

City of Philomath

2022 Annual

Water Quality Report

Drinking Water Quality Data from 2021

This report informs you about the drinking water you use everyday including where it comes from, how it is treated, and any contaminants found in it. In 2021 the City of Philomath drinking water met or surpassed every public health requirement, over 120 drinking water quality standards, set by the Oregon Department of Human Services and the U.S. Environmental Protection Agency.

Note: If you are a business or multifamily dwelling, please share this report with your employees or residents.

In 2021 the Philomath Water Treatment Plant and its Operators achieved the OUTSTANDING PERFORMER designation from the Oregon Health Authority, Public Health Division

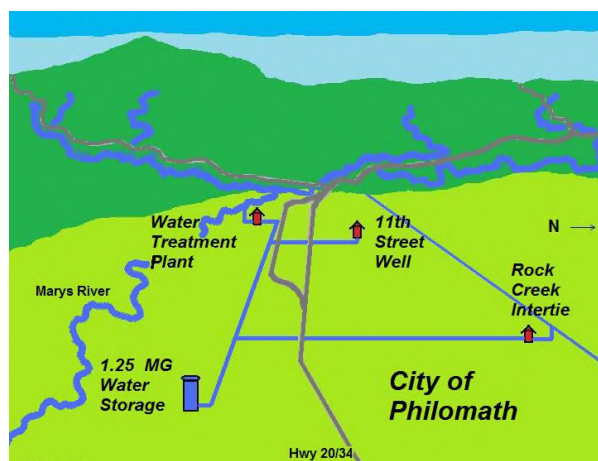
City of Philomath moved to Electronic Delivery of Annual Water Quality Report

The City of Philomath is constantly exploring new ways to provide its customer with the best customer service while keeping costs low. In 2017 the City decided to switch to an electronic delivery of the Annual Water Quality Report. This change streamlined the delivery of the report and reduced costs for printing and mailing. The report is available on the City's website at: www.ci.philomath.or.us/waterqualityreport.

If you would like a hard copy, you may pick one up at City Hall, Library, Police Station, Public Works or request one by calling 541-929-3579.

Philomath's Water System

Total Population served: 5583



Your Sources for Drinking Water

Marys River

In 2021 about 93% of Philomath's drinking water came from the Marys River. The water is pumped to the water treatment plant located on South Ninth Street. In the first step, a chemical called alum (aluminum sulfate) is added to the "raw water". Alum makes particles like dirt and sediment in the water coagulate, or stick together. These particles clump together into larger particles called "floc". In the second step, the water enters an upflow clarifier, or primary filter. The floc particles then adhere to a synthetic media. During the third step, the water leaves the primary filter and flows through the final multi-media filter. The filters are used to remove any remaining particles in the water. A small amount of chlorine is added as it leaves the plant to kill any germs and to keep it safe in the reservoir and distribution system.

11th Street Well

In 2021 less than .01% of water consumed came from the 11th Street well, which is used when the plant or the Inter-tie is down for maintenance or when demand is too great for the plant to keep up. A small amount of chlorine is also added as the water is pumped from the well.

Philomath-Corvallis Inter-tie

In 2008 the City of Philomath and the City of Corvallis activated the Inter-tie providing Philomath with a backup source of water to help when the plant is down for repairs or maintenance. The intertie provided about 7% of the total water used in Philomath in 2021.

Philomath Source Water Assessment Report

In 2001 the Department of Environmental Quality (DEQ) and the Environmental Protection Agency (EPA), with the help of the City of Philomath conducted a Source Water Assessment of the Marys River watershed as required by the Federal Safe Drinking Water Act. This assessment identifies potential sources of contaminants that could impact the quality of the Marys River.

Results of the assessment reveal that the contaminants of concern include Sediments and Turbidity, microbiological agents and nutrients. Potential sources of these contaminants include highways and railways, leaking septic systems, grazing animals, pastures, forest practices, rock quarries, lumber companies, water treatment plants, nurseries and auto shops.

Philomath's Source Water Assessment Report is available for review at the Public Works Department or on the web at: <http://www.deq.state.or.us/wq/dwp/docs/swasummary/pws00624.pdf>

City Water Meets Highest Standards

You will be pleased to know that in 2021, Philomath drinking water met all federal and state drinking water standards. Providing our customers with a safe and reliable supply of high-quality drinking water is a primary goal of the Philomath Public Works Department. Our commitment to water quality excellence has in many cases carried us beyond state and federal requirements. This annual report is intended to provide current information about your drinking water and some of the programs and technologies that make it among the safest in the world.

During 2021, 196.2 million gallons of drinking water were produced by the three facilities, up from 174.8 million gallons in 2020. Approximately 93% came from the treatment plant. The plant produced an annual average of just over 0.5 million gallons each day, while the well's production accounted for less than .01% and use of the Inter-tie was about 7%. Usage from the well and the Intertie depends on the time of year, customer demand, and maintenance requirements.

If after reading this report, you have questions or would like more information, please call the Public Works Department at 541-929-3579. The employees of the Public Works Department are dedicated to excellent customer service and value your input.

A Note For People With Special Health Concerns

Some people may be more vulnerable to contaminants in drinking water than is 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 are available from the Safe Drinking Water Hotline at 800-426-4791.

Why Is Chlorine Added To Our Water?

