

# CLEARLY WONDERFUL WATER



Seattle  
Public  
Utilities

DRINKING WATER  
QUALITY REPORT **2021**

# CUSTOMER RESOURCES

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 1.5 million people in the greater Seattle area.

## CUSTOMER SERVICE & BILLING ASSISTANCE

**Customer Service:** Monday–Friday (7:30 am–6 pm):  
Call [206-684-3000](tel:206-684-3000) or go to [seattle.gov/mybill](https://seattle.gov/mybill)

**Bill Assistance Programs:** Get help with your utility bills.  
Go to [seattle.gov/utilitybillhelp](https://seattle.gov/utilitybillhelp) or call Customer Service

## DRINKING WATER QUALITY

Learn more about **drinking water quality:** [seattle.gov/util/waterquality](https://seattle.gov/util/waterquality)

**Report urgent concerns**, such as water outages, discolored water, or hydrant leaks to SPU's 24-hour Operations Response Center: [206-386-1800](tel:206-386-1800)

Ask questions about **Seattle's water quality**, such as information about chlorine or fluoride: [206-615-0827](tel:206-615-0827)

Ask **general drinking water quality** questions via the Environmental Protection Agency's Safe Drinking Water Hotline: [800-426-4791](tel:800-426-4791)

Learn more about **source water assessments:** [fortress.wa.gov/doh/swap/](https://fortress.wa.gov/doh/swap/)

## CONSERVATION & REBATES

Explore **tips, assistance, and rebates** to help you save water: [savingwater.org](https://savingwater.org)

Income-qualified homeowners may be eligible for a **free toilet** and installation.  
Learn more: [seattle.gov/util/freetoilets](https://seattle.gov/util/freetoilets) or call Minor Home Repair: [206-448-5751](tel:206-448-5751)

Learn how to **find and fix leaks:** [savingwater.org/indoors/fixing-leaks](https://savingwater.org/indoors/fixing-leaks)

## EMERGENCY ALERTS

Sign up at: [alert.seattle.gov](https://alert.seattle.gov)

# TO OUR CUSTOMERS AND COMMUNITY

The past two years have been challenging for all of us. From COVID variants, rising inflation, and wildfires to international conflicts and high gasoline prices, we are all experiencing the pains of our ever-changing world.

In the midst of this uncertainty, I have grown to appreciate things that are constant and reliable. Seattle's drinking water is one of those things. Seattle Public Utilities (SPU) continues to deliver the best water in the nation—safe, clean, and an incredible value at less than a penny a gallon. We also have a sustained commitment to the environment through our management of waste and stormwater runoff, reduction of sewage overflows into our waters, and more.

I am proud to share this year's Drinking Water Quality Report. It serves as a reminder that you can rely on us to provide excellent drinking water to you every day. Sourced from protected watersheds and safely delivered to your faucets, Seattle's drinking water far surpasses all federal water quality standards.

The quality and reliability of your drinking water is the result of the dedication and expertise of SPU's essential employees, who work tirelessly to ensure that our customers have access to high-quality tap water whenever they need it. Our employees go above and beyond to protect our most precious resource so that everyone in our city, including the most vulnerable, have access to safe drinking water.

But SPU's employees don't do it alone. You partner with them by valuing our region's waters, helping neighbors in need, using water wisely, and keeping our communities and the environment healthy now and into the future.

Thank you for your partnership in ensuring our drinking water remains pure, reliable, and clearly wonderful for generations to come.



**Andrew Lee**  
Interim General Manager,  
Seattle Public Utilities

# WATER PROTECTION STARTS AT THE SOURCE

## OUR WATERSHEDS

It all starts with our watersheds. Seattle’s drinking water comes from two 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 is closed to unsupervised public access. SPU makes sure these lands are free of agricultural, industrial, and recreational activities; no one can live in the City-owned watersheds. This means there is little opportunity for contaminants to enter the water.

