

OUR E S S E N T I A L WATER



2019 DRINKING WATER QUALITY REPORT

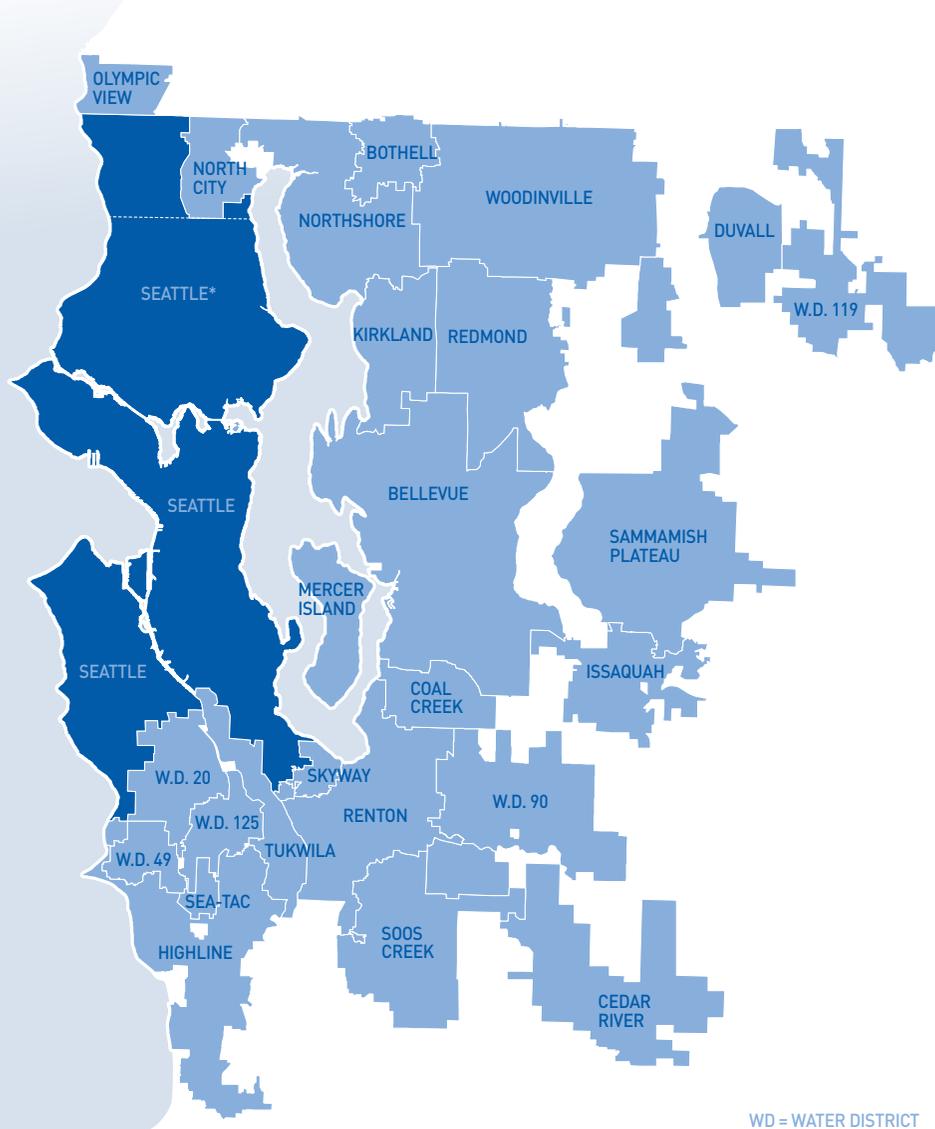


**Seattle
Public
Utilities**

OUR MISSION:

We protect and enhance our health, environment, and economy by partnering with community and customers to manage water and waste resources now and for future generations.

Seattle Public Utilities provides essential drinking water, drainage and wastewater, and solid waste services to Seattle residents. Seattle's water system serves 1.5 million people in the greater Seattle area. In addition to directly serving residents in and around the city of Seattle, SPU provides water through wholesale partnerships with the cities and water districts shown in the map below. 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.



