

Water Quality Report for 2023

EST. 1949
75
YEAR
ANNIVERSARY

75 Years of Reliable Water and Responsive Service



To our Rainbow Water customers,

Each year, we notify every customer that our annual Water Quality Report is available online. This fulfills federal and state requirements to keep you informed about the quality of your drinking water.

There's good news this year – again – your water is great! The accompanying report shows (and explains) test results that confirm the high quality of Rainbow's water.

In 2024 we celebrate the District's 75th anniversary. It was voted into existence on August 22, 1949. This milestone reminds us it is our privilege to continue serving you – our customers. Some of you have been around for many of those years, and some are brand new. We appreciate you all.

Reliable water and responsive service have been hallmarks throughout Rainbow Water District's history. After 75 years, those traits have become our tradition



We invite you to celebrate with us this year – and keep enjoying your water.

Thank you,

Jamie

Jamie Porter, PE
District Superintendent

Rainbow Water's Supply Sources

Rainbow's system operates on groundwater alone. Water is pumped from underground wells and stored in two hilltop reservoirs. These tanks maintain pressure in the pipes as water use fluctuates during the day, and they provide an emergency reserve for fire protection. Rainbow delivers the water through piping to customers across the service area.

WATER IS SUPPLIED BY FOUR WELLFIELDS:

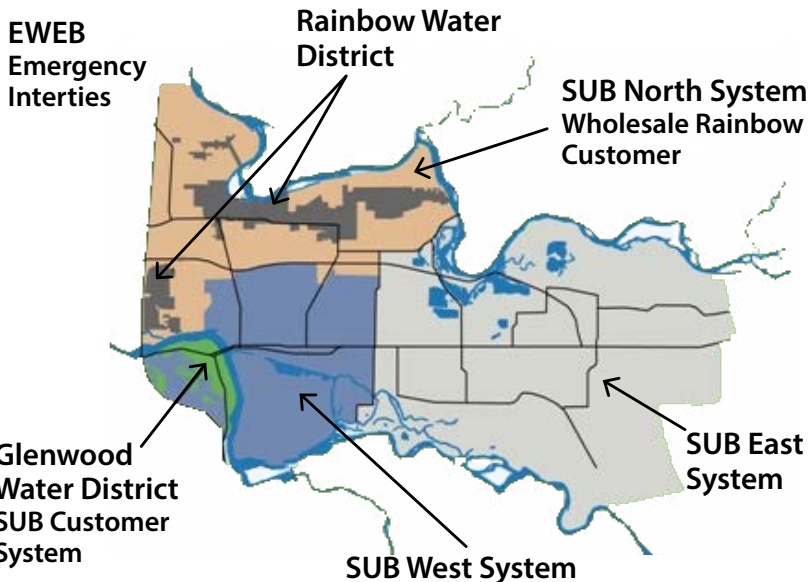
I-5 Two large wells provide nearly half of our water.

Chase Five wells provide one third of our spring/summer demand and one-half of our fall/winter demand. We raise the pH of the water from this source to help control corrosion.

Q Street One well provides 2 to 3% of our supply, helping meet demand during peak usage.

Weyerhaeuser Three wells jointly owned with SUB provide 16% of our spring/summer demand, helping meet demand during the summer watering season. Again, the pH is raised here for corrosion control.

Rainbow is also physically connected to Springfield Utility Board (SUB) and Eugene Water and Electric Board (EWEB), allowing each utility to support 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 normal water supply, although one well is subject to influence from the McKenzie River so it is classified and treated as surface water.



Revenue from monthly water bills pays for our ongoing water operations.

We use property taxes to hire Eugene-Springfield Fire for fire protection and emergency medical services. A portion may help fund water capital projects to maintain fire protection.

