation? (Y/N)	Possible Source(s) of Contamination
Disinfectants & Disinfection By-Products							
Total Trihalomethanes (TTHMs) (ppb)	8/31/17	54	NA	80	NS	N	By-product of drinking water chlorination
Haloacetic Acids (HAA5s) (ppb)	8/31/17	26	NA	60	NS	N	By-product of drinking water chlorination
Chlorine (ppm) (free) (Running Annual Average)	Monthly 2017	0.47	0.18-0.85	4	4	N	Water additive used to control microbes

Unregulated & Secondary Contaminants	Date(s) Collected	Result or Range Detected	Average Detected	SMCL	ORSG	Possible Source(s) of Contamination
Inorganic Contaminants						
Sodium (ppm)	5/17/17	65	NA	----	20	Natural sources, runoff from use as road salt, by-product of treatment process
Sulfate (ppm)	5/17/17	17	NA	250	----	Natural sources
Other Organic Contaminants						
Bromodichloromethane (ppb)	5/17/17	7.5	NA	----	----	By-product of drinking water chlorination
Chloroform (ppb)	5/17/17	8.8	NA	----	----	By-product of drinking water chlorination
Dibromo-chloro-methane (ppb)	5/17/17	3.4	NA	----	----	By-product of drinking water chlorination

Terminology Used in Water Quality Testing Results:

- **90th Percentile**: Out of every 10 homes sampled, 9 were at or below this level.
- **Action Level (AL)**: The highest level of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Massachusetts Office of Research and Standards Guideline (ORSG)**: 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.
- **Maximum Contaminant Level (MCL)**: The highest level of a contaminant that is allowed in drinking water.
- **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. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **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 of expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **NA**: not applicable
- **ND**: not detected
- **NS**: none set
- **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.
- **Running Annual Average (RAA):** Average of four quarters
- **Secondary Maximum Contaminant Level (SMCL)**: These standards are developed to protect the aesthetic qualities of drinking water, such as taste and odor, and are not health-based.
- **Treatment Technique (TT)**: A required process intended to reduce the level of a contaminant in drinking water
- **Unregulated Contaminants:** Substances without MCLs for which EPA requires monitoring. For some of these substances, the Massachusetts Office of Research and Standards (ORS) has developed state guidelines or secondary MCLs. Unregulated contaminants are only reported when they were detected.
- **Variances and Exemptions**: State or EPA permission not to meet an MCL or a treatment technique under certain conditions
    - **mrem/year** (Millirem's per year): A measure of radioactivity
    - **NTU**: Nephelometric Turbidity Units
    - **NA**: Not Applicable
    - **ND**: Not Detected
    - **ppb (**parts per billion): One part substance per billion parts water (or micrograms per liter [ug/l])
    - **ppm (**parts per million): One part substance per million parts of water (or milligrams per liter [mg/l])
    - **ppt (**parts per trillion): One part substance per trillion parts of water(or nanograms per liter [ng/l])
    - **pCi/l (**picocuries per liter): a measure of radioactivity**)**

Violations:

Our Commission is proud to announce there were no violations this year.

Health Information:

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 (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer who are 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. EPA/CDC (Centers for Disease Control) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791) or http://water.epa.gov/drink/hotline

Lead in Home Plumbing

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 Mendon Water Commission 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

Sodium Sensitivity

Individuals who are sensitive to sodium, such as those experiencing hypertension, kidney failure, or congestive heart failure, should be aware of sodium levels and carefully control their exposure.

Cross Connections:

A cross connection is formed at any point where a drinking water line connects with equipment, systems containing chemicals or water sources of questionable quality. Outside water taps and garden hoses tend to be the most common sources of cross-contamination at home. For example, fluctuation in water pressure can cause water to be siphoned or sucked backwards through pipes and hoses. This could occur if the water pressure dropped when a hose was turned on to apply spray fertilizer. In such a situation, the fertilizer could be sucked back into the drinking water pipes. The Mendon Water Commission recommends the installation of backflow prevention devices, such as Hose Bibb vacuum breakers, on all hose connections in order to prevent cross connections. These are inexpensive and are available from your local plumbing contractor or supplier. For more information on backflow prevention, contact the Safe Water Drinking Hotline at 1-800-426-4791. As required by Massachusetts Drinking Water Regulations 310 CMR 22.22 (3) (b), the Mendon Water Commission has an approved Cross Connection Program Plan. All cross connections in Mendon businesses that are supplied by public water are surveyed by a certified backflow tester on an annual basis. These records are available for your inspection at the Water Commission office in the Town Hall.

Iron and Manganese

Manganese—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.

Iron—naturally present in soils, groundwater, and surface water sources. Iron is not known to be disease causing, however, high levels can cause rust looking stains on plumbing fixtures and cause taste and odor problems.

Iron and manganese levels in our water are below levels required for reporting. However, we felt it was important to let you know that our water, as well as most water, does contain these contaminants. In our raw water, levels can be as high as 9.93 ppm. Since the installation of the filter plant in 2011, iron and manganese is removed to the point of non-detectable prior to being sent out to the distribution system.

Ways to Protect the Water Supply:

- Dispose of all unused household hazardous wastes at the Board of Health's Household Hazardous Waste Day. Call 508-634-2656 for more information.
    - **There is a Hazardous Waste Collection day scheduled for August 18th, 2018 9am-12pm at the Mendon Highway Barn (66 Providence St.)**
- Minimize the use of fertilizers, pesticides, or herbicides. Sweep up any spills instead of washing them into the street or storm drain. Do not apply them before a heavy rain is anticipated. Use natural alternatives to these substances.
- Maintain your septic system. The septic tank should be emptied once every three years. Call 508-634-2656 for more information.
- Conserve water to help support a growing population and avoid watering bans. Avoid excessive lawn irrigation. Check for leaks within your system. Purchase water saving devices, such as low flow toilets and showerheads.

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(Consumer Confidence Report)

Mendon Water Customer
STREET
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