

OREGON CITY
water 2015
quality
REPORT



Data presented is based on monitoring results from the calendar year 2014.

Information provided here is meant to help you:

- understand where your drinking water comes from
- make informed choices about your drinking water
- understand how your everyday activities affect water quality
- make informed choices about improving water quality



- 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.

water²⁰¹⁵ quality

Oregon City's Water Quality Program is guided by federal regulations – the Clean Water Act (stormwater) and the Safe Drinking Water Act (drinking water).



Welcome

to Oregon City's 2015 Annual Water Quality Report.

The Federal Water Pollution Control Act of 1948 was the first major U.S. law to address water pollution. Growing public awareness and concern for controlling water pollution led to sweeping amendments in 1972. As amended in 1977, the law became commonly known as the **Clean Water Act (CWA)**.

Polluted stormwater runoff is a leading cause of impairment to U.S. water bodies which do not meet water quality standards. Over land or via storm sewer systems, polluted runoff is discharged, often untreated, directly into local water bodies. When left uncontrolled, this water pollution can result in the destruction of fish, wildlife, and aquatic life habitats; a loss in aesthetic value; and threats to public health due to contaminated food, drinking water supplies, and recreational waterways.

Mandated by Congress under the CWA and administered by the Environmental Protection Agency (EPA), the **National Pollutant Discharge Elimination System (NPDES)** Stormwater Program is a comprehensive two-phased national program for addressing the non-agricultural sources of stormwater discharges which adversely affect the quality of our nation's waters. The program uses the **NPDES** permitting mechanism to require the implementation of controls designed to prevent harmful pollutants from being washed by stormwater runoff into local water bodies. In Oregon the Department of Environmental Quality (DEQ) oversees stormwater compliance.

The **Safe Drinking Water Act (SDWA)** was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. The **SDWA** authorizes the EPA to set national health-based standards for drinking water to protect against both naturally-occurring and man-made

contaminants that may be found in drinking water. The EPA, states, and water systems then work together to make sure that these standards are met. Locally the Oregon Health Authority, Public Health Division, Drinking Water Services (DWS) oversees drinking water compliance.

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

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:

Drinking Water comes from a variety of sources such as rivers, lakes, and wells. Contamination can occur in source water, but not all contaminants pose a risk to public health. People with certain health conditions may need to take extra precautions.

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 **1.800.426.4791**.

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 **1.800.426.4791**.



The number of routine microbiological samples collected each month is determined by population. As Oregon City's population grows, so does the number of samples collected. Beginning January 1, 2014 we increased sample collection from 30 to 40 samples each month.

Frequently Asked Questions

about your Drinking Water can be found at:

www.orcity.org/publicworks/drinking-water-faqs



Oregon City's Drinking Water comes from 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. To learn about contamination risks to our drinking water source go to the Source Water Assessment Report (April 15, 2003) at www.orcity.org/sites/default/files/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 us 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. Read the plan and learn more about the CRWP by going here www.clackamasproviders.org.

Your drinking water 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 www.sfwb.org.

Our most recent test results are provided in the data tables 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 you see will 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: <https://yourwater.oregon.gov/>. Search by water system name or ID number:

Oregon City – OR4101511
South Fork Water Board – OR4100591

Results of Monitoring for Regulated Contaminants

Substance/Contaminant (Unit of Measure)	MCL (MRDL)	MCLG (MRDLG)	Oregon City Measurement or Average (Range)	Sample Date	Major Sources in Drinking Water	Violation?
DISINFECTANT RESIDUAL, DISINFECTION BY-PRODUCTS, AND BY-PRODUCT PRECURSORS						
Chlorine (ppm)	(4)	(4)	0.95 (0.30 - 1.41)	2014	Water additive used to control microbes	No
Haloacetic Acids (ppb)	60	N/A	41.3* (22.9 - 50.9)	2014	By-product of disinfection with chlorine, combined with organic matter	No
Total Trihalomethanes (ppb)	80	N/A	45.7* (25.8 - 64.2)			
Total Organic Carbon** Raw Water (ppm)	TT	-	1.34 (0.91 - 2.52)	2014	Naturally present in the environment	No
Total Organic Carbon** Finish Water (ppm)	TT	-	0.80 (0.61 - 1.26)			
MICROBIOLOGICAL CONTAMINANTS						
Total Coliform Bacteria (presence/absence)	1 positive monthly sample	0	0	2014 (40 samples each month)	Naturally present in the environment	No
Turbidity *** (NTU)	TT = 0.3 in 95% of samples	-	(0.02 - 0.17)	2014	Soil runoff	No
INORGANIC CONTAMINANTS						
Nitrate (ppm)	10	10	0.21	2/4/14	Fertilizer run-off, septic, sewage, erosion	No
Lead (ppb) (Tier 1 homes)	AL = 15	0	90th% = N/D	2012	Corrosion of household plumbing Erosion of natural deposits	No
Copper (ppm) (Tier 1 homes)	AL = 1.3	1.3	90th% = 0.068			
SECONDARY STANDARDS****						
Chloride (ppm)	250	-	5.9	2/4/14	Erosion of natural deposits	No
Iron (ppm)	0.3	-	0.030			
Sulfate (ppm)	250	-	4.8			
Total Dissolved Solids (ppm)	500	-	59			
Zinc (ppm)	5	-	0.035			

* Highest Locational Running Annual Average is the highest calculated annual average at a single location.

** Total Organic Carbon (TOC) has no health effects. 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. 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.

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. Results were below the laboratory reporting limit. Minimum reporting limit for lead is 2 ppb.

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.

