

ORANGE WATER WORKS



ISSUE 24

A NEWSLETTER FROM THE ORANGE WATER DEPARTMENT

JUNE 2014

DRINKING WATER: A PRECIOUS NATURAL RESOURCE

Where does your drinking water come from?

Well #1 is located off of Holtshire Rd. (and is used for emergencies only).

Wells #2 & 2A are located off of West River St. (Magee Meadows).

Well #3 is located off of Daniel Shays Highway (Route 202).



We also have an emergency interconnection with the Town of Athol on Brookside Rd.



What's on Tap for 2014?

Well #3: Pump house corrosion control and emergency power upgrade.

East Road: Water main improvements.

Well #1: Continued testing to provide a replacement source.

Note: Field work may cause delays and inconvenience, your patience is greatly appreciated.



Lead and Copper Detections

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. Orange Water Department (OWD) 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>.



Note: Our water quality testing results for 2013 are provided on the enclosed table.



PWS ID
1223000

Equal Opportunity Provider

BOARD OF WATER COMMISSIONERS

Donald Barnes, Chair

Donald Priestley, Vice-Chair

Sheri Cleveland, Member

Regular Meetings

2nd Monday, 3:15PM at
our West Myrtle Street office

STAFF

Michael Heidorn, Superintendent
watersuper@townoforange.org

Steven Boudreau, Foreman

Richard Matthews, Water Operator

Kenneth Wysk, Water Operator

Lynne Boutwell, Billing Clerk

Office Hours Mon-Fri 6:30AM-3:00PM

Office Phone 978-544-1115

Billing Questions 978-544-1100 x102

Tips For Saving Water

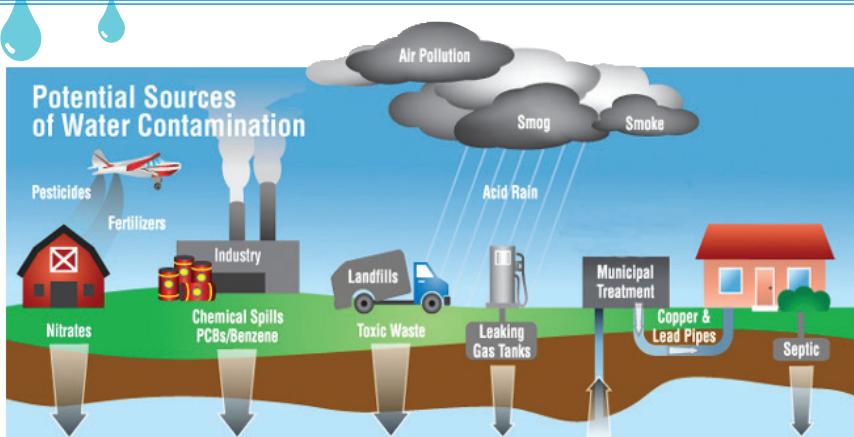
Visit our website for money-saving water conservation ideas.

Visit our office for a free water conservation kit.

Pay attention to leaky toilets and fixtures. Repair as needed.

If your water bill is unusually high or you suspect a leak in your outdoor water service line, please contact us right away so that we can assess the situation and reduce the likelihood of wasteful leaks.

Health Effects of Some Contaminants



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 U.S. 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/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).

Sources of Drinking Water and Drinking Water Contaminants

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, 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 tap water is safe to drink, the MA Department of Environmental Protection (DEP) 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 the MA Department of Public Health (DPH) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

For Your Information

The Water Dept. will be flushing most of the hydrants in town during normal working hours in the spring and fall. The flushing schedule will be posted in the newspaper and on the Town's web site (www.townoforange.org). Flushing is very important to maintain good water quality and fire flow. We apologize for any temporary inconvenience.

Source Water Assessment Report



Our wells draw their water from source water protection areas along Holtshire Road, South Main Street and Routes 2 and 202. Some potential sources of contamination in the source water area include: Fertilizers & Pesticides, Underground Storage Tanks, Transportation Corridors & Septic Systems. The DEP has assessed our water system as having a high susceptibility to potential contamination from Fertilizers & Pesticides and Underground Storage Tanks. A copy of the Source Water Assessment Report may be obtained by calling us or downloading from <http://www.mass.gov/dep/water/drinking/swa-reps.htm>.

Protecting Against Cross-Connections

What is a “cross-connection”?

A cross-connection is a permanent or temporary piping arrangement which can allow your drinking water to be contaminated if backflow occurs.

Cross connections can occur in many residential, commercial and institutional settings and are often associated with: Boilers, air conditioning units, fire sprinklers, lawn irrigation, solar heaters, chemical sprayers/storage, auxiliary wells, lab equipment, submerged piping, cooling towers, soda fountains, mop sinks, heat exchangers, soap injectors, etc.



What is “backflow”?

Backflow is when the water flows in the opposite direction from normal. With the direction of flow reversed, due to a change in pressures, backflow can allow contaminants to enter the town’s drinking water system through cross-connections.