Although three quarters of the Earth's surface is covered with water, only about 1% is available for human consumption. Often this water must be treated to make it safe for human consumption. In 1908, chlorine was first used on a large scale in the United States to disinfect water supplies. Waterborne diseases such as cholera, typhoid, and dysentery were virtually eliminated in this country. Unfortunately, more than 1.5 billion people in developing countries do not have access to safe drinking water. Diseases associated with dirty water kill more than 25,000 people each day around the world, according to the World Health Organization.

Our treatment plant and well both use chlorine to disinfect the water. Low doses of chlorine act as a disinfectant protecting you from disease causing microorganisms. We are required to add disinfectant in order to meet state and federal mandates for safe drinking water.

Definitions:

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.

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.

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

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

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 the 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 contamination.

ppm=Parts per Million: one part per million is equal to one cup of food coloring in an Olympic size swimming pool (130,000 gallons).

ppb=Parts per Billion: one part per billion is equal to one drop of food coloring in an Olympic size swimming pool (130,000 gallons).

NTU=Nephelometric Turbidity Unit: the standard unit of measurement used in water analysis to measure turbidity in water samples.

pCi/L=Picocuries per liter: billionths of a curie per liter of water, a standard to measure radiations at very low levels.

Radon = a naturally-occurring radioactive gas found throughout the U.S., more often in groundwater than in surface water. The City of Philomath is not required to test for Radon.

Cryptosporidium = a harmful microbial pathogen found in surface water throughout the U.S. Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Cryptosporidium must be ingested to cause disease and may be spread through other means than drinking water. The City of Philomath conducted a limited sampling for Cryptosporidium in late 2009 to 2010 before being released from further sampling by the Oregon Drinking Water program. Philomath finished with a highest mean month of .042 oocyst/L in unfiltered water taken before any treatment. There was none detected in finished water. The action level for Cryptosporidium is \geq .075 oocyst/L. There is currently no required testing for Cryptosporidium since the city did not exceed the limits for E. coli testing action levels in 2017. As of this writing, the state has not determined if any further testing is needed.

Escherichia coli, known as E. coli,= a bacteria that is present in all warm blooded mammals. Birds and animals are carriers and E. coli has even been found in some fish and turtles. Sand and soil can harbor the E. coli bacteria. The City of Philomath tested for E. coli in its source water (Marys River) in late 2009-10 and in 2017-18. While some E. coli were detected in the river water, it was below the action level. There were no E. coli or fecal bacteria detected in water samples taken throughout the city.

How Often Is Our Water Tested?

Before the water reaches your tap, samples from the water treatment plant, reservoir, and at numerous locations throughout the distribution system are tested. Dozens of tests are performed at the treatment plant each day, while more than 100 drinking water tests are conducted throughout the distribution system each year. Hundreds of other required tests are performed by state certified contract laboratories that specialize in drinking water analyses. Results from all these tests are summarized and sent monthly to the Oregon Health Division for review.

FOR MORE INFORMATION

**United States Environmental Protection Agency
Safe Drinking Water Hotline**
1-800-426-4791
www.epa.gov

**Oregon Department of Human Services
Drinking Water Program**
1-541-726-2587
<https://yourwater.oregon.gov/inventory.php>
(Philomath's ID #00624)

City of Philomath Website:
www.ci.philomath.or.us

**Blended Water Quality Data for 2021
Distribution System Sampling Results
All Three Source Waters Blended Together
(Philomath Water Treatment Plant, 11th Street Well and Corvallis/Philomath Intertie)**

Inorganic

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	MEETS REGS?	MAJOR SOURCES
Lead	2021	ppb	0	AL=15.0	Avg. 0.900	0.000	4.00	Yes	Corrosion of household plumbing
Copper	2021	ppm	1.3	AL=1.3	Avg. 0.154	0.027	0.85	Yes	Corrosion of household plumbing

Philomath's sampling frequency for Lead and Copper is every three (3) years.

Every three (3) years 20 samples are collected for analysis.

Philomath does not have Asbestos Cement Pipe, so therefore is not required to sample for Asbestos in the water.

Microbiological

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	MEETS REGS?	MAJOR SOURCES
Turbidity	2021	NTU	N/A	TT	Avg .07	0.02	.30	Yes	Soil Runoff
Total Coliform	2021	No Unit	0	Presence of coliform bacteria in <5% of monthly samples	1*	0	1*	Yes	Naturally present in the environment
Fecal Coliform or E.coli bacteria	2021	No Unit	0	0	0	0	0	Yes	Human or animal fecal waste

Sampling frequency for Coliform Bacteria is 5 samples per month. Currently 6 samples are taken, 3 samples are taken approximately every 2 weeks to insure quality and more frequent monitoring than once per month. Samples are also taken after any shutdowns, repairs and pressure drops below 20 psi. ***See "Explanation of Failed Bacteriological Sample" on following page.**

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

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	MEETS REGS?	MAJOR SOURCES
Haloacetic acids	2021	ppb	0.00	60.0	LRAA* 31.4	31.0	31.2	Yes	By-product of disinfection
Trihalomethanes	2021	ppb	0.00	80.0	LRAA* 44.1	32.3	46.4	Yes	By-product of disinfection
Total Organic Carbon	2021	ppm	N/A	TT	Avg 0.91	0.47	1.58	Yes	Naturally present in the environment
Chlorine Residual	2021	ppm	4.0	4.0	Avg 1.16	0.48	1.55	Yes	Remaining chlorine from disinfection

*LRAA-Localational Running Annual Average

Chlorine residuals are sampled daily.

Total Organic Carbon is sampled quarterly, or 4 times per year.

