

CITY OF SHERIDAN 2012 Drinking Water Quality Report

Summary of Water System

Drinking water for the City of Sheridan is supplied by springs in the Stoney Mountain watershed (Nestucca Formation aquifer) and by surface water from the South Yamhill River. Both sources of supply are treated in accordance with current regulations. Treated water is stored in water storage reservoirs located at the Water Treatment Plant on North Evans Street, and at the Ballston Road pump station located south of town near the FCI. Customers are supplied water through a distribution system grid comprised of 2-inch through 14-inch diameter pipelines. The springs source is considered to be less susceptible to contamination due to the watershed's remote location, and is utilized as the primary source, with Yamhill River water supplied as needed to meet demand. (A source assessment is available from the City of Sheridan for review upon request.)

The quality of your water is routinely tested throughout the year. We collect samples from the springs, river, distribution system, and at customer's taps. The US EPA requires that water systems report annually on contaminants that have been detected in water supplies. When contaminants are detected, they are typically below levels that EPA considers of concern. Sheridan's water supplies meet or surpass federal and state drinking water standards.

Results of Monitoring for Detected Regulated Contaminants

Variable	Amount Detected	Maximum Contaminant Level (MCL)	Maximum Contaminant Level Goal (MCLG)	Likely Source of Contaminant
Stoney Mountain Springs Samples				
Turbidity - highest monthly value	3.46 NTU	TT	Not Applicable	Soil runoff
Fluoride (peak daily average)	0.58 ppm			Erosion of natural deposits; water additive by City which promotes strong teeth
Fluoride (range)	0.0 – 1.0 ppm	4 ppm	4 ppm	
Radium - 226/228	0.90 pCi/L	5 pCi/L	0 pCi/L	Erosion of natural deposits (Tested in 2012)
Uranium	Not detected	30 pCi/L	0 pCi/L	Erosion of natural deposits (Tested in 2003)
South Yamhill River Samples (Before Treatment)				
Radium - 226/228	0.80 pCi/L	5 pCi/L	0 pCi/L	Erosion of natural deposits (Tested in 2012)
Uranium	Not detected	30 pCi/L	0 pCi/L	Erosion of natural deposits (Tested in 2003)
TOC (highest monthly value)	4.86 ppm	Not Applicable	Not Applicable	Naturally present in the environment
TOC (range)	0.875 – 4.86 ppm	Not Applicable	Not Applicable	
South Yamhill River Samples (After Treatment)				
Turbidity (highest single measurement)	0.48 NTU	1.0 NTU	1.0 NTU	Soil runoff
Turbidity (lowest monthly %)	99.9%	95% below 0.3 NTU	95% below 0.3 NTU	
Fluoride (peak daily average)	0.61 ppm			Erosion of natural deposits; water additive by City which promotes strong teeth
Fluoride (range)	0.00 – 0.90 ppm	4 ppm	4 ppm	
Distribution System Samples				
TOC (highest yearly value)	1.23 ppm	Not Applicable	Not Applicable	Naturally present in the environment
TOC (range)	0.52 – 1.23 ppm	Not Applicable	Not Applicable	
Total Coliform Bacteria	1 present 11-12 13; 0 on repeat	Not more than one positive per month	Zero positive samples	Naturally present in the environment
Total Fecal Coliform and <i>E. Coli</i>	Not detected	Zero positive samples	Zero positive samples	Human and animal fecal waste
Disinfectant Residuals – Total Chlorine				
Stoney Mountain Springs (average)	0.68 ppm	4 ppm	4 ppm	Chlorine is used to disinfect water
Stoney Mountain Springs (range)	0.00 – 1.98 ppm	(MRDL)	(MRDLG)	
Distribution System (average)	0.69 ppm	4 ppm	4 ppm	Chlorine is used to disinfect water
Distribution System (range)	0.09 – 1.63 ppm	(MRDL)	(MRDLG)	

Results of Lead and Copper Sampling at Residential Water Taps - The City monitors tap water samples for lead and copper from a sample group of 20-40 homes. These are homes in our service area where the plumbing may contribute to elevated lead or copper levels. Water is naturally corrosive and may leach metals when water stands in plumbing systems. Sheridan's water supply continues to meet the requirements for lead and copper. As a result, the sampling frequency has been reduced to once every three years. The following monitoring results are for 2012.

Variable	90 th Percentile Values	Action Level (AL)	No. of Sites Exceeding Action Level	Maximum Contaminant Level (MCL)	Maximum Contaminant Level Goal (MCLG)	Sources of Contaminant
Copper	0.34 ppm	1.3 ppm	All sample results were below the Action Level	Considered Action Level exceedance if 90th percentile exceeds 1.3 ppm	1.3 ppm	Corrosion of plumbing systems
Lead	Not Detected	15 ppb	All sample results were below the Action Level	Considered Action Level exceedance if 90th percentile exceeds 15 ppb	0 ppb	

Results of Disinfection By-product Sampling – The City monitors drinking water samples for disinfection by-products (DBPs), including trihalomethanes (THMs) and haloacetic acids (HAA5s). DBPs are the products formed by the reaction of a disinfecting agent, like chlorine, with organic material which may already be present in the water. DBPs must be monitored because they can have adverse health effects when present in significant concentrations. The City is currently required to take one sample of water per year from approved sampling sites and then to compute a running annual average of those values. The following table includes monitoring results for the year 2012.