Two natural surface water sources within these watersheds provide Seattle’s water: 60 percent from the Cedar River and 40 percent from the South Fork Tolt River. The system also occasionally gets water from wells located in Burien that can be used to provide additional supply in the summer. (They were not used in 2021.)

## EMPLOYEE SPOTLIGHT

Mark Hopf, Watershed Resources Technician

Mark is a member of SPU’s Watershed Protection team. They provide security, water quality and resource protection, and wildfire prevention and suppression for more than 100,000 acres of closed lands in the South Fork Tolt and Cedar River watersheds.



Jourdan Keith, Watershed Public Education Specialist, with students

## VISIT THE CEDAR RIVER WATERSHED EDUCATION CENTER

Experience the wonder and beauty of this 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 a virtual field trip.

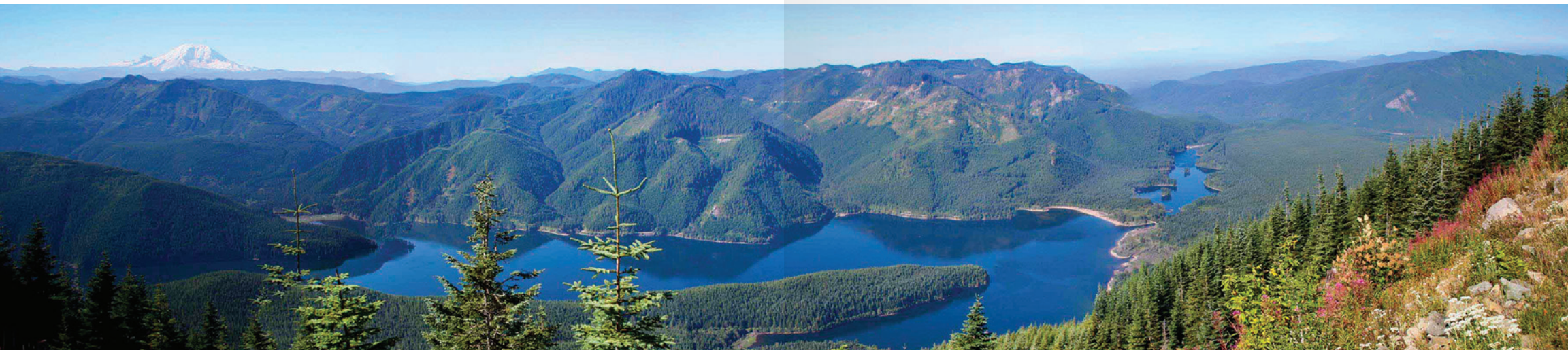
Center hours and distance learning resources are available at: [seattle.gov/utilities/crweec](https://seattle.gov/utilities/crweec) or by calling 206-733-9421.

## CONTINUAL MONITORING

Because our watershed is 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.

To protect against these potential natural sources of contamination, SPU continually monitors the water quality and reports on it regularly.