For more information on Haloacetic Acids and Trihalomethanes, see the "Additional Important Information" page.

Tests Results That Are Included and Tests Results That Are Not

Although we are required to test for more than one hundred substances, including radiological, inorganic chemicals, both synthetic and volatile organic chemicals, and microbiological, only the listed substances were found - and of those found, all results are well below the required MCL.

Complete test results can be found at <https://yourwater.oregon.gov/>. Use the "Water System Search" search link. Enter Philomath's water system number, 41-00624. All tests and information regarding the water system can be found in the links provided.

*Explanation on Failed Bacteriological Sample(s)

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct investigation(s) to identify problems and to correct any problems that were found during these investigation(s).

During the past year we were required to conduct One level 1 coliform investigation; which was completed. We were required to take no corrective actions, as there were no corrective actions to take.

Investigation revealed a sampling technique error was the cause of the one failed bacteriological sample. A resample and 2 samples taken upstream and downstream from the sample point were all negative for coliforms and passed. No E. coli was present in the failed sample.

Water Quality Data for 2021

Philomath Water Treatment Plant

Source of 93% of Total Water Supplied for 2021

Inorganic

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	Meets Regs?	MAJOR SOURCES
Fluoride	2021	ppm	4	4	Average: .72	.57	.92	Yes	Erosion of natural deposits; water additive
Nitrate	2021	ppm	10	10	None Detected		0.00	Yes	Erosion of natural deposits; runoff from fertilizer use, septic tank leaching.
Barium	2021	ppm	2.0	2.0	.0126	.0126	.0126	Yes	Erosion of natural deposits
Chromium	2021	ppm	100	100	.001	.001	.001	Yes	Erosion of natural deposits

Philomath's sampling frequency for Inorganic compounds is once in every nine (9) year period for surface water. Next samples are due by December 31st 2028.

The exception is for Nitrate, which is sampled once a year, and fluoride which is daily.

Radionuclides

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	Meets Regs?	MAJOR SOURCES
Gross Alpha	2019	pCi/L	0	15.0	0.00	0.00	0.00	Yes	Erosion of natural deposits
Radium 226/228	2019	pCi/L	0	5.0	0.00	0.00	0.00	Yes	Erosion of natural deposits
Uranium	2019	pCi/L	0	0.03	0.00	0.00	0.00	Yes	Erosion of natural deposits

The sampling frequency for Radionuclides is every 9 year period for surface water. Next sampling cycle needs to be completed by December 31, 2034. No Sample date is scheduled at this time.

Additional Tests of Interest

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	Meets Regs?	MAJOR SOURCES
Sodium	2021	ppm	N/A	20*	Avg. 17.8	17.8	17.8	N/A	Erosion of natural deposits
pH	2021	ppm			Avg. 7.7	7.5	7.9		

Sodium is tested for every nine (9) year period.

* EPA advisory level only.

An Explanation of the Water Quality Data Table

The table above shows the results of our water quality analyses. Every regulated contaminant that we detected in the water, even in the most minute traces, is listed here. All public water systems are required to report any detected contaminant within the last five years.

The table contains the name of each parameter, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the maximum reported value, the likely sources of each contaminant, footnotes explaining our findings, and a key to the units of measurement. Definitions of MCL and MCLG presented on the "definitions" page are important. The data presented in this report is from the most recent testing done in accordance with the state and federal regulations.

For the complete listing of all test results, go the Oregon Drinking Water program website <https://yourwater.oregon.gov/inventory.php> Enter ID #:00624

Although we are required to test for more than one hundred substances, including radiological, inorganic chemicals, both synthetic and volatile organic chemicals, and microbiological, only the listed substances were found - and of those found, all results are well below the required MCL.

Water Quality Data for 2021

11th Street Well (Emergency Back-up Source)

Source of less than 0.01% of Total Water Supplied for 2021

Inorganic

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	Meets Regs?	MAJOR SOURCES
Fluoride	2021	ppm	4	4	.25 One Sample every 9 years with IOC's	N/A	N/A	Yes	Erosion of natural deposits; water additive
Nitrate	2021	ppm	10	10	0.00 One sample per year	N/A	N/A	Yes	Erosion of natural deposits; runoff from fertilizer use, septic tank leaching.

Radionuclides

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	Meets Regs?	MAJOR SOURCES
Gross Alpha	2017	pCi/L	0	15.0	0.0	0.0	0.0	Yes	Erosion of natural deposits
Radium 226/228	2017	pCi/L	0	5.0	0.0	0.0	0.0	Yes	Erosion of natural deposits
Uranium	2017	pCi/L	0	.03	0.0	0.0	0.0	Yes	Erosion of natural deposits

The sampling frequency for Radionuclides is every 6 years for ground water. Next sampling cycle needs to be completed by December 31, 2028. No Sample date is scheduled at this time.

Microbiological, Disinfection By-Product Precursors, Disinfectant Residual

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	Meets Regs?	MAJOR SOURCES
Turbidity	2021	NTU	N/A	TT	Not sampled in Ground Water	N/A	N/A	N/A	Soil runoff
Total Organic Carbon	2021	ppm			Not sampled in Ground Water	N/A	N/A	N/A	Naturally present in the environment

Additional Tests of Interest

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	MEETS REGS?	MAJOR SOURCES
Sodium	2021	ppm	N/A	20 *	Avg 36.4	36.4	36.4	N/A	Erosion of natural deposits
pH	2021	ppm			Not Sampled	N/A	N/A	N/A	

* EPA advisory level only.