*SPU's Seattle service area includes the City of Seattle and portions of Shoreline and Lake Forest Park (indicated by the dotted line at N/NE 145th Street).

SEATTLE WATER: SAFE, SECURE, ESSENTIAL

June 2020

When we began to write this report in early April, we were weeks into the COVID-19 crisis. At the time, it was hard to anticipate what our world would look like when we sent this report to customers in late June. However, we were confident that public health and the reliability of essential services—like clean, safe drinking water—would still be on the forefront of everyone's mind.



We wrote this report to make sure you know that Seattle's tap water is safe to drink, protected against contaminants, and carefully managed so that we're prepared to deliver water to customers in even the most difficult circumstances.

Seattle is fortunate; our water comes from pristine and protected watersheds, high in the Cascade Mountains. Seattle Public Utilities (SPU) treats and monitors the water using the best science available and delivers it to your tap through carefully maintained infrastructure. We work in close coordination with the Centers for Disease Control and Prevention, the Washington State Department of Health, and Public Health Seattle and King County to monitor and address any potential risks to water quality.

In addition, SPU regularly conducts extensive planning exercises so that our staff and systems are prepared to adapt swiftly in emergency situations such as pandemics, earthquakes, and fires. During emergency events, Seattle's drinking water facilities are prioritized and protected and our dedicated front line employees are prepared to continue delivering essential services that protect public health, the environment, and our region's quality of life.

The U.S. Environmental Protection Agency requires that every community water supplier provide an annual water quality report to its customers. In this report, we highlight our essential water and the essential employees who keep it flowing, 24 hours a day, 365 days a year.

– Mami Hara,
SPU General Manager/CEO

SEATTLE'S PROTECTED WATERSHED

The City of Seattle owns or controls more than 100,000 acres of watershed closed to general public access. SPU makes sure these watersheds are free of agricultural, industrial, and recreational activities, and no one can live there. This means there is little opportunity for contaminants to enter the water. Even so, we continually monitor the water quality and report on it regularly.

Water Sources

Two natural surface water sources provide Seattle's water: 68 percent from the Cedar River and 32 percent from the South Fork Tolt River. These water sources begin in the Cascade Mountains, in two very large, protected watersheds. The system also has access to wells located in SeaTac that can be used to meet peak summer demand. They have not been used since 2015.



Our watersheds have incredible biodiversity. Forest, wetlands, meadows, and lakes are home to black bears, deer, salmon, frogs, and spotted owls.

Bear cub at Cedar River Watershed.

In the upper region of the Cedar River Watershed you will find Chester Morse Lake, the main storage reservoir in the watershed. The reservoir is fed by mountain snow, rain, and groundwater.

See the Source

Visit the Cedar River Watershed Education Center to see the source of Seattle's drinking water up-close. A short drive up I-90 to the Cascades brings you to one of our protected watersheds. Join a tour and experience the beauty of old growth forests, waterfalls, and awesome views.

The Center is open year round, Tuesday–Sunday (10 am–5 pm April–October; 10 am–4 pm November–March). Visiting the Center is free. Guided tours of the watershed are available July–September. (\$10 adults; \$5 youth and seniors ages 55 and older.) Visit seattle.gov/utilities/crwec for the latest updates on how COVID-19 is affecting tour scheduling.

The Center also has distance learning opportunities available online at seattle.gov/utilities/crwec. Our education specialists are always developing new material for people to access from home, so check the website often! Don't have access to a computer? Call (206) 733-9421 for more ways to access learning materials.

