

# 2022 ANNUAL DRINKING WATER QUALITY REPORT

This report is a snapshot of the drinking water quality that was provided last year. Included are details about where your water came from, what it contained, and how it compared to state and federal standards. Our system makes every effort to provide you with safe and pure drinking water.

for

## Charlton Manor Rest Home PWS ID #2054005



Prepared by

**McCLURE**  
ENGINEERING, INC

*The water system is owned by Charlton Manor Rest Home. For additional copies, please contact Michael Turpin at 508.248.5136 or the McClure Engineering website at <http://www.mcclureengineers.com/water.html> or office at 508.248.2005.*

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

*Community Drinking Water Source*

Charlton Manor Rest Home is located in Charlton, MA, and is supplied water by the following groundwater source:

- PWS Source ID# 2054005-01G (Well #01G)

Data in this report reflects water quality from Well 01G

Charlton Manor Rest Home continuously strives to produce the highest quality water possible to meet or surpass every water quality standard. We monitor our water source and distribution system very closely. The standards we operate under were enacted by the U.S. Congress as the Safe Drinking Water Act in 1974 and were amended in 1986 and 1996.

*Is My Water Treated?*

To ensure that we provide the highest quality of water available, certified operators and MassDEP regularly monitor water quality. When standards are exceeded, MassDEP requires treatment. Currently Well 01G is treated to remove arsenic and radon. Chlorine disinfection is available for emergency situations.

*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, 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, 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 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**, can be naturally occurring or be the result of oil and gas production and mining activities.
- **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.

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 US Environmental Protection Agency (EPA) 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 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 health care 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 (1-800-426-4791).

In order to ensure that tap water is safe to drink, the Department of Environmental Protection (MassDEP) and 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.

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~ CROSS CONNECTION CONTROL AND PREVENTION ~

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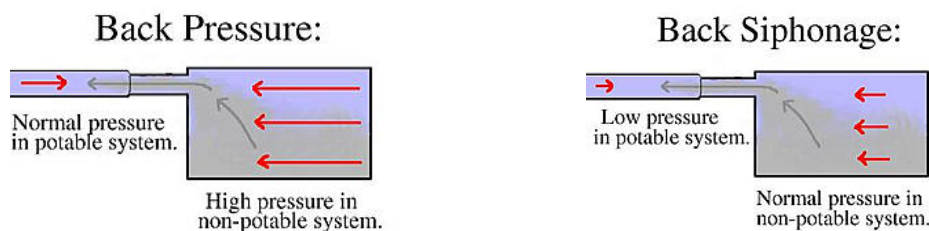
Charlton Manor makes every effort to ensure that the water delivered to your home and business is clean, safe and free of contamination. Our staff works very hard to protect the quality of the water delivered to our customers from the time the water is extracted via deep wells from underground aquifers 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.

### To 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.



### 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, they are:

- NEVER submerge a hose in soapy water buckets, pet watering containers, pool, tubs, sinks, drains, or chemicals.
- NEVER attached 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.

Charlton Manor recommends the installation of low-cost hose bibb vacuum breakers for all inside and outside threaded spigots and hoses. You can purchase them at a hardware store or plumbing supply store. This is a great way to help protect the water system that serves your home and community!

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~ *IMPORTANT DEFINITIONS* ~

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**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 that, if exceeded, triggers treatment or other requirements that a water system must follow.

**90<sup>th</sup> Percentile** – 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.

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

**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.

**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 (ng/l)

**pCi/l** = picocuries per liter (measure of radioactivity)

**ND** = Not Detected

**N/A** = Not Applicable

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## *DISTRIBUTION SYSTEM WATER QUALITY*

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### What Does This Data Represent?

The water quality information presented in the table is from the most recent round of testing done in accordance with the regulations. All data shown was collected during the last calendar year unless otherwise noted in the table.

Lead & Copper	Last Date Collected	* 90 <sup>th</sup> Percentile	Action Level (AL)	MCLG	# of sites sampled	# of sites above Action Level	Exceeds Action Level	Possible Sources of Contamination
Lead (ppb)	Q3 2020	2	15	0	5	0	N	Corrosion of household plumbing; erosion of natural deposits
Copper (ppm)	Q3 2020	0.12	1.3	1.3	5	0	N	Corrosion of household plumbing; erosion of natural deposits; leaching from wood preservatives.

\*9 out of every 10 sites sampled were at or below this level. Lead and copper compliance is determined by comparing the 90<sup>th</sup> percentile value to the Action Level (AL) for each contaminant. The AL is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Lead and copper sampling is scheduled every three years. The last samples collected were in September 2020 and the next sample collection will be during Quarter 3 of 2023.

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. Century Mill Estates 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 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>.