Sodium is tested with Inorganic Compounds. Sampling frequency is every 9 years. The next sampling cycle needs to be completed by Dec. 31st 2028

An Explanation of the Water Quality Data Table

The table above shows the results of our water quality analyses. Every regulated contaminant that was detected in the water, even in the most minute traces, is listed here. All public water systems are required to report any detected contaminant within the last five years.

The table contains the name of each parameter, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the maximum reported value, the likely sources of each contaminant, footnotes explaining the findings, the unit of measurement. Definitions of MCL and MCLG presented on the "Definitions" page are important. The data presented in this report is from the most recent testing done in accordance with the state and federal regulations.

For the complete listing of all test results, go the Oregon Drinking Water program website <https://yourwater.oregon.gov/inventory.php>
Enter ID #:00624 for Philomath results and enter ID # 00225 for Corvallis.

Water Quality Data for 2021

Corvallis-Philomath Inter-tie (Rock Creek Water)

Source of 7% of Total Water Supplied for 2021

Inorganic

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	Meets Regs?	MAJOR SOURCES
Fluoride	2021	ppm	4	4	Average: 0.76	0.49	0.90	Yes	Erosion of natural deposits; water additive
Nitrate	2021	ppm	10	10	0.0 One sample per year	N/A	0.0	Yes	Erosion of natural deposits; runoff from fertilizer use, septic tank leaching.
Manganese	2021	ppm	N/A	0.05	11.4	N/A	N/A	Yes	Erosion of natural deposits
Lead	2020	ppb	0.0	AL= 15.0	1.4	0.00	1.4	Yes	Corrosion of household plumbing
Copper	2020	ppm	1.3	AL= 1.3	0.131	0.0	0.131	Yes	Corrosion of household plumbing

Radionuclides

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	Meets Regs?	MAJOR SOURCES
Gross Alpha	2020	pCi/L	0	15.0	0.0	0.0	0.0	Yes	Erosion of natural deposits
Radium 226/228	2020	pCi/L	0	5.0	0.0	0.0	0.0	Yes	Erosion of natural deposits
Uranium	2020	pCi/L	0	.03	0.0	0.0	0.0	Yes	Erosion of natural deposits

Microbiological, Disinfection By-Product Precursors, Disinfectant Residual

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	MEETS REGS?	MAJOR SOURCES
Turbidity	2021	NTU	N/A	TT	0.03 avg.	0.02	0.05	Yes	Soil runoff
Total Organic Carbon	2021	ppm			Avg. 0.57	0.35	0.74	N/A	Naturally present in the environment
Chlorine Residual	2021	ppm	4.0	4.0	Not Reported	0.0	0.0	Yes	Remaining Chlorine from disinfection
Haloacetic Acids	2021	ppb	0.0	60.0	21.9	5.4	27.5	Yes	Disinfectant By-Product
Trihalomethanes	2021	ppb	0.0	80.0	25.6	12.1	27.2	Yes	Disinfectant By-Product

Additional Tests of Interest

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	Meets Regs?	MAJOR SOURCES
Sodium	2021	ppm	N/A	20 *	11.5 One Sample	N/A	N/A	N/A	Erosion of natural deposits
pH	2021	ppm			Avg 7.35	7.10	8.00	N/A	

An Explanation of the Water Quality Data Table

The table above shows the results of Corvallis's water quality analyses. Every regulated contaminant that was detected in the water, even in the most minute traces, is listed here. All public water systems are required to report any detected contaminant within the last five years. The table contains the name of each parameter, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the maximum reported value, the likely sources of each contaminant, footnotes explaining the findings, the unit of measurement. Definitions of MCL and MCLG presented on the "Definitions" page are important. The data presented in this report is from the most recent testing done in accordance with the state and federal regulations.

For the complete listing of all test results, go the Oregon Drinking Water program website <https://yourwater.oregon.gov/inventory.php>
Enter ID #:00624 for Philomath results and enter ID # 00225 for Corvallis.

* EPA advisory level only.

Water Quality Data for 2021

Corvallis-Philomath Inter-tie (Taylor Treatment Plant)

While 7% of water was supplied by the Inter-tie with Rock Creek Water, a very minimal amount was from the Taylor Treatment Plant. This data is being supplied since some water was supplied by the Taylor Plant.

Inorganic

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	Meets Regs?	MAJOR SOURCES
Fluoride	2021	ppm	4	4	Average: 0.79	0.44	1.04	Yes	Erosion of natural deposits; water additive
Nitrate	2021	ppm	10	10	0.0 One sample per year	N/A	0.0	Yes	Erosion of natural deposits; runoff from fertilizer use, septic tank leaching.
Lead	2020	ppb	0.0	AL= 15.0	1.4	0.00	1.4	Yes	Corrosion of household plumbing
Copper	2020	ppm	1.3	AL= 1.3	0.131	0.0	0.131	Yes	Corrosion of household plumbing

Radionuclides

TEST	DATE	UNIT	(MRDLG)	(MRDL)	LEVEL	RANGE	RANGE	Regs?	MAJOR SOURCES
Gross Alpha	2020	pCi/L	0	15.0	0.0	0.0	0.0	Yes	Erosion of natural deposits
Radium 226/228	2020	pCi/L	0	5.0	0.0	0.0	0.0	Yes	Erosion of natural deposits
Uranium	2020	pCi/L	0	.03	0.0	0.0	0.0	Yes	Erosion of natural deposits

