

Discover Seattle Water Drinking Water Quality Report 2023



Seattle Public Utilities



Seattle Public Utilities provides essential drinking water, drainage and wastewater, and solid waste services to Seattle residents.

The drinking water system alone serves more than 1.6 million people in the greater Seattle area, including those who get water from neighboring utilities throughout the region.



Discover Seattle Water

This report is about Seattle Water: Pure from the Start.

When we say pure from the start, we mean it. Seattle is the only city in the United States that owns its watersheds. This means your drinking water is collected from pristine, protected mountain sources and delivered straight to your tap.

1.6 million people in the greater Seattle area rely on us to deliver safe, clean water around the clock, 365 days a year. It's some of the freshest, purest water anywhere, made possible by the talented and dedicated staff at Seattle Public Utilities (SPU).

Water is a precious resource. As we face the challenges of a changing climate, including rising temperatures and more frequent drought, we remain dedicated to protecting and sustaining our water resources.

But we can't do it alone. Seattle Water needs you. We appreciate the extra conservation measures people took during our water shortage in 2023. Together we were able to ensure we had enough water for people and fish through the winter.

We're proud to produce this water quality report for our customers every year. It is an opportunity to learn about Seattle Water—where it comes from, how it gets to your tap, the work of our caring and dedicated staff, and the results of our daily, regular water quality testing. We hope you'll take a few minutes to read it, discover something new, and share what you learn with your friends, family, and community.

> Andrew Lee General Manager Seattle Public Utilities

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Pure from the star



Giant lakes and reservoirs store massive amounts of water. They're like **nature's water banks**, holding water until we need it.





Your Drinking Water Truly is 'Pure from the Start.'

Seattle Water comes from natural sources within two very large, protected watersheds in the Cascade Mountains: the Cedar River Watershed and the South Fork Tolt River Watershed.

We refer to these watersheds as "protected" because the City of Seattle owns or manages more than 100,000 acres of land that are closed to unsupervised public access. SPU makes sure these areas are free of agricultural, industrial, recreational, and residential use. Even so, there is always potential for natural sources of contamination.

In Seattle's surface water supplies, the potential sources of contamination include:

- microbial contaminants, such as viruses, bacteria, and protozoa from wildlife;
- inorganic contaminants, such as salts and metals, which are naturally occurring;
- organic contaminants, which result from chlorine combining with the naturally occurring organic matter; and
- radioactive contaminants, which can be naturally occurring.

Where Does Seattle's Drinking Water Come From?

> South Fork Tolt River: 28%



Cedar River: 72%

Note: The water system also sometimes gets water from wells located in Burien that can be used to provide additional supply in the summer, when demand for water is higher. (These wells were not used in 2023, and have not been used since 2015.)

See the Source

Experience the wonder and beauty of the watershed through exciting exhibits and captivating stories from educators at the **Cedar River Watershed Education Center**. You can visit us in person or online.

If you visit in person, you can hike nearby **Rattlesnake Ledge** to see a breathtaking view of the enormous watershed. If you visit online, you can explore our extensive learning resources, including informative videos and engaging at-home activities.

Summer watershed tours may also be available, so check our webpage for current offerings. Center hours, program offerings, and online learning resources are available at: <u>seattle.gov/utilities/crwec</u> or by calling (**206**) **733-9421**.







Working Together to Conserve

Saving water starts long before the water reaches your tap. SPU produced 45.8 billion gallons of treated drinking water in 2023. Of that, 2.5 billion gallons were lost to leakage. While that may sound like a lot, it's only 5.5% of the total and is considered relatively low.

SPU has a long history of focusing on conservation. In the 1980s, we convened local water utilities committed to working together to help customers conserve water. The group—now called the Saving Water Partnership and made up of SPU and 18 other utilities—is still going strong today.

To encourage efficient water use, the Saving Water Partnership set a 10-year (2019-2028) conservation goal: to keep the total average annual retail water use of its members below 110 million gallons per day (mgd) through 2028, despite forecasted population growth, by reducing per capita water use. In 2023, our customers met this goal, using 96.3 mgd.

Make a Difference. Use Water Wisely.

Visit **<u>SavingWater.org</u>** to learn more about the tips, tools, and rebates available to help you save water.

- Gardening classes taught by local experts
- \$100 rebates to upgrade older toilets and sprinkler timers with new rebate-eligible models
- Water-saving assistance for business and multifamily buildings, and more!