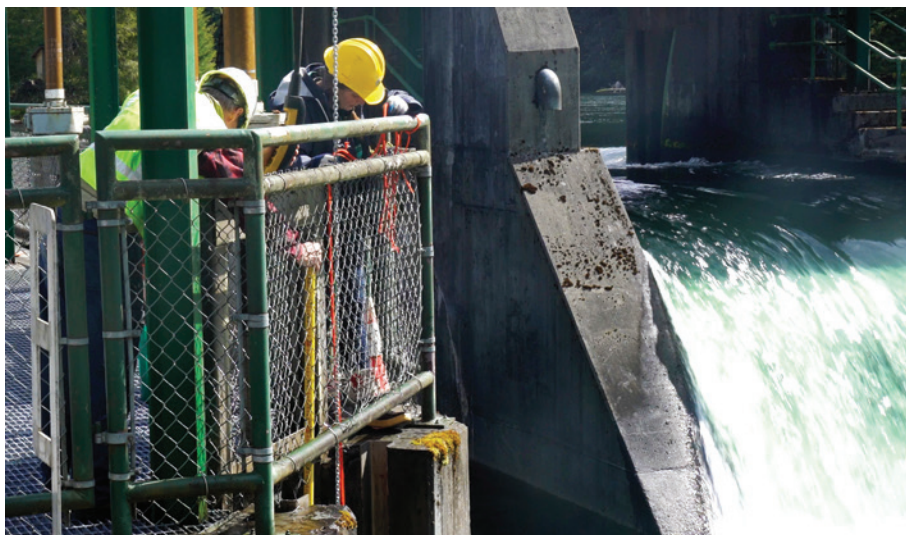
# INVESTING IN OUR WATER INFRASTRUCTURE

SPU delivers water to your tap through carefully maintained infrastructure. This requires keeping our well-designed systems operating at peak performance, and investing in communities by building new infrastructure that can better withstand disruptive events.

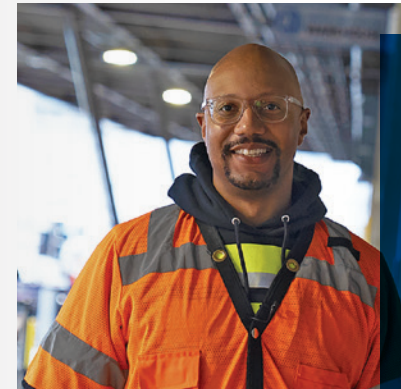
Our infrastructure is essential, not only for Seattle, but for the entire King County region. SPU provides retail water service to parts of Shoreline, Lake Forest Park, and Burien. Wholesale water service is provided through partnerships with 17 additional cities and special purpose districts, and Cascade Water Alliance. We also provide mitigation water to the City of North Bend and have emergency agreements with the City of Edmonds and Lake Forest Park Water District.

## BUILDING RESILIENCE

Water resilience means having a water system that can withstand and adapt to the supply challenges of the future. In Seattle, our water system is incredibly resilient, but real threats lie ahead. System stressors like climate change, natural disasters, aging infrastructure, and technology hacks require continued investment to ensure our system remains safe, secure, and reliable.



Senior Civil Engineer Rick Lippold and Fish Biologist Julia Unrein at Landsburg Diversion Dam



## EMPLOYEE SPOTLIGHT

Maxzell Blanchard, Heavy Truck Driver

Maxzell is a heavy truck driver in SPU's Water Operations and System Maintenance group—the team responsible for installing, upgrading, extending, maintaining, and repairing 1,800 miles of water pipeline.



Water Quality Division Staff: Stacia Thomas, Ajua Ampadu, Allison Ator, Dominic McLaughlin, and Bao-Tran Ngo

## THE PEOPLE BEHIND OUR WATER SYSTEM

From system operators to water supply managers to water pipe workers, each member of our staff plays an integral role in bringing you safe, abundant water and building our system's resilience.



Senior Water Pipe Worker Marrión Harris, Senior Water Pipe Lead Summer Hepburn

# PROTECT & CONSERVE

## OUR PRECIOUS RESOURCES



### SAVE WATER, HELP SALMON

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

Your actions to conserve water year-round are important. In the summer and early fall, when stream flows are naturally low, conserving water helps provide the habitat necessary for a healthy salmon population.

### OUR REGION IS SAVING WATER

Saving water starts long before the water reaches your tap. SPU produced 45.4 billion gallons of treated drinking water in 2021. Of that, 2.7 billion gallons were lost to leakage. While that may sound like a lot, it's only 5.9% of the total and is considered relatively low.

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



To encourage efficient water use, SWP set a 10-year (2019-2028) conservation goal: keep the total average annual retail water use of SWP members below 110 million gallons per day through 2028, despite forecasted population growth, by reducing per capita water use. In 2021 SWP customers met this goal, using 95.5 million gallons per day.

Get trusted information from SPU and the SWP on using water wisely, including tips, tools, and rebates at [savingwater.org](https://savingwater.org).



### EMPLOYEE SPOTLIGHT

Julia Unrein, Fish Biologist

Fish Biologist Julia Unrein manages the fish ladder at the Cedar River Landsburg diversion dam. Her work ensures that our native fish have access to the miles of habitat upstream of the dam and safe passage through our drinking water diversion system.

