



OREGON CITY water 2017 quality REPORT

Based on findings from data collected in 2016.

Welcome to the 2017 Annual Water Quality Report. Oregon City's drinking water continues to meet, or exceed, all state and federal standards and regulations.

OREGON CITY IS committed to:

- **Protecting public health** – providing clean, safe drinking water that complies with all state and federal regulations.
- **Protecting public safety** – ensuring reliable, plentiful water for fire suppression.
- **Protecting the environment** – providing a safe and reliable stormwater system and implementing watershed protection and restoration actions that consistently promote surface water quality and stream health.

The source of Oregon City's drinking water is the Clackamas River.

The Clackamas River watershed begins on the slopes of Olallie Butte near Mount Hood, and flows nearly 83 miles from its headwaters (elevation 6,000 feet) to its confluence with the Willamette River near Clackamette Park (elevation 12 feet); it encompasses 940 square miles.

Unlike the City of Portland's Bull Run watershed, the Clackamas River watershed is completely unprotected. The watershed crosses two counties and includes federal, state and private lands. It is 72% publicly owned, 25% privately owned and 3% tribally owned.

A source water assessment 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. To learn about contamination risks to our drinking water source go to the Source Water Assessment Report (4/15/03) at

www.oregoncity.org/sites/default/files/citydocuments/pubworks/SWAR.pdf.

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 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. You can read the plan and learn more about the CRWP by going to www.clackamasproviders.org.

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 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.

Cross Connection / Backflow Prevention

Oregon City water customers play a big part in helping to keep our drinking water safe by complying with the Cross Connection/Backflow Prevention Program (CC/BPP).

Learn more at: www.orcity.org/publicworks/cross-connection-backflow-prevention-program.

Simple steps will prevent any accidental contamination. If you use a spray attachment on a garden hose when applying herbicides, pesticides, or when washing windows, always remove the spray attachment from the hose when your job is done. Never submerge the end of the hose in buckets, pools, tubs, or sinks.

Most modern water-using fixtures and appliances such as sinks, toilets, and clothes washers have built-in backflow prevention features. Some, however, require installation of a backflow prevention device to comply with plumbing code and to protect the cross connection from backflow conditions. Common residential examples are landscape irrigation and fire sprinkler systems. For plumbing permit information contact the Oregon City Building Department at **503.722.3789** or go to www.orcity.org/building.

South Fork Water Board

Water from the Clackamas River is made safe to drink by “conventional treatment” at the South Fork Water Board (SFWB) Treatment Plant, located in the Park Place area of Oregon City. Learn about the treatment process and SFWB by visiting their website at www.sfwb.org.

You can see our most recent test results in the data table included in this report. We are required to report only those substances that were present at detectable levels. We are allowed to monitor for some contaminants less than once per year, therefore some of the data can be more than one year old.



You can view all monitoring results and compliance records by visiting the Oregon Health Authority SDWIS Data Online website at <https://yourwater.oregon.gov/>.

Search by water system name or ID number:
OREGON CITY – **OR4101511**
SOUTH FORK WATER BOARD – **OR4100591**



You are encouraged to participate in City decisions that may affect water quality. City Commission meetings are held at City Hall, 625 Center Street, Oregon City, the first and third Wednesday of each month, starting at 7:00 pm. Find meeting agenda information or watch archived videos of public meetings at www.orcity.org.

In order to ensure that tap water is safe to drink, the US Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for the public.



Lead & Drinking Water

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. South Fork Water Board and Oregon City are 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 www.epa.gov/safewater/lead.

The main source of lead in drinking water is typically from household plumbing. This is usually lead solder that was used in homes built or plumbed with copper pipes before 1985. Lead was banned for use in household plumbing construction in 1985. Lead can also be found in brass plumbing fixtures and components. Oregon City has no lead water service lines in the distribution system.

No lead is detected in Oregon City's drinking water as it leaves the treatment plant. South Fork's corrosion control strategy increases the pH of the water, making it less likely to deteriorate piping materials and plumbing fixtures. Oregon City is in compliance with all state and federal standards for both lead and copper.

What can you do to reduce your exposure to lead from drinking water?