CEDAR RIVER WATERSHED EDUCATIONAL TOUR



CEDAR RIVER
WATERSHED
EDUCATION
CENTER

\$ **5** OFF
EACH TICKET

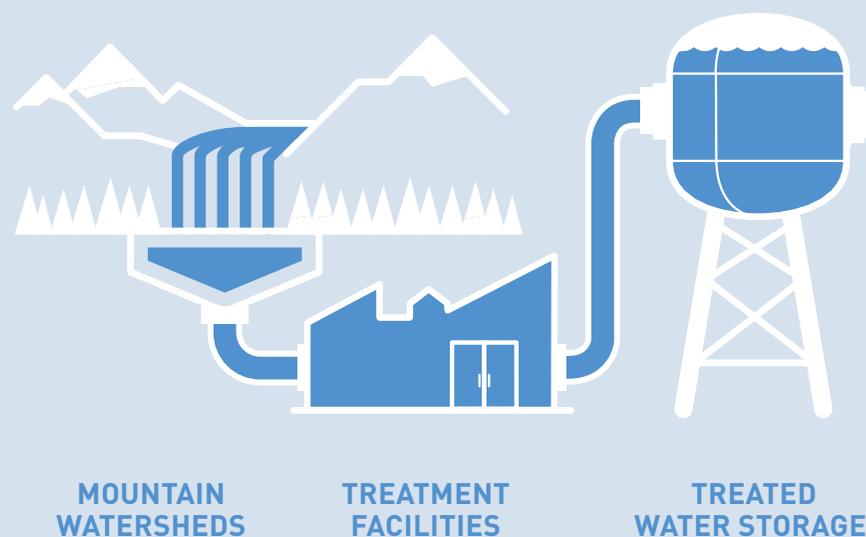
REGISTER AND REDEEM AT:
seattle.gov/utilities/crwec

Click on "Programs and Tours" **PROMO CODE: WATER**
Valid July–September 2020

Visit seattle.gov/utilities/crwec for the latest updates on how COVID-19 is affecting Center open hours and tour scheduling. If tours are cancelled in 2020, this promo code may be used in 2021.

KEEPING YOUR WATER SAFE EVERY STEP OF THE WAY

Testing and Treatment: Two plants treat and test your water to make sure it's safe. Because our source water is protected and pristine, we don't have to do as much treatment to meet the same water quality regulations as other cities.

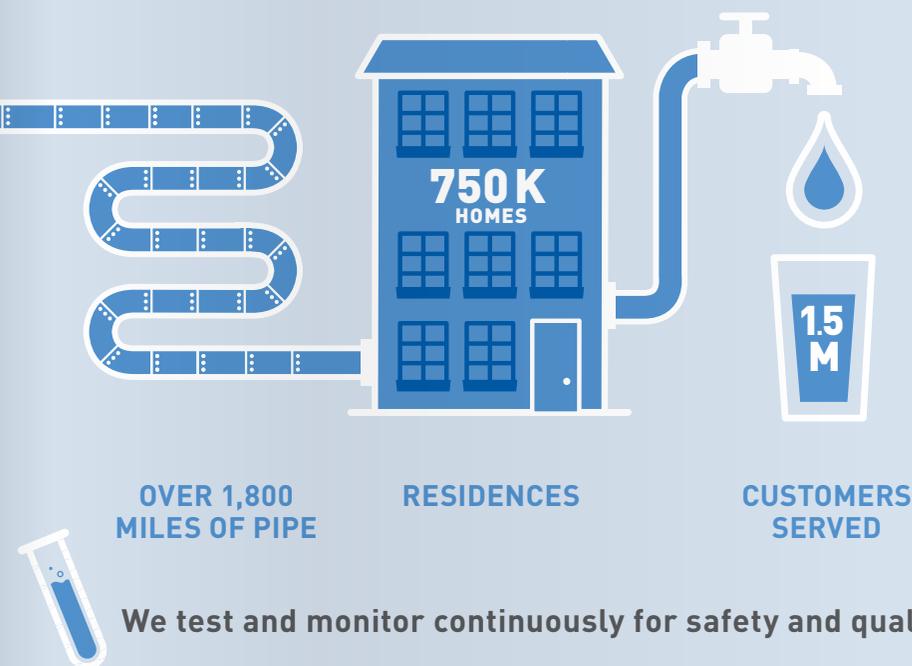


Safe Storage: Covered reservoirs are located throughout the city and are protected from contamination.

Maintaining Pipes: Your water travels through more than 1,800 miles of water pipes to get from the forest to your faucet. We conduct regular maintenance of pipes to prevent leaks and breaks.

Monitoring: The expert testing and engineering staff at our water quality lab are committed to keeping your water clean. We monitor your water 24 hours a day, 365 days a year. We test samples from the region between 10 and 100 times per day. And we respond to water main breaks, service outages, and other issues 24/7.

