



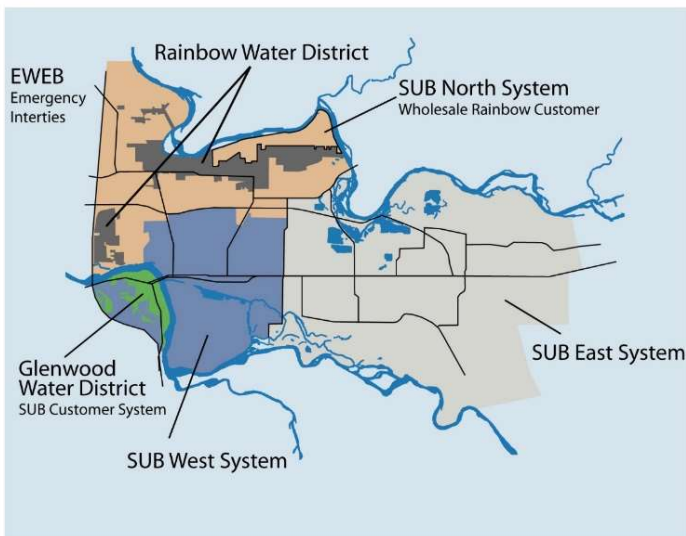
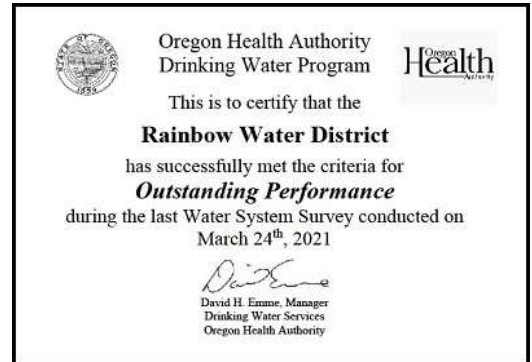
Rainbow Water District Water Quality Report for 2021

P.O. Box 8
1550 N. 42nd Street
Springfield, OR 97477
www.RWDOnline.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 Wednesday of every month, beginning at 5:30 pm, at the Rainbow office, 1550 N. 42nd Street, Springfield. *(A virtual option is provided.)*



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.

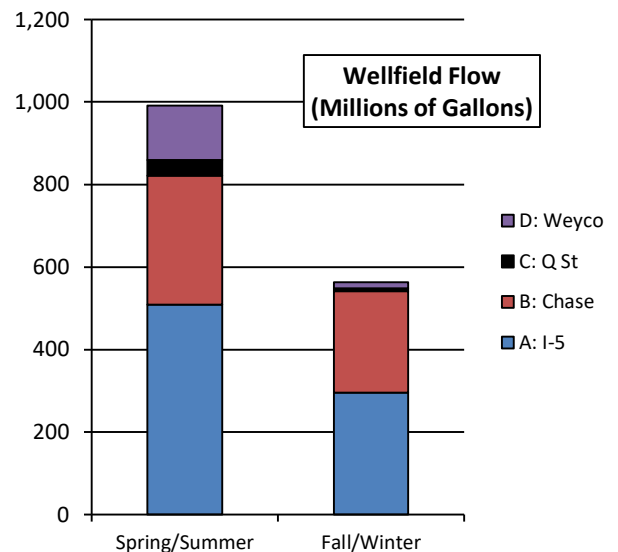
Last year, water was supplied by **four wellfields, sources A-D:**

I-5 - Two wells which provided 51% of our April-September (Spring and Summer) water demand and 52% of our Fall and Winter (October-March) water demand in 2021.

Chase - Five wells which provided 32% of our spring/summer demand and 44% of our fall/winter demand. We raise the pH of the water from this source to help control corrosion.

Q Street - One well providing up to 4% of our summer supply.

Weyerhaeuser - Three wells jointly owned by SUB provided 13% of our spring/summer demand and 3% of our fall/winter demand. We started corrosion control treatment to raise the pH in 2021.



Rainbow Water System Fast Facts

Average flow, million gallons per day: 3.0 (winter) and 7.0 (summer)
System size: about 2,400 connections serving 6,300 people
Supply/Storage: 11 wells, with 5 million gallons stored in 2 reservoirs

Typical 2021 indoor water bill assuming 11 units of usage and ¾" meter:
 $\$20.00 \text{ base rate} + \$12.65 \text{ usage (11 units} \times \$1.15/\text{unit)} = \$32.65$

We use property taxes to hire Eugene-Springfield Fire for fire protection and emergency medical services, with a portion funding 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 (SWA) that evaluates risks to our groundwater was completed as part of the Drinking Water Protection Plan (DWPP) that Rainbow completed jointly with SUB. The DWPP was originally adopted May 17, 1999, and the SWA updated in August 2019. Copies may be reviewed or purchased for the cost of reproduction at the Springfield Public Library, Rainbow Water District, or SUB's Water Service Center. The Source Water Assessment helps identify that 72.7% of the risk to our groundwater wells comes from urban lands in private ownership, 5.2% from private rural lands, and 22.1% from agricultural uses. Risks to Chase Well 2, which is influenced by the McKenzie River, includes soil erosion and forestry practices.

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 website at <http://www.epa.gov/safewater/lead> can provide information on lead in drinking water, testing methods, and the 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 2021 was \$1.15 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 then 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, money orders and credit and debit cards. New in 2022, we have a Customer Portal that allows you to create an account and manage how you pay and how you receive your water bill. See the PAY NOW button at www.rwdonline.net or go directly to <http://www.rwdonline.net/payment.html> 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 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 the running wells, and at Chase (since 2017) and Weyerhaeuser (since 2021) we raise the pH to at least 7.0 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 limited emergency connections. This could temporarily include receiving 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 WATER QUALITY DATA

TESTING AT WELLFIELD ENTRY POINTS TO THE DISTRIBUTION SYSTEM (2021 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 - 1.80 ppm (2021)	Yes	10 ppm	10 ppm	Fertilizer runoff, leaching from septic tanks, sewage, erosion of natural deposits
Arsenic	Regulated Inorganic	ND - 5.1 ppb (2020, 2021)	Yes	10 ppb	0 ppb	Erosion of natural deposits
Synthetic Organics	Regulated SOCs	Not Detected (2016-2018, 2020)	Yes	varies	varies	Byproducts of industrial processes
Pentachlorophenol	part of Regulated SOCs	Not Detected (2016-2018, 2021)	Yes	1 ppb	0 ppb	Byproduct of industrial processes
Volatile Organics	Regulated VOCs	Not Detected (2016-2018, 2020)	Yes	varies, up to 10 ppm Xylenes	varies	Byproducts of industrial processes
Gross Beta**	Regulated Radionuclides	Not Detected (2021)	Yes	50 pCi/L	0 pCi/L	Erosion of natural deposits
Combined Radium	Regulated Radionuclides	ND - 1.22 pCi/L (2017, 2021)	Yes	5 pCi/L	0 pCi/L	Erosion of natural deposits
Combined Uranium	Regulated Radionuclides	Not Detected (2017, 2021)	Yes	30 ppb	0 ppb	Erosion of natural deposits
Gross Alpha** (excluding Ra, U)	Regulated Radionuclides	Not Detected (2017, 2021)	Yes	15 pCi/L	0 pCi/L	Erosion of natural deposits
Barium	Regulated Inorganic	3.2 - 3.4 ppb (2021)	Yes	2.0 ppm (2000 ppb)	2.0 ppm (2000 ppb)	Erosion of natural deposits
Sodium***	UNREGULATED Inorganic	12.2 - 18.0 ppm (2021)	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 (2021 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 2021 (Out of 98 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 2021 (Out of 98 samples)	Yes	0 positive samples	0	Human & animal fecal waste
Chlorine	Disinfectant	0.36 - 0.74 ppm (2021) RAA = 0.55	Yes	4 ppm	4 ppm	Water additive used to control microbes
Asbestos	Regulated Inorganics	ND (8/2014)	Yes	7 MFL (million fibers per Liter)	7 MFL (million fibers per Liter)	Decay of asbestos cement in water mains; erosion of natural deposits
Copper	Regulated Inorganics	0.049-0.480 ppm (2021) 90th percentile summary is 0.330 ppm	Yes 90% < AL	Action Level = 1.3 ppm	0	Corrosion of household plumbing systems
Lead	Regulated Inorganics	ND - 13.4 ppb (2021) 90th percentile summary is 2.5 ppb	Yes 90% < AL	Action Level = 15 ppb	0	Corrosion of household plumbing systems, erosion of natural deposits
Total Trihalomethanes	Disinfection Byproducts	ND - 3.60 ppb (8/2021)	Yes	80 ppb	0	Byproducts of the disinfection process
Total Haloacetic Acids	Disinfection Byproducts	ND (8/2021)	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 contamination.

PPM = one part per million. **PPB** = one part per billion. **PPT** = one part per trillion. **Picocuries Per Liter (pCi/L)** is a measurement of radioactivity.

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 WATER QUALITY DATA

TURBIDITY (SOURCE BB: CHASE WELL #2)

Other Analyses	Treatment Technique (TT)	In Compliance?	% of Samples Meeting Standard	Range Detected	Likely Source of Contamination
Turbidity	TT less than or equal to 5 NTU at all times and TT requires 95% of the daily samples in any month are less than or equal to 1 NTU	Yes	100%	0.02-0.68 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.

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	ND in 13 Samples (5/2021-10/2021)	Yes	0.7 ppb	3 ppb	Harmful algae blooms
Total Microcystins	Cyanotoxins	ND in 13 Samples (5/2021-10/2021)	Yes	0.3 ppb	1.6 ppb	Harmful algae blooms

ADDITIONAL WATER QUALITY TESTING

As part of the Unregulated Contaminant Monitoring Rule (UCMR), the US EPA began monitoring for PFAS (per- and polyfluoroalkyl substances) several years ago. PFAS are a group of chemicals that have been in production since the 1940s and have been widely used in common items like nonstick cookware and stain-resistant fabrics, as well as in firefighting foams and products. As a class of chemicals, these compounds break down slowly and can therefore persist in the environment. Because of the pervasive nature of these chemicals and out of an abundance of caution, SUB voluntarily began testing its groundwater sources in 2019. In 2020, Rainbow joined in and voluntarily tested wells and entry points for the presence of 18 PFAS compounds to contribute information about our water sources in North Springfield. This testing continued in 2021. Samples from some wells have indicated the presence of six different PFAS compounds at extremely low concentrations, with results summarized in the table below.

There are currently no regulatory limits set for PFAS compounds, but EPA is working to develop some and has established a combined health advisory level for two PFAS compounds: PFOA and PFOS. SUB's and Rainbow's results for those compounds were far below the health advisory level. Because we take great care in protecting the quality of our source water, Rainbow is continuing to conduct voluntary sampling and will work with DEQ to ensure we continue to provide safe, high-quality water to our customers.

Per- and Polyfluoroalkyl Substances (PFAS)

Water Test	Unit	Federal Health Advisory Level (HAL)	Oregon Health Advisory Level (HAL)	SUB SP & Maia Wellfield	SUB/RWD Sports Way/ I-5 Wellfield	RWD Chase Wellfield	Below Health Advisory Level?
Perfluorooctanoic acid (PFOA)	ppb	0.07	0.03	0.00304	0.00216	0.0038	Yes
Perfluorooctanesulfonic acid (PFOS)	ppb	0.07	0.03	ND	0.0023	0.0079	Yes
PFOA + PFOS (combined total)	ppb	0.07	0.03	0.00304	0.00446	0.0117	Yes
Perfluorononanoic acid (PFNA)	ppb	NA	0.03	ND	ND	ND	Yes
Perfluorohexanesulfonic acid (PFHxS)	ppb	NA	0.03	ND	ND	ND	Yes
PFOS, PFOA, PFNA and PFHxS (combined total)	ppb	NA	0.03	0.00304	0.00446	0.0117	Yes
Perfluoroheptanoic acid (PFHpA)	ppb	NA	NA	0.0053	ND	ND	NA*
Perfluorohexanoic acid (PFHxA)	ppb	NA	NA	0.00931	ND	0.0022	NA*
Perfluorobutanesulfonic acid (PFBS)	ppb	NA	NA	ND	ND	0.003	NA*