

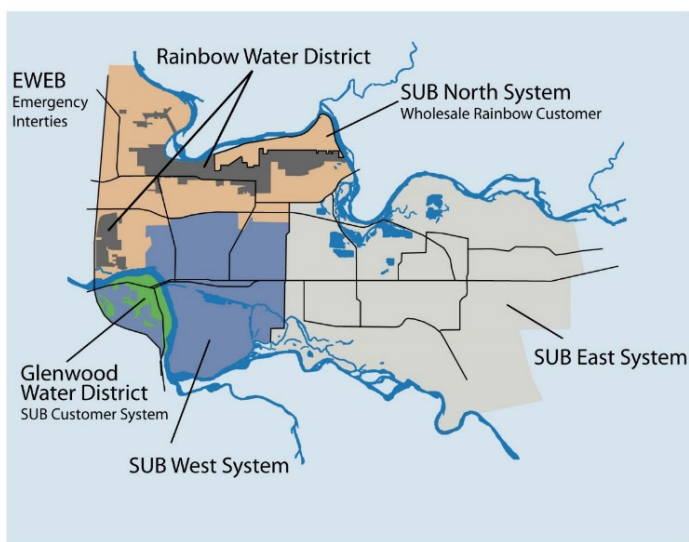
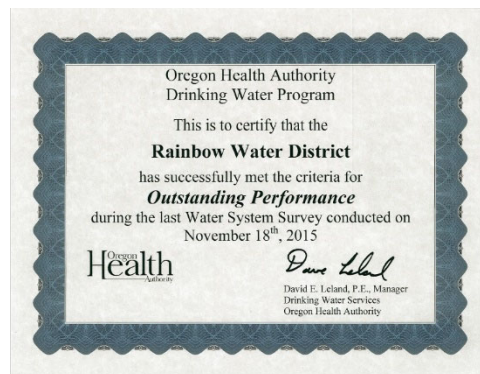
Rainbow Water District Water Quality Report for 2018

P.O. Box 8
1550 N. 42nd Street
Springfield, OR 97477
www.RWOnline.net

Rainbow Water District strives to provide top quality water to every tap and we ask all customers to help us protect the water sources that we share.

This report shows that **Rainbow's water meets or exceeds all federal and state guidelines for water quality.** The enclosed information is provided to inform and educate you about your water and your water utility. If you have any questions, please call our Superintendent, Jamie Porter, at 541-746-1676.

Meetings of the Board of Commissioners, your elected representatives, are held on the second Tuesday of every month, beginning at 5:30 pm, at the Rainbow office, 1550 N. 42nd Street, Springfield.



Rainbow is connected to Springfield Utility Board (SUB) and Eugene Water and Electric Board (EWEB), allowing each utility to provide some assistance to the others in the event of a regional emergency. SUB and EWEB are supplied from a combination of groundwater and surface water sources. Rainbow relies on groundwater alone for our normal water supply, although one well is subject to influence from the McKenzie River so it is classified and treated as surface water.

Water is pumped from underground and stored in two hilltop reservoirs. These reservoirs maintain pressure in the pipes as water use fluctuates during the day, and they provide an emergency reserve for fire protection. We deliver the treated water through transmission and distribution piping to various neighborhoods and areas of need.

We collect over 100 samples per year, testing our wells and system monitoring points on a regular basis, to look for harmful chemicals or bacteria and verify the water system is operating properly.