Sampling Stations: There are more than 90 water sampling stations throughout Seattle. These are used to test the quality of your drinking water every day.



ABOUT COVID-19

This report focuses on Seattle's drinking water quality in 2019, but we recognize it's important to address the evolving COVID-19 situation. Here's what you need to know:

- Your water is safe from the novel coronavirus that causes COVID-19. There is no evidence of coronavirus in our protected drinking water supply and Seattle's water is treated (including chlorination), which protects you from contaminants such as viruses.

Learn more: epa.gov/coronavirus/drinking-tap-water-safe

- We monitor the water supply continuously to make sure it remains safe.
- We follow the guidelines of national, state, and local health agencies to keep our community, employees, and neighbors safe.
- We plan for emergencies, just like this, so we can continue to deliver the safe drinking water you rely on.

- SPU's front line staff continue to work around the clock to deliver uninterrupted essential services.
- To access the most up-to-date information about COVID-19, go to: seattle.gov/mayor/covid-19

In these unprecedented and unsettling times, we need to rely on each other. Thank you for all you are doing to keep our community safe and for your continued support.



SAVING WATER SAVES MONEY

AND PROTECTS THE ENVIRONMENT

Using water wisely is essential to protecting water resources for us, our environment, and future generations. It's particularly important to conserve water in the summer and fall months when stream flows are naturally low and adult salmon are returning to rivers to spawn.

Fixing leaks, using efficient appliances, and making common-sense choices to use water efficiently also helps keep water and sewer bills as low as possible.

Conservation starts long before the water reaches your tap. SPU produced 45.2 billion gallons of treated drinking water in 2019. Of that, 3.1 billion gallons were lost to leakage. While that may sound like a lot, it's only 6.9% of the total, and considered relatively low.

SPU has a proud history of conservation leadership. 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 17 other utilities—is still going strong today. *You can get trusted information from SPU and the SWP on how to use water wisely, including tips, tools and rebates at savingwater.org.*

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 under 110 million gallons per day (mgd) through 2028, despite forecasted population growth, by reducing per capita water use. In 2019, our customers met this goal, using 94 mgd.



BETTER THAN BOTTLED:

- It takes more than twice as much water to produce a plastic water bottle as it does to fill it.
- Only 20% of those bottles get recycled. The rest end up in landfills or floating in our waterways.
- Bottled water can be up to 1,000 times more expensive than tap water. The average cost of a gallon of bottled water is around \$1.50. Seattle's drinking water costs less than a penny per gallon.

To see more reasons why Seattle's water is better than bottled, go to bit.ly/BetterThanBottled.



The Morning Glory Spillway at the Tolt Dam helps control water flow to the South Fork Tolt River. In addition to ensuring water quality, SPU is a leader in managing water resources in the region.



WE'RE IN THIS TOGETHER

PARTNERING FOR CLEAN, SAFE AND RELIABLE WATER

Our community, customer-owners, and employees are our most important assets and partners. You help us protect the watersheds; keep our neighborhoods clean and healthy; maintain water, sewer and drainage systems, and so much more. Together, we're working to protect our water and waste resources now and for future generations.

Community Connections

SPU's Community Connections program was developed to better support people of color, immigrant, refugee, and low-income customers. To do this, Community Connections funds multi-year partnerships with trusted organizations and leaders that serve a variety of ethnic and language groups.



As a person who came to Seattle from parts of the world where tap water isn't safe to drink, it's truly eye-opening to learn about Seattle's high-quality water sourced from our protected watershed and delivered through reliable and resilient water infrastructure.

– Ebsa Chefo
Program Manager, Horn of Africa Services

Keeping the Essential Affordable

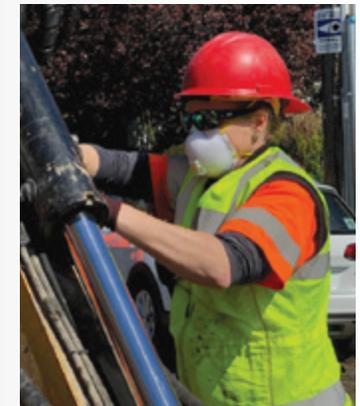
Many Seattle residents and businesses have suffered unprecedented economic hardship due to the COVID-19 pandemic. Seattle Public Utilities knows the last thing our customers need to worry about right now is access to essential services like clean, safe drinking water. We are committed to helping our customers through the COVID-19 crisis by providing the essential services they need while making it easier to obtain financial assistance. Please contact us if you need help paying your bill or making payment arrangements.