Rainbow Water System

Fast Facts

AVERAGE FLOW
million gallons
per day (mgd)

3.2 mgd (Winter)
6.5 mgd (Summer)

SYSTEM SIZE

About **2,400 connections**
serving **6,300 people**

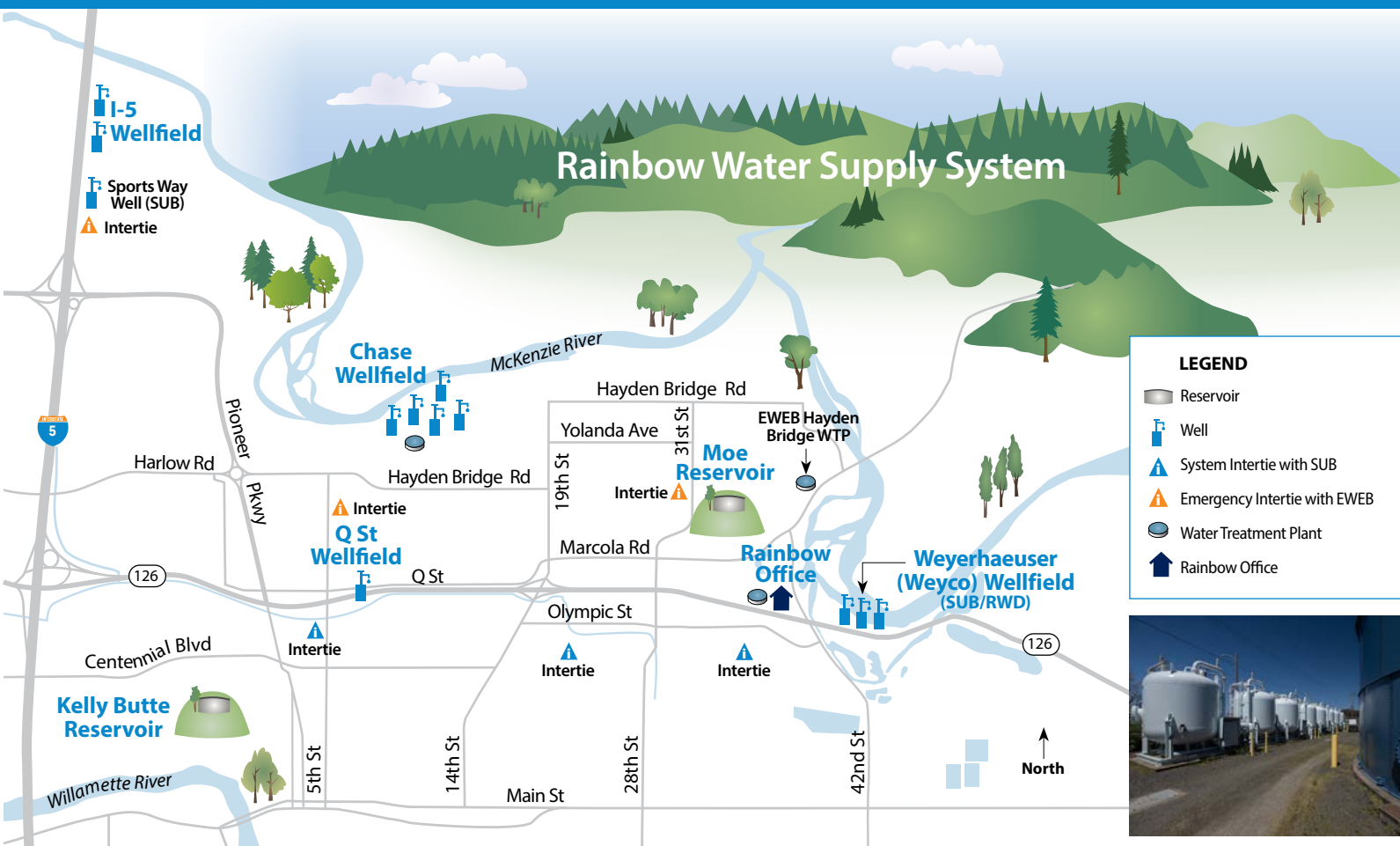
SUPPLY/STORAGE

11 wells
4 wellfields
2 reservoirs

TYPICAL 2023
INDOOR WATER BILL
(assuming 12 units of
usage and ¾"meter)

\$23.00 base rate
+ **\$19.32** usage
(12 units x **\$1.61/unit**)
= **\$42.32**

A Source Water Assessment (SWA) that evaluates risks to our groundwater was prepared as part of the Drinking Water Protection Plan (DWPP) that Rainbow completed jointly with SUB. The Plan was originally adopted in 1999, and the SWA updated in 2019. Copies may be reviewed or purchased at the Springfield Public Library, Rainbow Water District, or SUB's Water Service Center. The Source Water Assessment concludes the risk to our groundwater wells comes mainly from urban lands in private ownership, with other sources including rural lands and agricultural uses. Risks to Chase Well 2, which is influenced by the McKenzie River, include 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 is responsible for providing high quality drinking water, and we raise the pH of the water from our Chase and Weyerhaeuser wellfields 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.