# KEEPING YOUR DRINKING WATER SAFE

## ABOUT 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's 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. Additional information on source water assessments is available here: [fortress.wa.gov/doh/swap/](https://fortress.wa.gov/doh/swap/).

**While reviewing the information in this section, please know that SPU's water quality results are all better than the recommended federal levels designed to protect public health.**

## CORONAVIRUS AND YOUR DRINKING WATER

Rest assured: your water is safe from COVID-19. There is no evidence of coronavirus in our protected drinking water supply; and Seattle's water is treated, which protects you from contaminants such as viruses. Learn more: [epa.gov/coronavirus/drinking-tap-water-safe](https://epa.gov/coronavirus/drinking-tap-water-safe).

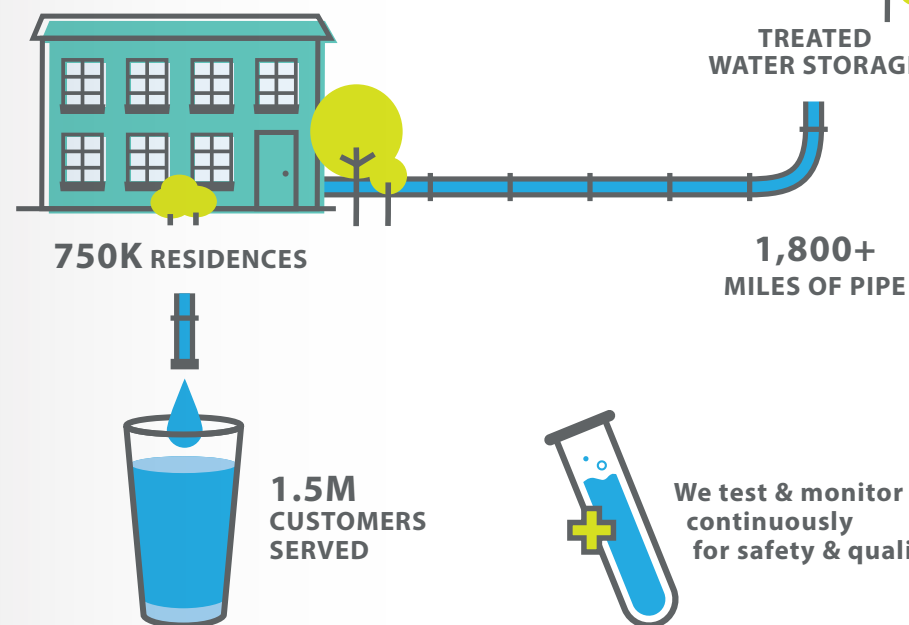
We continuously monitor the water supply to make sure it remains safe. You do not need to stockpile bottled water because of COVID-19. However, we do recommend including a two-week water supply in your emergency kit for an emergency such as an earthquake. More information on earthquake preparedness can be found at [seattle.gov/emergency-management/prepare](https://seattle.gov/emergency-management/prepare).

To access the most up-to-date information about COVID-19, please go to [seattle.gov/covid-19](https://seattle.gov/covid-19).

## WORKING TOGETHER TO KEEP WATER SAFE

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. 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](tel:800-426-4791).



# UNDERSTANDING WATER QUALITY MONITORING

Results of monitoring for parameters regulated by federal and state agencies in 2021 are shown on pages 13-14. For other water quality information, please call [206-615-0827](tel:206-615-0827) or go to [seattle.gov/utilities/waterquality](https://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 watershed and water coming from the Tolt watershed. In Seattle, if you live south of Green Lake, your water probably comes from the Cedar. Areas north of Green Lake usually receive Tolt water.

**The most important thing to know is SPU's water quality results are all better than the recommended federal levels designed to protect public health.**

## RECOGNIZE YOUR RISK

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers.

