



Water Quality Report

2018

Providing our customers with a safe and reliable drinking water supply is the highest priority of the Water Division.

The City of Roseburg gets its water from the North Umpqua River.

Raw water is withdrawn from the North Umpqua River at the City's treatment plant on Pioneer Way in Winchester where it is treated and pumped into the City's piping system. The City's water system serves approximately 29,000 people. The water system is comprised of approximately 197 miles of transmission and distribution mains, 13 reservoirs providing 10.7 million gallons of storage, and 21 pump stations. During 2018, 1.650 billion gallons of treated water were produced at the Winchester Treatment Plant for an average production of 4.51 million gallons per day. The plant is operated 24 hours per day by a well-trained and state certified staff. The North Umpqua River is a high quality water source with a very low susceptibility to contamination due to the large amount of unimproved forested areas in the watershed. A source water assessment is available from the Oregon Department of Health Services.

Water treatment is the process of removing contaminants from the water.

Treatment makes the water safe to drink because in nature, water is often not clean enough for human use. A four-step process is used to provide safe, clean drinking water. These steps are coagulation, flocculation, sedimentation and filtration. A coagulant is added to the raw or untreated water to clump the particles of dirt together. These larger particles called "floc" then settle to the bottom of the basin in the sedimentation phase. The settled water then flows to the filters where any remaining particles are filtered out. A small amount of chlorine is added to the water in the final step to keep it safe in the distribution system as it travels to your home or business.

All 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. Our monitoring and testing has detected some contaminants as listed in the table below. *Please note: these are just the contaminants detected, not all the testing results.* All of the tests are within acceptable standards.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791) or visiting the EPA website address www.epa.gov/safewater.

TREATED WATER TEST RESULTS JANUARY 1, 2018 TO DECEMBER 31, 2018						
Parameter	Units	MCLG	MCL	Level Detected	Complies?	Major Source
Turbidity, Bacteria, Inorganic Chemicals, Lead and Copper						
Turbidity	NTU	na	TT 95% Under 0.3	0.15 Max , 0.02 Avg 100% < MCL	Yes	Soil runoff
Total Coliform	% samples positive	0%	<5% all samples	0 of 372 samples	Yes	Naturally present in the environment
Fecal Coliform	% samples positive	0%	0	0 of 372 samples	Yes	Human and animal fecal waste
Sodium Jul-14	ppm	na	20 Advisory	8.52	Yes	A metallic element found in nature
Lead and Copper						
Lead Aug-17	ppm	0	(AL) 0.015	0.003	Yes	Corrosion of household plumbing
Copper Aug-17	ppm	1.3	(AL) 1.3	0.041	Yes	Corrosion of household plumbing
By-Products of Drinking Water Chlorination						
Total Trihalomethanes	ppb	0	80	Range 18 to 32 24 Average	Yes	By-product of disinfection
Halo Acetic Acids	ppb	0	60	Range 14 to 28 21 Average	Yes	By-product of disinfection
Chlorine Residual	ppm	(MRDLG) 4.0	(MRDL) 4.0	Range 0.73 to 1.42 1.11 Average	Yes	Added during treatment process for disinfection
Radioactive Contaminants Analyses						
Gross Alpha Oct-15	pCi/L	na	15	nd	Yes	Naturally occurring or oil and gas production/mining activities.
Radium Oct-15	pCi/L	na	5	nd	Yes	Naturally occurring or oil and gas production/mining activities.

ABBREVIATIONS AND DEFINITIONS

nd = not detectable

na = not applicable

- **Action Level (AL)** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water utility must follow.
- **Maximum Contaminant Level (MCL)** - 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.
- **Maximum Contaminant Level Goal (MCLG)** - 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.
- **Maximum Residual Disinfectant Level (MRDL)** – 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.
- **Maximum Residual Disinfectant Level Goal (MRDLG)** – The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **Nephelometric Turbidity Unit (NTU)** - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity describes how cloudy the water is. The smaller the number is, the clearer the water. Turbidity has no health effects, however, it can interfere with disinfection and provide a medium for microbial growth.
- **Parts per million (ppm) or Milligrams per liter (mg/L)** - One part per million is the same as one minute in two years or a single penny in \$10,000.
- **Parts per billion (ppb) or Micrograms per liter (mcg/L)** - One part per billion is the same as one minute in 2,000 years, or a single penny in \$10,000,000.
- **Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

The City of Roseburg was required to sample the river water (before any treatment) for the presence of cyanotoxins (blue/green algae). Eight samples were taken from July through October. There were **no toxins** detected in any of the samples.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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 Roseburg 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 from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

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

Backflow Prevention

In order to keep our drinking water pure and safe after it has left the treatment plant, the City of Roseburg maintains a Cross Connection Prevention Program as required by the Oregon Health Authority. A cross connection is an actual or potential connection with the City's potable water and another water source or any contaminant or pollutant. Water can flow backward from a water supply lines when a negative pressure is created into the City's Water supply lines. A back-siphoning condition occurs when water pressure in the water main is reduced. The City conducts a survey of water users where there is a potential hazard from a cross connection. When a cross connection risk is found, the owner is required to install the proper backflow assembly. Assemblies are required to be tested every year and after all repairs. If you have any questions regarding backflow or cross connection please contact Andrew Albee at 541-492-6730.

HOW TO REACH US

If you have any questions about this report or concerning your water utility, please contact Water Plant Superintendent Andy Albee at 541-492-7030. This report is available on the City of Roseburg website www.cityofroseburg.org. The Public Works Commission meets the second Thursday of each month at 3:30 P.M. at City Hall. Agendas can be found online at www.cityofroseburg.org/your-government/commissions/public-works-commission