

Water Quality Report

Mayor's Note:

I'm proud of our staff for providing service around the clock to bring you drinking water that is safe and meets all federal and state requirements. We ask that all of you help us protect our water sources, which are the heart of our community, our way of life and our children's future.

Cheryl Temple, Mayor

"Consumer Confidence Report" (CCR). A CCR is a yearly report on drinking water quality and safety. The primary purpose of a CCR is to educate consumers about their drinking water. The CCR gives the Orting Water Department a chance to tell it's customers what it takes to deliver safe drinking water. We are pleased to inform you that our compliance with all state and federal drinking water laws remains exemplary. We remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. We encourage you to take a few minutes and read about your City's most valued natural resource, *drinking water*.

Where Do We Get Our Water?

The City of Orting currently obtains drinking water from four natural springs and three wells. The four springs are located outside the City limits. Water from three of these springs, Upper Harmon, Lower Harmon and Wingate is chlorinated for disinfection at each source, serving customers south of the City limits. The water from these springs eventually mixes with the well water to serve customers within the City limits. The fourth spring known as Boatman, is chlorinated for disinfection and currently serves customers on the northwest side of South Prairie Creek. Water at Well #1 & Well #3 is chlorinated for protection against microbial contaminants and filtered to remove iron and manganese before entering the water main. The water at Well #2 is chlorinated for disinfection then treated with Calciquest to sequester (isolate) the manganese. Currently, Well #2 does not have a filtration facility.

What is Manganese?

There have been many concerned citizens who inquire about **brown water**. Have you ever turned your bath water on and found it **yellow, rusty** or looking more like **chocolate milk**? This contaminant is called manganese, which naturally occurs in Orting's drinking water. Though not often, some affects left by manganese have ranged from stains on white clothes, to staining the insides of dishwashers, toilet and sinks.



Using chlorine/bleach products could increase the possibility of staining. Department of Health Regulations consider manganese a secondary contaminant that poses no health risk.

In effort to address the manganese issue, the City's Capital Improvement Plan (CIP) constructed a filtration facility at Well #3 in 2009 and also at Well #1 in 2002. Please keep in mind that the manganese is still in the water mains. It sticks to the side of pipes, occasionally breaking off and reaching your service line. In addition, Manganese problems may occur more prevalent when the demand for water becomes high. To supplement this demand, Well #2 and Well #3 come on line to help increase the water supply causing an extra rush of water. Fire hydrant use and a drop in water pressure can also cause the manganese to break loose, again causing brown water.

If you encounter brown water, allow COLD water to run at a moderate pace for 10-15 minutes to clear up. If the water continues to appear brown, please call Orting Public Works at (360) 893-2219, x139. We apologize for the inconvenience.

Source Water Assessment

The City of Orting relies on multiple groundwater sources to meet its water supply needs. To protect groundwater supplies, the U.S. Environmental Protection Agency (EPA) and the DOH require public water utilities to develop a wellhead protection program as a component of their comprehensive water plan. The purpose of a wellhead protection program is to provide local utilities with a proactive program for preventing groundwater contamination. One of the major components of a successful plan is a susceptibility rating. Wells #1 and Wells #2 rate as moderate, Well #3 has a low susceptibility rating, while the four City spring sources rate high. You can learn more about the City of Orting Water Assessment by accessing the Office of Drinking Water SWAP website and typing in City of Orting's system ID# **645003** at:

<http://www4/doh.wa.gov/dw/sap/app/login.cfm?app=maps>

City of Orting
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Lead & Copper



The water from our springs can be slightly corrosive (low pH), and have a tendency to leach lead & copper from the customer's plumbing fixtures and ultimately add slight amounts to your water supply. With the guidance of the DOH, we are able to optimize treatment and bring lead & copper levels within the limits established by the DOH. The 2009 lead & copper sample results are available at the end of this report.

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 Orting 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 exposure by flushing your tap for 30 second 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, test methods, and steps you can take to minimize exposure is available from the EPA Safe Drinking Water Hotline (800) 426-4791 or at: <http://www.epa.gov/safewater/lead>."