Save Water, Help Salmon

The foundation for a healthy salmon run is a healthy habitat-including water flow and water quality considerations like temperature.

Your actions to conserve water, particularly in the summer and early fall when stream flows are naturally low, help provide the habitat necessary for a healthy salmon population.





You can be a **Water Hero**! Turn off the tap while brushing your teeth, take shorter showers, and use water wisely to help save this precious resource.

SPU Puts YOU at the Center of All We Do.

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The People of SPU Keep Seattle Water Safe and Flowing

We put people at the heart of our work and work with them to understand and address their priorities. Our customers and community are why we work every day to protect and deliver safe, reliable, and great-tasting drinking water.

Mayor Bruce Harrell Loves Seattle Water:

"It's better than bottled!

Seattle's drinking water is unmatched. Sourced from our rain supply and mountain watersheds, we have one of the purest water supplies in the nation. Choosing our tap water over bottled options is more affordable, champions sustainability, and ensures each glass of drinking water is clean, safe, and tastes great!"

Find more reasons why Seattle Water is better than bottled at: **seattle.gov/utilities/BetterThanBottled**

OTTLE

The Journey from Forest to Faucet

Taking Care of Our Infrastructure

To ensure water stays safe as it moves from the watershed to your faucet, we carefully maintain our water infrastructure to keep it operating at peak performance and are building new infrastructure to better withstand disruptive events.

HULET · AATUUN

Building Water Resilience Our water system is incredibly resilient, but real threats lie ahead. Climate change, natural disasters, aging infrastructure, and technology

hacks are stressing our water supply and system. SPU is making investments to ensure our water system remains safe, secure, and reliable.



Infrastructure Partnerships

Resilient infrastructure isn't just important to Seattle; it matters to the entire region. SPU provides water services, sells drinking water, and provides emergency supply water to cities and special districts throughout the region.

Partnerships also help us maintain and invest in our water system. SPU collaborates with other municipalities and jurisdictions on a wide range of infrastructure issues such as water supply management, climate change, seismic resilience, emergency preparation and response, innovative approaches, and more.

* SPU provides drinking water to the cities of Bothell, Duvall, Mercer Island, and Renton; Cascade Water Alliance (cities of Bellevue, Kirkland, Redmond, Tukwila, and Issaquah; Skyway Water and Sewer District; and Sammamish Plateau); Cedar River Water and Sewer District; Coal Creek Utility District; Highline Water District; North City Water District; Northshore Utility District; Olympic View Water and Sewer District; Soos Creek Water and Sewer District; Woodinville Water District; and King County Water Districts 20, 49, 90, 119, and 125.





transport water from one place to another.

Mountain Watersheds



Every Drop Counts

your teeth.

Pure from the start.

Using water wisely helps ensure we have enough water for people and the environment for generations to come.

Can You Solve This Water Riddle?

Fill in the missing words to learn about using water wisely in and around your home, then unscramble the circled letters to solve the riddle!

- 1. A leaky toilet can waste 200 _____ of water every day or more.
- 2. Try taking a _____ instead of a bath. You'll use a lot less water.
- 3. Turn off the faucet when you _____
- 4. Running toilets can be _____, which means you can't hear them.
- 5. Check to make sure soil is dry before your lawn or garden.

Riddle: What runs, but never walks?

Answer: _

Are You Water Wise?

Test your conservation knowledge with this quiz!

1. Which of the following is a home's biggest water user?

A. Toilet B. Shower C. Refrigerator D. Clothes washer

- 2. Save water by planting perennials in the ______ and let nature water your plants as they build strong root systems.
 A. Spring
 B. Summer
 C. Fall
 D. Winter
- 3. What percent of earth's water can be consumed by humans?

A. 100% B. 70% C. Less than 1% D. 25%

- 4. Which method of washing dishes uses less water?
 - A. Washing dishes in a full dishwasher
 - B. Washing dishes by hand in the sink



Seattle shares its water with salmon, trout, and many other species. Using water wisely helps protect critical freshwater habitat!







How Do We Keep Our Drinking Water Safe?

Understand Water Sources and Potential Risks

Nationally, the sources of drinking water (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. This report addresses our approaches for managing those risks.



Washington's Source Water Assessment Program is conducted by the state Department of Health (DOH) Office of Drinking Water. According to DOH, all surface waters in Washington are given a susceptibility rating of "high" regardless of whether contaminants have been detected or whether there are any sources of contaminants in the watershed. Information on the source water assessments is available from the DOH website at <u>fortress.wa.gov/doh/swap</u>.