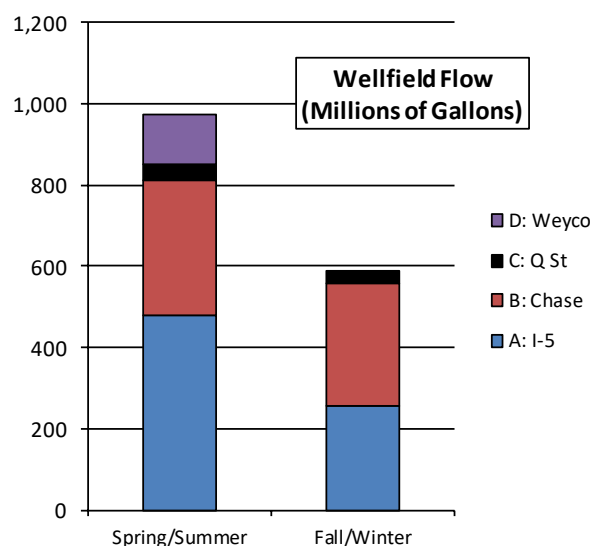
Last year, water was supplied by **four wellfields, sources A-D:**

I-5 - Two wells which provided 50% of our April-September demand and 59% of our January-March and October-December water demand.

Chase - Five wells which provided 32% of our spring/summer demand and 36% of our fall/winter demand. We raise the pH of the water from this source to help control corrosion.

Q Street - A single well providing 4% of our supply during the year.

Weyerhaeuser - Three wells which provided about 14% of our spring/summer demand and 5% of our fall and winter demand. These wells are jointly owned by SUB.



Rainbow Water System Fast Facts

Average flow, million gallons per day: 2.5 (winter) and 7.5 (summer)
System size: about 2,400 connections serving 6,300 people
Supply/Storage: 11 wells, with 5 million gallons stored in 2 reservoirs

Typical 2018 indoor water bill assuming 11 units of usage and ¾" meter:
 $\$19.00 \text{ base rate} + \$12.10 \text{ usage (11 units} \times \$1.10/\text{unit)} = \$31.10$

We use property taxes to hire Eugene-Springfield Fire for fire protection and emergency medical services, saving a portion for urgent capital projects.
Revenue from monthly water bills pays for our ongoing water operations.

Rainbow Water District was voted into existence on August 22, 1949.

A Source Water Assessment that evaluates risks to our groundwater has been completed as part of the Drinking Water Protection Plan that Rainbow completed jointly with SUB. The plan was adopted May 17, 1999, and most recently updated in June 2013. Copies may be reviewed or purchased for the cost of reproduction at the Springfield Public Library, Springfield Planning Services Division, Rainbow Water District, or SUB's Water Service Center.

Here is what the Environmental Protection Agency (EPA) says about drinking water contaminants:

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or manmade. These substances can be microbes, inorganic or organic chemicals and radioactive substances. 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 the water poses a health risk.

Drinking water sources (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. Rainbow Water District is supplied about 85% by groundwater wells, and as much as 15% by water from one well that is filtered as protection against the influence of surface water.

To ensure safe drinking water, the EPA regulates the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration establishes limits for contaminants in bottled water to provide the same protection for public health.

Contaminants that may be present in source water may include:

Microbial contaminants, such as viruses and bacteria, may come from wildlife or septic systems. *Radioactive contaminants* can occur naturally. *Inorganic contaminants*, such as salts and metals, can occur naturally or result from urban stormwater runoff, industrial or domestic wastewater discharges or farming. *Organic chemical contaminants*, including synthetic and volatile organic chemicals, are byproducts of industrial processes, and can come from septic systems, gas stations, and urban stormwater runoff. *Pesticides and herbicides* may come from a variety of sources such as farming, urban stormwater runoff and home or business use.

Some people may be more vulnerable than others to contaminants in drinking water. Immuno-compromised persons such as organ transplant patients, persons undergoing chemotherapy for cancer, people with HIV/AIDS or other immune system disorders, infants and some elderly people, can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. Call 1-800-426-4791 (the Safe Drinking Water Hotline) for EPA/CDC (Centers for Disease Control) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants, and for information about water contaminants and their potential health effects.

A note about lead in the water:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is mainly from materials and components associated with service lines and home plumbing. Rainbow Water District is responsible for providing high quality drinking water, and we raise the pH of the water from our Chase Wellfield to help, but we 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. The Safe Drinking Water Hotline (1-800-426-4791) or at www.epa.gov/safewater/lead can provide information on lead in drinking water, testing methods, and steps you can take to minimize exposure.