Microbiological, Disinfection By-Product Precursors, Disinfectant Residual

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	MEETS REGS?	MAJOR SOURCES
Turbidity	2021	NTU	N/A	TT	0.03 avg.	0.01	0.05	Yes	Soil runoff
Total Organic Carbon	2021	ppm			Avg. 0.59	0.46	0.81	N/A	Naturally present in the environment
Chlorine Residual	2021	ppm	4.0	4.0	Not Reported	0.0	0.0	Yes	Remaining Chlorine from disinfection
Haloacetic Acids	2021	ppb	0.0	60.0	21.9	5.4	27.5	Yes	Disinfectant By-Product
Trihalomethanes	2021	ppb	0.0	80.0	25.6	12.1	27.2	Yes	Disinfectant By-Product

Additional Tests of Interest

TEST	TEST DATE	UNIT	MCLG (MRDLG)	MCL (MRDL)	DETECTED LEVEL	LOWEST RANGE	HIGHEST RANGE	Meets Regs?	MAJOR SOURCES
Sodium	2021	ppm	N/A	20 *	14.7 One Sample	N/A	N/A	N/A	Erosion of natural deposits
pH	2021	ppm			Avg 7.35	7.10	7.40	N/A	

An Explanation of the Water Quality Data Table

The table above shows the results of Corvallis's water quality analyses. Every regulated contaminant that was detected in the water, even in the most minute traces, is listed here. All public water systems are required to report any detected contaminant within the last five years. The table contains the name of each parameter, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the maximum reported value, the likely sources of each contaminant, footnotes explaining the findings, the unit of measurement. Definitions of MCL and MCLG presented on the "Definitions" page are important. The data presented in this report is from the most recent testing done in accordance with the state and federal regulations.

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Enter ID #:00624 for Philomath results and enter ID # 00225 for Corvallis.

* EPA advisory level only.

What You Should Know About Contaminates in Source Waters

When Congress passed the 1996 Safe Drinking Water Act amendments, the Environmental Protection Agency (EPA) was given the mandate to require public water systems to provide each customer with an Annual Water Quality Report every 12 months.

The sources of drinking water, both tap and bottled, include surface sources such as rivers, streams, lakes and reservoirs, and groundwater sources, or wells. As water moves through the ground or over surfaces, it dissolves naturally occurring minerals, and in some cases, radioactive material. Water can also pick up substances resulting from the presence of human or animal activity. Contaminants that may be present in the source water include:

Microbial - such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic - salts and metals, which can occur naturally or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides - from a variety of sources such as agriculture, stormwater runoff, and residential uses.

Organic chemicals - both synthetic and volatile, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive - can be naturally occurring or be the result of oil and gas production and mining activities.

To insure that tap water is safe to drink, the EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. Bottled water must meet similar standards for contaminant levels as prescribed by the Food and Drug Administration (FDA).

All 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. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or by visiting the EPA website address:

www.epa.gov/safewater

Help Keep Our Water Clean-What You Can Do To Help

It is the people living and working in communities who have the most to gain or lose from the quality of their drinking water. Become an environmentally aware citizen and help avoid drinking water contamination. Things you can do around your home to help protect your drinking water include:

Properly dispose of chemicals- Never pour on the ground, down the drain, or toilet: cleaning supplies, paints, solvents, lawn and garden motor oil, antifreeze, or other waste chemicals. Participate in household hazardous waste collection events.

Properly dispose of drugs and personal care products- Never flush medications or personal care products down the toilet or drains. Take medications to the police department or watch the newspaper for drug take back programs.

Use fertilizers, herbicides and pesticides properly- Apply chemicals according to label instructions and avoid runoff. Do not exceed recommended application rates.

Report spills on roadways-Report spills from vehicles on the roadways by calling "911" so local emergency response teams can effectively contain and remediate the spill to prevent it from entering the waterways.

Cross Connection and Backflow Prevention

Congress established the Safe Drinking Water Act (SDWA) in 1974 to protect human health from contaminants in drinking water and to prevent contamination of existing groundwater supplies. This Act, and its amendments (1986 and 1996), require many actions to protect drinking water and its sources. One of these actions is the installation and maintenance of an approved backflow prevention assembly at the water service connection whenever a potential hazard is determined to exist in the customer's system. Without proper protection devices, cross-connections can occur.

What is a cross-connection?

It is a connection between your drinking water and another source of water that combines the two when a backflow condition occurs. When this condition occurs, your drinking water can become contaminated. The City of Philomath is serious about the mission to protect customers, water resources and the environment. Our objective is to monitor the implementation and annual testing of devices which will prevent the water supply from becoming contaminated, even unintentionally.

According to the State of Oregon Rules for Safe Drinking Water, all users connected directly or indirectly to a public water system must have a backflow prevention device if there is any hazard risk. Risk hazards would include, but are not limited to: Underground irrigation systems, hot tubs, wells, etc.

This backflow device must be installed and maintained at the user's expense.

All backflow prevention devices must be tested annually, on the anniversary of the installation of the device, not from the last tested date, by a certified tester to ensure proper working order. The City of Philomath can provide consumers or property owners with a list of certified backflow prevention testers. The consumer or property owner selects one of his/her own choosing from the list to perform the test. The consumer or property owner should maintain written records of the test and ensure that The City of Philomath has been provided with a copy. The City of Philomath is authorized to suspend water service to the consumer's premises in the event the backflow prevention device inspection and test reports are not provided as required.

