City of Manzanita
2015 Water Quality Report

Is my water safe?
Last year your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. The City of Manzanita safeguards its water supply and once again are able to report that we have not violated a maximum contaminant level or any other water quality standard.

Information on Drinking Water from EPA.
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 Safe Drinking Water Hotline 1-800-426-4791. *(This information was written and required by EPA and OHD)*

Where does my water come from?
Manzanita utilizes two sources of water to feed our water system:

1) Anderson Creek - Is a surface water source near the North Fork of the Nehalem River. The surface water source is filtered through our Memcor Micro-filtration system. The Anderson Creek surface water source is located on property owned by the City of Nehalem and privately owned timber land.

2) Foss Road Wells - Is a groundwater source near the Nehalem River. The groundwater source uses the natural processes of the earth for filtration and does not require additional filtration under existing Federal and State regulation. The Foss Road groundwater source is on property owned by the City of Wheeler.

Source water assessment availability.
Source water assessments have been completed for both of our water sources by the Department of Environmental Quality and Oregon Health Division (OHD). Additional Information regarding these assessments is available by contacting the City of Manzanita.

Why are there contaminants in my 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 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, 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 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. *(This information was written and required by EPA and OHD)*

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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/Centers for Disease Control (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 1-800-426-4791. *(This information was written and required by EPA and OHD)*

Additional Information for Lead.

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 City of Manzanita 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 1-800-426-4791 or at *www.epa.gov/safewater/lead*. *(This information was written and required by EPA and OHD)*

How can I get involved?

We want our customers to be informed about their water utility. If you want to learn more, contact the City Water Treatment Plant at (503) 368-3940.

Unit Descriptions	
Term	**Definition**
ppm / mg/L	parts per million, or milligrams per liter
ppb / µg/L	parts per billion, or micrograms per liter
MFL	Million Fibers per Liter, used to measure asbestos concentration
NA	Not Applicable
ND	Not Detected
NR	Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	**Definition**
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.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	Maximum residual disinfection level goal. 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.

MRDL	Maximum residual disinfectant level. 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.
MNR	Monitored, Not Regulated
MPL	Maximum Permissible Level

Water Quality Data Table

The table below lists all of the drinking water contaminants that were detected during this and previous calendar years.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Disinfectants & Disinfectant By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
TTHMs [Total Trihalomethanes]	NA	.06 mg/L	0.0010 mg/L	NA		2015	No	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	NA	.08 mg/L	0.0010 mg/L	NA		2015	No	By-product of drinking water chlorination
Inorganic Contaminants								
Asbestos (MFL)	7 MFL	7 MFL	0.11 MFL	NA		2008	No	Decay of asbestos cement water mains. Erosion of natural deposits.
Nitrate [measured as Nitrogen]	NA	10 mg/L	1.48 mg/L	NA		2014	No	Runoff from fertilizer use. Sewage run off. Erosion of natural deposits.
Combined Radium (-226 and -228)	NA	5.0 PCI/L	ND	NA		2013	No	Found in the earth crust. Can become trapped in water.
Gross Alpha, Excl. Radon	NA	15 PCI/L	ND	NA		2013	No	Found in the earth crust. Can become trapped in water.

Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Inorganic Contaminants							
Lead - action level at consumer taps	NA	.015 mg/L	ND mg/L	2014	0	No	Corrosion of household plumbing. Erosion of natural deposits
Copper - action level at consumer taps	NA	1.3 mg/L	0.656 mg/L	2014	0	No	Corrosion of household plumbing. Erosion of natural deposits

For more information please contact:

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Phone: 503-368-5343
Fax: 503-368-4145
E-Mail: cityhall@ci.manzanita.or.us
Website: http://ci.manzanita.or.us/

Water System Safety - Backflow & Cross Connection Program

State and federal governments strictly regulate the quality of water the City of Manzanita provides its customers. The City maintains an ongoing cross connection program. Many millions of dollars are spent in the United States each year to make safe potable water that enters the homeowners plumbing system. Studies have proven this may be compromised. Some water systems become contaminated after the water has back flowed through unprotected cross connections found in homeowner's plumbing system.

What is a Cross Connection?

Cross connection means a point in the plumbing system where the potable water supply is connected directly or indirectly to a non-potable water source. Wherever an unprotected cross connection exists, there is a possibility of a contaminant that could enter into the drinking water system.

Why be concerned?

Cross connections are inadvertently installed each day in the United States by homeowners, landscapers, and others who are unaware of the potential harmful situation created. In Manzanita the most common "cross connections" found include, improperly installed sprinkler systems, chemical sprayers connected to hoses, unprotected booster pumps, and fill hoses left draped into hot tubs.

How does the City handle possible cross connections!

Chapter 0333-061-0700 of the Oregon Administrative Rules which governs public water systems, includes regulations that must be followed regarding potential cross connections. We inspect possible cross connection hazards and provide information on the mitigation of these hazards.

<u>If a potential or known hazard exists, the property owner shall</u>:

1) Install or have installed an approved backflow device.
2) All backflow devices must be tested in accordance with state and local regulations.

<u>The local water provider must:</u>

1) Inspect and monitor the water system and connections for possible backflow conditions.
2) Maintain records on each backflow device connected to the City water system.
3) Enforce federal, state and local regulations regarding backflow devices.
4) Satisfy state and federal cross connection requirements.

For more information contact City of Manzanita (503) 368-5343

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? There are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Use the garbage disposal sparingly. Compost vegetable food waste instead.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You could save up to 1,000 gallons a month.
- Water plants only when necessary.
- Collect water from your roof to water your garden.
- Install a rain sensor on your irrigation controller so your system won't run when it's raining.
- Use drip irrigation for shrubs and trees to apply water directly to the roots where it's needed.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Use a hose nozzle or turn off the water while you wash your car. You could save up to 100 gallons every time.
- Monitor your water bill for unusually high use. Your bill and water meter are tools that can help you understand water usage.
- If you accidentally drop ice cubes when filling your glass from the freezer, don't throw them in the sink. Drop them in a house plant instead.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit www.epa.gov/watersense or http://www.wrd.state.or.us/OWRD/Water_Conservation.shtml for more information.

Water Trivia

1. The United States uses some 450 billion gallons of water every day. Only about 6% of that --- 27 billion gallons --- is taken by public water supply systems. The daily average of water pumped by those systems is 100 gallons per person.

2. Indoor water use statistics vary from family to family and in various parts of the country. Nearly 40% gets flushed down toilets, more than 30% is used in showers and baths, the laundry and dishwashing take about 15%, leaks claim 5% or more, and less than 1% is actually consumed by humans, which leaves about 9% for everything else.

3. In a 100-year period, a water molecule spends 98 years in the ocean, 20 months as ice, about 2 weeks in lakes and rivers, and less than a week in the atmosphere.

4. Water is the only substance that is found naturally on earth in three forms: liquid, gas, solid.

5. Americans use five times the amount of water that Europeans use.

6. Bottled water can be up to 1000 times more expensive than tap water and it may not be as safe.