## *DISTRIBUTION SYSTEM WATER QUALITY (continued)*

Regulated Contaminants	Date Collected	Highest Result or Highest Avg	Range detected	MCL	MCLG	Violation (Y/N)	Possible Sources
<b>Inorganic Contaminants</b>							
Arsenic (ppb)	1/12/2022 4/11/2022 7/18/2022 10/11/2022	ND	ND	10	N/A	N	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium(ppm)	6/10/2020	0.014	0.014	2	2	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrate (ppm) (annual)	4/11/2022	0.0603	0.0603	10	10	N	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits
Nitrite (ppm)	5/5/2021	ND	ND	1	1	N	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits
Perchlorate (ppb)	7/20/2020	ND	ND	2	N/A	N	Rocket propellants, fireworks, munitions, flares, blasting agents
PFAS6 (ppt)	1/12/2022 4/11/2022 7/18/2022	2.57	2.37-2.57	20	None	N	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. Additional sources include the use and disposal of products containing these PFAS, such as fire-fighting foams.
<b>Radioactive Contaminants</b>							
Gross Alpha Particle Acitivity (pCi/L)	5/5/2021	8.3	8.3	15	0	N	Erosion of natural deposits
Radium 226 & 228 (pCi/L)	4/9/2018	2.02	N/A	5	0	N	Erosion of natural deposits
<p>-Gross Alpha was sampled June 5, 2021. The next sampling is due Quarter 2 2024.</p> <p>-Nitrite was sampled June 5, 2021. The next sampling is due Quarter 2 2024.</p> <p>-Radium 226 &amp; 228 was sampled April 9, 2018. The next sampling event is Quarter 2 2025.</p> <p>-Inorganic Contaminants (IOCs) were sampled in June 2020. <u>IOCs were non-detected.</u> The next sampling is due Quarter 2 2023.</p> <p>-Synthetic Organic Contaminants (SOCs) were sampled in May 2021. <u>SOCs were non-detected.</u> The next sampling is due Quarter 2 2024.</p> <p>-Volatile Organic Compounds (VOCs) were sampled April 11, 2022. <u>VOCs were non-detected.</u> The next sampling is due Quarter 2 2023.</p>							

## *DISTRIBUTION SYSTEM WATER QUALITY (continued)*

<b>*Unregulated Contaminants</b>	<b>Last Date Collected</b>	<b>Result or Range Detected</b>	<b>Average Detected</b>	<b>SMCL (ppb)</b>	<b>ORSG</b>	<b>Possible Sources</b>
Iron (ppb)	6/10/2020	ND	ND	300	N/A	Natural and industrial sources as well as aging and corroding Distribution Systems and household pipes
Manganese*(ppb)	6/10/2020	20-170	95	50	Health advisory of 300	Erosion of natural deposits
Sodium** (ppm)	8/30/2021	19.6	19.6	N/A	20	Discharge from the use & improper storage of sodium-containing de-icing compounds or in water-softening agents.
Radon-222 (pCi/L)	10/11/2022	407.25	407.25	N/A	10,000	Natural sources
<p>*US EPA and MassDEP have established public Health Advisory (HA) levels for manganese to protect against concerns of potential neurological effects and a one-day and 10-day HA of 1000 ppb for acute exposure.</p> <p>**<u>Sodium</u>: Some people who drink water containing sodium at high concentrations for many years could experience an increase in blood pressure.</p>						

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~ EDUCATIONAL INFORMATION ~

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***SWAP (Source Water Assessment and Protection) ~***

MassDEP has prepared a Source Water Assessment Program (SWAP) Report for Charlton Manor Rest Home. The report assesses the susceptibility of the public water supply to contamination and makes recommendations.

Residents can help protect sources by:

- Practicing good septic system maintenance
- Supporting water supply protection initiatives at the next town meeting
- Taking hazardous household chemicals to hazardous materials collection days
- Limiting pesticides, fertilizer uses, and unnecessary outdoor watering

***Opportunities to Participate ~***

Any matters that concern your drinking water supply or issues you would like to see addressed can be presented at the regularly scheduled meeting of the trustees, association or board. If your concerns need immediate attention contact Owner, Michael Turpin at (508) 248-5136.

***Water System Improvements ~***

Our water system is routinely inspected by MassDEP for its technical, financial and managerial capacity to provide safe drinking water to you. The PWS continues to monitor the water and make adjustments when necessary.

Charlton Manor Rest Home  
PWS ID# 2054005  
12 Town Farm Road  
Charlton, MA 01507  
(508) 258-5136

*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

Date Distributed: 6/30/2023

For more information please contact:

**Charlton Manor Rest Home**  
**PWS ID# 2054005**  
**12 Town Farm Road**  
**Charlton, MA 01507**  
**#508.258.5136**

This report was prepared by McClure Engineering, Inc.

Also available at <http://www.mcclureengineers.com/>

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**IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER**