



SEATTLE
WATER
Pure from the start.



**Seattle
Public
Utilities**

**2022 DRINKING WATER
QUALITY REPORT**

What's Seattle Water?

It's refreshing.

It keeps our bodies and communities healthy.

It's essential to our lives.

It's Seattle Water: Pure from the Start.

Seattle Water is our drinking water. When you turn on the tap, you can trust that Seattle Water is safe, clean, reliable, and an incredible value at less than a penny a gallon.

It's high quality from the very beginning — starting in the mountains, where it is collected and protected in watersheds. We work hard, from the start, to keep it clean and pure.

This report is all about the excellence of Seattle Water — where it starts, how it gets to you, its quality, and the people responsible for safely delivering it to communities we serve.



What is Seattle Public Utilities?

Seattle Public Utilities provides essential drinking water, drainage and wastewater, and solid waste services to Seattle area residents and businesses. The drinking water system alone serves more than 1.5 million people in the greater Seattle area, including those who get water from neighboring utilities throughout the region.*

Seattle Public Utilities makes sure Seattle Water flows to taps throughout the region!

*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.

A Message to Our Customers

We are delighted to bring you our 2022 Drinking Water Quality Report about Seattle Water. Again this year, our water quality data shows that your drinking water is among the best in the nation.

Seattle Public Utilities protects the mountain drinking water source, so Seattle Water truly is pure from the start.

Every day we put you at the center of all that we do. Our team of water pipe workers, conservationists, wildland firefighters, water system operators, water quality scientists, and many others works to make sure it stays that way from the mountains all the way to your tap.

This is all possible because of your support. Seattle's long-term commitment to public health, the environment, and public infrastructure means we can provide access to clean, safe, and reliable drinking water to more than 1.5 million people in our region.

Like many cities across the nation, we too have aging infrastructure, workforce shortages, growing climate impacts, and other challenges. But we are working together as a region and city to vigilantly protect, conserve, and sustain our excellent, municipal drinking water.

Each year we look forward to sharing our drinking water quality data with you. We're proud of our work and hope you are too.



Andrew Lee

General Manager
Seattle Public Utilities

Who Keeps Seattle Water Safe and Flowing?

THE PEOPLE OF SEATTLE PUBLIC UTILITIES

From system operators to water supply managers to water pipe workers, SPU staff play an integral role in bringing you safe, reliable, and high-quality water.



Water System Operators and Operation Response Center (ORC) Representatives

Water system operators and ORC staff work 24/7 to ensure the region's drinking water system remains flowing for our customers and help resolve any issues customers may experience with their water service.

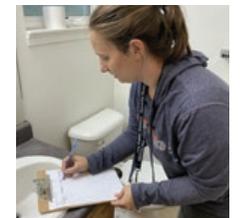


Water Pipe Workers & Apprentices

Water pipe worker apprentices work alongside journey-level water pipe workers to construct, install, and repair water mains, services, valves, and fire hydrants. They are responsible for maintaining 1,800 miles of pipeline.

Water Conservation Team

The SPU water conservation team provides customers with water-saving tips, tools, and rebates to help preserve our region's water for future generations and manages the Saving Water Partnership — a regional water conservation program.



Water Quality Testing Team

The team of experts at SPU's Water Quality Lab collects and analyzes water samples, manages and analyzes data, and helps us comply with regulations and other activities that help protect customers' health. The team also provides their excellent service to other utilities in the region.



Working Together With State and Federal Regulators

In order to ensure that tap water is safe to drink, the U.S. 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. The 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 EPA's Safe Drinking Water Hotline at **800-426-4791**.

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 <https://fortress.wa.gov/doh/swap/>.

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. EPA/Centers for Disease Control and Prevention 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**.

MESSAGE FROM THE MAYOR

"Every neighbor deserves clean, high-quality drinking water that supports their health and wellbeing. Seattle is fortunate to have some of the best drinking water in the nation, beginning with our protected watersheds capturing mountain fresh water all the way through well-maintained infrastructure delivering safe and pure water to Seattle neighborhoods and customers. The dedicated teams at Seattle Public Utilities ensure that our residents, businesses, and visitors continue to enjoy great drinking water every day of the year, keeping our city healthy and thriving."