Variable	Maximum Contaminant Level (MCL)	Maximum Contaminant Level Goal (MCLG)	Running Annual Average -- Range		Source
Total Trihalomethanes (TTHMs)	80 ppb (running annual average)	0 ppb	14.9 ppb	14.6 – 15.3 ppb	Formed from chlorine
Haloacetic Acids (HAA5s)	60 ppb (running annual average)	0 ppb	19.6 ppb	18.9 – 20.4 ppb	

Notes Regarding Regulated Contaminants

Violations - There were no violations issued during 2012.

Turbidity and NTUs - The Stoney Mountain springs are an unfiltered water supply, and the South Yamhill River is a filtered supply. Rules for public water systems have strict standards for unfiltered and filtered supplies. Turbidity levels in unfiltered water must not exceed 5 NTU (nephelometric turbidity units), while 95% of the turbidity samples in filtered water must not exceed 0.3 NTU and the single highest turbidity measurement from filtered water must not exceed 1.0 NTU. The typical cause of turbidity is tiny particles of sediment in the water. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

Fluoride - Fluoride is a naturally occurring trace element in groundwater. The City of Sheridan also adds fluoride to the water. At low levels, it helps prevent tooth decay. The US Public Health Service and the Centers for Disease Control (CDC) consider the fluoride levels in Sheridan's water sources to be within the recommended optimal range for helping to prevent tooth decay. You may want to consult with your dentist about fluoride treatments to help prevent tooth decay, especially for young children.

TOC (Total Organic Carbon) - This is a measure of organic carbon in water. In natural waters, TOC is composed primarily of materials dissolved due to decomposing leaves and other vegetative matter. TOC is considered a precursor to disinfection by-products, with higher levels of TOC associated with a higher potential to create disinfection by-products during treatment.

Radioactive Contaminants - As they deteriorate, certain minerals give off radiant energy in various forms. This can be released from the ground, and from water that has been exposed to these substances. Tests conducted in 2003 and 2012, in accordance with regulations, indicate that the City of Sheridan meets the standards for radium and uranium content in its drinking water.

Microbiological Testing - Microbiological testing of water helps protect the public from diseases such as cryptosporidiosis, giardiasis, diphtheria, typhoid and cholera. The Safe Drinking Water Act Surface Water Treatment Rule requires water systems to meet standards for total and fecal coliform bacteria. For unfiltered water, this Rule requires disinfection, which is a prescribed treatment technique, to destroy or inactivate a minimum level of *Giardia* cysts and viruses.

- **Total Coliform Bacteria** - Total coliform bacteria are naturally present in the environment. Their presence is an indicator that other, potentially harmful bacteria may be present. The City uses chlorine to control these bacteria. Total coliform samples are taken from the distribution system.
- **Fecal Coliform Bacteria** - The presence of fecal coliform bacteria indicates that water may be contaminated with human or animal wastes.

Chlorine Residual - Although there are a variety of methods by which water can be disinfected, some chlorination is utilized by most water systems, including ours. This is because some of the chlorine will remain in the water, providing protection all the way to the customer's tap. Current regulations specify that average chlorine residual levels in the distribution system be no higher than 4 ppm. Sheridan's water is disinfected at much lower levels.

Important Definitions

Maximum Contaminant Level Goal (MCLG): 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.

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

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

Maximum Residual Disinfectant Level (MRDL): 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.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits to the use of disinfectants to control microbial contaminants.

Treatment Technique (TT): A required water treatment process intended to reduce the level of contaminants in drinking water.

Part Per Million (ppm); Part Per Billion (ppb): These units describe the levels of detected contaminants. One part per million is about 1/2 of a dissolved aspirin tablet (162.5 mg) in a full bathtub of water (about 50 gallons). One part per billion is about one dissolved aspirin tablet (325 mg) in a typical 25-meter swimming pool (about 100,000 gallons).

Picocuries per liter (pCi/L): A measure of radioactivity.

Total Trihalomethanes (TTHMs): A calculation of the running annual average of quarterly analysis of the concentrations of several chemicals which are formed as a result of chlorine being added to the drinking water for disinfection purposes. Levels became regulated for the city of Sheridan as of January of 2004.

Haloacetic Acids (HAA5s): The sum of the concentrations of the haloacetic acid compounds. These compounds are also formed from chlorine, which is added as a disinfecting agent to drinking water.

Educational Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. A contaminant is any substance found in water; however, 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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

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 untreated 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 by-products 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.

Since household chemicals may eventually enter our rivers and streams, please do not pour used motor oil, antifreeze, degreaser, or any other chemicals into street drains.

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 about drinking water from their health care providers. Environmental Protection Agency/Centers for Disease Control guidelines 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).

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.

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 Sheridan 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>.

We at the City of Sheridan work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. If you have any questions about this report or concerning your water utility, please contact Ken Hamilton, Water Systems Director, at the City of Sheridan Water Treatment Plant at (503) 843-2176. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled City Council meetings, which are held on the third Monday of each month at 7:00 p.m. at Sheridan City Hall. For more information, please visit the City's web site: <http://www.cityofsheridanor.com>.

**Have questions about drinking water quality? Please contact:
Oregon Health Authority, Office of Environmental Health, Drinking Water Program, (971) 673-0405.**

Web page: <http://public.health.oregon.gov/PHD/OEPH/DWP/Pages/index.aspx>; EPA web page: <http://www.epa.gov/OW>