

2015 Annual Drinking Water Quality Report

Orono-Veazie Water District

**Orono, Maine
PWSID ME0091210**

We're pleased to present to you our Annual Drinking Water Quality Report, also known as the Consumer Confidence Report. This report, a requirement of the 1996 amendments to the Safe Drinking Water Act, is designed to inform you about the quality water and services we deliver to you every day. 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.

If you have any questions about this report or concerning your water system, please contact the office at telephone number 207-866-4449, fax 207-866-3570, or mailing address 47 Penobscot Street, Orono, ME 04473. We want our valued customers to be informed about their water system. If you want to learn more, please attend any of our regularly scheduled meetings. Please check our website for their specific time and location, at www.ovwd.org.

OVWD contracted with Wright & Pierce to develop a Master Plan for the District. The Master Plan will serve as a tool to integrate all ongoing planning efforts in the service communities so the water system can better coordinate planning for growth and utility management.

WATER SOURCE

Our water is drawn from four drilled wells located in a well field to the north of 116 Bennoch Road. The water from all four is filtered and then treated with chlorine to protect against bacteriological contaminants, fluoride to promote dental health, and sodium hydroxide to reduce lead solubility from your home's plumbing. We maintain 2,297 service connections that serve a population of 8,125.

SOURCE WATER ASSESSMENT

The Maine Drinking Water Program (DWP) has evaluated all public water supplies as part of the Source Water Assessment Program (SWAP). The assessments included geology, hydrology, land uses, water testing information, and the extent of land ownership or protection by local ordinance to see how likely our drinking water source is to being contaminated by human activities in the future. Assessment results are available at public water suppliers, town offices, and the DWP. For more information about the SWAP, please contact the DWP at telephone 207-287-2070.

WATER QUALITY

The Orono-Veazie Water District routinely monitors for contaminants in your drinking water according to Federal and State laws. The following table shows any detection resulting from our monitoring for the period of January 1st to December 31st, 2015.

In 2014, as a result of efforts to protect the water supply, our system was granted a 'Synthetic Organics Waiver.' This is a three-year exemption from the monitoring/reporting requirements for the following industrial chemical(s): herbicides, carbamate pesticides, toxaphene/chlordane/PCB and semivolatile organics. This waiver was granted due to the absence of these potential sources of contamination within a half-mile radius of the water source. The state of Maine Drinking Water Program grants a waiver only upon a finding that "it will not result in an unreasonable risk to health."

The sources of drinking water include rivers, lakes, ponds and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material and can pick up substances resulting from human or animal activity. All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man-made. Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, 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 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, 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.

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

The table below lists all of the drinking water contaminants that were detected through our water quality monitoring and testing. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk.

TEST RESULTS						
Unless otherwise noted, testing was done in 2015.						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Total Coliform Bacteria	N	0 positive	Highest monthly # of positive samples	0	1 positive	Naturally present in the environment
Radioactive Contaminants						
Radium-228 (4/3/12)	N	0.227	pCi/L	0	5	Erosion of natural deposits.
Inorganic Contaminants						
Copper* (1/1/11-12/31/13)	N	0.12	ppm	1.3	AL=1.3	Corrosion of household plumbing systems
Fluoride (10/14/15)	N	0.7	ppm	4	4	Erosion of natural deposits. Water additive which promotes strong teeth. Discharge from fertilizer and aluminum factories.
Lead* (1/1/11-12/31/13)	N	3.9	ppb	0	AL=15	Corrosion of household plumbing systems
Nitrate (3/3/15)	N	0.17	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
* = Reported results are the 90 th percentile value (the value that 90% of all samples are less than).						
Disinfection By-Products						
HAA5 [Total Haloacetic Acids] 1215 State St	N	RAA=29 (3.9-18)	ppb	0	60	By-product of drinking water chlorination
TTHM [Total Trihalomethanes] 1215 State St	N	RAA=65 (49.9-81.4)	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total Haloacetic Acids] UM Student Union	N	RAA=34 (21-43)	ppb	0	60	By-product of drinking water chlorination
TTHM [Total Trihalomethanes] UM Student Union	N	RAA=40 (23.3-48.2)	ppb	0	80	By-product of drinking water chlorination

Note: The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Not all contaminants are tested for every year due to monitoring waivers and therefore we must use the most recent round of sampling. Some of our data is more than one year old, however, is limited to no older than 5 years.