Copper

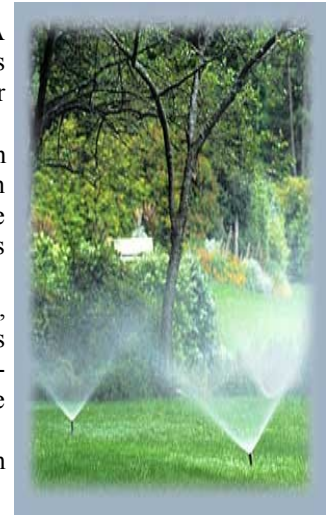
Copper is an essential nutrient, but some people who drink water-containing copper in excess of the action level over a relative short amount of time could experience gastrointestinal distress. Some people who drink water-containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

Contamination from Cross-Connections

Cross-connections that could contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment, systems containing chemicals (air conditioning systems, fire sprinkler systems and irrigation systems) or water sources of questionable quality.

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. A garden hose creates a hazard when submerged in a swimming pool or when attached to chemical sprayer for weed killing or fertilizing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemical. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continually jeopardized by cross-connections unless appropriate valves, known as backflow prevention assemblies, are installed and maintained. The City of Orting now has on staff a certified backflow assembly tester who will annually survey and test all industrial, commercial, institutional facilities and commercial/residential irrigation sprinklers in our service area to ensure that all potential cross-connections are identified and eliminated or protected by a backflow preventer. For more information, visit the website of the American Backflow Prevention Association (www.abpa.org) for a discussion on current issues.



EPA Tightens Arsenic Standard



How much is 10 ppb?

10 parts per billion (ppb) of arsenic in water means that there are 10 molecules of arsenic for every 999,999,990 molecules of water. That is roughly equivalent to a few drops of ink in an Olympic-sized swimming pool.

The Environmental Protection Agency (EPA) has set drinking water standards for arsenic to reduce the risk of health effects from long-term exposure to low levels of arsenic in drinking water. Your drinking water currently meets EPA's revised drinking water standards for low levels of arsenic. The EPA's Standards balance the current understanding of arsenic's possible health risks against the costs of removing arsenic from drinking water. The EPA continues to research the health effects for low levels of arsenic. This mineral is known to cause cancer in humans at high concentrations, and linked to other health risks such as skin damage and circulatory problems.

Did You Know?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants.

The presence of some 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.

Water System Security Vulnerability Assessment

The City of Orting Water Department completed a vulnerability assessment and put together an emergency response plan in 2004. The primary objective of this information document was to provide a framework for utility managers and staff to identify and evaluate vulnerabilities, (earthquakes, windstorms, flooding, drought, vandalism, terrorist activity, etc.), that could place the operation of the water utility, staff, and/or customers in harm's way. We continually upgrade safety and security measures throughout the system. We encourage citizens to report any possible acts of vandalism to our water department as soon as possible. Public Works main office number is 360-893-2219, x139 or the after hour's number at 253-377-0262.

Water System Upgrades

The Mayor and City Council members have been working together to make certain the water utility can provide water now and into the future. As we all know, the City has grown considerably in the last 15 years. In order to keep up with the growth, the City's progress for upgrading the water system infrastructure are noted below.

CIP Projects Scheduled for 2011:

- Construction for Well 4, a one million gallon water storage reservoir and pump station to meet Department of Health's system storage requirements due for completion early 2012.

Facts About Immune-Compromised Individuals

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 provider. EPA/CDC (Center for Disease Control) guide lines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water hotline, 800-426-4791.

**City Contacts**

If you have any questions about this report or concerns about your water utility, please contact Dean Kaelin or Tim Harpster at 360-893-2219, x139. If you want to learn more about our water system, please attend any of our regularly scheduled council meetings held on the second and last Wednesday of each month at 7:00 p.m. at the Public Safety Building.

Water Conservation Tips

Water conservation measures are an important first step in protecting our water supply. Such measures not only save the supply of our source water, but can also save you money by reducing your water bill. Here are a few suggestions.

Inside Your Home:

- Fix leaking faucets, pipes, toilets, etc.
- Replace old fixtures: install water saving devices in faucets, toilets and appliances.
- Wash only full loads of laundry.
- Do not use toilet for trash disposal.