Rainbow Water Quality Data

TESTING AT WELLFIELD ENTRY POINTS TO THE DISTRIBUTION SYSTEM (2023 or most recent results)

Chemical	Category	Range Detected (Year Tested)	In Compliance?	Federal Limit ¹	Federal Goal ¹	Likely Source of Contamination
Nitrate (as Nitrogen)	Regulated Inorganic	ND - 2.4 ppm (2022)	Yes	10 ppm	10ppm	Fertilizer runoff, leaching from septic tanks, sewage, erosion of natural deposits
Arsenic	Regulated Inorganic	ND - 5.1 ppb (2021, 2022)	Yes	10 ppb	0 ppb	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
Barium	Regulated Inorganic	2.46 - 3.8 ppb (2021, 2022)	Yes	2.0 ppm (2000 ppb)	2.0 ppm (2000 ppb)	Erosion of natural deposits
Fluoride	Regulated Inorganic	ND - 50 ppb (2023)	Yes	4.0 ppm (4000 ppb)	4.0 ppm (4000 ppb)	Erosion of natural deposits. Water additive in some systems

TESTING AT ROUTINE DISTRIBUTION SYSTEM LOCATIONS (2023 or most recent results)

Chemical	Category	Range Detected (Year Tested)	In Compliance?	Federal Limit ¹	Federal Goal ¹	Likely Source of Contamination
Total Coliform Bacteria	Regulated Microbiological	0 positive in 2023 (Out of 96 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 2023 (Out of 96 samples)	Yes	0 positive samples	0	Human and animal fecal waste
Chlorine	Disinfectant	0.28 - 0.77 ppm (2023) RAA = 0.54	Yes	4 ppm	4 ppm	Water additive used to control microbes
Copper	Regulated Inorganic	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 Inorganic	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 - 5.0 ppb (8/2023)	Yes	80 ppb	0	Byproducts of the disinfection process

2023 TURBIDITY (CHASE WELL #2)

Other Analyses	Treatment Technique (TT)	In Compliance?	% of Samples Meeting Standard	Range Detected	Likely Source of Contamination
Turbidity ⁴	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%	0.01 - 0.40 NTU	Soil erosion from runoff

Notes

¹Federal 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.

²Some contaminants are monitored less than once per year. Data shown are the most recent monitoring done in compliance with regulations.

³Sodium is not a regulated contaminant, but we share that sodium was detected in the range of 12.2-17.7 ppm since some source water contains an amount of sodium which people with high blood pressure may wish to know about.

⁴Turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

Definitions

Action Level

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system 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.

ND

Not detected.

Treatment Technique

A required process intended to reduce the level of a contaminant in drinking water.

Nephelometric Turbidity Units (NTU)

The unit of measurement of turbidity or cloudiness in water as measured by the amount of light passing through a sample.

Part Per Million (ppm)

One part per million corresponds to one penny in \$10,000 or approximately one minute in two years. One part per million is equal to 1,000 parts per billion.

Part Per Billion (ppb)

One part per billion corresponds to one penny in \$10,000,000 or approximately one minute in 2,000 years.

Part Per Trillion (ppt)

One part per trillion is one nanogram per Liter (ng/L). That corresponds to one minute in 2 million years.

Picocuries Per Liter

Picocurie is a measurement of radioactivity. One picocurie is one trillion times smaller than one curie.

Rainbow collects more than 100 samples per year, testing wells and system monitoring points on a regular basis to look for harmful chemicals or bacteria and verify the water system is operating properly.

Testing for PFAS – Things to Know

EPA began monitoring for PFAS (per- and polyfluoroalkyl substances) several years ago. PFAS are a group of chemicals produced since the 1940s and widely used in common household items such as nonstick cookware and stain-resistant fabrics, as well as in firefighting foams. These compounds break down slowly and can persist in the environment.

