



Safe, reliable drinking water is a basic life necessity. The City of Sherwood is proud to deliver water to more than 18,265 people every day. We think it is important for our customers to understand where their water comes from, how safe it is, and what actions we take to ensure its continuing safety. In accordance with federal guidelines, this report provides the information you need to know about the water you drink. Contaminant levels in your drinking water are well below state and federal regulatory limits. The test results are shown on the following pages. Although the City's water supplies are tested for more than 200 regulated and unregulated contaminants, only those that have been detected in the water in 2012 are included in this report.

If you have any questions about the contents of this report, or about something not included in this report, please contact the City of Sherwood's Water Division Supervisor, Rich Sattler, at 503 925-2319 or email a message to sattlerr@sherwoodoregon.gov.



Water Sources: the Willamette River Water Treatment Plant (WRWTP), the Bull Run Watershed and from local ground water wells.

The City is relying on the Willamette River Water Treatment Plant more than ever before. Soon, with the completion of the final segment of pipe this fall, 100% of our capacity (up to 5 mgd) will come from this source. Our ground water wells will remain active as a back-up for high demand and emergencies. The Portland Bull Run Watershed will become an emergency source only.





The <u>Intake</u> screens protect fish and prevent debris from entering the treatment facility. <u>Enhanced Sedimentation</u> removes materials that are small enough to pass through the intake screens.



Secondary Disinfection adds chlorine to prevent bacterial contamination for its long trip to your house.



Granular Activated Carbon and sand filters "polish" the water.

Ozonation plays a big part of disinfecting and filtering.

THE EPA SA

Tours of the Willamette River Water Treatment Plant are given by appointment. If you are interested in scheduling a tour contact Veolia Water at 503 582-9655.

Drinking water and 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. To ensure that tap water is safe, the EPA sets regulations that limit the amount of certain contaminants in water provided by public systems. The Food and Drug Administration (FDA) establishes similar limits for bottled water. Some people may be more vulnerable to contaminants in drinking water than the general populations. Immuno-compromised people, such as those with cancer undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC (centers for Disease Control) guidelines on ap-

propriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline at 1 800-426-4791.

YOUR WATER IS TESTED for approximately 200 contaminates. These include all contaminates regulated by the EPA, plus a number of unregulated contaminates. Sampling is conducted at various locations in the water supply and distribution system. Test results are submitted to the Oregon Health Authority, Drinking Water Program, the local agency responsible for enforcing EPA's Safe Drinking Water Act. If a health related contaminate is not listed in this report, it was not detected.

Contaminate	Unit of Measure	Amount Detected min-max	MCL	MCLG	Supply	Source
Antimony	ppb	<0.05-0.13	6	6	PDX	Found in natural deposits
Arsenic	ppb	<0.5-1.4	0	10	PDX	Erosion of natural deposits in groundwater aquifers
Barium	ppm	0.0029—0.0057 <0.0083—0.01	2	2	SW PDX	Erosion of natural deposits in groundwater aquifers
Chromium	ppb	<0.2-0.3	100	100	PDX	Found in natural deposits
Copper*	ppm	0.0110-0.0165 0.0005-0.0016	1.3	1.3	SW PDX	Found in natural deposits; household plumbing
Fluoride	ppm	<0.025-0.14	4	4	PDX	Found in natural deposits
Lead*	ppb	0.02-0.04	15	0	PDX	Found in natural deposits; household plumbing
Nitrate	ppm	0.17—0.60 < 0.01—0.11 <0.00—0.90	10	10	SW PDX SS	Runoff from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Turbidity†	NTU	0.028-0.074 0.13-4.14	≤0.3	N/A	SW PDX	Soil Runoff; erosion of natural deposits

*LEAD AND COPPER

While there is no MCL for lead or copper, the federal government identifies an "action level" (AL) that triggers certain actions by the water provider. The action level is based on the 90th percentile. This means that 90 percent of the samples must be at or below the defined action level. The action level for copper is 1.3 ppm and the action level for lead is 15 ppb.

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. Sherwood 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 running your tap for 30 seconds to 2 minutes before using water for drinking or cooking. Call or visit the Safe Drinking Water Hotline at 1 800-426-4791 or www.epa.gov/safewater/lead for more information.

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37	Letad 207,02	

Contaminate	# of samples	AL	MCLG	90th Percentile	Sites above AL
Lead	69	15 ppb	0 ppb	0	0
Copper	69	1.3 ppm	1.3 ppm	0	0

DEFINITIONS

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

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in ppm: Parts per million. 1 ppm means that one part of a particular contaminant is present drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG): The level of contaminant in drinking water pCi/L: Picocuries per liter, a measure of radioactivity. below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of 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 of the use of disinfectants to control microbial contaminants.

NTU: Nephelometric turbidity units, a measure of turbidity.

ppb: Parts per billion. 1 ppb means that one part of a particular contaminant is present for every 1 billion (1,000,000,000) parts of water. 1 ppb is equivalent to 1 inch in 16,000 miles, 1 second in 32 years and 1 cent in \$10 million dollars.

for every 1 million (1,000,000) parts of water. 1 ppm is equivalent to 1 inch in 16 miles, 1 minute in 2 years and 1 cent in \$10,000 dollars.