Bruce Harrell
Mayor, City of Seattle



Water Quality Monitoring

In the monitoring chart that follows on pages 6-7, you'll see results for water coming from the Cedar River Watershed and water coming from the South Fork Tolt River Watershed. The monitoring chart shows results of monitoring for parameters regulated by federal and state agencies in 2022. 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 we tested for but did not find in our surface water supplies, including unregulated contaminants.

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



2022 Results

Water quality monitoring data can be difficult to interpret. To make all the information fit in one table, we used many abbreviations that are defined below the table.

Detected Compounds	Units	EPA'S ALLOWABLE LIMITS		LEVELS IN CEDAR WATER		LEVELS IN TOLT WATER		Typical Sources	✔ = Passed!
		MCLG	MCL	Average	Range	Average	Range		
RAW WATER									
Total Organic Carbon	ppm	NA	TT	0.72	0.39 to 0.97	1.24	1.10 to 1.41	Naturally present in the environment	✔
FINISHED WATER									
Turbidity	NTU	NA	TT	0.35	0.19 to 1.93	0.04	0.02 to 0.24	Soil runoff	✔
Arsenic	ppb	0	10	0.43	0.34 to 0.52	0.28	0.22 to 0.38	Erosion of natural deposits	✔
Barium	ppb	2000	2000	1.26	1.02 to 1.43	1.21	1.14 to 1.30	Erosion of natural deposits	✔
Bromate	ppb	0	10	0.4	ND to 5	ND	ND	Byproduct of drinking water disinfection	✔
Fluoride	ppm	4	4	0.7	0.6 to 0.8	0.7	0.6 to 0.8	Water additive, which promotes strong teeth	✔
Nitrate	ppm	10	10	0.1	1 Sample	0.1	1 Sample	Erosion of natural deposits	✔
Coliform, Total	%	0	5%	Highest Month=0.4%** Annual Average=0.06%**		Highest Month=0.4%** Annual Average=0.06%**		Naturally present in the environment	✔
E. Coli	#	0	0	1 positive sample of the 3331 samples collected in 2022**		1 positive sample of the 3331 samples collected in 2022**		Human and animal fecal waste	✔
Total Trihalomethanes	ppb	NA	80	34	22 to 42	36	18 to 53	Byproducts of drinking water chlorination	✔
Haloacetic Acids(5)	ppb	NA	60	35	10 to 54	38	23 to 46	Byproducts of drinking water chlorination	✔
Chlorine	ppm	MRDLG =4	MRDL = 4	Average=1.08 Range=0 to 1.8		Average=1.08 Range=0 to 1.8		Water additive used to control microbes	✔

** One initial sample showed a detection in the distribution system for both Total Coliform and E. Coli. Follow-up samples did not detect contamination for either compound and compliance was maintained.

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.

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 2022 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 2022 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 microgram per liter

1 ppm=1000 ppb



Where Does Our Drinking Water Come From?

PROTECTED WATERSHEDS

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, and recreational activities, and no one can live in the City-owned watersheds.

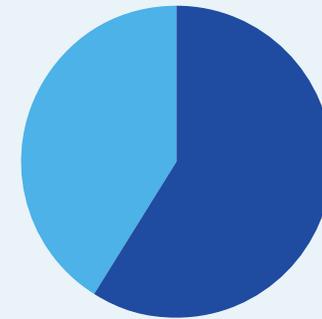
Because our watersheds are protected, there is little opportunity for contaminants to enter the water. Even so, there is always potential for natural sources of contamination. In Seattle’s surface water supplies, the potential sources of contamination include:

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

WHICH WATERSHED PROVIDES MY WATER?

Two natural surface water sources within protected watersheds provide Seattle Water. In Seattle, if you live south of Green Lake, your water likely comes from the Cedar. Areas north of Green Lake usually receive Tolt water. Each source can provide water to other areas in Seattle if needed.