FAQs – Frequently Asked Questions about Rainbow’s Water

Q. *Why does my bill increase in the summer?*

A. Rainbow charges a base amount plus a three-tiered usage rate that encourages water conservation. A “unit” of water is 748 gallons. For the first 25 units of water used, which is more than sufficient for most indoor water needs, the cost in 2018 was \$1.10 per unit. During the summer you may wash your car, clean sidewalks, fill the wading pool or water the lawn and garden. As you use more water during the warmer months, you will also pay a higher amount per unit if your use reaches the 2nd (25-49 units) or 3rd (50+ units) tier.

Q. *How do Rainbow’s water rates compare to other utilities?*

A. Our water rates continue to be some of the lowest in Oregon. Each year our Budget Committee reviews our operating costs and a list of what we hope to accomplish in the coming year, and makes recommendations regarding rates and an operating budget to the Board of Commissioners. Like other area water utilities, we have found it necessary to periodically raise rates to maintain services. Your monthly water bills cover the cost of normal operation, and allow us to hire staff, buy electricity and chlorine, keep up with technology and procure parts and supplies to pump and treat groundwater. As our system ages, a larger portion of our budget is required for repairs and maintenance or to replace worn out things like pumps, pipes, valves and hydrants. Property taxes pay for your fire protection. A local option levy allows us to collect additional property taxes, providing enough to hire Eugene-Springfield Fire for fire protection and emergency medical services.

Q. *Can I track my water use? How do I know if I have a water leak?*

A. Your water meter is usually in the front yard, buried in a concrete or plastic meter box with a metal lid. Many meters have a metal or plastic flap to protect the glass display. Our meters read in “units” and each unit equals 748 gallons. You may read your meter at any time during the month, but we have several types of meters and you may need to call our office at **541-746-1676** so we can explain how to read the numbers on your particular meter. (If you call us we can also give you tips on where to look for a leak.) If you stop using water in the house and then watch the meter you can often tell if water is passing by. Depending on your meter, a leak might be indicated by a spinning red triangle or a flashing picture of a faucet. Any leak on your side of the meter, between the meter and your house, is your responsibility to repair. If it appears there is a leak on the street side of the meter, please let us know so we can investigate and take care of any leaks that are our responsibility.

Q. *Can I pay my bill over the phone or internet? Where do I pay?*

A. We accept cash, checks, and money orders. You may pay in person, or send your payment by mail or sign up for a **free ACH** debit from your checking account. We also allow you the option of paying by credit or debit card. (Another company, *Official Payments*, provides this service, charging \$2.05 to process the transaction. See the PAY NOW button at www.rwdonline.net for more information.) Our office is open 8am-5pm, Monday through Friday, at 1550 N. 42nd Street, Springfield. (Look for the white tanks on 42nd Street, between Olympic and Marcola Road. Our driveway is adjacent to the westbound Highway 126 on-ramp.) We have a secure mail slot on the front of the building for after-hours payments.

Q. *How much should I water my lawn and garden?*

A. Grass needs to have a deep root system to survive and flourish. The amount that is needed depends on the temperature and rate of evaporation. View our website for wise watering tips and to subscribe to the Green Grass Gauge weekly advisory email sponsored by the Regional Water Providers. See www.RWDonline.net/ggg.html for more information.

Q. *Where does my water come from? How is it treated?*

A. All of Rainbow’s water comes from wells, with the groundwater naturally filtered by local sands and gravels as it is pumped from the ground. We add a small amount of chlorine as a disinfectant. We do not add any fluoride. The pH of Rainbow’s water typically runs from 6.8 to 7.5, depending on which wells are running. We raise the pH at our Chase Wellfield source to reduce corrosion and help you protect your household plumbing. (In times of crisis, we are also able to purchase water from (or sell water to) SUB or EWEB, activating our mutual aid agreements and emergency connections. This could temporarily include water from the McKenzie or Willamette Rivers.)

