



Overlook Masonic Health Center
PWS I.D. # 2054003
Charlton, MA

PUBLIC NOTICE

Copies of
The 2016 DRINKING WATER QUALITY
ANNUAL WATER QUALITY REPORT
Are available upon request

Contact: Doug LaRoche @ (508) 434-2235 or
John Moore @ (508) 889-8517

ANNUAL WATER QUALITY REPORT 2016



**OVERLOOK MASONIC HEALTH CENTER
CHARLTON, MASSACHUSETTS
PWS ID# 2054003**

Public Water System Information

The **Overlook Masonic Health Center** is pleased to issue our annual water quality report. This report discusses the quality of the drinking water on Campus and shows test results for **2016**. It confirms that our water meets or surpasses the requirements for safe drinking water as established by State and Federal standards. We are committed to providing you with information about our water quality because informed residents and staff are our best allies. For more information about your water, call Doug LaRoche at (508) 434-2235. Copies of this report are available upon request for all residents living at the Overlook Life Care Community, their visitors, and our staff.

An electronic copy is available on the McClure Engineering website at:

<http://www.mcclureengineers.com/water.html>

Sources of Drinking Water

We have two sources of drinking water. Both are groundwater wells (PWS ID# 2054003-03G (03G) and #2054003-04G (04G)) and are located on the east side of our property. Each well is marked with an X on the property layout below. Well 03G is approximately 500-feet deep, while Well 04G is 800-feet deep. Both wells share the same bedrock aquifer system through an inter-connected series of fractures. We add disinfectant to protect you against microbial contaminants.



In 2001, Mass DEP prepared a Source Water Assessment and Protection (SWAP) report for the sources serving this water system. A susceptibility ranking of “moderate” was assigned to one of our wells and a ranking of “high” to the other due to the presence of at least one high-threat land use activity and the absence of geologic barriers that could prevent contaminant migration to this system. The concerns in that report have been addressed, including replacement of our original two wells with deeper wells that are less vulnerable to contamination. For more information about the SWAP report and our source protection efforts, please contact: Doug LaRoche @ (508) 434-2235.

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.

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).

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.

Substances Found in Tap Water *(continued from previous page)*

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, or 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 (VOCs), 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as 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. EPA/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).

To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) and MassDEP 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 (DPH) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Important Definitions

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

90th 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.

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 contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

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

Maximum Residual Disinfectant Level Goal (MRDLG): 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.

Important Definitions *(continued)*

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

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.

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

Office or 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.

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.

ppb: parts per billion or micrograms per liter (ug/L)

ppm: parts per million, or milligrams per liter (mg/L)

pCi/L: picocuries per liter (a measure of radioactivity)

n/a: not applicable

2016 Water Quality Testing Results

The water quality information presented in the following tables is from the most recent rounds of testing done in accordance with the drinking water regulations.

| Regulated Contaminants | Date Collected | Highest Detected Amount | Range Of Detection | MCL or MRDL | MCLG or MRDLG | Violation (Yes/No) | Possible Sources |
|------------------------------------|------------------|-------------------------|--------------------|-------------|---------------|--------------------|--|
| Inorganic Contaminants | | | | | | | |
| Barium (ppm) | 5/13/15 | 0.0061 | --- | 2 | 2 | No | Erosion of natural deposits |
| Nitrate (ppm) | 6/8/16 | 0.081 | --- | 10 | 10 | No | Fertilizer runoff; septic tanks; natural deposits |
| Radioactive Contaminants | | | | | | | |
| Gross Alpha (pCi/L) | 5/8/12 | 2.98 | --- | 15 | 0 | No | Erosion From natural deposits |
| Combined Radium (pCi/L) | 5/8/12 | 0.08 | --- | 5 | 0 | No | Erosion from natural deposits |
| Disinfection By-Products | Date Collected | Highest Result / RAA | Range of Detection | MCL or MRDL | MCLG or MRDLG | Violation (Yes/No) | Possible Sources |
| Total Trihalomethanes (TTHMs)(ppb) | 8/24/16 (annual) | 5.1 | n/a | 80 | n/a | No | Formed as byproduct when chlorine is added to water supply systems |
| Haloacetic Acids (HAA5) (ppb) | 8/24/16 (annual) | 0.84 | n/a | 60 | n/a | No | Formed as a byproduct when chlorine is added to water supply systems |

| Unregulated VOC Contaminants | Date Collected | Highest Detect | Range of Detection | MCL or MRDL | ORSG | Violation (Yes/No) | Possible Sources |
|--|----------------|------------------------|--------------------|-------------|-------|--------------------|--|
| Bromodichloromethane (ppb) (quarterly VOC) | Quarterly | 0.68 | 0.55 - 0.68 | n/a | --- | No | Trihalomethane; byproduct of drinking water chlorination |
| Chlorodibromomethane (ppb) (quarterly VOC) | Quarterly | 1.4 | 1.1 - 1.4 | n/a | --- | No | Trihalomethane; byproduct of drinking water chlorination |
| Bromoform (ppb) (quarterly VOC) | Quarterly | 2.7 | 0.89 - 2.7 | n/a | --- | No | Trihalomethane; byproduct of drinking water chlorination |
| Disinfectant | Date Collected | Running Annual Average | Range of Detection | MRDL (ppm) | MRDLG | Violation (Yes/No) | |
| Chlorine (ppm) | Monthly | 0.18 | <0.02 – 0.26 | 4 | 4 | No | Water additive used to control microbes |