South Fork
Tolt River
41%



Cedar River
59%

Note: The water system also sometimes gets water from wells located in Burien that can be used to provide additional supply in the summer. (These wells were not used in 2022 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 tours of the watershed may also be available, so check our webpage for current offerings. Center hours, programs, and online learning resources are available by *scanning the QR code* to the right, or by calling **206-733-9421**.



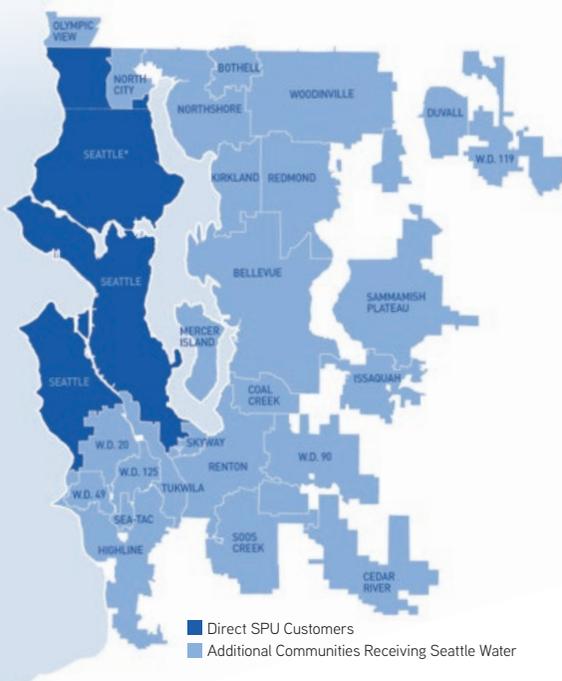
How Does Our Drinking Water Get to Your Faucet?

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.

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.

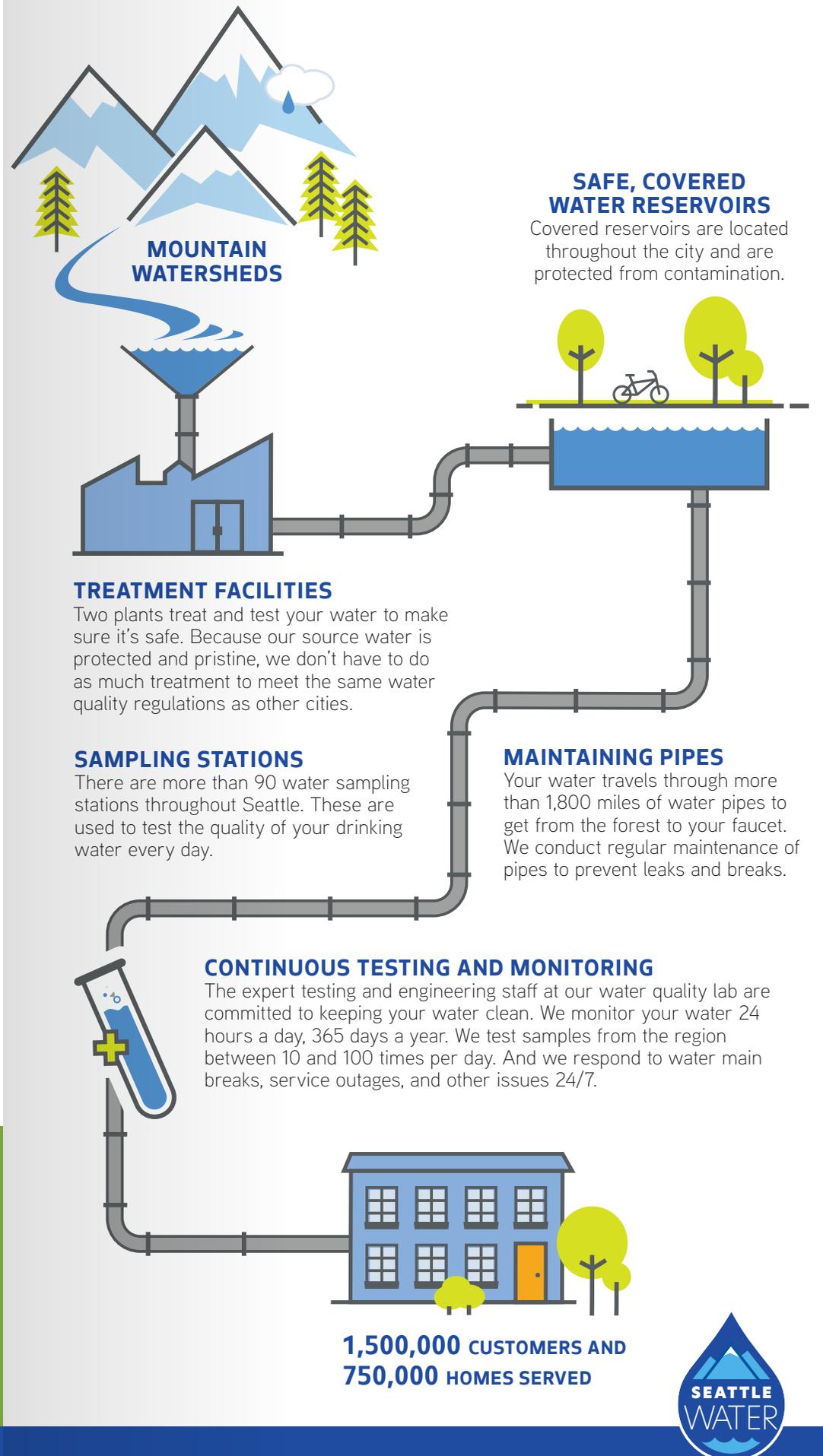
SPU provides water services, sells drinking water, and provides emergency supply water to cities and special districts throughout the region.