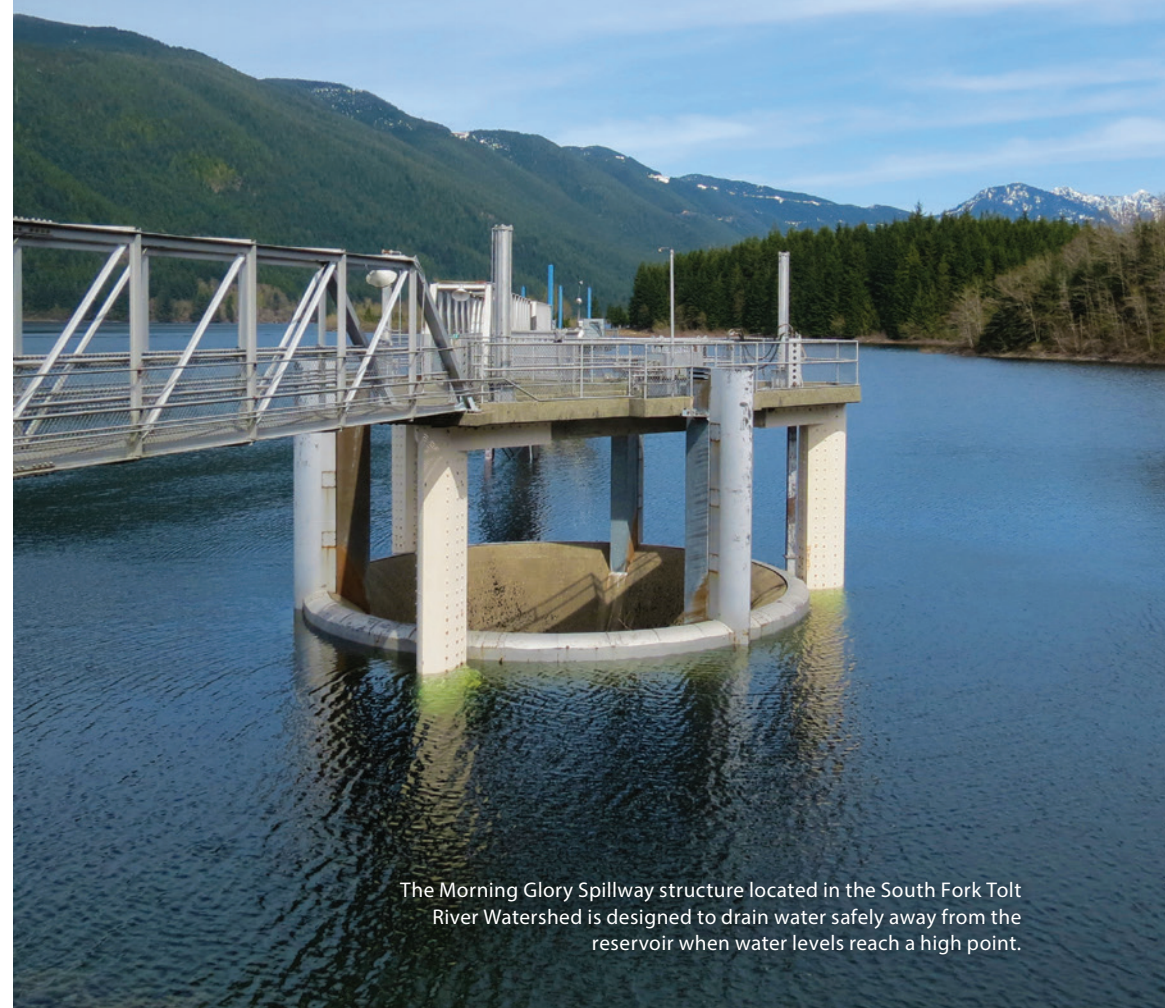
Environmental Protection Agency/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at [800-426-4791](tel:800-426-4791).