Recognize Your Risk

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised individuals, such as cancer patients undergoing chemotherapy, people with organ transplants, those who have HIV/AIDS or other immune system disorders, some elderly, and infants, can be particularly at risk from infections. These people should seek advice from their health care providers about drinking water. Environmental Protection Agency/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline **(800) 426-4791**.

Water Quality Monitoring Results

Results of monitoring for parameters regulated by federal and state agencies in 2023 are shown on pages 15-16. For other water quality information call **(206) 615-0827** or go to **seattle.gov/utilities/WaterQuality**.

We can also send you a list of the more than 200 compounds for which we tested but did not find in our surface water supplies, including unregulated contaminants.

In the monitoring chart, you'll see results for water coming from the Cedar River Watershed and water coming from the South Fork Tolt River Watershed. In Seattle, if you live south of Green Lake, your water probably comes from the Cedar River Watershed. Areas north of Green Lake usually receive water from the South Fork Tolt River Watershed. Each source can provide water to other areas in Seattle if needed.

Here's the Great News:

SPU's water quality results are all better than the recommended federal levels designed to protect public health!



2023 Results:

We Meet or Exceed All Quality Standards

Water quality monitoring data can be difficult to interpret. In order to fit all the

information in one table, we used many abbreviations that are defined below the table.

EPA'S ALLOWABL LIMITS			A'S VABLE NTS	LEVELS IN CEDAR WATER		LEVELS IN TOLT WATER			Passed!
Detected Compounds	Units	MCLG	MCL	Average	Range	Average	Range	Typical Sources	V
RAW WATER				RAW WATER		RAW WATER			
Total Organic Carbon	ppm	NA	TT	0.76	0.42 to 1.12	1.26	0.99 to 2.49	Naturally present in the environment	V
FINISHED WATER				FINISHED WATER		FINISHED WATER			•
Turbidity	NTU	NA	TT	0.38	0.19 to 3.5	0.04	0.02 to 0.12	Soil runoff	V
Arsenic	ppb	0	10	0.4	0.3 to 0.6	0.3	0.2 to 0.4	Erosion of natural deposits	V
Barium	ppb	2000	2000	1.5	1.3 to 1.7	1.2	1.1 to 1.4	Erosion of natural deposits	V
Bromate**	ppb	0	10	0.7	ND to 11	0.2	ND to 2	Byproduct of drinking water disinfection	V
Fluoride	ppm	4	4	0.7	0.5 to 0.8	0.7	0.6 to 0.8	Water additive, which promotes strong teeth	V
Nitrate	ppm	10	10	0.1	1 Sample	0.1	1 Sample	Erosion of natural deposits	V
Coliform, Total	%	0	5%	Highest Month=0.7% Annual Average=0.09%		Highest Month=0.7% Annual Average=0.09%		Naturally present in the environment	V
Total Trihalomethanes	ppb	NA	80	33	14 to 48	38	19 to 57	Byproducts of drinking water chlorination	V
Haloacetic Acids(5)	ppb	NA	60	24	14 to 30	31	18 to 37	Byproducts of drinking water chlorination	V
Chlorine	ppm	MRDLG =4	MRDL = 4	Average=1.0	Range=0 to1.7	Average=1.0	Range=0 to 1.7	Water additive used to control microbes	V

** SPU is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During October 2023, a bromate sample was

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. **MRDL:** Maximum Residual Disinfectant Level The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the 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 contaminants. However, based on historical data and results since October 2023, Tolt bromaté levels are generally ND.

not analyzed for the Tolt supply, and therefore SPU cannot be sure of the quality of your drinking water during that time.

TT: Treatment Technique

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

NTU: Nephelometric Turbidity Unit

Turbidity is a measure of how clear the water looks. The turbidity MCL that applied to the Cedar supply in 2023 was 5 NTU, and for the Tolt it was 0.3 NTU for at least 95% of the samples in a month. 100% of Tolt samples for 2023 were below 0.3 NTU.

NA: Not Applicable ND: Not Detected ppm: 1 part per million = 1 mg/L = 1 milligram per liter ppb: 1 part per billion = 1 ug/L =

1 ppm = 1000 ppb

1 microgram per liter





Seattle's Unregulated Contaminants Monitoring Rule 5 (UCMR5) Sampling Results for 29 PFAS Compounds and Lithium

UCMR5 data is reported to let you know about new contaminants that may be regulated in the future. The U.S. Environmental Protection Agency (EPA) requires monitoring for contaminants that do not have defined health-based standards.