2014 System Improvements

Project Name	Ductile Iron Pipe (Length in Feet)					
	Pipe Diameter	2"*	4"	6"	8"	10"
Charman & Jersey			50	25		
Clairmont Way (Phase 2)			36	52	1669	10
Downtown Alley (800 Block) Enhancements		140				
Washington Street 5th-7th	150					
Washington Street & 6th			60			
Washington Street & 13th		50				
Total (Length in Feet)	150	190	146	77	1669	10

* Copper Pipe

Drinking water pipelines have an average life expectancy of 75 years. Replacement of aging pipelines is essential for us to continue providing reliable, high quality water to our customers and to ensure adequate flow for fire-fighting activities.

Oregon City Water Customers
play a big part in helping to keep our drinking water safe
 by complying with our Cross Connection/Backflow Prevention Program.

For more information go to:

www.orcity.org/publicworks/cross-connection-backflow-prevention-program.htm

Lead and 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.

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.

Substance/Contaminant MCL (Unit of Measure) Oregon City Measurement Sample Date Major Sources in Drinking Water

UNREGULATED CONTAMINANTS

Sodium (ppm)	20*	7.1	2/4/14	Erosion of natural deposits; added during treatment (soda ash)
Bromodichloromethane (ppb)	-	1.5	7/8/14	By-product of chlorine disinfection, combined with organic matter
Chloroform (ppb)	-	12		

* Recommended maximum level.

The Third Unregulated Contaminant Monitoring Rule* (UCMR3)

In May 2014, Oregon City began additional monitoring for unregulated contaminants on a quarterly basis, 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. Oregon City water was tested for 21 contaminants; five were detected. They are listed below.

Contaminant	Average (ppb)	Range (ppb)	Use or Source
UCMR3*			
Chlorate	55.8	35 - 71	Used as an agricultural defoliant or desiccant and in the production of chlorine dioxide
Total Chromium	0.22	0.20 - 0.28	
Hexavalent Chromium	0.17	0.065 - 0.23	Erosion of natural deposits; used in various manufacturing processes
Strontium	43	29 - 54	
Vanadium	1.3	1.0 - 1.9	

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

Compliance with the Clean Water Act – Oregon City's Stormwater Management Plan provides direction as we work to improve water quality.

In Oregon City's 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.

Oregon City has an obligation, and commitment, to comply with the requirements of our NPDES Municipal Separate Storm Sewer System (MS4) Discharge Permit. Oregon City is one of 13 co-permittees on the Clackamas County urban area permit. Our current permit, issued March 16, 2012, lists numerous programs and tasks required of the city as we work to prevent stormwater pollution and improve stream and river health. Oregon City's NPDES MS4 permit includes a Stormwater Management Plan (SWMP). This plan provides direction for activities that aim to reduce water pollution. Best management practices include:

- ensuring compliance with municipal codes, design standards, and construction standards
- routine cleaning of storm pipes, catch basins, and roadside ditches
- managing construction sites for proper grading and erosion control
- detecting and removing illicit discharges to the stormwater system
- conducting public education about pollution prevention

For more information about our SWMP and to read our annual reports, submitted to DEQ by November 1st each year, go to www.orcity.org/publicworks/npdes-documents-page.



Street sweeping reduces the amount of pollutants and sediments entering our streams and rivers. You can help by trimming trees to allow at least a ten foot clearance.



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

Individual Action & Compliance with the Clean Water Act – Each of us contributes to stormwater pollution. Each of us can take steps to reduce stormwater pollution!

What can you do to improve the health of Oregon City's streams and rivers?

• **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:

<http://cleanriversandstreams.org>

www.oregonmetro.gov/index.cfm/go/by.web/id=24309

<http://extension.oregonstate.edu/gardening/>

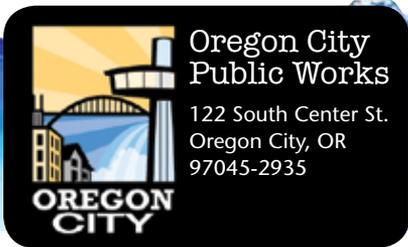
• **Vehicle care** – Maintain your vehicles to reduce oil and fluid leaks. Consider using EcoBiz-certified mechanics who use environmentally safe and healthy practices. Use a commercial car wash or wash your vehicle on the lawn to prevent runoff of soap and grime. Visit: www.ecobiz.org

• **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 into the garbage. If you do pressure wash, divert the runoff toward grassy or planted areas.

• **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.

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. Visit <http://conservationdistrict.org/resources/stream> for more information.



Oregon City
Public Works

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

YOUR water quality 2015

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.

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.

Resources

- City of Oregon City: www.orcity.org
- City Hall (625 Center Street): 503.657.0891
- Oregon City Public Works (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!: <http://user.govoutreach.com/oregoncity/faq.php>
- South Fork Water Board: www.sfwb.org
- Clackamas River Water Providers: www.clackamasproviders.org, 503.723.3511
- Clackamas River Basin Council: www.clackamasriver.org, 503.303.4372
- Greater Oregon City Watershed Council: www.gocwc.org, 503.427.0439
- OR Health Authority: <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: 1.800.426.4791
- Metro: www.oregonmetro.gov
- Regional Coalition for Clean Rivers and Streams: <http://cleanriversandstreams.org>
- OSU Extension Service: www.extension.oregonstate.edu
- Clackamas County Soil and Water Conservation District: www.conservationdistrict.org
- Drinking water quality questions/concerns: Gail Johnson: gjohnson@orcity.org, 503.657.8241 x2107
- Stormwater questions/concerns: Eric Hand: ehand@orcity.org, 503.657.8241 x2102



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