## EMPLOYEE SPOTLIGHT

Elizabeth Garcia, Hydrologist

Elizabeth is part of SPU's Water Resources team. This group is responsible for analyzing the amount of water that is stored in our major mountain watersheds and released in the Cedar and South Fork Tolt rivers. Water Resources has the important job of managing the region's water supply by helping mitigate flood impacts in the winter and ensuring there is enough water in our communities for people and fish to enjoy year-round.



The Morning Glory Spillway structure located in the South Fork Tolt River Watershed is designed to drain water safely away from the reservoir when water levels reach a high point.

# 2021 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.



		EPA'S ALLOWABLE LIMITS		LEVELS IN CEDAR WATER		LEVELS IN TOLT WATER		Typical Sources	☑ = Passed!
Detected Compounds	Units	MCLG	MCL	Average	Range	Average	Range		
<b>RAW WATER</b>				<b>RAW WATER</b>		<b>RAW WATER</b>			
Total Organic Carbon	ppm	NA	TT	0.62	0.35–0.96	1.09	0.94–1.4	Naturally present in the environment	☑
<b>FINISHED WATER</b>				<b>FINISHED WATER</b>		<b>FINISHED WATER</b>			
Turbidity	NTU	NA	TT	0.29	0.17–1.97	0.03	0.02–0.24	Soil runoff	☑
Arsenic	ppb	0	10	0.42	0.36–0.52	0.27	0.23–0.31	Erosion of natural deposits	☑
Barium	ppb	2000	2000	1.52	1.49–1.54	1.22	1.17–1.32	Erosion of natural deposits	☑
Bromate	ppb	0	10	ND	ND	0.7	ND–8	By-product of drinking water disinfection	☑
Fluoride	ppm	4	4	0.7	0.6–0.8	0.7	0.6–0.8	Water additive, which promotes strong teeth	☑
Radium 228**	pCi/L	0	5	0.6	ND–1.15	0.8	ND–1.69	Erosion of natural deposits	☑
Total Trihalomethanes	ppb	NA	80	45	23–59	49	20–63	By-products of drinking water chlorination	☑
Haloacetic Acids(5)	ppb	NA	60	41	15–60	41	17–53	By-products of drinking water chlorination	☑
Chlorine	ppm	MRDLG = 4	MRDL = 4	1.15	0–2.1	1.15	0–2.1	Water additive used to control microbes	☑

\*\* Initial samples showed a slight detection. Follow-up samples showed no detections.

## 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 addition of a disinfectant is necessary for 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 2021 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 2021 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

**pCi/L** = picocuries per liter





# LEARN ABOUT LEAD SAFETY

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.

## SOURCES OF LEAD

There is no detectable lead in our source water, but tests show there are sometimes elevated levels of lead and copper in some home tap samples, primarily because of corrosion of household plumbing systems. In Washington state, lead in drinking water is primarily from materials and components associated with service lines 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 more about water quality and lead at [seattle.gov/util/lead](http://seattle.gov/util/lead).

## 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, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. You can use the flushed water for washing dishes, watering plants, or general cleaning.

## 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](tel:800-426-4791) or at [epa.gov/safewater/lead](http://epa.gov/safewater/lead). Customers enrolled in the City of Seattle’s Utility Discount Program can access free testing by calling SPU’s Water Quality Lab at [206-615-0827](tel:206-615-0827).

Finally, 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, Units	MCLG	Action Level <sup>+</sup>	2019 Results <sup>*</sup>	Homes Exceeding Action Level	Source
Lead, ppb	0	15	2	0 of 52	Corrosion of household plumbing systems
Copper, ppm	1.3	1.3	0.11	0 of 52	

<sup>\*</sup> 90th Percentile: i.e., 90 percent of the samples were less than the values shown.

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

## CROSS-CONNECTIONS, BACKFLOW, AND WATER QUALITY

Did you know that leaving a pressurized garden hose laid out in your yard on a warm and sunny day can make the water in your home taste bad? It’s true. As the sun warms the water in the garden hose, the water starts to expand and it can flow back into your home’s drinking water. This water is often described as tasting like plastic or rubber. This is an example of water “backflow,” and it is happening through the garden hose that is connected to your home’s water piping system. This connection is known as a “cross-connection.”