You may call the City of Philomath, Public Works Dept. at 541-929-3579 with any questions about backflow prevention.



Additional Important Information

A Word About Lead In 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. The City of Philomath 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 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.

Philomath Has Met Criteria For Reduced Monitoring Of DBP's.

Philomath has met the criteria for reduced monitoring of Disinfectant by Products. (DBP).

DBP's are compounds that are produced when chlorine (disinfectant) comes in contact with organic or inorganic materials that naturally occur in raw water. Treatment of the water removes a great deal of organics from the water, but the removal of all organic materials is nearly impossible resulting in minute particles remaining that combine with the chlorine. The two DBP's that are monitored are Trihalomethanes (TTHM) and Haloacetic Acids (HAA5). TTHM's are a grouping of four chemical compounds and HAA5's are a grouping of 5 chemical compounds. The Maximum Contaminant Level (MCL) on a running annual average for TTHM's is 80 parts per billion (ppb). HAA5 MCL is 60 ppb. Philomath's Long Running Annual Average has stayed below half of the MCL's for both groups allowing monitoring to be reduced from 2 dual sample sites (both sites TTHM and HAA5 samples) 4 times a year (quarterly) to 2 dual sample sites once per year.

Helpful Tips For Reducing Water Use:

A lawn only needs approximately one inch of water per week to stay healthy and green. It is better to give your lawn a deep watering infrequently rather than every day. This promotes healthy root growth.

Make sure your irrigation system is operating efficiently.

- Look for broken or misdirected spray heads
- Check how much water you are applying weekly by adjusting your watering schedule.
- Set your watering schedule for early morning or late evening to avoid water loss from evaporation.
- Consider using drip irrigation for watering.
- Plant native or drought tolerant plants that use less water once established.
- Be sure to check your toilets for leaks, even if you can't hear or see them. A leaky toilet can waste up to 100 gallons of your drinking water per day.

Planning a home improvement job? Planting a tree? Installing a fence or deck?



WAIT!

Here's what you need to know first:

Homeowners often make risky assumptions about whether or not they should get their utility lines marked, but every digging job requires a call – even small projects like planting trees and shrubs. The depth of utility lines varies and there may be multiple utility lines in a common area. Digging without calling can disrupt service to an entire neighborhood, harm you and those around you and potentially result in fines and repair costs. Calling 811 before every digging job gets your underground utility lines marked for free and helps prevent undesired consequences.

Some Useful Tips to Help Keep Our Drinking Water Clean

General Education

- Stormwater runoff is polluted.
- When it rains, water landing on driveways, roofs, roads, and other surfaces picks up pollutants and carries it directly to wetlands, streams, and ponds without treatment.
- Water entering storm drains is not treated; it all goes directly to nearby wetlands, streams, ponds, and eventually the river without treatment.
- Rainwater seeping into the ground is naturally filtered and recycled to groundwater to replenish drinking water supplies and keep streams flowing between storms.

Storm Drains

- Storm drains carry water away without any treatment; any stormwater, fertilizer, leaves, and trash entering a storm drain flows directly to nearby wetlands, streams, ponds and eventually to the river without treatment.
- Never dump, wash, or rake anything into the path of storm drains.

Home Care

- Don't dump household hazardous waste (which includes paint, paint thinner, drain and oven cleaners, and other products with warning labels) down storm drains, on the ground, or down household drains.
- Always follow labeled disposal instructions to avoid injury and environmental harm.
- Bring leftover household chemicals to Republic Services. Contact Republic Services at 541-754-0444 to schedule a drop-off appointment or find out when there will be a hazardous waste pick-up site in your area.
- If you have a septic system, have it inspected regularly (about every two years) and have regular pump-outs (about every three to five years, depending on use) to ensure that your system does not fail. If you have a cesspool or failing system, it should be inspected annually. Improperly maintained septic systems can be a source of contamination.
- Always keep household hazardous waste materials in their original containers.
- Never combine dangerous waste with other products.

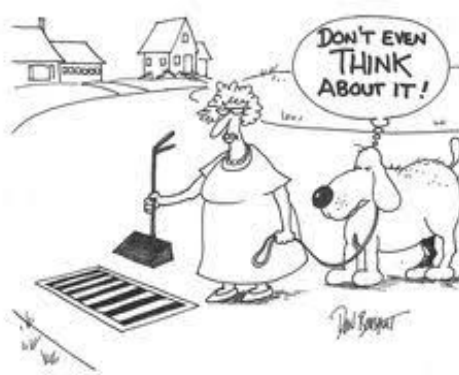
Auto Care

- If you change your own oil, never dump the used oil down storm drains, on the ground, or down household drains. Take the used oil to a transfer station in your community. A local auto parts shop might also accept used oil from you.
- It's best to wash your car at a certified car wash facility, as they are required to either recycle, collect, or dispose of the wash water properly. But if you wash your car at home, moving your car off a paved surface and onto a more permeable one such as a lawn or a gravel driveway can help keep the polluted wash water out of the storm drains.
- Sweep, don't hose, the driveway or other paved surface.

Pet Care

- Always pick up your pet's waste. It's easy to do when you're prepared, so carry a bag with you, put the waste in the bag, and throw in the trash-never in a storm drain!

