



CITY OF
**West
Linn**

WestLinnOregon.gov

2015



Annual

WATER
QUALITY
REPORT

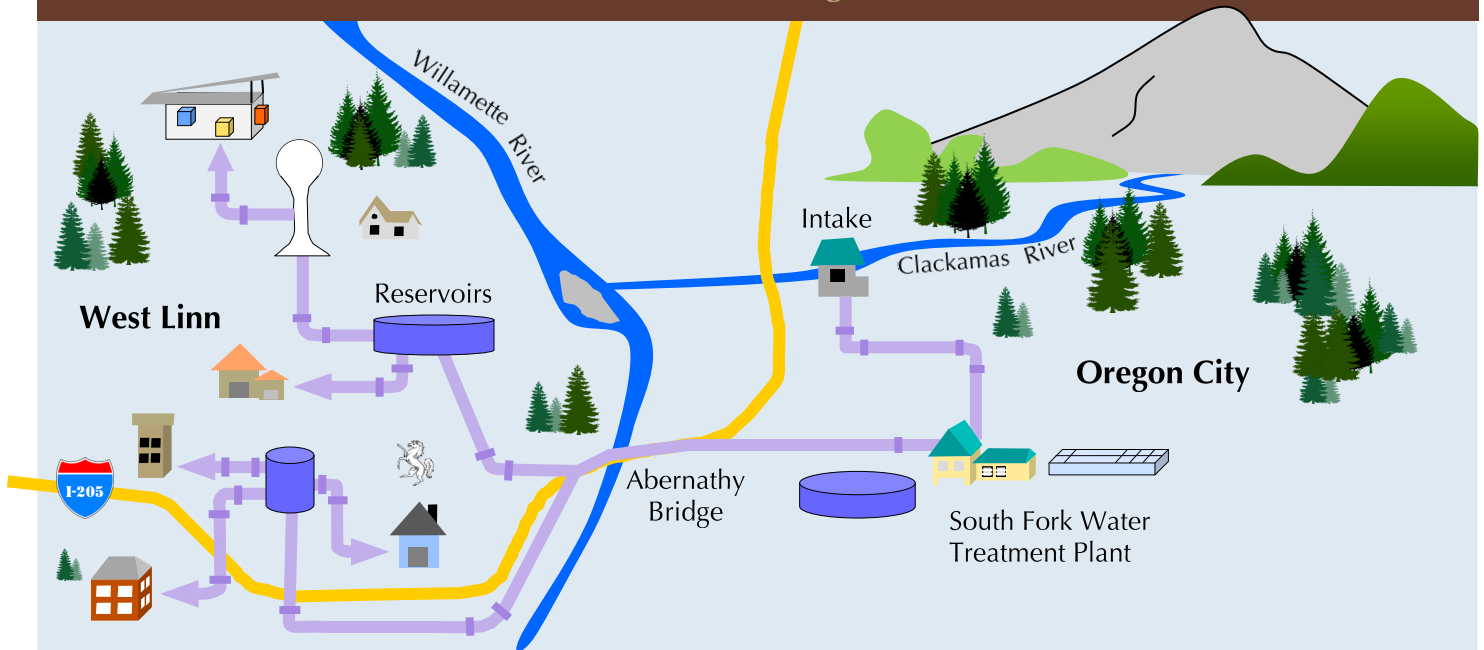


2015 Annual Drinking Water Quality Report

The City of West Linn is pleased to provide you with the 2015 Drinking Water Quality Report based on data collected during the 2014 calendar year. It is important for customers to understand where their water comes from, how it is treated, and the actions we take to ensure its continued high-quality.

This document conforms to Federal Environmental Protection Agency (EPA) regulations that require water utilities to provide the following information annually. The water we serve you meets or exceeds the water quality standards set by EPA.

West Linn's Drinking Water Source



West Linn's drinking water is drawn from the Lower Clackamas River. The Clackamas River flows west from its headwaters on Ollalie Butte, south of Mt. Hood, for nearly 83 miles until it joins the Willamette River near Oregon City. The Clackamas River watershed covers almost 1,000 square miles, most of it located within Clackamas County. The South Fork Water Board (SFWB) treats our water at their facility in the Park Place area of Oregon City. SFWB is jointly owned by the City of West Linn and the City of Oregon City. West Linn also has an emergency-only water main connection with Lake Oswego.

