Seattle Public Utilities

2020

Drinking Water Quality Report

Water & You

Water is life. Our bodies rely on water—it helps our blood carry oxygen to cells, is essential to our immune system to fight off illness, helps us digest food, and keeps our temperature normal.

Water also keeps our communities healthy, cities running, and economies growing. Yet we often take it for granted. We turn on the tap, and like magic, water is available to us! This report is about that magic—where Seattle's drinking water comes from, how it gets to you, what it contains, and its excellent quality.

Seattle Public Utilities (SPU) is proud to produce this report for our customers every year. We hope that you'll read it and share the great news about Seattle's drinking water with your friends and family.

Coronavirus & Drinking Water

Rest assured: 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, which protects you from contaminants such as viruses. Learn more: 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 the coronavirus. 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.

To access the most up-to-date information about COVID-19, please go to seattle.gov/mayor/covid-19.

COVID-19 Relief

SPU is on the front line of the coronavirus crisis, providing help to those who need it. For example, we:

- Stopped water service shutoffs for non-payment
- Expanded payment assistance and Utility Discount Program
- Launched a new community donation fund
- Deployed hygiene stations and showers to provide the city's unhoused residents with access to clean water

To Our Customers and Community:

In the midst of this past year's tumult and uncertainty, at least one thing remained unchanged: Seattle's drinking water continues to be some of the best in the nation. It remains safe, clean, and an incredible value at less than a penny a gallon.

Thanks to Seattle Public Utilities' (SPU) skilled and dedicated employees, the 1.5 million people of the greater Seattle area can enjoy reliable, safe, high-quality tap water whenever they need it—even during a global pandemic.

The past year has shown that SPU employees face challenges with resilience and resourcefulness, going above and beyond to continuously provide essential services to us all and to protect the most vulnerable in our community.

Beyond ensuring the protection, management, and delivery of high-quality drinking water this past year, SPU's workforce worked with other City of Seattle departments to deploy handwashing stations, portable toilets, and mobile shower facilities for unhoused residents; delayed planned construction projects that involved temporary water outages for customers; and performed extensive outreach to raise awareness about resources available for customers in need of financial assistance.

We didn't do our work alone, because you—our community—have been with us the whole way. Thank you for partnering to help neighbors in need, use water wisely, and protect our waterways from pollution.

I am very pleased to share this year's Drinking Water Quality Report with you. I hope it helps answer your questions about the quality of the tap water you use every day and gives you a better idea of the incredible commitment that goes into its uninterrupted delivery. This report is a tribute to what you and our staff have accomplished together over this past unforgettable year.

Mami Hara
General Manager,
Seattle Public Utilities

Your water comes from a **PROTECTED** place

Our Watersheds

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

Water Sources

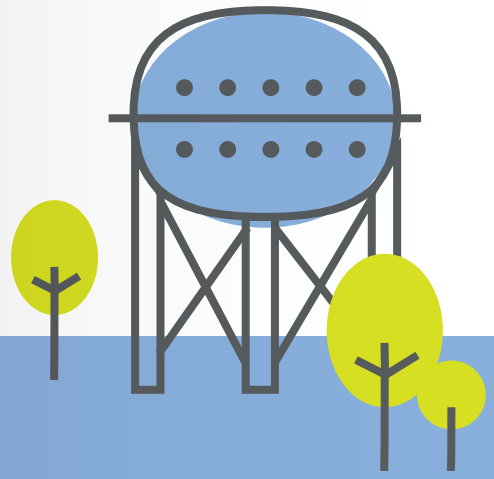
Two natural surface water sources provide Seattle's water: 63 percent from the Cedar River and 37 percent from the South Fork Tolt River. These water sources begin in the Cascade Mountains, in two vast, protected watersheds. The system also has access to wells located in SeaTac that can be used to meet peak summer demand.