Outside Your Home:

- Water the lawn and garden in early morning or evening.
- Use mulch around plants and shrubs, this helps retain moisture in the soil.
- Repair leaks in faucets and hoses.

Information on other ways to help conserve water can be found at:

<http://www.doh.wa.gov/ehp/dw/Publications>.



Regulated Water Test Levels



Maximum Contaminant Levels (MCLs) are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink two liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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 human activity.

Contaminants that may be present in source water before we treat it include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage 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 discharges, oil and gas production, mining or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring.

Glossary

In this table, you will find many terms and abbreviations you might not be familiar with.

To help you better understand these terms we've provided the following definitions:

- ⇒ **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.
- ⇒ **Parts per billion (ppb) or Micrograms per liter (ug/L)** - One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- ⇒ **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 Goal (MCLG)** - The "Goal" (MCLG) is the level of contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.
- ⇒ **Maximum Contaminant Level (MCL)** - The "Maximum Allowed" (MCL) is the highest level of contaminant that is allowed in drinking water. The MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
- ⇒ **Million Fibers per Liter (MFL)** - Samples with values higher than (7) MFL are above the EPA maximum contaminant level (MCL) and must be reported to the appropriate state agency for assessment of vulnerability.
- ⇒ **Trigger Level**— Department of Health drinking water response level. Systems with compounds detected at concentrations in excess of this level are required to take additional samples.
- ⇒ **MRDL**—Maximum Chlorine Residual Disinfectant Level.
- ⇒ **MRDLG**—Maximum Chlorine Residual Disinfectant Level Goal.
- ⇒ **TT—Treatment Technique**-A treatment technique is a required process intended to reduce the level of contaminant in drinking water.

Test Results

Radioactive Contaminants None Detected (12/23/09)

Volatile Organic Chemicals (VOCs') None Detected (06/15/09)

Inorganic Contaminants

Contaminant	Violation Yes/No	Level Detected	Unit Measurement	MCL G	MCL	Likely Source of Contamination
Arsenic 8/24/2010	No	6	PPB (Range <2-6)	0	50	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production waste.
Asbestos 11/5/2009	No	0	MFL	7	7	Decay of asbestos cement water mains; erosion of natural deposits.
Copper 20 Sample sites 08/25/2009	No	1.1	PPM	1.3	AL=1.3	Corrosion of household plumbing systems, erosion of natural deposits; leaches from wood preservatives.
Lead 20 Sample Sites 08/25/2009	No	3	PPB	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits.
Nitrate 8/24/2010	No	1.9	PPM (Range <0.2-1.9)	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.

Disinfection By-Products

Contaminant	Violation Yes/No	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
TTHM (Total Trihalomethanes) 08/24/2010 (TT)	No	1.83	PPB (Range 0.5-2.8)	0	80	By-Product of drinking water chlorination.
Haloacetic Acids (HAA5) 08/24/2010 (TT)	No	0.3	PPB (Range 0-1.3)	0	60	By-Product of drinking water chlorination. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Chlorine Residual (PPM) 01/6 thru 12/15/2010 (TT)	No	0.6	PPM (Range 0.4-1.0)	4 MRDLG	4.0 MRDL	Measure of disinfectant added to water.

⇒ **Unless otherwise noted, the data presented in the table is from testing completed between June 15, 2010 and December 31, 2010. The state requires monitoring for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.**

⇒ Lead & Copper—Two residential sample sites out of twenty samples taken exceeded the action level for lead & copper. However, samples taken at City of Orting water sources show no detection of lead & copper.

- Lead Samples ranged from < 0.02—6.0 ppb
- Copper Samples ranged from < 0.02—3.4 ppm

⇒ Total Trihalomethanes, Haloacetic Acids and Chlorine Residual are within the DOH required limits as per the ranges in parentheses above.

⇒ Monitoring Waivers—The Washington state Department of Health has reduced the monitoring requirements for Synthetic Organic Chemicals (SOC's) for all City of Orting water sources because the sources are not at risk of contamination. The last sample collected for these contaminants were reported on June 30, 2009 and was found to meet all applicable EPA and Department of Health Standards.