- Don't feed waterfowl; it causes them to concentrate in higher numbers than they would if they had to rely solely on natural food supplies, and that results in large quantities of waste that are carried by stormwater to local ponds, streams, and rivers.
- If you have large animals, barnyard and manure management is critical. For information specific to livestock, please consult Benton County's website: <https://www.co.benton.or.us/cd/page/tmdl-water-quality-pollutants>



Yard Care

- Mow at the highest setting on your lawn mower. Longer grass helps to conserve water and control weeds.
- Leave grass clippings on the lawn to improve its health and quality. You'll also require less fertilizer.
- Keep fertilizer, pesticides, leaves, and grass clippings off hard surfaces and out of the path of storm drains. Sweep any product that spills back onto the lawn to prevent it from being washed into the storm drain.

Yard Waste

- Compost yard waste when possible; it can be used as mulch later. But don't stockpile yard waste in wetlands or near surface waters.
- Compost leaves, use your yard debris cart, or utilize Republic Service's leaf pickup events.

Lawn Chemicals

- Fertilize sparingly. If you only fertilize once a year, doing so in September is best; there are cooler temperatures, ample rain, and weeds are dying back. If you do apply fertilizer in the spring, do so after the grass is actively growing. A good rule of thumb is to wait until you've mown the lawn three times.
- Use slow release fertilizers. The label should read: slow release or time release fertilizer with water-insoluble, slowly-available, or slowly-available soluble nitrogen.
- More is not always better. Skip the "step programs" offered by many lawn care companies, and be sure to apply fertilizers and pesticides only as directed. If you use a lawn care company, ask them about their environmental options and certifications.
- Check the weather forecast before fertilizer or pesticide applications, and don't apply chemicals when there is rain predicted.
- Avoid using combination fertilizer/pesticide products. Hand pick weeds when possible, and if you must treat weeds or insects with pesticides, spot treat them rather than dousing the entire lawn.
- Avoid using lawn chemicals near wellheads or within 75 feet of waterways.

Water Conservation

- Water wisely. Many species of turf grass go naturally dormant during hot, dry summer months and do not need to be watered when dormant. If you must water, water less often for longer lengths of time and put no more than one inch per week of water on the lawn.
- Adjust sprinklers so that they don't water paved surfaces. In the event that it's unavoidable, try to direct the flow of water towards your garden or lawn.
- Check the weather forecast if you have automatic sprinklers to ensure they aren't programmed to come on in the rain.
- Don't water in the heat of the day. Watering early in the morning or late in the evening minimizes the water lost to evaporation.
- Consider using slow-watering techniques such as drip irrigation or soaker hoses.

Diverting Rooftop Runoff

- If the runoff from your roof flows directly onto pavement, consider using downspout extenders to direct the water onto a landscaped area instead.
- Runoff can also be directed to a rain garden, which is a natural or dug shallow depression designed to soak up water.
- Roof runoff can be captured in a rain barrel and used later for irrigation, which not only reduces stormwater but conserves water.



Philomath is working on a new water treatment plant



The City of Philomath is in the engineering phase of constructing a new water treatment plant. The original plant was built in 1985 and has a life expectancy of 25 years. The current plant turns 36 years old this year and in water treatment plants such as this, that is ancient. Our biggest problem is that the components that make up the plant are wearing out. Many components are required to be rebuilt and recalibrated on a yearly basis. Replacement parts to rebuild or make repairs are no longer available. Newer like parts, if available, are usually completely different in size, shape and tolerances so most of the time they won't fit or work with the current configuration of the plant. Our operators have stocked up on yearly rebuild parts and parts that wear out from every day use when they find out that a component is becoming obsolete. They have scoured Ebay and Amazon for extra parts and less expensive parts and they also contact other cities who might have similar treatment plants that they are replacing to see about acquiring any extra parts they have on hand. The plant has served its purpose, for much longer than expected, but parts are failing regularly triggering shutdowns and it is only a short matter of time before a failure will not be able to be repaired.

Some information regarding the current plant:

Built: 1985

Rated at: 1.5 Million Gallons a Day (MGD)(about 1050 gallons per minute), output is about 1 MGD

Filtering: Rapid sand filters-2- Microfloc Trident TR210 upflow clarifier Filter units. Each unit operates independently and uses 6 layers of filter media starting with Anthracite, Sand, Garnet and 3 different levels and sizes of gravel media totaling about 6 feet in depth.

Raw water pumps: 3- 10 hp 375 gpm vertical turbines

Finish pumps: 3-40hp 375 gpm vertical turbines

Clear Well Volume: 40,000 gallons

Chemicals feeds used at the plant:

Liquid Alum (Aluminum Sulfate)-coagulation and flocculation aid

Sodium Carbonate (Soda Ash)-Used to raise PH

Polyelectrolyte- Aids in stabilizing or initiating Coagulation, Flocculation

Chlorine (Gas)- Used as a disinfectant

Fluorosilicic Acid- Fluoride additive to prevent tooth decay

City of Philomath Proposed Water Treatment Plant

The combination of several factors postponed the construction of the new water treatment plant from happening last year. Below is the original concept plan with estimated costs and construction as of last year. While nothing has changed with design plans, operations or cost estimate, the new construction schedule is for the Reservoir to bid in early May and the Water Treatment Plant to bid in July. Each would be out to bid for four to six weeks. The City also received a 12 million dollar grant to help finance constructing these new structures.



Engineer's Conceptual Drawing

The proposed water treatment plant will be attached to the existing plant. The existing plant will be retained as the office and laboratory so as to minimize cost and size of the new proposed building. Improvements include switching from the rapid sand filters to membrane filtration which will enable us to consistently meet the increasingly stricter water quality standards and also should decrease the need for as many and as much chemicals. It will also expand production from 1.5 Million gallons a Day (MGD) to 2.5 MGD.