In compliance with the 1996 Amendments to the Safe Drinking Water Act, a source water assessment for the SFWB was completed in 2002. The delineated drinking water protection area is occupied by a wide variety of land uses: residential/municipal, agricultural/forest, and commercial/industrial. A total of 1,127 potential contaminant sources were identified within this area that could, if improperly managed or released, impact the water quality in the watershed. In 2010, the Clackamas River Water Providers (CRWP) completed a Drinking Water Protection Plan for the Clackamas River. The purpose of this plan is to provide CRWP with a road map of potential strategies and programs to implement over the next decade and beyond to preserve the Clackamas River as a high quality drinking water source. CRWP strives to keep its water treatment requirement as low as possible, while ensuring optimum water quality for our communities.

For more information about the programs CRWP is implementing or to download a copy of the plan, please visit clackamasproviders.org

Important Information About 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 West Linn is responsible for providing high quality drinking water, but cannot control the variety of materials used in home plumbing components. When your water has been sitting for several hours, you can minimize and even eliminate 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 drinking water, you may wish to have your water tested. The City of West Linn is not able to test water as we are not a water testing laboratory. To get a list of accredited labs, visit the Oregon Health Authority's Drinking Water Program website. 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

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to two minutes before using tap water.

Compliance with the Lead and Copper Rule

Our last Lead and Copper testing event was labeled "Round 17" and took place in June of 2012. Because we have not triggered any Action Levels for Lead or Copper for the last 3 years, we have been put on a reduced sampling schedule by the State. Our next Lead and Copper sampling events will take place in June 2015, 2018 and 2021.

Health Conditions And Your Water

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. The EPA and Centers for Disease Control and Prevention provide guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants and are available from the Safe Drinking Water Hotline (800-426-4791). Please read this report carefully, and if you have questions, call the resource numbers supplied.

Bottled Water

Bottled water that you may otherwise purchase comes under different standards and requirements than those required of tap water. Bottled water manufacturers are regulated by the Food and Drug Administration (FDA). Please be an informed consumer and check the sources and standards of your drinking water.

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 EPA Safe Drinking Water Hotline at 1.800.426.4791.

**We Are Here to Help:
Questions About Water Quality?
Call (503) 656-6081**



Your drinking water meets or exceeds all Federal and State water quality requirements

Water Quality Testing Information

The results of tests performed in 2014 are presented on the water quality tables on pages 5 and 6. The City of West Linn and the SFWB Treatment Plant routinely monitor for contaminants in your drinking water as required by Federal and State laws. Only contaminants found to be present in the drinking water are listed in the following tables. Your drinking water is tested for more than 90 other contaminants. To view all testing results and compliance records visit the Oregon Health Authority website at <https://yourwater.oregon.gov/> and under WS ID Look Up enter 00944. West Linn's full ID is [OR4100944](#). The South Fork Water Board water system identification number is [00591](#).

Additional Information

For more information about West Linn's drinking water, please contact Jim Whynot, Water Division Supervisor for the City of West Linn at:

Email: jwhynot@westlinnoregon.gov

Phone: (503) 656-6081

West Linn is a member of the American Water Works Association, a national organization dedicated to safe and sustainable water, and the South Fork Water Board, the wholesale supplier of your drinking water.

American Water Works Association: www.awwa.org

South Fork Water Board: www.sfwb.org

We encourage public interest and participation in our community's decisions affecting drinking water. Regular meetings of the West Linn City Council occur on the second Monday of each month at City Hall, 22500 Salamo Road, West Linn, at 6:30 p.m.



Learn more about the City of West Linn Water System

westlinnoregon.gov/publicworks/water

Definitions

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

Contaminant: Any physical, chemical, biological, or radiological substance or matter in water that creates a possible health hazard.

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

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water, below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for the 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. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.

Million Fibers per Liter (MFL): A measure of the presence of asbestos fibers longer than 10 micro meters.

Minimum Reporting Level (MRL): the smallest measured concentration of a substance that can be reliably measured by using a given analytical method.

Nephelometric Turbidity Unit (NTU): A measure of how cloudy water is due to suspended particles in the water. Smaller # = clearer water.

Non-Detects (N/D): Laboratory analysis indicates that the contaminant is not present or that it is present at levels too low for modern laboratory equipment to detect.

Non-Regulated Contaminant: These have guidelines set to assure good aesthetic quality and to identify levels of substances that may affect taste, odor, or color of water.

Parts per million (ppm) or Milligrams per liter (mg/L): One ppm is comparable to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (mcg/L): One ppb is comparable to a single penny in \$10,000,000 or the first 16 inches on a trip to the moon.

Range: The lowest to the highest values for all samples tested for each contaminant (this value is listed only where applicable).

Secondary Maximum Contamination Level (SMCL): The level of a secondary contaminant which when exceeded may adversely affect the aesthetic quality of the water which thereby may deter public acceptance of it or may interfere with water treatment methods.