- **Run the cold water faucet to flush out lead.** If water has not been used for several hours, run the cold water for 30 seconds to 2 minutes, or until it becomes cold or reaches a steady temperature, before using it for drinking or cooking.
- **Use only cold water for cooking, drinking, and preparing baby formula.** Do not use water from the hot tap to cook, drink, or make baby formula. Lead dissolves more easily into hot water.
- **Do not boil water to remove lead.** Boiling water will not reduce lead levels.
- **Consider using a filter.** Confirm the filter is approved to reduce lead. Always maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality. Contact NSF International at **800.673.8010** or www.nsf.org for information on performance standards for water filters.
- **Consider buying low-lead fixtures.** As of January 4, 2014 all pipes, fittings, and fixtures are required to contain less than 0.25% lead. When buying new fixtures, consumers should seek out those with the lowest lead content. Visit www.nsf.org to learn more about lead content in plumbing fixtures.

Frequently Asked Questions About My Drinking Water

I can taste and smell chlorine in the water. Why?

You may be sensitive to the taste and smell of the disinfectant. The amount of sodium hypochlorite varies throughout the distribution system, but it generally measures less than 1 part per million (ppm). This is well below the maximum residual disinfectant level, set by EPA, of 4 ppm.

Here are some suggestions for minimizing the taste and odor of chlorine:

- Fill a glass container with water and set it aside. Within an hour the chlorine will evaporate. Then cover the container and store it in the refrigerator.
- Mix the water in a blender. This will speed up the dissipation of the chlorine residual.
- Add one or two teaspoons of lemon juice to the water, then refrigerate.

Remember that if you plan to store drinking water after the chlorine residual has been removed, treat the water as you would a perishable food. Store it in clean, airtight containers and refrigerate.



Is there fluoride in Oregon City's drinking water?

No fluoride is added to Oregon City's drinking water. Naturally-occurring fluoride in the Clackamas River is generally less than 0.10 ppm (the detection limit for fluoride analysis). Check with your dentist to see if supplemental fluoride is recommended for your family.

Find more questions and answers at:
www.orcity.org/publicworks/drinking-water-faqs

2016 monitoring RESULTS

Substance/Contaminant (Unit of Measure)	MCL (MRDL)	MCLG (MRDLG)	Oregon City Measurement or Average (Range)	Sample Date	Major Sources in Drinking Water	Violation?
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DISINFECTANT RESIDUAL, DISINFECTION BY-PRODUCTS, AND BY-PRODUCT PRECURSORS

Chlorine (ppm)	(4)	(4)	1.01 (0.20 - 1.53)	2016	Water additive used to control microbes	No
Haloacetic Acids (ppb)	60	N/A	42.0* (26.0 - 49.8)	2016	By-product of disinfection with chlorine, combined with organic matter	No
Total Trihalomethanes (ppb)	80	N/A	43.9* (28.4 - 56.4)			
Total Organic Carbon** Raw Water (ppm)	TT	-	1.84 (0.93- 6.27)	2016	Naturally present in the environment	No
Total Organic Carbon** Finish Water (ppm)	TT	-	0.70 (0.53 - 1.13)			

MICROBIOLOGICAL CONTAMINANTS

Total Coliform Bacteria (presence/absence)	TT	0	0	2016 (40 samples each month)	Naturally present in the environment	No
E. coli (presence/absence)	TT	0	0		Human and animal fecal waste	No
Turbidity *** (NTU)	TT = 0.3 in 95% of samples	-	0.10	2016	Soil runoff	No

INORGANIC CONTAMINANTS

Barium (ppm)	2	2	0.00325	2/16/16	Erosion of natural deposits; Refinery discharge; Drilling wastes	No
Nitrate (ppm)	10	10	0.148		Fertilizer run-off; Septic; Sewage; Erosion	No
Lead (ppb) (Tier 1 homes)	AL = 15	0	90th% = 3	2015 (Round 18)	Corrosion of household plumbing; Erosion of natural deposits	No
Copper (ppm) (Tier 1 homes)	AL = 1.3	1.3	90th% = 0.056			

SECONDARY STANDARDS****

Chloride (ppm)	250	-	7.2	2/16/16	Erosion of natural deposits	No
Sulfate (ppm)	250	-	6.7			
Total Dissolved Solids (ppm)	500	-	51.0			
Zinc (ppm)	5	-	0.052			

UNREGULATED CONTAMINANTS

Sodium (ppm)	20*****	-	7.2	2/16/16	Erosion of natural deposits; Added during treatment (soda ash)	-
Bromodichloromethane (ppb)	-	-	1.9	7/12/16	By-product of disinfection with chlorine, combined with organic matter	-
Chloroform (ppb)	-	-	11.9			
Dibromochloromethane (ppb)	-	-	0.5			

THE THIRD UNREGULATED CONTAMINANT MONITORING RULE

Chlorate (ppb)	-	-	56.6 (35-71)	5/7/14 8/6/14 11/5/14 2/4/15	Used as an agricultural defoliant or desiccant and in the production of chlorine dioxide	-
Chromium (ppb)	-	-	0.22 (N/D-0.28)		Erosion of natural deposits; Used in various manufacturing processes	-
Hexavalent Chromium (ppb)	-	-	0.15 (0.065-0.23)			
Strontium (ppb)	-	-	41.3 (29-54)			
Vanadium (ppb)	-	-	1.2 (0.78-1.9)			

Important Message From the EPA

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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at **800.426.4791**.

