

# 2011 Annual Drinking Water Quality Report

The City of West Linn is pleased to provide you with the 2011 Drinking Water Quality Report based on data collected during the 2010 calendar year. It is our constant goal to provide you with a safe and dependable supply of drinking water. 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 7:00 p.m.

## Where does our water come from?

The Clackamas River in Clackamas County, Oregon is the surface water source that supplies the South Fork Water Board (SFWB) Water Treatment Plant, located in Oregon City. The South Fork Treatment Plant is jointly owned by the City of West Linn and the City of Oregon City. To deliver water from South Fork Treatment Plant, West Linn owns a 24" transmission main that begins at the Division Street Pump Station located near Willamette Falls Hospital in Oregon City. To bring the water across the Willamette River to West Linn, the transmission water main is suspended beneath the Interstate 205 Bridge. West Linn also has an emergency only interconnection with Lake Oswego.

## What are some of the system improvements made in 2010?

- Recoating of the Bland Reservoir
- Willamette Pump Station motor control center replacement

## What is the Source Water Assessment Report?

The 1996 Amendments to the Safe Drinking Water Act required each public water system to conduct a source water assessment. This meant

identifying the source area for the water system and then conducting an inventory of potential contamination sources that may impact the drinking water supply. The assessment report for West Linn 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.

The water providers in the Clackamas River Basin have been working together on various water resource issues for more than a decade, spending approximately \$1 million on watershed related projects. The group funded a major portion of the watershed assessment and jointly funded, with the US Geologic Service, the first pesticide study in the basin.

Information about the Clackamas River Watershed is contained in the *Clackamas River Basin Source Water Assessment*. The *Source Water Assessment* is available at [www.westlinnoregon.gov](http://www.westlinnoregon.gov) or on the Clackamas River Water Providers website at [www.clackamasproviders.org](http://www.clackamasproviders.org).

## Drinking Water Sources

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 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 Environmental Protection Agency, or EPA, prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for the public health.

## WATER QUALITY INFORMATION

The results of tests performed in 2010 are presented on the following water quality tables. 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.

**Disinfectant Residual, Disinfection By-Products, and By-Product Precursors**

Substance/ Contaminant Name	Sample Date	Units	MCL (MRDL)	MCLG (MRDLG)	Detected Level (Highest Average)	Range	Violation?	Major Sources
TTHMs <sup>1</sup>	Quarterly	ppb	0	N/A	34	25-34	No	By-product of drinking water chlorination
HAA5 (5 halo acetic acids)	Quarterly	ppb	0	N/A	35	34.8-35	No	By-product of drinking water chlorination
Chlorine	Daily; plus 30 samples taken monthly	ppm	4	4	0.9	0.62-0.90	No	Water additive used to control microbes
Total Organic Carbon - Raw H <sub>2</sub> O <sup>2</sup>	2010	ppm	---	TT	1.53	ND-1.53	No	Naturally present in the environment
Total Organic Carbon - Finished Water <sup>2</sup>	2010	ppm	---	TT	0.97	0.56-0.97	No	Naturally present in the environment

<sup>1</sup>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.

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

**Microbiological Contaminants**

Turbidity	Sample Dates	Units	MCL	MCLG	Maximum Detected	Range	Violation?	Major Sources
Turbidity <sup>1</sup>	(Continuous) Every two hours during water treatment plant operation	ntu	(TT) = 0.3 ntu in 95% of samples	N/A	0.10	0.02-0.10	No	Soil runoff

<sup>1</sup>Turbidity is a measure of the cloudiness or 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.

All samples met the turbidity limit of < 0.3 NTU throughout 2010.

**Inorganic Compounds & Unregulated Contaminants<sup>1</sup>**

Substance/ Contaminant Name	Sample Dates	Units	MCL	SMCL	Detected Level	Violation?	Major Sources
Total Sodium <sup>2</sup>	March 2, 2010	ppm	20.0	N/A	8.9	N/A	Runoff/leaching from natural deposits
Chloride	February 23, 2011	ppm	N/A	250	7	No	Most chloride is attached to sodium in the form of sodium chloride (table salt).
Bromodichloromethane	August 3, 2010	ppb	N/A	N/A	2	N/A	By-product of chlorine disinfection, combined with organic matter.
Chloroform	August 3, 2010	ppb	N/A	N/A	12	N/A	By-product of chlorine disinfection, combined with organic matter.
Nitrate	February 23, 2010	ppb	10	N/A	0.5	No	Runoff/leaching from fertilizer use; leaching from septic tanks & sewage; erosion of natural deposits.

<sup>1</sup>Monitoring for unregulated contaminants helps the EPA to determine where certain contaminants occur and whether they need to regulate those contaminants in the future.

<sup>2</sup>Sodium is an unregulated contaminant but it is recommended its content in drinking water be limited to below 20.0 ppm.