Gross alpha, radium 226 and radium 228 sampling is scheduled for 2021. Synthetic Organic Contaminants and Inorganic Contaminants sampling is scheduled for collection in 2018.

| Lead & Copper | Date Collected | 90 th Percentile* | Action Level (AL) | MCLG | # of sites Sampled | # of sites above AL | Exceedance (Yes/No) | Possible Sources |
|---------------|----------------|------------------------------|-------------------|------|--------------------|---------------------|---------------------|---------------------------------|
| Lead(ppb) | 9/23/14 | 2.2 | 15 | 0 | 10 | 0 | No | Corrosion of household plumbing |
| Copper (ppm) | 9/23/14 | 0.11 | 1.3 | 1.3 | 10 | 0 | No | Corrosion of household plumbing |

*Nine out of every 10 sites sampled were at or below this level. Lead and copper compliance is determined by comparing the 90th 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.

The next lead and copper sampling event is scheduled in 2017.

Required Lead Statement: 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 Overlook Life Care Community 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 two minutes before using water for drinking or cooking. We test in accordance with the regulations to assure our residents, employees and visitors have the safest and cleanest drinking water possible. Our regular sampling includes testing at 10 different locations on campus to determine the 90th percentile value. We also test two additional sites in the School Daycare. All 12 sites were well below the action levels for lead and copper in the last round of testing. 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>

2016 Water Quality Testing Results *(continued)*

| Bacteria | Highest Positive in a Month | MCL | MCLG | Violation (Yes/No) | Possible Sources |
|----------------|-----------------------------|-----|------|--------------------|--------------------------------------|
| Total Coliform | 0 | 1 | 0 | No | Naturally present in the environment |
| E. coli | 0 | * | 0 | No | Human and animal fecal waste |

*Compliance with the Fecal Coliform / E. coli MCL is determined upon additional repeat testing.

| Unregulated & Secondary Contaminants | Date Collected | Level Detected | SMCL | ORSG | Possible Sources |
|--------------------------------------|----------------|----------------|------|------|--|
| Sulfate (ppm) | 8/12/15 | 28 | 250 | ---- | Naturally occurring in rocks and soil |
| Sodium (ppm) | 5/13/15 | 13 | ---- | 20 | Natural sources; runoff from road salt |

Cross Connection Control

At any point where a drinking water line connects to water of questionable quality, a backflow may occur in the drinking line causing a contamination. This is called a cross connection. A simple example of this is the common garden hose connected to a tap with the other end of the hose inserted into a pool or other external source. Other examples of cross connections may occur at boilers, air conditioning systems, fire sprinkler systems, and irrigations systems. Our facility has been surveyed for cross connection hazards and has proper backflow devices wherever necessary.

The Positive Effects of Water

Are you drinking enough water? According to the University of Washington, 75% of Americans are chronically dehydrated. For 37% of Americans, the thirst mechanism is so weak that it is often mistaken for hunger. Even **mild** dehydration will slow down one's metabolism as much as 3%. Here are some facts from the study:

- A person can live for about a month without food, but only about a week without water.
- The lack of water is the number one trigger for daytime fatigue.
- Preliminary research indicates that 6-8 glasses of water per day significantly ease back and joint pain for up to 80% of sufferers and prevent constipation.
- Water naturally alleviates headaches.
- A mere 2% drop in body water can trigger fuzzy short-term memory trouble with basic math, and difficulty focusing on a computer screen or printed page.
- Drinking water can lower the risk of certain cancers, including colon, bladder and breast cancer.

What You Should Know About the Water You Use

- The average American uses 140-170 gallons of water per day.
- The average family of four uses 881 gallons of water a week to flush the toilet.
- If you leave the water running when you brush your teeth, you'll use about 5 extra gallons of water a week.
- An automatic dishwasher uses 9-12 gallons of water. Hand washing dishes can use up to 20 gallons of water.
- You can refill an 8-ounce glass of water approximately 15,000 times for the same cost as a six pack of soda pop.
- A leaky faucet or toilet can waste 100 gallons of water each day.

Tap Water vs. Bottled Water

Thanks to aggressive marketing, the bottled water industry has successfully convinced us that all water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than tap water. In fact, about 25% of bottle water is actually just bottled tap water. The government estimate is even higher (40%).

~ Water System Awards and Improvements ~

Our water system received a Public Water System Award for Outstanding Performance and Achievement in 2016! Please see the attached Award.

A new digital Sensus OMNI water meter was installed in December 2016, and the well pump in Well 03G was replaced in February 2017.

Public Participation Opportunities

If you are ever interested in scheduling a meeting of residents and staff to discuss our water, please contact Doug LaRoche @ (508) 434-2235.

The Commonwealth of Massachusetts
Department of Environmental Protection
Drinking Water Program



2017

Public Water System Award

is presented to

Overlook Life Care Community

PWS ID 2054003

For Outstanding Performance
and Achievement in 2016.

A handwritten signature in black ink, appearing to read "Yvette dePeiza".

Yvette dePeiza - Program Director
MassDEP Drinking Water Program