In communities where PFAS chemicals have become a concern for drinking water, the problems are typically associated with a specific facility — for example, a military base or airfield where firefighting training occurs or a factory where PFA chemicals are produced. Springfield does not have any known sources of PFAS.

However, because of the pervasive nature of these chemicals and out of an abundance of caution, in 2019 SUB voluntarily developed a PFAS sampling plan and began testing its groundwater sources. In 2020, Rainbow joined in, voluntarily testing wells and entry points to contribute information about our water sources in North Springfield. Samples from some wells have indicated the presence of five different PFAS compounds at very low concentrations. 2023 results are summarized in the table below.

Here are five things to know about Rainbow Water’s progress on PFAS chemicals.

1. EPA recently adopted new drinking water requirements for six PFAS compounds. The maximum contamination level (MCL) for two of these is 4.0 parts per trillion (ppt). The MCL for three other compounds is 10.0 ppt.
2. If these contamination levels are exceeded, treatment will be needed by 2029 to lower the concentrations. Proven technology is available to remove PFAS.
3. Public water systems must also monitor for four more PFAS compounds and inform the public of results by 2027. Rainbow is already sharing this information to meet the new standards.
4. Through testing, Rainbow and SUB have found water samples from some wells exceed the 4.0 ppt limit. This result doesn’t mean Rainbow is out of compliance with EPA’s new rules, which will be implemented in phases through 2029.
5. Rainbow is taking steps to control the costs of PFAS compliance, exploring treatment options and pursuing grant funding and financial recovery from manufacturers.

There’s more about PFAS available online at rwdonline.net/pfas.

PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

Water Test	Unit	Oregon Health Advisory Level (HAL)	Chase EP	I-5 EP	Q St. EP	MCL
Perfluorooctanoic acid (PFOA)	ppt	30 ppt	2.9 - 4.2	ND	ND - 2.3	4 ppt
Perfluorooctanesulfonic acid (PFOS)	ppt	30 ppt	6.6 - 7.9	2.0 - 2.1	4.1 - 6.6	4 ppt
Perfluorononanoic acid (PFNA)	ppt	30 ppt	ND	ND	ND	10 ppt
Perfluorohexanesulfonic acid (PFHxS)	ppt	30 ppt	ND	ND - 2.3	ND - 2.6	10 ppt
PFOS, PFOA, PFNA and PFHxS (combined total)	ppt	30 ppt	12.1	4.4	9.2	
Perfluorobutanesulfonic acid (PFBS)	ppt	NA*	2.9 - 3.0	ND - 2.1	ND	Haz Index
Perfluorohexanoic acid (PFHxA)	ppt	NA*	2.2		2.5 - 2.6	n/a
PFNA, PFHxS, GenX, and PFBS (Hazard Index mixture)	ppt	NA*	0.002	0.256	0.289	H.I = 1

* The State of Oregon has not published Health Advisory Levels for these PFAS compounds.



Products that Contains PFAS

- NAIL POLISH
- CLEANING PRODUCTS
- Non-Stick Cookware
- Firefighting Foams
- PIZZA BOXES
- DENTAL FLOSS
- Water Resistant Clothing
- EYE MAKEUP
- Paints & Sealants
- SHAMPOO



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 2022 was \$1.40 per unit. During the summer outdoor water usage increases so you may 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 have been some of the lowest in Oregon, but like other area water utilities, we have found it necessary to raise rates to maintain services. Your monthly water bills cover our normal operating costs, which climb each year due to inflation. 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. Most have a metal or plastic flap to protect the glass display. Our meters read in "units" and each unit equals 748 gallons. You may check your meter at any time during the month. 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 still flowing. For most meters, a leak might be indicated by a flashing picture of a faucet on the digital display. Any leak on your side of the meter, between the meter and your house, is costing you money and 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. Our Customer Portal allows you to create an account and manage how you pay and how you receive your bill. Use the PAY NOW button at RWDOnline.net or visit RWDOnline.net/customer-portal 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 a deep root system to survive and flourish. The amount of water needed depends on the temperature and rate of evaporation. View our website or Facebook page for the weekly watering recommendation and other wise watering tips provided by your Regional Water Providers. See RWDOnline.net/summer-tips 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 water from Rainbow's wells ranges from 6.8 to 7.5, and we raise pH water above 7.4 to reduce corrosion and help 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. Our Backflow Program requires devices installed between the public and private systems to protect against possible cross-connections. Backflow devices are required for items such as sprinkler systems, boilers, swimming pools, and rooftop solar water heaters. To ensure that the device is functioning properly, we work with property owners, plumbers and 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.

