2013 Annual Drinking Water Quality Report

The City of West Linn is pleased to provide you with the 2013 Drinking Water Quality Report based on data collected during the 2012 calendar year. This document conforms to Federal Environmental Protection Agency (EPA) regulations requiring water utilities to provide the following information annually. The water we serve you is required to meet the water quality standards set by EPA.

Drinking Water Sources

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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The Source of Your Drinking Water

West Linn's surface drinking water comes from the Lower Clackamas River in Clackamas County, Oregon. The Clackamas River flows west from its headwaters on Ollalie Butte, just south of Mt. Hood, until it joins the Willamette River near Oregon City. The water shed covers almost 1000 square miles, most of it located within Clackamas County. South Fork Water Board (SFWB) treats our water at the plant in 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 interconnection with Lake Oswego.

In compliance with the 1996 Amendments to the Safe Drinking Water Act, a source water assessment for SFWB was completed in late 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 www.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 set up to test water since 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 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 16" and took place in June of 2011. 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. Bottle 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 requirements

Water Quality Testing Information

The results of tests performed in 2012 are presented on the water quality tables on page 4**.** The City of West Linn and 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 http://170.104.63.9/ and under WS ID Lookup enter 00944. West Linn's full ID is OR4100944. The South Fork Water Board water system identification number is 4100591.

Additional Information

For more information about West Linn's drinking water, you can 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 and fourth 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 http://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 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.

Non-Detects (ND): 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 one second in 32 years, one minute in 2000 years, 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.)

Regulated Contaminant: These are regulated by law to protect public health. The law specifies maximum contaminant levels allowed in drinking water.

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.

2012 Water Quality Test Results

Disinfectant Residual, Disinfection By-Products & By-Product Precursors

Contaminant Name	Sample Date	Units	MCL (MRDL)	MCLG (MRDLG)	Highest Running Annual Average	Range	Violation?	Major Sources
TTHMs[1]	Quarterly 2012	ppb	80	N/A	38.8	27.1 - 41.0	No	By-product of drinking water chlorination
HAA5 (5 haloacetic acids)	Quarterly 2012	ppb	60	N/A	46.3	22.7 - 49.8	No	By-product of drinking water chlorination
Chlorine	Daily; plus 30 samples taken monthly	ppm	4	4	0.91	.41 - 1.05	No	Water additive used to control microbes
Total Organic Carbon - Raw H_20[2]	2012	ppm	---	TT	1.67	.79 - 3.43	No	Naturally present in the environment
Total Organic Carbon - Finished Water[2]	2012	ppm	---	TT	0.67	.50 - .97	No	Naturally present in the environment

[1] *Total 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.*

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

Microbiological Contaminants

Turbidity	Sample Date	Units	MCL	MCLG	Maximum Detected	Range	Violation?	Major Sources
Turbidity[3]	(Continuous) Every two hours during water treatment plant operation	ntu	(TT)= 0.3 ntu in 95% of samples	N/A	0.12	0.03 - 0.12	No	Soil runoff

[3] *Turbidity is a measure of the cloudiness caused by suspended particles in the water. Turbidity is monitored and recorded because it is a good indicator of the effectiveness of the water treatment plant filtration system. 100% of the samples met the turbidity limit of < 0.3 NTU throughout 2012.*

Inorganic Compounds, Secondary & Unregulated Contaminants[4]

Contaminant Name	Sample Date	Units	Minimum Reporting Level	SMCL	Detected Level	Violation?	Major Sources
Total Sodium[5]	February 10, 2012	ppm	0.1	---	5.5	Unregulated	Runoff/leaching from natural deposits
Chloride	February 23, 2012	ppm	1	250	3.3	No	Most chloride is attached to sodium in the form of sodium chloride (table salt)
Bromodichloromethane[4]	June 12, 2012	ppb	0.5	---	2	Unregulated	By-product of chlorine disinfection, combined with organic matter
Chloroform[4]	June 12, 2012	ppb	0.5	---	30.3	Unregulated	By-product of chlorine disinfection, combined with organic matter
Zinc	March 4, 2012	ppm	0.02	5	0.06	No	Erosion of natural deposits
Total Dissolved Solids	February 8, 2012	ppm	1	500	50	No	Erosion of natural and unnatural deposits

[4] *Monitoring for unregulated contaminants helps the EPA to determine where certain contaminants occur and whether they need to regulate those contaminants in the future.*

[5] *Sodium is an unregulated contaminant, but it is recommended its content in drinking water be limited to below 20.0 ppm.*