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 FUN FACT!

In 2022, the Association of Metropolitan Water Agencies awarded Seattle Public Utilities the 2022 Platinum Award for Utility Excellence! The Platinum Award recognizes outstanding achievement in implementing the nationally recognized Attributes of Effective Utility Management.

To learn more, visit atyourseattle.seattle.gov and search "platinum award"



**1,500,000 CUSTOMERS AND
750,000 HOMES SERVED**



Why Save Water?



Save Water, Help Salmon

The foundation for a healthy salmon run is a healthy habitat — including water flow and water quality. 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.

Working Together to Conserve

Saving water starts long before the water reaches your tap. SPU produced 45.1 billion gallons of treated drinking water in 2022. Of that, 2.8 billion gallons (or 6.2% of the total) was lost due to leakage. This is relatively low when compared to other utilities across the country.

SPU has a long history of focusing on conservation. In the 1980s, we convened local water utilities that were 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 population growth, by reducing per capita water use. In 2022, our customers met this goal, using 94.3 mgd.

Get trusted information from SPU and the Saving Water Partnership on how to use water wisely, including tips, tools, and rebates at [savingwater.org](https://www.savingwater.org).



ALL THE FRESHNESS WITHOUT ALL THE PLASTIC

Bottled water can be up to 1,000 times more expensive than tap water. The average cost of a 20-ounce bottle of water is around \$1.50. Seattle's drinking water costs less than a penny per gallon.

More reasons why Seattle Water is better than bottled:



What are 'Forever Chemicals' (PFAS) and Are They in Our Drinking Water?

PFAS are Human-Made Chemicals

PFAS (per- and polyfluoroalkyl substances) are a category of manufactured chemicals used in everyday products like waterproof jackets, food packaging, and nonstick pans, since the 1940s. PFAS are also found in firefighting foams, and their use at airports and military bases has been linked to the contamination of aquifers. PFOS and PFOA are types of PFAS.

Because PFAS don't break down in the environment, they are sometimes called "forever chemicals." Scientific studies have shown that exposure to some PFAS in the environment may be linked to harmful health effects in humans and animals.