Other examples of cross-connections in and around your home include irrigation systems, fertilizer/chemical sprayers, fire sprinkler systems, and boilers. These cross-connections can actually contaminate your drinking water if the appropriate backflow protection is not installed. SPU’s cross-connection control program partners with Washington state’s Department of Health and our customers in an effort to keep the city’s drinking water safe from these potentially harmful water backflow events. To learn more about cross-connections and protecting your drinking water, please go to [seattle.gov/utilities/backflow](http://seattle.gov/utilities/backflow), email [SPU\\_backflow@seattle.gov](mailto:SPU_backflow@seattle.gov), or call [206-684-3536](tel:206-684-3536).



## EMPLOYEE SPOTLIGHT

**Ajua Ampadu,**  
Water Laboratory Technician

Ajua is part of a team responsible for collecting and preserving nearly 30,000 water quality samples each year for laboratory analysis. Ajua collects samples from water tanks, standpipes, and neighborhood sampling stations throughout King County communities.

# KEEPING ESSENTIAL SERVICES AFFORDABLE

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

## NEED HELP WITH YOUR UTILITY BILLS?

Contact us at [seattle.gov/utilitybillhelp](https://seattle.gov/utilitybillhelp) or 206-684-3000. We offer:

**Flexible Payment Plans:** Discuss payment plans and financial assistance with our Customer Service team.

**Utility Discounts:** Learn about our Utility Discount Program, which offers 50-60 percent off utility 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.

## WANT TO HELP?

The COVID pandemic has made it harder for many customers to afford their utility bills. You can help by donating to SPU's Community Donation Fund. Every dollar donated through the Community Donation Fund supplements SPU's Emergency Assistance Program, which provides one-time emergency financial assistance to help qualifying customers pay their SPU bills. Learn more at [seattle.gov/utilities/donations](https://seattle.gov/utilities/donations).

## BETTER THAN BOTTLED

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.

It takes more than twice as much water to produce a plastic water bottle than it does to fill it, and only about 20 percent of these bottles get recycled. The rest end up in landfills or floating in our waterways and will take at least 450 years to decompose.

More reasons why Seattle's water is better than bottled: [seattle.gov/utilities/betterthanbottled](https://seattle.gov/utilities/betterthanbottled)



## JOIN OUR WONDERFUL WATER WORKFORCE

Hundreds of people at SPU help protect, manage, monitor, test, and deliver our drinking water. They help make our city healthy and a great place to live, work, and play. We're proud of all that our employees do to protect our resources and enhance our quality of life. Come join us! Learn more about our apprenticeship, training, and career opportunities: [seattle.gov/utilities/about/careers](https://seattle.gov/utilities/about/careers).

## OUR MISSION

Seattle Public Utilities fosters healthy people, environment, and economy by partnering with our community to equitably manage water and waste resources for today and future generations.

## OUR VISION

COMMUNITY Centered, ONE Water, ZERO Waste



Please share this report with members of your household and encourage schools, businesses, and health care providers to post the report where visitors can view it.



# Seattle Public Utilities

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

PRESORTED  
STANDARD  
US POSTAGE PAID  
SEATTLE, WA  
PERMIT NO. 6000

For translation services please call 206-684-3000.

Para servicios de traducción favor llamar al 206-684-3000.

Để nhận các dịch vụ dịch thuật, vui lòng gọi số 206-684-3000.

如需翻譯服務，請撥打 206-684-3000。

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

Para sa mga serbisyong pagsasalitwika, mangyari lang tumawag sa 206-684-3000.

번역 서비스를 원하시면 206-684-3000로 전화 하시기 바랍니다.

Английн хэлний үйлчилгээг 206-684-3000-д урьдчилан:

You are receiving this report as part of a federal requirement for municipal water systems. This report costs about 49 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](http://seattle.gov/utilities) | 206-684-3000 | [seattle.gov/utilities/emailus](mailto:seattle.gov/utilities/emailus)