Foot Notes:

** Highest Locational Running Annual Average is the highest calculated annual average at a single location. Oregon City samples for disinfection by-products quarterly, at 4 locations.*

*** Total Organic Carbon (TOC) has no health effects, however TOC provides a medium for the formation of disinfection by-products.*

****Turbidity is a measure of cloudiness caused by suspended particles in the water. It is monitored because it is a good indicator of the effectiveness of the filtration system. Turbidity is monitored continuously, every 2 hours during treatment plant operation. The value reported is the highest single measurement for the year. 100% of samples tested were below the treatment technique level of 0.3 NTU.*

***** Secondary standards are guidelines for contaminants that may cause aesthetic effects in drinking water.*

****** Recommended Maximum Level.*

The Third Unregulated Contaminant Monitoring Rule

The 1996 Safe Drinking Water Act amendments require that once every five years EPA issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems. For this, the third round, approximately 6,000 public water systems conducted special monitoring to provide scientifically valid data on the occurrence of 21 unregulated 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.

In May 2014, Oregon City began additional monitoring for these unregulated contaminants, at two sites for four quarters, as required by EPA. Five of the 21 contaminants were detected, but at levels that are unlikely to contribute to adverse health effects.

Find more information about this rule at:

<http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3>.

Table Definitions

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

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

MCLG: Maximum Contaminant Level Goal. 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.

MRDL: Maximum Residual Disinfectant Level. 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.

MRDLG: Maximum Residual Disinfectant Level Goal. 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.

N/A: Not Applicable. No maximum contaminant level goal has been set for disinfection by-products.

N/D: Not Detected. The results were below the laboratory reporting limit.

NTU: Nephelometric Turbidity Unit. A measurement of the water turbidity. Turbidity greater than 5 NTU is noticeable to the average person.

ppb: Parts per billion. A measure of the concentration of a substance in a given volume of water. One part per billion corresponds to one penny in \$10,000,000.

ppm: Parts per million. A measure of the concentration of a substance in a given volume of water. One part per million corresponds to one penny in \$10,000.

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

90th Percentile: The highest result found in 90% of the samples when listed in order from the lowest to the highest results.

Pollution Prevention

In an urban setting impervious surfaces such as buildings, streets, parking lots and sidewalks prevent rain water and snow melt from soaking into the ground. Resulting stormwater runoff, if not managed properly, sends pollution directly into our wetlands, streams and rivers.

What can you do to improve the health of Oregon City's waterways?

Lawn and Garden Care – Skip the weed and feed. Chemicals are harmful to children and pets. Rain can wash chemicals off your lawn and into storm drains and streams.

- Use slow release fertilizers or compost to add nutrients.
- Native plants need less water and maintenance.
- Learn more here: www.oregonmetro.gov/index.cfm/go/by.web/id=24309
<http://extension.oregonstate.edu/gardening/>
<https://www.growsmartgrowsafe.org/>

Vehicle Care – Maintain your vehicles to reduce oil and fluid leaks.

- Consider using EcoBiz-certified mechanics who use environmentally safe and healthy practices. <http://ecobiz.org/>.
- Use a commercial car wash or wash your vehicle on the lawn to prevent runoff of soap and grime.

Roof Treatments – Use alternatives to chemical treatment for moss and lichen removal. Typical chemical treatments contain copper, zinc and iron sulfate metals that are harmful to our waterways and aquatic life.

- Prevent moss growth by keeping debris and leaves off the roof; sweep or use a blower to remove debris once or twice a year.
- Prune back overhanging tree branches to reduce shade and moisture – this will slow moss buildup.

Pressure Washing – Be stream friendly when cleaning your home, deck, sidewalk and driveway. Pollutants from cleaning activities can flow into storm drains and ditches directly into our rivers and streams.

- Sweep sidewalks and driveways and place the sweepings in the garbage.
- If you do pressure wash, divert the runoff toward grassy or planted areas.