A potentially hazardous cross-connection occurs every time someone uses a garden hose sprayer to apply insecticides or herbicides to their lawn. Another cross-connection occurs when someone uses a garden hose to clear a stoppage in their sewer line. Without a backflow prevention device between your hose and hose bibb (spigot or outside faucet), the contents of the hose and anything it is connected to can backflow into the piping system and contaminate drinking water throughout the town.

Backflows and cross-connections are serious plumbing problems. They can cause sickness and even death. However, they can be avoided by the use of proper protection devices such as air gaps, pressure vacuum breakers, reduced pressure valves and double check valves. The type of device used depends on the degree of health hazard. For example, hose-bibb vacuum breakers (photo below) are simple,

inexpensive and easy to find, and should be installed on every home spigot.



More complex backflow prevention devices are often needed for businesses and municipal facilities. These devices are tested on an annual or semi-annual basis. If you own one or more of these devices, please refer to State Regulation 310 CMR22.22 to fully understand your maintenance responsibilities.

For more information on cross-connection control and backflow prevention for your home or business, please contact the Orange Water Department at 978-544-1115.



2013 Water Quality Testing Results



The water quality information presented in this table is from the most recent round of testing done in accordance with the regulations. All reportable detections of monitored contaminants in the last five years are included. We are committed to providing you with the best water quality available. Your drinking water continues to meet all applicable state and federal health standards.

CONTAMINANT	HIGHEST DETECT VALUE	RANGE DETECTED	AVERAGE DETECT	MCL or AL	MCLG or ORSG	VIOLATION (Y/N)	POSSIBLE SOURCE OF CONTAMINANT	
Lead ¹	Tested 2011	25 ug/L	ND - 25 ug/L	4.1 ug/L	15 ug/L	0 ug/L	N	Corrosion of lead solder in household plumbing; erosion of natural deposits.
Copper ¹	Tested 2011	0.34 mg/L	0.02 - 0.34 mg/L	0.09 mg/L	1.3 mg/L	1.3 mg/L	N	Corrosion of household plumbing systems; erosion of natural deposits.
Nitrate ²	Tested 2013	5.1 mg/L	0.31 - 5.1 mg/L	3.4 mg/L	10 mg/L	10 mg/L	N	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits.
Sodium ³	Tested 2013	110 mg/L	98 - 110 mg/L	104 mg/L	None	20 mg/L	N	Runoff from winter road deicing.
Fluoride ⁴	Tested 2011	0.3 mg/L	ND - 0.3 mg/L	0.1 mg/L	4 mg/L	4 mg/L	N	Erosion of natural deposits.
Barium	Tested 2011	0.08 mg/L	0.01 - 0.08 mg/L	0.04 mg/L	2 mg/L	2 mg/L	N	Erosion of natural deposits.
MTBE	Tested 2013	0.6 ug/L	ND - 0.6 ug/L	0.3 ug/L	None	70 ug/L	N	Fuel additive; fuel storage, leaks and spills.
Perchlorate	Tested 2013	0.11 ug/L	ND - 0.11 ug/L	NA	2 ug/L	None	N	Fireworks, blasting, flares, munitions and rocket propellants.
Total Coliform ⁵	Tested 2013	5 Samples June 2013	No Range	NA	1 Sample per month	Zero	Y	Naturally present in the environment.

1) Twenty lead and copper samples were taken and ranked highest to lowest. The results for sample number 18 (aka the 90th percentile) on these lists are indicated as the averages above for reporting purposes. The averages did not violate the ALs for lead and copper.

One lead sample result exceeded the lead AL. This result is not a violation and does not reflect water quality at the wells or within the distribution system. Some older homes have lead joints or pipes in their plumbing systems. When water is allowed to remain in these systems for a period of time, lead can dissolve into the water. If you are concerned about your home's water, you may elect to have it tested.

2) 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 for advice from your health care provider. The highest detected nitrate level was less than 10 ppm.

3) Sodium sensitive individuals, such as those experiencing hypertension, kidney failure, or congestive heart failure, should be aware of sodium levels exceeding the state chronic exposure guideline of 20 mg/L (where exposures are being carefully controlled). Only wells #2/2A were required to be tested in 2013. The actual average sodium level is far less than reported above, since these wells produced only 30% of the water consumed.

4) EPA set 4mg/L as the fluoride MCL. Our state has a secondary contaminant level of 2mg/L for fluoride to better protect human health.

5) Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

The total coliform MCL was violated in June and November 2013. We believe the violations resulted from historical sampling procedures. Those procedures were significantly updated as detailed in our January 22, 2014 report to DEP. Total coliform has not been detected since November. In addition, we have not found bacteria of much greater concern (E.Coli) in any of our samples.

Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs (see below) as feasible using the best available technology.

Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

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

Office of Research & Standards Guideline or ORSG: Health-based guidance level for a contaminant without an MCL.

Units: Milligrams/Liter or mg/l = parts per million, Micrograms/Liter or ug/l = parts per billion, Picocuries/Liter or pCi/l = A measure of radioactivity.