See page 18 of this report for contact information.

OUR ESSENTIAL WORKFORCE

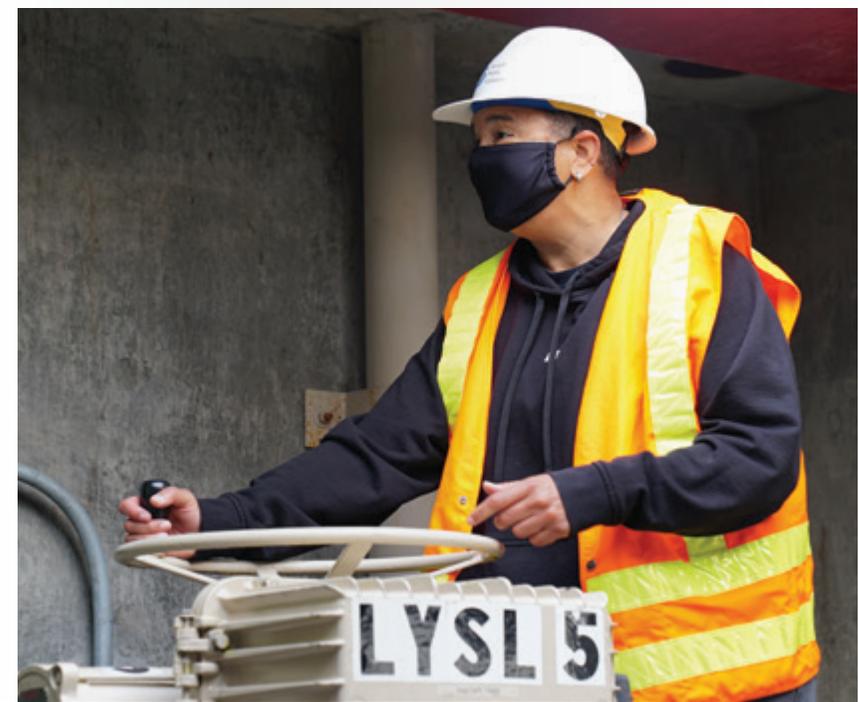
It takes skilled and dedicated people to make sure our region can depend on the safety and quality of the water they use every day:

- Hydrologists, biologists, and maintenance crews manage 100,000 acres of watershed.
- Chemists, microbiologists, and other water quality experts test more than 20,000 samples annually to keep your water safe.
- Water pipe workers install, maintain, and repair water mains, transmission pipelines, fire hydrants, and more to ensure our water keeps flowing.



The COVID-19 pandemic underscores the importance of our frontline workforce—the people who work 24/7 to make sure our water keeps flowing. Throughout the crisis, SPU's frontline staff have been first responders, protecting the most vulnerable in the community while providing essential services to us all. We are immensely grateful for their commitment to our city.

– Mami Hara, SPU General Manager/CEO



WHAT'S IN YOUR DRINKING WATER AND WHAT'S NOT

Seattle's Protected Water Source Protects You

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells.

Because our tap water comes from protected sources, we don't have as many contamination risks as other cities in the country that draw their water from local rivers—the same rivers that are used for recreation, industry, and commerce.

No matter where the water comes from, 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.

The Washington Department of Health gives all surface waters in Washington 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 at: fortress.wa.gov/doh/swap.

Contaminants and Regulations

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 the Washington State Department of Agriculture regulations establish limits for contaminants in bottled water that must provide the same protection for public health.



ESSENTIAL WATER FACT: You can use tap water for your vegetable garden! While the drinking water in Seattle must have chlorine present to protect against possible microbial contamination in the system, the amount of chlorine is well within regulatory health standards and safe for plants, too.

About Your 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 ([800-426-4791](tel:800-426-4791)).