Q. *What is a backflow device, and why do I need to get it tested?*

A. Water should flow from Rainbow’s piping system to you, and never in the opposite direction. A backflow device is installed between the public and private systems to protect against possible cross-connections. Backflow devices are required for items such as irrigation (sprinkler) systems, boilers, swimming pools, and rooftop solar water heaters. To ensure that the device is functioning properly and only allowing flow in one direction, water providers work with property owners, plumbers and licensed contractors to install and test these devices.

Q. *Is my water hard or soft?*

A. Water is “hard” if it contains high mineral content (> 120 ppm). While the mineral content varies at our different wellfields, most of Rainbow’s water is 40-80 ppm, only slightly or moderately hard. Mineral content tends to be slightly higher during the high demand summer months.

RAINBOW WATER DISTRICT CONSUMER CONFIDENCE REPORT DATA

TESTING AT WELLFIELD ENTRY POINTS TO THE DISTRIBUTION SYSTEM (2018 or most recent results)

Chemical	Category	Range Detected (Year Tested)	In Compliance?	Federal Limit*	Federal Goal*	Likely Source of Contamination
Nitrate (as Nitrogen)	Regulated Inorganic	ND - 1.90 ppm (2018)	Yes	10 ppm	10 ppm	Fertilizer runoff, leaching from septic tanks, sewage, erosion of natural deposits
Arsenic	Regulated Inorganic	ND - 5.0 ppb (2015, 2017)	Yes	10 ppb	0 ppb	Erosion of natural deposits
Sodium***	UNREGULATED Inorganic	4.58 - 21.9 ppm (2012, 2017)	Yes	No MCL. 20 ppm is advisory only.	n/a	Fertilizer runoff, leaching from septic tanks, sewage, erosion of natural deposits

TESTING AT ROUTINE DISTRIBUTION SYSTEM LOCATIONS (2018 or most recent results)

Chemical	Contaminant Category	Range Detected (Year Tested)	In Compliance?	Federal Limit*	Federal Goal*	Likely Source of Contamination
Total Coliform Bacteria	Regulated Microbiological	0 positive in 2018 (Out of 94 samples)	Yes	no more than 1 positive sample per month	0	Naturally present in the environment
Fecal Coliform & E.Coli Bacteria	Regulated Microbiological	0 positive in 2018 (Out of 94 samples)	Yes	0 positive samples	0	Human & animal fecal waste
Chlorine	Disinfectant	0.26 - 0.72 ppm (2018) RAA = 0.49	Yes	4 ppm	4 ppm	Water additive used to control microbes
Copper	Regulated Inorganics	0.014-0.792 ppm (2018) 90th percentile summary is 0.540 ppm	Yes 0 sites > AL	Action Level = 1.3 ppm	0	Corrosion of household plumbing systems
Lead	Regulated Inorganics	ND - 4.0 ppb (2018) 90th percentile summary is 4.0 ppb	Yes 0 sites > AL	Action Level = 15 ppb	0	Corrosion of household plumbing systems, erosion of natural deposits
Total Trihalomethanes	Disinfection Byproducts	1.20 - 2.10 ppb (8/2018)	Yes	80 ppb	0	Byproducts of the disinfection process
Total Haloacetic Acids	Disinfection Byproducts	ND (8/2018)	Yes	60 ppb	0	Byproducts of the disinfection process

Definitions: **Not Detected (ND)** indicates the contaminant was not detected at levels above the laboratory's reporting capability.

Action Level (AL) is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level (MCL) is 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) is 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) is 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) is 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.

One **Part Per Million (ppm)** corresponds to one penny in \$10,000 or about one minute in 2 years. Measurements in ppm indicate only one milligram of contaminant per liter of water.