The EPA uses this information to determine the occurrence of contaminants in drinking water systems, which may lead to future regulations. The contaminants monitored were selected through a data-driven process that considered adverse health effects (potency and severity) and occurrence (prevalence and magnitude), but additional health information is needed to know whether the contaminants pose a health risk.

EPA's UCMR5 list includes 29 PFAS compounds and lithium. 2023 testing shows that **Seattle's drinking water supply from the Cedar and Tolt watersheds is free of these contaminants.**

For more information about the program, visit EPA's website:

epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas

The scientists at **SPU's Water Quality Lab** work 365 days a year and test almost 30,000 water samples each year to ensure our water is safe.

What You Need to Know About 'Forever Chemicals' (PFAS)



The EPA and the Washington State Department of Health (DOH) have rules and regulations about the acceptable health levels for certain types of PFAS in drinking water. Drinking water systems are required to test for and report on 29 PFAS compounds. In April 2024, the EPA finalized regulations for six of these. In compliance with regulations, SPU performed four rounds of testing on its drinking water supplies (Cedar and Tolt rivers) in 2023 and found **no detections of the 6 newly regulated PFAS compounds or the 23 unregulated compounds on the EPA's list.**

List of PFAS Compounds Included in UCMR5 Testing

- Hexafluoropropylene Oxide Dimer Acid 1H,1H,2H,2H-Perfluorodecane sulfonic acid (HFPO-DA) (8:2 FTS) 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)3 2 Perfluorobutanesulfonic acid (PFBS) 17 3 Perfluorohexanesulfonic acid (PFHxS) 1H.1H.2H.2H-Perfluorooctane sulfonic acid 4 Perfluorononanoic acid (PFNA) (6:2 FTS) Nonafluoro-3,6-dioxaheptanoic acid 5 Perfluorooctanesulfonic acid (PFOS) 19 (NFDHA) O Perfluorooctanoic acid (PFOA) Perfluoro(2-ethoxyethane)sulfonic acid 20 (PFEESA) 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) 21 Perfluoro-3-methoxypropanoic acid (PFMPA) 9-Chlorohexadecafluoro-3-oxanonane-22 Perfluoro-4-methoxybutanoic acid (PFMBA) 1-sulfonic acid (9CI-PF3ONS) 23 Perfluoropentanoic acid (PFPeA) 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) 24 Perfluoroheptanesulfonic acid (PFHpS) 10 Perfluorodecanoic acid (PFDA) 23 Perfluoropentanesulfonic acid (PFPeS) 1 Perfluorododecanoic acid (PFDoA) N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) 26 12 Perfluoroheptanoic acid (PFHpA) N-methylperfluorooctanesulfonamidoacetic 27 13 Perfluorohexanoic acid (PFHxA) acid (NMeFOSAA) 14 Perfluoroundecanoic acid (PFUnA) 28 Perfluorotetradecanoic acid (PFTA)
 - 15 Perfluorobutanoic acid (PFBA)

The first six compounds on this list are regulated by the EPA as of Ap The EPA requires monitoring for all 29 PFAS compounds listed.

For more information about testing for PFAS and keeping Seattle Water safe, go to: seattle.gov/utilities/PFAS

29 Perfluorotridecanoic acid (PFTrDA)



Seattle's Source Water Has No Detectable Lead

Lead is an important topic when it comes to the safety of your drinking water. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children.

Even though no lead was found in Seattle's source water, there is still some risk of exposure. Lead in drinking water is primarily from materials and components associated with service lines (the pipe between your water meter and home) and home plumbing. Where you live, when your plumbing was installed and what type of plumbing you have all play a part in determining your potential exposure level.

About Your Plumbing

While there are no known lead service lines in Seattle's water distribution system, there are a small number of homes and buildings that may have short lead connections. In addition, individual homes and businesses may have other plumbing components that could corrode or rust and introduce contaminants into the water. SPU is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. SPU treats the water to minimize the tendency for lead to enter the water through corrosion, and results show that we have been very successful at this.

Lower Your Risk, Don't Let It Sit

The risk of lead contamination in water increases when water sits in pipes for longer than six hours. 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.

