

## Terms to Remember

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

**Maximum Contaminant Level Goal or MCLG's:** 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.

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



## Tips For Saving Water

Understanding where you use water most can provide hints on where the most water can be conserved. Here are a few water conservation tips:

- ❖ Listen and look for leaky toilets and fixtures. Repair as needed.
- ❖ Take shorter showers. A quick shower rather than a bath can save an average of 20 gallons of water.
- ❖ Garbage disposals use approximately 11.5 gallons of water per day. Try composting organic wastes instead.
- ❖ Use dishwasher and washer only when you have full loads.

**Conservation Kits are available for free at the Water Department office and the Billing Clerk's office.**

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.

## 2009 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 data shown were collected during the last calendar year unless otherwise noted in the table. All reportable detections of monitored contaminants are included.

CONTAMINANT	HIGHEST DETECT VALUE	RANGE DETECTED	AVERAGE DETECT	MCL or AL	MCLG	VIOLATION (Y/N)	POSSIBLE SOURCE OF CONTAMINATION	
Lead	Tested 2008	5.6ug/L	0.0 - 5.6ug/L	2.9ug/L	15ug/L	0	N	Corrosion of lead solder in household plumbing.
Copper	Tested 2008	.20mg/L	.017 - .20mg/L	.14mg/L	1.3mg/L	1.3mg/L	N	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
1) Regulations require 20 lead and copper samples to be taken and ranked highest to lowest. The 90th percentile is equivalent to the result for sample number 18 on this list and is indicated as the average above for reporting purposes. Of the 20 samples taken, zero (0) samples exceeded the AL's for lead and copper.								
2) Nitrate in drinking water at levels above 10ppm 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.								
Nitrate <sup>2</sup>	5.0mg/L	0.02 - 5.0mg/L	3.2mg/L	10mg/L	10mg/L	N	Runoff from fertilizer use. Leaching from septic tanks. Erosion of natural deposits.	
Sodium	Tested 2007	96.7 mg/L	7.0 - 96.7mg/L	45.6mg/L	none	none	N	MA Highway Department Winter Deicing Procedures

# ORANGE WATER WORKS

ISSUE 20

A NEWSLETTER FROM THE ORANGE WATER DEPARTMENT

JUNE 2010



PWS ID  
1223000

## Over 6,000 Orange Residents are Supplied with High-Quality Drinking Water from Three Groundwater Sources:

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



**Well #2** is located off of West River St. (Magee Meadows).

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

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

## What's on Tap for 2010?

Well #2A: Replacement for Well #2

Well #4: Exploration engaging to provide an alternative primary source.

Well #3: New motor starter and corrosive control upgrade.

*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>.



## Numbers to Remember

Environmental Protection Agency (EPA)  
Safe Drinking Water Hotline  
**1-800-426-4791**

MA Department of Environmental Protection (DEP) **1-413-784-1100**

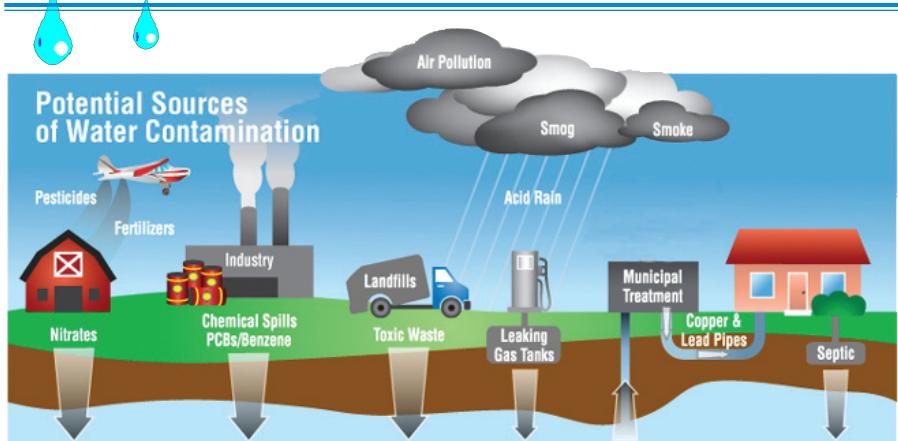
OWD Superintendent  
watersuper@townoforange.org  
**978-544-1115**

OWD Billing Questions  
**978-544-1100 x102**

OWD Emergencies  
**978-501-2062**

Town of Athol DPW  
(Tully Residents)  
**978-249-9244**

# 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 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 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, 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 Massachusetts 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 on the Town's web site ([www.townoforange.org](http://www.townoforange.org)). Flushing is very important to maintain good water quality. 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/swareps.htm>.

## Protecting Against Cross-Connections

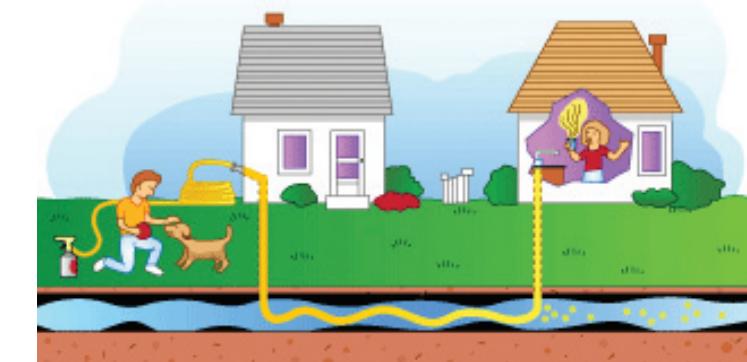
### What is a "cross-connection"?

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

### What is "backflow"?

Backflow is when the water is 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 our 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 their 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 your drinking water.



This hazardous situation sometimes can affect more than a single home. In 1977, an entire town in North Dakota had to ration drinking water from National Guard water trucks while the town's water distribution system was flushed and disinfected following contamination by DDT. Investigation revealed that two residents spraying DDT had made cross-connections. A backflow condition allowed DDT to be sucked through the homes and out into the town's water distribution system.

Backflows due to 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. Each spigot at your home should have a hose-bibb vacuum breaker installed. This is a simple, inexpensive device which is easily installed and can be purchased at any plumbing or hardware store.



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.