One **Part Per Billion (ppb)** corresponds to one penny in \$10,000,000 or approximately one minute in 2,000 years. It takes 1,000 parts per billion to equal one part per million. **Picocuries Per Liter (pCi/L)** is a measurement of radioactivity, a trillion times smaller than one Curie.

Running Annual Average (RAA) is computed using monthly or quarterly results and is a value used to determine compliance.

Notes

* Federal Limits may be either the MCL or the MRDL. Federal Goals may be either the MCLG or MRDLG. Maximum contaminant levels (MCLs) are the highest levels of chemicals that the EPA has determined to be acceptable for life-long consumption. MCLs are set at very stringent levels. To understand the possible health effects described for many regulated chemicals, a person would have to drink 2 liters (about 8 glasses) of water every day at the MCL for a lifetime to have a one-in-a-million chance of having the undesirable health effects.

** Some contaminants are monitored less than once per year. Data shown are the most recent monitoring done in compliance with regulations.

*** Sodium is not a regulated contaminant, but we show the results of sodium testing for all water sources since some source water contains an amount of sodium which people with high blood pressure may wish to know about.

RAINBOW WATER DISTRICT CONSUMER CONFIDENCE REPORT DATA

CHASE WELL #2 GWUDI TREATMENT TESTING (2018 or most recent results)

Other Analyses	Treatment Technique (TT)	In Compliance?	% of Samples Meeting Standard	Highest Measurement	Likely Source of Contamination
Turbidity	TT = <5 NTU at all times and 95% of the daily samples in any month are < 1 NTU	Yes	100%	0.28 NTU	Soil erosion from runoff.

Definitions: NTU or Nephelometric Turbidity Unit is a unit of measure for turbidity.

Treatment Technique (TT) is a required process intended to reduce the level of a contaminant in drinking water.

GWUDI refers to GroundWater Under the Direct Influence of surface water, meaning water from a well that is treated as if it was surface water.

CYANOTOXINS (SOURCE BB: CHASE WELL #2)

Chemical	Category	Range Detected (Year Tested)	In Compliance?	Vulnerable Population Limit	Age 6 and Above Limit	Likely Source of Contamination
Cylindrospermopsin	Cyanotoxins	Not Detected (2018)	Yes	0.7 ppb	3 ppb	Harmful algae blooms
Total Microcystins	Cyanotoxins	Not Detected (2018)	Yes	0.3 ppb	1.6 ppb	Harmful algae blooms

Unregulated Contaminant Monitoring (UCMR4)

Chemical	Category	Range Detected Average (Year Tested)	In Compliance?
bromide	UCMR4 (Raw Water Tap)	ND - 42 ppb 20.5 ppb (2018)	No Limit Established
manganese	UCMR4 (Entry Point)	ND - 1.2 ppb 0.29 ppb (2018)	No Limit Established
quinoline	UCMR4 (Entry Point)	ND - 0.031 ppb 0.004 ppb (2018)	No Limit Established
HAA5	UCMR (Distribution Sys)	ND - 0.78 ppb 0.39 ppb (1/18)(7/18)	No Limit Established
HAA6Br	UCMR (Distribution Sys)	ND - 1.21 ppb 0.61 ppb (1/18)(7/18)	No Limit Established
HAA9	UCMR4 (Distribution Sys)	ND - 1.5 ppb 0.75 ppb (1/18)(7/18)	No Limit Established

ANNUAL SOURCE ASSESSMENT TESTING

Chemical	Total or Fecal Coliform Bacteria	Results (Absent is not detected)
I-5 Well 1	11/6/2018	Absent
I-5 Well 2	11/6/2018	Absent
I-5 Well 1	10/2/2018	Absent
I-5 Well 2	10/2/2018	Absent
Chase Well 1	12/4/2018	Absent
Chase Well 3	10/23/2018	Absent
Chase Well 4	10/23/2018	Absent
Chase Well 5	10/23/2018	Absent
Q Street Well	10/23/2018	Absent
Q Street Well	10/9/2018	Absent