Supply: PDX = Portland's Bull Run Watershed/Well field; SW = Surface Water from the Willamette River; SS = Sherwood Specific from local sample testing

+Turbidity: Bull Run is an unfiltered surface water supply. The rules for public water systems have strict standards for unfiltered surface water supplies. Turbidity levels in unfiltered water must not exceed 5 NTU more than two times in a twelve-month period. The typical cause of turbidity is sediment suspended in the water that 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 that can cause symptoms such as nausea, cramps, diarrhea and associated headaches. Large storm events can result in increased turbidity, causing the Portland Water Bureau to shut down the Bull Run system and serve water from the Columbia South Shore Well Field. Turbidity has no serious health effects.

FOTAL COLIFORM									
Contaminate	Unit of Measure	Amount Detected min-max	MCL	MCLG	Supply	Source			
Total Coliform	% in monthly samples	1 sample out of 20 in July had detectable coliform bacteria	1 positive sample per month	0	SS	Naturally present in the environment			
Note: Follow-up samples found no detectable coliform bacteria. No violation.									



Total coliform bacteria are used as indicators of microbial contamination of drinking water. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

UNREGULATED CONTAMINANTS

Contaminate	Unit of Measure	Amount Detected min-max	MCL	MCLG	Supply	Source
Gross Alpha	pCi/L	1.2	15	0	SS	Erosion of natural deposits in groundwater aquifers; most current results are from 2008
Nickel	ppb	<0.2—0.25	N/A	N/A	PDX	Found in natural deposits
Sodium	ppm	9.4—13.0 2.6—8.3 9.0—58.6	N/A	N/A	SW PDX SS	Erosion of natural deposits and added to water during treatment; low levels in drinking water unlikely contribute to adverse health
Vanadium	ppb	0.00-2.9 3.1-4.3	N/A	N/A	SW PDX	Found in natural deposits

"Contaminant"

refers to any substance that may be found in water. As water travels over the surface or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material. It can also pick up substances resulting from the presence of animals or human activities. Contaminants that may be present in source water

(water that hasn't been treated) include biological contaminants, such as viruses and bacteria; inorganic contaminants, such as salts and metals; pesticides and herbicides; organic chemicals from industrial or petroleum use; and radioactive materials. To ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems.

DISINFECTION BYPRODUCTS

Contaminate	Unit of Measure	Amount Detected min-max	MRDL	MRDLG	Supply	Source
Bromate	ppb	1.1-2.0	10	0	SS	Byproduct of water disinfection
Total Haloacetic Acids (5)	ppb	0.00-46	60	N/A	SS	Byproduct of water disinfection
Total Trihalomethanes	ppb	0.00-52	80	N/A	SS	Byproduct of water disinfection

DISINFECTION RESIDUALS

Contaminate	Unit of Measure	Amount Detected min-max	MRDL	MRDLG	Supply	Source	
Disinfectant Residuals	ppm	0.01-3.6	4	4	SS	Water additive to control microbes.	
NOTE: Some high recorded levels of Disinfectant Residuals were due to a malfunctioning analyzer. Equipment has been calibrated							

Collection of routine sampling is contracted out.

Additional Information from the Portland Water Bureau: On January 5, 2012 two Cryptosporidium oocysts were detected in a sample collected from the South Fork Bull Run River. This sample was collected as a followup to a detection of one oocyst at the Intake and one oocyst at the South Fork in late 2011. Consultation with local health officials confirmed that these detections did not represent a public health threat.

In 2005, the Oregon Department of Human Services and Oregon Department of Environmental Quality conducted a source water assessment on the City of Sherwood's groundwater wells. Results indicate that the water system would be sensitive to a contamination event inside the identified Drinking Water Protection Area. Potential sources include high density housing areas, sewer lines and transportation corridors. This source assessment is available for review.



THE SHERWOOD CITY COUNCIL meets every first and third Tuesday at 7:00 p.m. at the Sherwood City Hall, 22560 SW Pine Street. With the exception of any scheduled Executive Session, the meetings are open to the public and residents are encouraged to attend.

How YOU CAN PARTICIPATE

INDOOR AND OUTDOOR WATER CONSERVATION is easy, saves resources and saves you money. The Utility Billing Department offers free conservation items to its residential customers. Low-flow showerheads, faucet aerators, shower timers, toilet tank banks and leak-detection dyes all reduce your indoor water usage. Tips on irrigation and tools to measure your lawn watering volume will help keep your landscape looking good without wasting water. Please visit <u>sherwoodoregon.gov/utility-billing</u> for more conservation information and <u>www.conserveh2o.org</u> for fun family activities.

UNIDIRECTIONAL FLUSHING PROGRAM

The hydrant flushing program is very important to our water system. This is an integral part of our ongoing effort to deliver the safest and highest quality water possible. Yearly we will perform a flushing of half of the system. For this method of flushing we take water from the source and isolate a section of water mainline, which allows water to flow in one direction to increase flow velocities in the mainline. This effectively and efficiently removes sediment. In addition to removing sediment in our



water pipes staff is able to confirm the proper operation of valves and fire hydrants. All water is de-chlorinated prior to entering the storm system. Signs like the one seen here will indicate where we are currently operating. See the City's website for more information.

CROSS-CONNECTION/BACKFLOW TESTING

It is all of our responsibility to protect our most precious resource. It is possible for customer plumbing to jeopardize the public drinking water supply by way of a cross-connection. State and City rules and regulations require that all cross-connections be protected with a backflow assembly that is permitted upon installation and tested at least annually. In April, notices are mailed to residential customers reminding them of the July 1st deadline for submission of a passing backflow assembly test report. Failure to comply will cause water disconnection

and additional fees to be charged to the account. We appreciate your attention and compliance with this program. Sherwood has increased testing compliance of backflow testing to nearly 100% in 2012. Our water is much safer with your help!



Backflow Assembly