Lead Testing is Available

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 at **(800) 426-4791** or at **epa.gov/safewater/lead**.

Customers enrolled in the City of Seattle Utility Discount Program can access free testing by calling SPU's Water Quality Lab at **(206) 615-0827**.

Remember that drinking water is only a minor contributor to overall exposure to lead. Other sources, including paint, soil, and food, also contribute.

Parameter and Units	MCLG	Action Level⁺	2022 Results [*]	Homes Exceeding Action Level	Source	
Lead, ppb	0	15	2.8	0 of 50	Corrosion of household	
Copper, ppm 1.3		1.3	0.12	0 of 50	plumbing systems	

* SPU is required to test for lead and copper every three years; results represent the 90th percentile: i.e., 90% of the samples were less than the values shown.

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

Lead, once a troublemaker in pipes, was told to take a hike. Now, SPU works to ensure our water is **lead-free** and safe to drink.

Working Together with State and Federal Regulators

In order to ensure that tap water is safe to drink, the Environmental Protection Agency and/or the Washington State Board of Health prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration and/or Washington State Department of Agriculture regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

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. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.



We're Here to Help You!

Have a question about your drinking water (or garbage, or sewer, or drainage) services? **We can help!**

How Can I...?

Get help with SPU services or your SPU bill

drinking water quality

drinking water quality

quality questions

Learn more about

in your home

drinking water systems

Ask questions about Seattle's

Ask general drinking water

Learn more about Seattle's

Customer Service: (206) 684-3000 Monday-Friday 7:30 am-7:00 pm myutilities.seattle.gov

seattle.gov/utilities/waterquality

SPU's Drinking Water Quality Division (206) 615-0827

Environmental Protection Agency's Safe Drinking Water Hotline: (800) 426-4791

Washington State Department of Health: doh.wa.gov/you-and-your-family/ healthy-home/drinking-water

savingwater.org

Explore water-saving tips and rebates

Learn about repair resources and free toilets for incomequalified customers

Learn how to find and fix leaks

<u>seattle.gov/utilities/freetoilets</u> Minor Home Repair: <u>mhr@soundgenerations.org</u>

savingwater.org/indoors/fixing-leaks

alert.seattle.gov

Report urgent concerns, such as water outages, discolored water, or hydrant leaks

Sign up for emergency alerts

SPU's 24-hour Operations Response Center: (206) 386-1800

Keeping Essential Services Affordable



We work hard to invest ratepayer dollars wisely, keep rates low, and make our services accessible and affordable. However, some Seattle residents and businesses may find it difficult to afford our essential water and waste services. For those who need additional assistance, help is available.

Need Help with Your Utility Bills? We Offer:

Flexible Payment Plans: Set up a short- or long-term payment plan (available to all customers) to get caught up on your utility bill.

Utility Discounts: Learn about our Utility Discount Program, which offers 50-60% off bills for income-qualified customers.

Emergency Assistance: Find out if you qualify. Income-eligible residential customers can get help paying their utility bill immediately through the Emergency Assistance Program.

Learn more at **seattle.gov/utilitybillhelp** or call **(206) 684-3000**.



Donate Today to Help a Neighbor in Need

You can help customers in the community afford their utility bills by making a donation to SPU's Community Donation Fund. Learn more at **seattle.gov/utilities/donations**.

Celebrate Water Year-Round!

Fix a Leak Week (March): An annual reminder for people to check household plumbing fixtures and irrigation systems for water leaks.

World Water Day (March): A United Nations observance day to highlight the importance of fresh water.

Water Week (April): An annual opportunity for water professionals to advance key water policy priorities.

Drinking Water Week (May): A weeklong event, sponsored by the American Water Works Association, for water professionals and the communities they serve to recognize the vital role water plays in our daily lives.

Imagine a Day Without Water (October): A National Day of Action, sponsored by the U.S. Water Alliance, highlighting how water is essential, invaluable, and in need of continuous investment.

New Water Year (October): October 1 marks the beginning of SPU's water year. This is the time of year when we await the fall rains to start refilling our mountain reservoirs.





Seattle, WA 98124-4018 **Seattle Public Utilities** P.O. Box 34018 700 Fifth Avenue, Suite 4900

For interpretation services please call (206) 684-3000.

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통역 서비스를 원하시면 (206) 684-3000번으로 전화해 주십시오

Para sa serbisyo ng tagapagpaliwanag, tumawag sa (206) 684-3000

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