Q. Will Rainbow do anything to celebrate its 75th anniversary?

A. Look in July's newsletter and on our website for more information on our plans for August!

Then & Now

SEVENTY-FIVE YEARS OF SERVICE

In 1917 the Oregon Legislature adopted, "An Act to authorize communities to incorporate as municipal corporations for the purpose of supplying their residents with water for domestic purposes." Voters in Lane County exercised this authority during an election on August 22, 1949, and Rainbow Water District was formed. Voters gave the district the authority to provide fire protection in 1952, and to install and operate a small system of streetlights in 1966.

Compared to many other government entities, our mission as a special district is narrow and focused. We hire out fire protection and emergency medical services to Eugene-Springfield Fire. We hire out our streetlight maintenance responsibilities to SUB Electric. And for 75 years your staff has concentrated their efforts on providing you with great water and customer service. That is what we still do today!

THE TIMES AND RATES ARE CHANGING

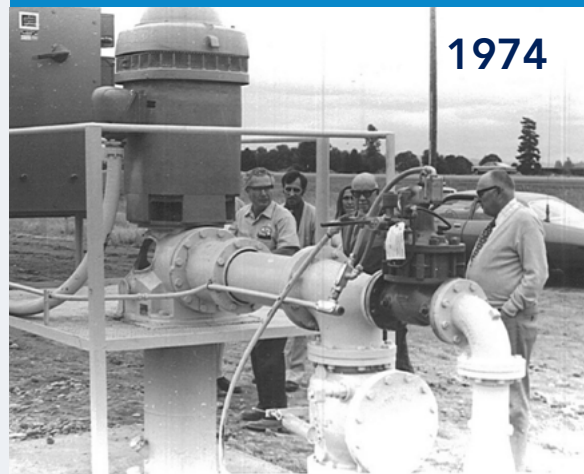
Those first residents who formed the district in 1949 pooled their money to buy water from EWEB for a short period of time while they drilled our first wells and installed piping to serve new subdivisions. Over time, as homes were built and the population grew, the district built storage tanks and drilled more wells to expand the water supply. During the growing years, it was hard to build the infrastructure fast enough to keep up with the district's growth. After most of the neighborhoods filled in, however, we had several decades of relative stability. By water system standards, our pumps and pipes and valves were new and did not require many expensive repairs. We were able to keep the monthly water bills very low, and we were proud of that.

As we have shared before, however, our system has been aging and our circumstances are changing. Regulations intended to make water safer to drink have added complexity and new treatment requirements to our operations. SUB is building a new treatment plant and will no longer purchase large volumes of our surplus water as early as 2027. All of these factors are resulting in a need for some larger rate increases over the next several years to allow us to maintain our high level of service. Our rates are and will be higher than you have been used to, but still not close to what some others pay for water. We are fortunate to have abundant resources in our area.

1957



1974



1986



2024





Mail: P.O. Box 8
Street: 1550 N. 42nd Street
Springfield, OR 97477

Rainbow's office is open and available Monday through Friday, 8:00 AM to 5:00 PM. We have a night drop where you can make after hours payments. Customers are also encouraged to use our online portal to update your information or make electronic payments.

Call us at 541-746-1676 to speak to a human.

We are happy to serve you!

2024 Board of Commissioners



Jamie Porter, PE
District Superintendent



Doug Keeler
Position 1



Mindy Kephart
Position 2



Marla Casley
Position 3



Lou Allocco
Position 4



Jim McLaughlin
Position 5

Meetings of the Board of Commissioners, your elected representatives, are held on the second Wednesday of every month. Meetings begin at 5:30 pm, at the Rainbow office, 1550 N. 42nd Street, Springfield. (A virtual option is provided.)



Oregon Health Authority
Drinking Water Program



This is to certify that the

Rainbow Water District

has successfully met the criteria for

Outstanding Performance

during the last Water System Survey conducted on
March 24th, 2021

David H. Emme, Manager
Drinking Water Services
Oregon Health Authority

CONNECT WITH US

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