**Lead & Copper**

Lead/Copper Corrosion	Sample Dates	Units	MCLG	Action Level	90 <sup>th</sup> Percentile <sup>1</sup>	Violation?	Major Sources
Lead—lead at consumers tap	Round 15 June 4, 2010 through June 11, 2010	ppb	0	15	8	No	Corrosion of household plumbing systems; erosion of natural deposits. (Samples are collected by homeowners at a tap inside their home).
Copper—copper at consumers tap	Round 15 June 4, 2010 through June 11, 2010	ppm	1.3	1.3	Non-detected	No	Corrosion of household plumbing systems, erosion of natural deposits; and leaching from wood preservatives. (Samples are collected by homeowners at a tap inside their home.)

<sup>1</sup>The 90<sup>th</sup> 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 taken in 2010).

**Key to Tables:**

AL= Action Level	pCi/L= Picocuries Per Liter
MCL= Maximum Contaminant Level	ppb= Parts Per Billion or Micrograms Per Liter (ug/l)
MCLG= Maximum Contaminant Level Goal	ppm= Parts Per Million or Milligrams Per Liter (mg/l)
ntu= Nephelometric Turbidity Units	TT= Treatment Technique
SMCL = Secondary Maximum Contaminant Level	

Your drinking water is tested for more than 90 other contaminants. West Linn's public water system identification number is 4100944. The Southfork Water Board water system identification number is 4100591. Definitions for terms used in Water Quality Tables:

- **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 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.
- **Action Level:** The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.
- **Range:** The lowest to the highest values for all samples tested for each contaminant. (This value is listed only where applicable.)
- **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. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

#### **COMPLIANCE WITH THE LEAD AND COPPER RULE**

In 1992, Oregon City, West Linn, and Clackamas River Water South (CRW), began monitoring for lead and copper as a single entity for compliance with the Lead and Copper Rule requirements. This cooperative Joint Monitoring Plan was approved by the EPA and Oregon Department of Human Services based on the fact that each service area received water from a "single source", the Clackamas River, which was treated by South Fork Water Board.

In 2007, CRW began blending water from the Clackamas River (surface water), which was treated at the SFWB Treatment Plant, with well water (ground

water) in a portion of their service area. As this no longer constituted a "single source", the decision was made to revisit how Oregon City and West Linn would comply with the Lead and Copper Rule requirements.

In January 2009, Oregon City and West Linn Water Quality Staff each were able to locate the required number of sample sites (60) and no longer would use the sample sites at Clackamas River Water South. These sample sites are designated "Tier 1" by the EPA and are homes that were built between 1983 and 1987 and installed with copper piping using lead-based solder. We thank our "Tier 1" customers for their assistance with this important program!

#### **IMPORTANT LEAD INFORMATION**

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 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 because we are not a water testing laboratory. To get a list of accredited labs, please visit the Oregon Health Authority's Drinking Water Program at <http://public.health.oregon.gov/>. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

#### **HEALTH EFFECTS OF 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. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

#### **IMPORTANT HEALTH INFORMATION**

Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. 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.

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 are available from the Safe Drinking Water Hotline (800-426-4791) or by going to [www.cdc.gov](http://www.cdc.gov).

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.

## About the West Linn Water System

*From the snowmelt of the Cascade Mountains, West Linn water is drawn from the Clackamas River by the South Fork Water Board and then sold wholesale to West Linn once treated to drinking water standards. After treatment, West Linn pumps the clean water supply across the Willamette River through a pipe suspended under the I-205 Abernethy Bridge and into one of the City's six covered reservoirs that store up to 5.5 million gallons to help meet the daily indoor and outdoor needs of West Linn residents, schools, and businesses for drinking, cooking, bathing, dishwashing, laundering, gardening, car washing, etc. West Linn also has an emergency intertie with Lake Oswego to meet any emergency water supply needs. In total, the City's water distribution system has 119 miles of underground pipe maintained and operated by the West Linn Public Works Department.*

•••

For more information about West Linn's drinking water, call Jim Whynot with the City of West Linn Water Department at 503-656-6081 or email [jwhynot@westlinnoregon.gov](mailto:jwhynot@westlinnoregon.gov).

West Linn is a member of the American Water Works Association. South Fork Water Board's website: [www.sfwb.org](http://www.sfwb.org).

Learn more about the City of West Linn water system at [www.westlinnoregon.gov](http://www.westlinnoregon.gov).

For more information on drinking water quality data and regulations visit the Oregon Health Authority's Drinking Water Program website at <http://public.health.oregon.gov>.



CITY OF

West Linn

### **About the City of West Linn**

*The City of West Linn is a community where citizens, civic organizations, businesses and city government work together to ensure that the community retains its hometown identity, quality of life, and natural beauty. The estimated population is 24,400. The City Council consists of the Mayor and four Councilors who act as the board of directors of the City of West Linn municipal corporation. The Council sets policies for the city government, enacts ordinances and hires, directs, and evaluates the City Manager. Municipal services are provided by City employees and headed by the City Manager. The City operates its own police department, a municipal court, water, wastewater and storm water utilities, street operations, planning, building inspection, engineering, fleet management, administration, library, and parks and recreation.*