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

2014 Water Quality Monitoring Test Results

Substance/Contaminant (Unit of Measure)	MCL (MRDL)	MCLG (MRDLG)	West Linn Measurement or Average (Range)	Sample Date	Major Sources in Drinking Water	In Compliance?
Disinfectant Residual, Disinfection By-Products & By-Product Precursors						
Chlorine (ppm)	(4)	(4)	0.85 (0.45 - 1.17)	Daily; plus 30 samples taken monthly	Water additive used to control microbes	Yes
Haloacetic Acids ¹ (ppb)	60	--	31.7 (25.3 - 39.5)	3rd week of each new quarter in 2014	By-product of drinking water chlorination	Yes
Total Trihalomethanes ¹ (ppb)	80	--	34.5 (24.1 - 44.0)			
Total Organic Carbon - <i>Raw Water</i> ² (ppm)	TT	--	1.34 (0.91 - 2.52)	2014	Naturally present in the environment	Yes
Total Organic Carbon - <i>Finished Water</i> ² (ppm)	TT	--	0.80 (0.61 - 1.26)			
Microbiological Contaminants						
Turbidity ³ (NTU)	TT = 0.3 in 95% of samples	--	(0.02-0.17)	Continuous: every 2 hours during water treatment plant operation	Soil runoff	Yes
Inorganic Contaminants						
Asbestos (MFL)	7	--	0.115	10/31/2011	Decay of asbestos cement water mains and erosion of natural deposits	Yes
Nitrate (ppm)	10	10	0.21	2/4/2014	Runoff/leaching from fertilizer use; leaching from septic tanks & sewage; erosion of natural deposits	Yes
Lead (ppb) ⁴	AL = 15	--	90 th % = N/D	6/1/2012	Corrosion of household plumbing; erosion of natural deposits	Yes
Copper (ppm) ⁴	AL = 1.3	--	90 th % = 0.068			
Secondary Standards⁵						
Chloride (ppm)	250	--	5.9			
Iron (ppm)	0.30	--	0.03			
Sulfate (ppm)	250	--	4.8	2/4/14	Erosion of natural deposits	Yes
Total Dissolved Solids (ppm)	500	--	59			
Zinc (ppm)	5	--	0.035			

¹Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5) are produced by a chemical reaction between chlorine and organic matter in the water. Optimizing disinfection in drinking water minimizes the production of these two disinfection by-products. The reported averages and ranges are calculated by the locational running annual averages as required by the Oregon Health Authority - Drinking Water Services.

²Total Organic Carbon has no health effects; however TOC provides a medium for the formation of disinfection by-products.

³Turbidity is a measure of the cloudiness or suspended particles in the water. Turbidity has no health effects, however it can interfere with disinfection and provide a medium for microbial growth. All samples met the turbidity limit of < 0.3 NTU throughout 2014.

⁴The 90th percentile is the highest result found in 90% of the samples when they are listed in order from the lowest to the highest results. (30 samples were taken in 2012 & 30 homes will be tested in June 2015.)

⁵Secondary Contaminants are non-enforceable guidelines regulating contaminants that may cause cosmetic effects, i.e. skin or tooth discoloration or aesthetic effects, i.e. taste, odor or color.

Monitoring for Unregulated Contaminants

Monitoring for unregulated contaminants helps the EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants in the future.

Unregulated Contaminants				
Substance/Contaminant (Unit of Measure)	MCL	West Linn Measurement	Sample Date	Major Sources in Drinking Water
Bromodichloromethane (ppb)	N/A	1.5	7/8/14	By-product of chlorine disinfection, combined with organic matter.
Chloroform (ppb)	N/A	12		
Sodium (ppm)	20	7.1	2/4/14	Runoff/leaching from natural deposits.

In May 2014, West Linn began additional monitoring for unregulated contaminants on a quarterly basis for a period of one year only, as required by EPA. Approximately 6,000 public water systems conducted this special monitoring to provide scientifically valid data on the occurrence of these contaminants. EPA uses this data to assess the number of people potentially being exposed and at what levels of exposure. The agency then uses this information to develop regulations for contaminants of concern. West Linn water was tested for 21 contaminants; five were detected and are listed below.

The Third Unregulated Contaminant Monitoring Rule (UCMR 3*)				
Substance/Contaminant (Unit of Measure)	Average (ppb)	Range (ppb)	Sample Date	Use or Source
Chlorate	51.7	34 - 67	5/7, 8/6 & 11/5 of 2014	Used as an agricultural defoliant or desiccant and in the production of chlorine dioxide.
Hexavalent Chromium	0.16	0.062 - 0.22	5/7, 8/6 & 11/5 of 2014	Erosion of natural deposits; used in various manufacturing processes.
Total Chromium	0.22	0.21 - 0.24		
Strontium	39.3	29 - 47		
Vanadium	1.4	0.96 - 2.1		

*Find more information about the UCMR 3 here: <http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3>

WATER QUESTIONS? We Have Answers!