Testing for PFAS in Our Drinking Water

To protect human health, SPU monitors your drinking water to detect PFAS. Routine testing was only recently required, but SPU conducted testing in 2015, 2018, and 2022, and there were no detections of PFAS in Seattle's drinking water supply from the Cedar and Tolt watersheds. Those results can be found on our website: seattle.gov/utilities/PFAS.

In March 2023, SPU conducted another round of PFAS testing. Those test results were not available at the time of publication for this report, but will be posted on the website as soon as SPU receives the results from the lab.



Learn more about water quality, including PFAS
seattle.gov/utilities/waterquality



Does Our Water Contain Lead?

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 (see table on next page), there is still some risk of exposure. Lead in drinking water is primarily from materials and components associated with service lines (the pipe that goes from your meter box to your 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.



Learn 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 lead connections. In addition, individual homes and businesses may have other plumbing components that could corrode 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. If you are concerned about lead and 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 or at [epa.gov/safewater/lead](https://www.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.

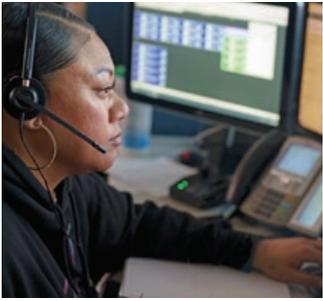
LEAD & COPPER MONITORING RESULTS

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 plumbing systems
Copper, ppm	1.3	1.3	0.12	0 of 50	

^{***} 90th Percentile: i.e., 90 percent of the samples were less than the values shown.

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





We're Here to Help You!

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



DONATE TODAY TO HELP A NEIGHBOR IN NEED

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

HOW CAN I...?

- ▶ **Get help with SPU services or your SPU bill** ▶ Customer Service: **(206) 684-3000** Monday-Friday 7:30 am-7:00 pm myutilities.seattle.gov
- ▶ **Learn more about Seattle's drinking water quality** ▶ seattle.gov/utilities/waterquality
- ▶ **Ask questions about Seattle's drinking water quality** ▶ SPU's Drinking Water Quality Division **(206) 615-0827**
- ▶ **Ask general drinking water quality questions** ▶ Environmental Protection Agency's Safe Drinking Water Hotline: **800-426-4791**
- ▶ **Learn more about drinking water systems in your home** ▶ Washington State Department of Health doh.wa.gov/you-and-your-family/healthy-home/drinking-water
- ▶ **Explore water-saving tips and rebates** ▶ savingwater.org
- ▶ **Learn about free toilets for income-qualified customers** ▶ seattle.gov/utilities/freetoilets Minor Home Repair: mhr@soundgenerations.org
- ▶ **Learn how to find and fix leaks** ▶ savingwater.org/indoors/fixing-leaks
- ▶ **Sign up for emergency alerts** ▶ alert.seattle.gov
- ▶ **Report urgent concerns, such as water outages, discolored water, or hydrant leaks** ▶ SPU's 24-hour Operations Response Center: **(206) 386-1800**

Keeping Essential Services Affordable

We work hard to invest ratepayer dollars wisely, keep rates as low as possible, 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 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 percent 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





Seattle Public Utilities

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如需翻译服务，请拨打(206) 684-3000。

Si aad u heshid adeego turjubaan fadlan wac (206) 684-3000.

Para sa mga serbisyo ng pagsasalin-wika, mangyari lang tumawag sa (206) 684-3000.

번역 서비스를 원하시면 (206) 684-3000로 전화 연락하시기 바랍니다.

အိတ်ငှာမှု ကူညီပံ့ပိုးမှုများအတွက် (206) 684-3000 နံပါတ်ကို

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This report costs about 51 cents to produce and mail to you. Printed on 30% post-consumer recycled paper produced in the Northwest at a local printing plant using 100% renewable energy and renewable energy credits.



Contact Seattle Public Utilities

seattle.gov/utilities | (206) 684-3000

seattle.gov/utilities/emails