Riparian Health

Does a stream flow through your property? Learn what you can do to protect and improve the vegetation and trees alongside the water. A healthy riparian area has many benefits, including filtering sediment and pollutants from stormwater runoff and providing shade to cool stream water temperature. Elevated water temperature can negatively impact coldwater fish and other coldwater aquatic species. For more information, visit: <http://conservationdistrict.org/resources/stream>.



To report illegal dumping or to participate in our Catch Basin Marking & Stenciling Program call **503.657.8241**

**Barlow
Crest
Reservoir**



Barlow Crest Reservoir (capacity 1.75 million gallons) is one of five reservoirs that store water for Oregon City drinking water customers.

Stormwater Management

Oregon City is committed to remain in compliance with the requirements of our National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Discharge Permit. Our current permit, issued March 16, 2012 by the Oregon Department of Environmental Quality (DEQ), lists numerous programs and tasks required of the city as we work to prevent stormwater pollution and improve stream and river health.

Learn more about our ongoing stormwater programs and read our annual reports, submitted to DEQ by November 1st each year, by going here: www.orcity.org/publicworks/npdes-documents-page.



Pick-up After Your Pets

Proper disposal of pet waste helps to minimize bacteria in our city's streams. Pet waste can contain pathogens such as Giardia, E. coli, Salmonella and Campylobacter – these can cause illness in humans, especially children and the elderly.

Always pick up after your pet when on walks, avoid children's play areas, and remember to pick up in your own yard, too.

Like most cities across the nation, Oregon City has aging infrastructure. In order to continue providing reliable, high quality water to our customers, a percentage of water system revenue funds capital improvement projects. These investments allow us to:

2016 System Improvements

Replacement of aging components in the drinking water distribution system is necessary to maintain good water quality and system reliability.

Project Name	Ductile Iron Pipe (Length in Feet)				
Pipe Diameter	2"	4"	6"	8"	10"
6th Street (Washington to John Adams)			219		
OC Library Addition Project	25*	120	320		
15th Street Waterline Replacement		80	271	1910	2180
Total (Length in Feet)	25	200	810	1910	2180

* copper pipe

- Replace old cast iron pipe with ductile iron pipe. Cast iron pipe tends to corrode over time. This corrosion builds up on the pipe interior, reducing the effective diameter and capacity of the pipe. It also contributes to discolored water that, while being safe to drink, is aesthetically unpleasing.
- Ensure reliability by replacing older, smaller diameter piping with larger diameter piping that improves fire flow as well as water quality.
- "Loop" sections of pipeline whenever possible. Eliminating dead-end lines improves water circulation so water quality and fire flow are enhanced.

YOUR water 2017 quality REPORT



**Oregon City
Public Works**

122 South Center St.
Oregon City, OR
97045-2935



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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at **800.426.4791**.

Our drinking water source-
the Clackamas River



данный рапорт содержит
важную инФормацию о вашей
питьевой воде. переведите его
или проконсультируйтесь с тем,
кто его понимает.

Este informe contiene
información muy importante
sobre su agua beber.
Traduzcalo o hable con
alguien que lo entienda bien.

Resources

City of Oregon City: www.orcity.org

City Hall (625 Center Street): **503.657.0891**

Public Works Operations (122 S. Center Street): **503.657.8241**

Questions about your utility bill: **503.657.8151**

To report a water leak: **503.657.8241**

OC Request!: <https://www.orcity.org/community/oc-request>

South Fork Water Board: www.sfwb.org

Clackamas River Water Providers: **503.723.3511**, www.clackamasproviders.org

Oregon Health Authority, Drinking Water Program: <http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/Pages/index.aspx>

Oregon Department of Environmental Quality: www.oregon.gov/DEQ

Environmental Protection Agency: www.epa.gov

EPA Safe Drinking Water Hotline: **800.426.4791**

Greater Oregon City Watershed Council: **503.427.0439**, www.gocwc.org/

Clackamas River Basin Council: **503.303.4372**, www.clackamasriver.org

Clackamas Soil and Water Conservation District: www.conservationdistrict.org

Metro: www.oregonmetro.gov

OSU Extension Service: www.extension.oregonstate.edu

Drinking water quality questions or concerns: Gail Johnson - **503.657.8241** ext 2107, gjohnson@orcify.org

Stormwater questions or concerns: Eric Hand - **503.657.8241** ext 2102, ehand@orcify.org

<http://theriverstartshere.org/>