Water Quality Question?
(503) 656-6081

Water Billing Question?
(503) 656-4261

Water Emergency?
(503) 656-6081

After-hours Water Emergency?
(503) 635-0238

Water Value

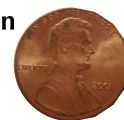
Bottled Water vs. Tap Water



128.0 oz (3.7 L = 1 Gal)
FOR A GALLON!



Your West Linn Water is delivered to your property and costs a **fraction of a penny per gallon**



*Cost for a standard residential customer on a 5/8 x 3/4 meter. First 700cf.

EPA Information on Source Water Contaminants

The sources of drinking water (both tap 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 storm water 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 storm water 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 storm water 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 the 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.



Choose Tap
over bottled water



YOU CAN FILL OVER
1,500
GLASSES OF TAP WATER



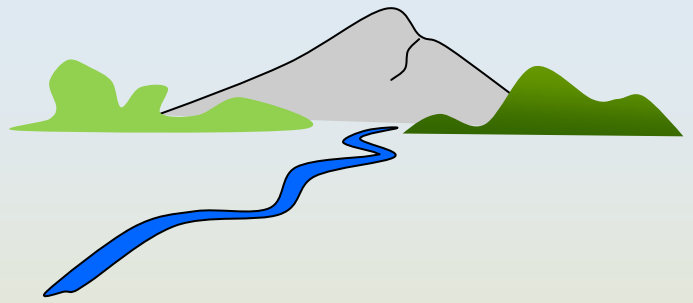
FOR THE PRICE OF
1 SINGLE
PLASTIC BOTTLE



REUSEABLE BOTTLE

Get in the habit of carrying a reusable bottle and take your tap to go! You'll be doing both the environment and your wallet some good.

HOW IS MY DRINKING WATER TREATED?



Water from the Clackamas River is converted into safe drinking water for West Linn customers at the South Fork Water Board (SFWB) Treatment Plant in Oregon City through a conventional treatment process.

WATER INTAKE

Water is drawn out of the Clackamas River just west of I-205 and pumped to the water treatment plant.

COAGULATION

Alum and polymer chemicals are added to the water causing small particles to attract one another and form larger particles.

FLOCCULATION

Gentle stirring of the water brings the particles together to form larger clumps called "floc."

SEDIMENTATION

Water velocity is reduced allowing gravity to settle out the floc.

FILTRATION

Any remaining particles are removed as water flows through filters of sand and anthracite coal.

CORROSION CONTROL

Soda ash is added to increase the pH of the water, reducing its ability to deteriorate piping material and plumbing fixtures.

DISINFECTION

Sodium hypochlorite (a liquid form of chlorine) is added to kill any disease-causing organisms in the water. It is important to have a small amount of chlorine remain in the water as it travels throughout the distribution system to ensure microorganisms do not have an opportunity to survive.

DISTRIBUTION

Water is pumped from Oregon City underneath the I-205 bridge to West Linn's reservoirs and distribution piping where it reaches you!

Learn more about SFWB and the treatment process at www.sfwb.com



WATER IS LIFE.

Don't Take it for Granted

Invisible Problem



Water infrastructure plays a critical role in protecting public health, sanitation, fire protection, promoting economic prosperity, and ensuring a good quality of life. These systems, and the people who maintain them, work silently and reliably to keep the water flowing. Because our water pipes are buried out of sight, we often take them for granted, but their maintenance and replacement is essential.

Support Investment in Aging Infrastructure



It takes an enormous investment in infrastructure and maintenance for water treatment, storage, and delivery systems. We see roads falling apart, but infrastructure hidden under our feet is also deteriorating. It is critical that we support the investment needed to replace our aging infrastructure.

We Are Not Alone



Cities across the country face the same problem. Much of today's public water systems were built more than 50 years ago and are entering an era of needed infrastructure replacement.

Stay Educated on Water Issues



Learn more about the water you drink and use. Start by reading and understanding this water quality report and your water bill.

learn more at:



westlinnoregon.gov/publicworks/water



Customers may request a mailed paper copy of this report by contacting Public Works at (503) 656-6081 or by email at jwhynot@westlinnoregon.gov



The City of West Linn will provide auxiliary aid services to persons with disabilities. To request an ADA accommodation of this information in an alternate format please contact Public Works at (503) 656-6081 or by email at jwhynot@westlinnoregon.gov