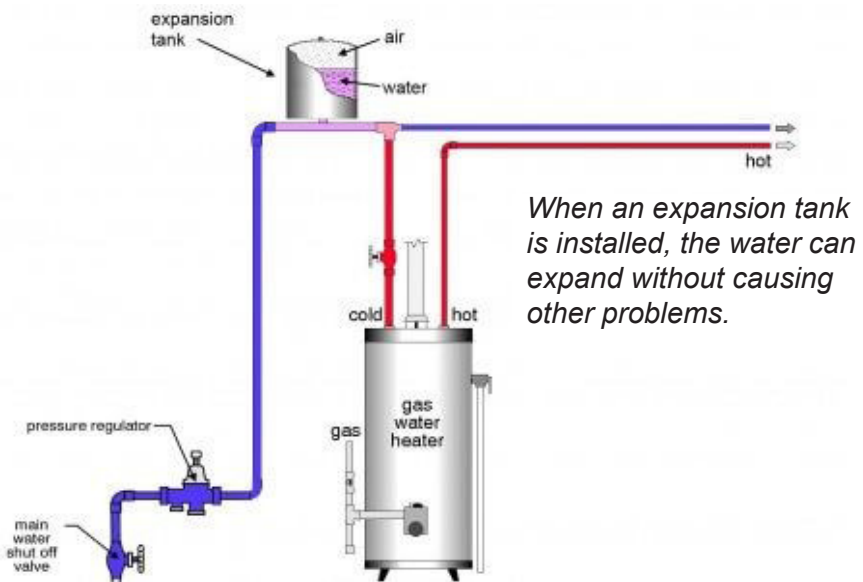


Installation of a thermal expansion tank can help manage thermal expansion concerns.



You should consult a certified plumber if you have any questions or concerns regarding thermal expansion on your property.

## Conservation Tips

Did you know that the average U.S. household uses approximately 350 gallons of water per day? Luckily, there are low-cost and no-cost ways to conserve water.

- ◆ Water your lawn at the least sunny times of the day (early morning/late evening)
- ◆ Fix toilet and faucet leaks
- ◆ Take short showers – a 5 minute shower uses 4-5 gallons of water as compared to up to 50 gallons for a bath
- ◆ Turn the faucet off while brushing your teeth, washing your face or shaving; 3-5 gallons go down the drain per minute



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## Letter to Our Customers

Roats Water System is pleased to provide you with this annual Consumer Confidence Report. This report contains information about the source, maintenance, and analysis of your drinking water, including the most recent sample results.

The safety and reliability of water service is our top priority. You will see our personnel conducting fire hydrant maintenance, water main flushing, backflow prevention assembly testing, water quality sampling, and cross connection inspections. All of these maintenance programs are essential for providing our customers with quality water service.

It is our privilege to serve you. Please feel free to call our office with questions or visit us on our website.

Sincerely,

Bill Roats

Owner, Roats Water System

Este informe contiene información muy importante sobre la calidad de su agua beber.  
Tradúscalo o hable con alguien que lo entienda bien.

## Your Drinking Water

Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. Roats Water vigilantly safeguards its water. Your drinking water comes from ground water. Our wellfields contain 4 wells that tap deep into the Deschutes Basin aquifer. The State of Oregon has completed a source water assessment for our water system, which includes a map, possible sources of contamination, and a review of the susceptibility of our water sources to contamination. This plan is available for public review. 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 (EPA) Safe Drinking Water Hotline (800-426-4791).

## Important Health Information

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, persons 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 Water Drinking Hotline (800-426-4791).

## Lead and Copper

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. Roats Water System 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Information Regarding Contaminants in Drinking Water

The 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 stormwater 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 stormwater runoff, and residential uses.
- ◆ **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater 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, EPA prescribes regulations which limit the amount of certain contaminants in the water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

## Water Quality Data Table

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report or during the most recent testing period. The EPA or the state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk.