As the Marys River has wandered and changed the channel and banks of the river, a new intake structure will be constructed downstream, roughly at the end of S. 9th street as the banks and channel have been more stable over time and not varied in location as much as the current location.

As well as a new plant and intake, a new 1.5 million gallon water reservoir will also be constructed. This will also increase the available water needed for fire fighting operations, peak demand usage and chlorine contact time.

The total project cost is estimated to be \$13.5 million dollars.

Construction of the reservoir is expected to begin July of 2021 and the new intake and treatment plant is anticipated to begin in March of 2022. It is expected to take about 10-12 months to construct the new reservoir and 12-14 months for the intake and new treatment plant.

Plant Capacity: 2.5 Million Gallons a Day (MGD)(about 1735 gallons per minute)

Filtering Process: Membrane filtration. Two racks of membrane filters with each rack capable of producing 1.25 million gallons a day. Higher filtration capabilities than sand filters

Raw water pumps: Two 100 hp 1,400 gpm variable speed soft start vertical turbine pumps

Clearwell Volume: 84,000 gallons

Disinfecting, coagulating methods at the plant:

Liquid Alum (Aluminum Sulfate) - coagulation and flocculation aid

Sodium Carbonate (Soda Ash) - Used to raise pH

Polyelectrolyte - Aids in stabilizing or initiating Coagulation, Flocculation

Chlorine (Gas) - Used as a disinfectant and to provide required chlorine residual in reservoirs and distribution water mains.

Ultraviolet Light Disinfection – Used to enhance and strengthen the chlorination disinfection process

Fluorosilicic Acid- Fluoride additive to prevent tooth decay

Finished water pumps: Two 150hp 1,400 gpm variable speed soft start vertical turbine pumps

Do you know where your water meter shut-off valve is?

It is the middle of the night and a water pipe has burst. You need to shut off the water to your house, but do you know where the shut-off valve is located?

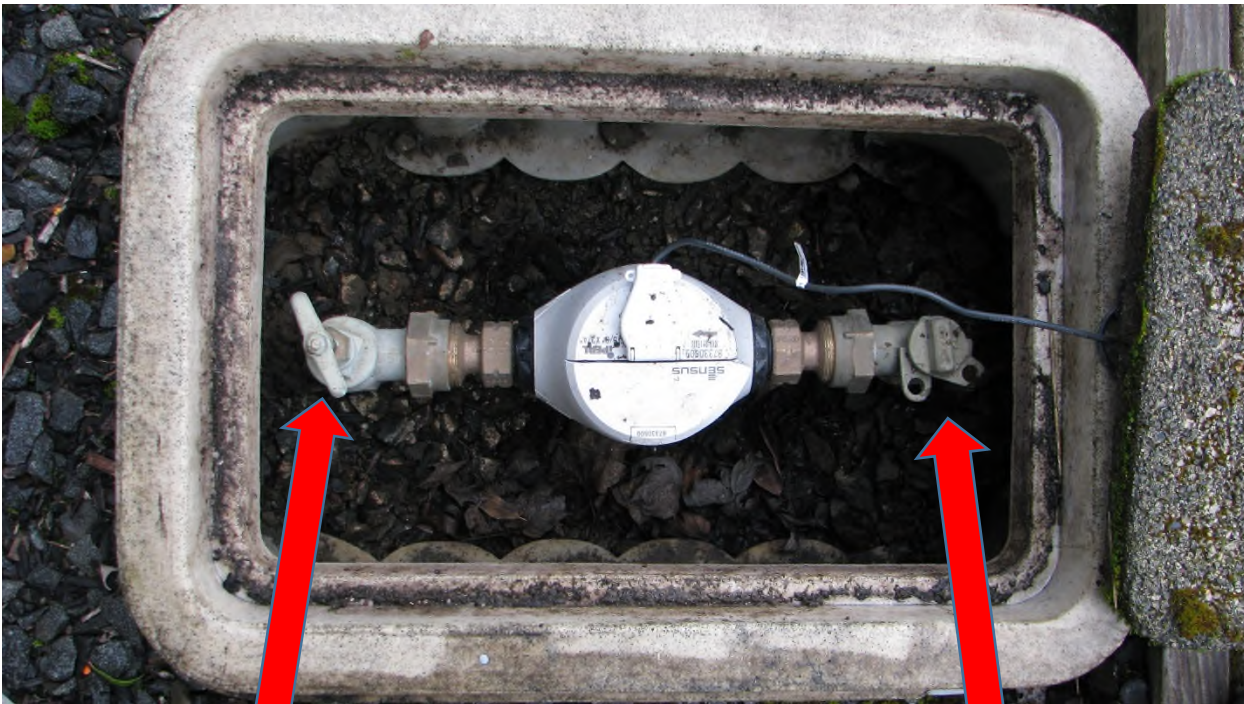
It can take time to find and phone the Public Works number and for a city representative to get to your residence, even longer if it is at night or after hours.

Below is a typical water meter setup with a residence shut-off valve installed.

Your valve may look different but it will be between the water meter and the residence. City ordinance now requires the installation of this valve; if you have an older house, you may not have one installed. If that is the case, we encourage you to get one installed by a plumber.

Call Public Works if you need assistance in locating your water meter setup.

541-929-3579



Customer Valve

City Valve