Definitions:

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

Maximum Contaminant Level (MCL) - is 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) - is 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.

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

Maximum Residual Disinfection 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.

MFL – million fibers per liter

Not Applicable (N/A) - Does not apply

POS – Positive Sample

Running Annual Average (RAA) - The average of all monthly or quarterly samples for the last year at all sample locations.

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water (e.g. treatment technique for turbidity).

Variations, Exemptions, and Waivers - State or EPA permission not to meet an MCL, a treatment technique or test for a given contaminant under certain conditions.

Units:

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Parts per billion (ppb) or micrograms per liter (µg/L) - One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per million (ppm) or milligrams per liter (mg/L) - One part per million corresponds to one minute in two years or a single penny in \$10,000.

Picocuries per liter (pCi/L) - A measure of the radioactivity in water.

Notes:

Arsenic: The U.S. EPA adopted the new MCL standard in October 2001. Water systems must meet this new standard by January 2006.

Fluoridation: There is a target fluoride level of 0.7 mg/l and a control range of 0.5-1.2 mg/l for those systems that fluoridate water.

Gross Alpha: Action level over 5 pCi/L requires testing for Radium. Action level over 15 pCi/L requires testing for Radon and Uranium.

Lead/Copper: Action levels are measured at consumer's tap. 90% of the tests must be equal to or below the action level; therefore, the listed results above have been calculated and are listed as the 90th percentile.

Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Radon: The State of Maine adopted a Maximum Exposure Guideline (MEG) for Radon in drinking water at 4000 pCi/L, effective 1/1/07. If Radon exceeds the MEG in water, treatment is recommended. It is also advisable to test indoor air for Radon. The U.S.EPA is proposing setting federal standards for Radon in public drinking water.

Total Coliform Bacteria: Reported as the highest monthly number of positive samples, for water systems that take < 40 samples per month.

TTHM/HAA5: Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5) are formed as a by-product of drinking water chlorination. This chemical reaction occurs when chlorine combines with naturally occurring organic matter in water.

Uranium: The U.S. EPA adopted the new MCL standard of 30 µg/L(ppb), in December 2000. Water systems must meet this new standard after December 2003.

IMPORTANT INFORMATION

We are required to report our Running Annual Average (RAA) for chlorine residual, since our system chlorinates its water. **Chlorine Residual** was found to be **0.437 ppm**, with a range of 0.01 ppm to 1.20 ppm.

2015 Violations

Violation Period

7/1/2015-7/31/2015

Violation Type

Type 24 Violation – Monitoring(TCR), Routine minor coliform(TCR)

We are required to monitor our drinking water for specific contaminants on a regular basis. Results of regular monitoring indicate whether or not our drinking water meets health standards. During 2015, we did not test for, or failed to collect all necessary tests for Total Coliform Bacteria.

The District collected **4 of the 6** required samples is how the violation occurred. The rule procedure was changed in sampling, which created a new sampling protocol with sample timing to take half the samples at the beginning of the month and the rest at the end of the month versus taking all samples at the beginning of the month. This resulted in the over sight of total sample collections. We took our first set of samples at the beginning of the month and made an over sight not taking the samples at the end of the month. Corrections have been instituted to address the new sampling protocol.

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

For most people, the health benefits of drinking plenty of water outweigh any possible health risk from these contaminants. However, 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 about drinking water from their health care providers. EPA/Center of Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological 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. We are 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 thirty (30) seconds to two (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>.

We, at Orono-Veazie Water District, work hard to provide top quality water to every tap. We ask that all our customers help us protect and preserve our drinking water resources, which are the heart of our community, our way of life, and our children's future. Please contact us with any questions. Thank you for working together for safe drinking water.