Variable	Units	MCLG	MCL or AL	Result	Sample Date	In Compliance?	Notes	Typical Source
Nitrate	mg/L	10	10	0.07-0.09	10/04/18	Yes		Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits.
Copper	mg/L	1.3	1.3	0.072	09/14/18	Yes	Zero sites exceeded action level.	Corrosion of household plumbing
Lead	ppb	15	15	3	09/14/18	Yes		Corrosion of household plumbing
Fluoride	mg/L	4	4	0.23	09/14/17	Yes		Erosion of natural deposits
Arsenic	ppb	10	10	3.0	09/18/17	Yes		Erosion of natural deposits
Sodium	mg/L	Not regulated	Not regulated	9.3	08/10/15	Yes		Erosion of natural deposits

Term	Definition
ppb	Parts per billion, or micrograms per liter, number of micrograms of substance in one liter of water.
MCLG	Maximum Contaminant Level Goal: 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.
MCL	Maximum Contaminant Level: 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.
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
mg/L	Milligrams per liter: Number of milligrams of a substance in one liter of water.

## Safe Drinking Water: Cross Connection Control & Backflow Prevention

### What is a cross connection?

A cross connection is an actual or potential connection between piping that carries drinking water and piping that carries other substances.

### What are common examples of cross connections?

Common examples of cross connection include fire systems, private wells, lawn irrigation systems, boilers, swimming pools and hot tubs.

### What is the legal basis for a local cross connection control program?

The Federal Safe Drinking Water Act has jurisdiction over the public health aspects of the drinking water supply. The Oregon Health Division regulates public water systems in this state, including cross connection control, through Oregon Administrative Rules (OAR). OAR 333-61-0700 requires water systems to develop and administer a cross connection control program that will protect the public water supply.

### What are Roats Water System's requirements?

Roats Water System requires that every service connection have a backflow prevention assembly at the water meter. Our company has certified cross connection inspectors on staff and annual cross connection surveys are performed to find and remedy any potential cross connections.

### How often does a backflow assembly need to be tested?

Backflow assemblies must be tested at the time of installation, annually thereafter, and after any repair or relocation. Roats Water tests backflow assemblies for both commercial and residential customers currently enrolled in our backflow assembly program annually.

### How can I prevent backflow?

- ◆ Never submerge hoses in buckets, pools, spas, tubs or sinks. They may contain harmful substances.
- ◆ Always keep the end of the hose away from possible contaminants.
- ◆ Do not use any spray or cleaning attachment on your hose without a vacuum breaker/backflow preventer on the faucet.

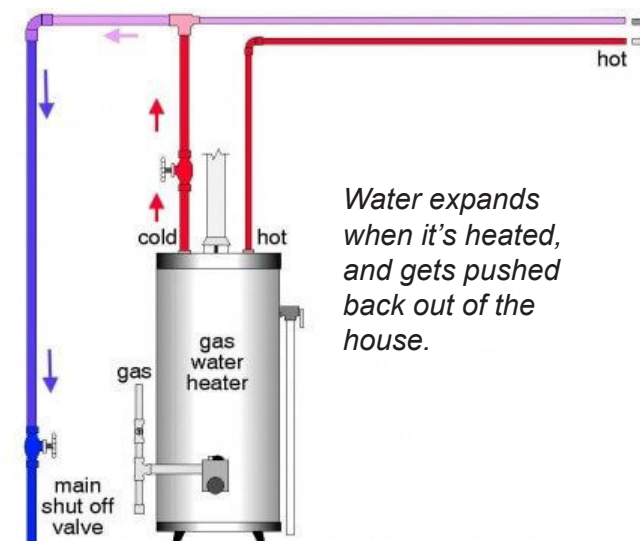


Typical DCVA installed at your meter (double-check valve backflow assembly)

## Backflow Prevention and Thermal Expansion

Our staff is dedicated to providing your household with superior quality drinking water that exceeds federal standards. With the installation of a backflow assembly, you can feel confident that you are helping to protect the public water supply.

Hot water heaters warm water causing it to expand in volume. Thermal expansion (increase in volume due to increased water temperature) has the potential to push water from your home back into the public water supply. A backflow assembly installed at your meter prevents water from flowing back into the public water pipes. The backflow assembly creates an isolated or "closed" plumbing system.



Water expands when it's heated, and gets pushed back out of the house.

Once the backflow assembly is installed, the water can no longer expand into the public water supply and relieve this pressure. Therefore, pressure on the house plumbing can increase dramatically.

Thermal expansion may cause leaky faucets, set off the relief valve on the hot water heater, or cause other damage or personal injury. NEVER under any circumstances plug or interfere with the pressure relief valve (PRV) on your hot water heater. The PRV is essential to relieve excess pressure within your hot water heater.