Potential Contamination Sources

Because the City of Seattle owns or controls more than 100,000 acres of watershed that are closed to general public access, 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.

Special Health Needs

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as people 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 ([800-426-4791](tel:800-426-4791)).

2019 RESULTS

The results of monitoring for parameters regulated by federal and state agencies in 2019 are shown below. For other water quality information, go to seattle.gov/utilities/services/water/water-quality or call (206) 615-0827. A list of the more than 200 compounds for which we tested but did not find in our surface water supplies, including unregulated contaminants, is also available.

Water quality monitoring data can be difficult to interpret. To make all the information fit in one table, we used many acronyms that are defined below the table. 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. Each source can provide water to other areas in Seattle if needed.

Detected Compounds	Units	EPA'S ALLOWABLE LIMITS		LEVELS IN CEDAR WATER		LEVELS IN TOLT WATER		Typical Sources	Success
		MCLG	MCL	Average	Range	Average	Range		
RAW WATER									
Total Organic Carbon	ppm	NA	TT	0.5	0.3 to 0.8	1.1	1.0 to 1.3	Naturally present in the environment	✓
FINISHED WATER									
Turbidity	NTU	NA	TT	0.3	0.2 to 1.8	0.03	0.01 to 0.17	Soil runoff	✓
Arsenic	ppb	0	10	0.4	0.4 to 0.6	0.4	0.3 to 0.4	Erosion of natural deposits	✓
Barium	ppb	2000	2000	1.6	1.4 to 1.9	1.3	1.1 to 1.5	Erosion of natural deposits	✓
Bromate	ppb	0	10	ND	ND	0.2	ND to 2	By-products of drinking water disinfection	✓
Nitrate	ppm	10	10	ND	One Sample	0.11	One Sample	Erosion of natural deposits	✓
Chromium	ppb	100	100	0.27	0.25 to 0.33	0.2	ND to 0.24	Erosion of natural deposits	✓
Fluoride	ppm	4	4	0.7	0.6 to 0.8	0.7	0.6 to 0.8	Water additive, which promotes strong teeth	✓
Total Trihalomethanes	ppb	NA	80	39	21 to 43	37	23 to 58	By-products of drinking water chlorination	✓
Haloacetic Acids(5)	ppb	NA	60	36	16 to 41	35	23 to 45	By-products of drinking water chlorination	✓
Chlorine	ppm	MRDLG = 4	MRDL = 4	1.0	0 to 1.7	1.0	0 to 1.7	Water additive used to control microbes	✓

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 2019 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 2019 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

ABOUT LEAD AND COPPER

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. There is no detectable lead in our source water.

Sources of Lead

Although there is no detectable lead in our source water, 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. Learn more about water quality and lead at seattle.gov/util/lead.

Learn About Your Plumbing

SPU is responsible for providing high quality drinking water, but we cannot control the variety of materials used in plumbing components. It is very important for people to be aware of their plumbing, and how the plumbing affects their drinking water quality. Where you live, when your plumbing was installed, and what type of plumbing you have all play a part in determining your potential lead exposure level. SPU treats the water to minimize the tendency for lead to enter the water, and results show that that we have been very successful.

Information on lead in drinking water, testing, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at epa.gov/safewater/lead.

Minimize Risk, Don't Let It Sit

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. You can use the flushed water for watering plants, washing dishes, or general cleaning. Only use water from the cold-water tap for drinking, cooking, and for making baby formula. If lead is present, hot water is likely to contain higher levels than cold water.

Keep Healthy, Minimize Exposure

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



THE WATER WATCHERS

SPU's expert testing and engineering staff work in partnership with others to keep your water safe and clean. We report test findings to federal, state, and local agencies including:

- The U.S. Environmental Protection Agency (EPA), which regulates drinking water, provides information about contaminants and potential health effects, and requires this report.
- The Washington Department of Health (DOH), Office of Drinking Water, which manages Washington's Source Water Assessment Program.
- Public Health—Seattle & King County (SPU works cooperatively with Public Health on drinking water emergency response).



There are more than 90 water sampling stations throughout Seattle.

LEAD AND COPPER MONITORING RESULTS

Parameter, Units	MCLG	Action Level ⁺	2019 Results [*]	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	

^{*} 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 which a water system must follow.

ADDITIONAL REPORTING

Unregulated Contaminant Monitoring Rule 4 (UCMR4) data are reported to let you know about new contaminants that may be regulated in the future. The EPA requires water suppliers to monitor 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. For more information about the program, visit EPA's website at: epa.gov/dwucmr/fourth-unregulated-contaminant-monitoring-rule.

SEATTLE'S 2019 UCMR4 MONITORING RESULTS		
Analyte	Range	Average
Manganese, ppb	1.4-1.6	1.5
Dichloroacetic Acid, ppb	4.2-14	11.6
Trichloroacetic Acid, ppb	15-19	16.7
Bromochloroacetic Acid, ppb	ND-0.76	0.5
Bromodichloroacetic Acid, ppb	0.5-0.9	0.75
Chlorodibromoacetic Acid, ppb	ND-0.4	0.1

ND = NOT DETECTED

Cross-Connections, Backflow, and Water Quality

Backflow from common household plumbing fixtures connected to drinking water pipes—a cross-connection—can impact your drinking water quality. For example, if a garden hose connected to your home plumbing system is left in the sun, the water can heat up and flow back to your house, affecting the taste and odor of your drinking water.

Some backflows can become hazardous. For example, a sudden drop in water pressure from a water main break can cause water that may not be safe for consumption to flow into a building's drinking water pipes and potentially into the public water system from residential, commercial, or industrial properties that don't have required backflow prevention equipment. SPU's cross-connection control program helps protect Seattle's drinking water from potentially harmful backflow events.

We partner with our water customers to keep the drinking water safe; this means working together to protect home drinking water from potentially hazardous connections. Learn more about cross connections and protecting your drinking water at: seattle.gov/utilities/backflow.

CUSTOMER RESOURCES

WATER QUALITY

Learn more about water quality online: 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

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

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

Learn more about Source Water Assessments: fortress.wa.gov/doh/swap

CONSERVATION AND REBATES

Explore tips, assistance, and rebates to help you save water: savingwater.org

Water saving rebates are available for residential and commercial customers. Learn more: savingwater.org/rebates or call (206) 684-SAVE

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

Learn how to find and fix leaks: seattle.gov/util/fixaleak

ACCOUNTS AND FINANCIAL ASSISTANCE

Utility Discount Program: 50-60 percent off utility bills for income-qualified customers. Call (206) 684-0268 or go to seattle.gov/mybill

Contact Center: Monday–Friday (7:30 am–6 pm)

NEW! The City of Seattle's new Utility Services website is now live. Get started at myutilities.seattle.gov

EMERGENCY ALERTS

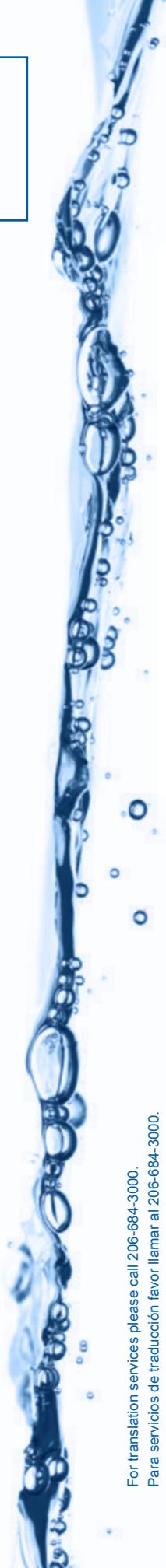
Sign up at: alert.seattle.gov



**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.

如需翻译服务，请拨打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 serbisyo ng pagsasalim-wika, mangyari lang tumawag sa 206-684-3000.

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

You are receiving this report as part of a federal requirement for municipal water systems. This report costs about 37 cents to produce and mail to you.
Printed on FSC Certified paper consisting of 30% Post Consumer Recovered Fiber (PCRF) and 70% virgin fiber sourced from sustainably managed forests.



Contact Seattle Public Utilities

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

Plan a trip to explore your watershed and learn more about your water supply
COUPON INSIDE!