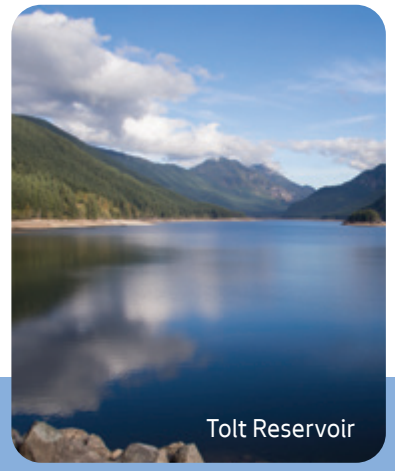
See the Source

Experience the beauty of the old-growth forests, waterfalls, and awesome views of our watershed. The Cedar River Watershed Education Center provides an up-close look at the source of Seattle's drinking water.

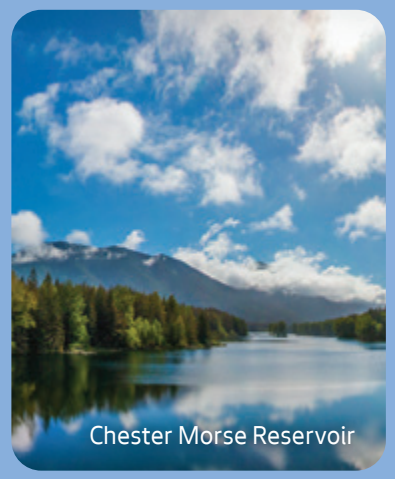
The Center—responding to COVID constraints—has pivoted from in-person to distance learning opportunities available online at seattle.gov/utilities/crwec. Don't have access to a computer? Call 206-733-9421 for more ways to access learning materials.

Wildland Fire Team members, McClellan Butte Fire, August 2020





Tolt Reservoir



Chester Morse Reservoir

About Water Sources & Risks

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 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 on the DOH website at https://fortress.wa.gov/doh/swap.

SAVE money, water, and the environment

Every Drop Counts

Water is essential to life, but only a tiny fraction of Earth's water is available for drinking. Water in oceans is too salty, two-thirds of the planet's fresh water is frozen in glaciers and ice caps, and available fresh water is diminishing due to pollution and population. It's important that we use water wisely.

Not only does conserving water save you money, but it also helps our economy, environment, and community. We need to make sure this vital resource is safe and available for future generations.

When we all work together, simple changes can add up to make a big difference. Here are some ideas for how you can save water:

- Find and fix leaks right away
- Turn the water off when you brush your teeth
- Upgrade to a WaterSense labeled showerhead
- Wait to wash clothes and dishes until you have a full load

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, helps provide the habitat necessary for a healthy salmon population.

We share our Cedar River water supply with Chinook, Coho, and Sockeye salmon and continue to have high quality drinking water.

Our Region is Saving Water

Saving water starts long before the water reaches your tap. SPU produced 43.1 billion gallons of treated drinking water in 2020. Of that, 2.5 billion gallons were lost to leakage. While that may sound like a lot, it's only 5.8 percent of the total, and 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 17 other utilities—is still going strong today.

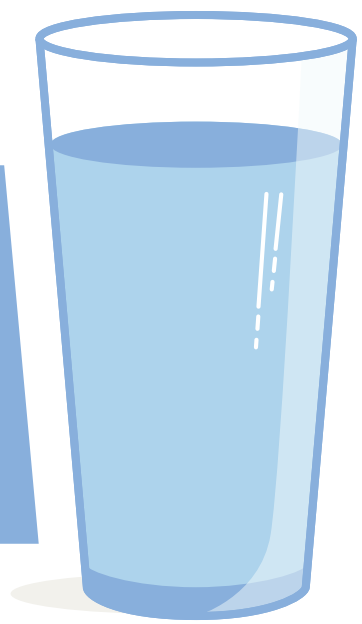
To encourage efficient water use, SWP set a 10-year (2019-2028) conservation goal: keep the total average annual retail water use of SWP members below 110 million gallons per day (mgd) through 2028, despite forecasted population growth, by reducing per capita water use. In 2020, our customers met this goal, using 91.2 mgd.

Get trusted information from SPU and the SWP on how to use water wisely, including tips, tools, and rebates at savingwater.org.

Better Than Bottled

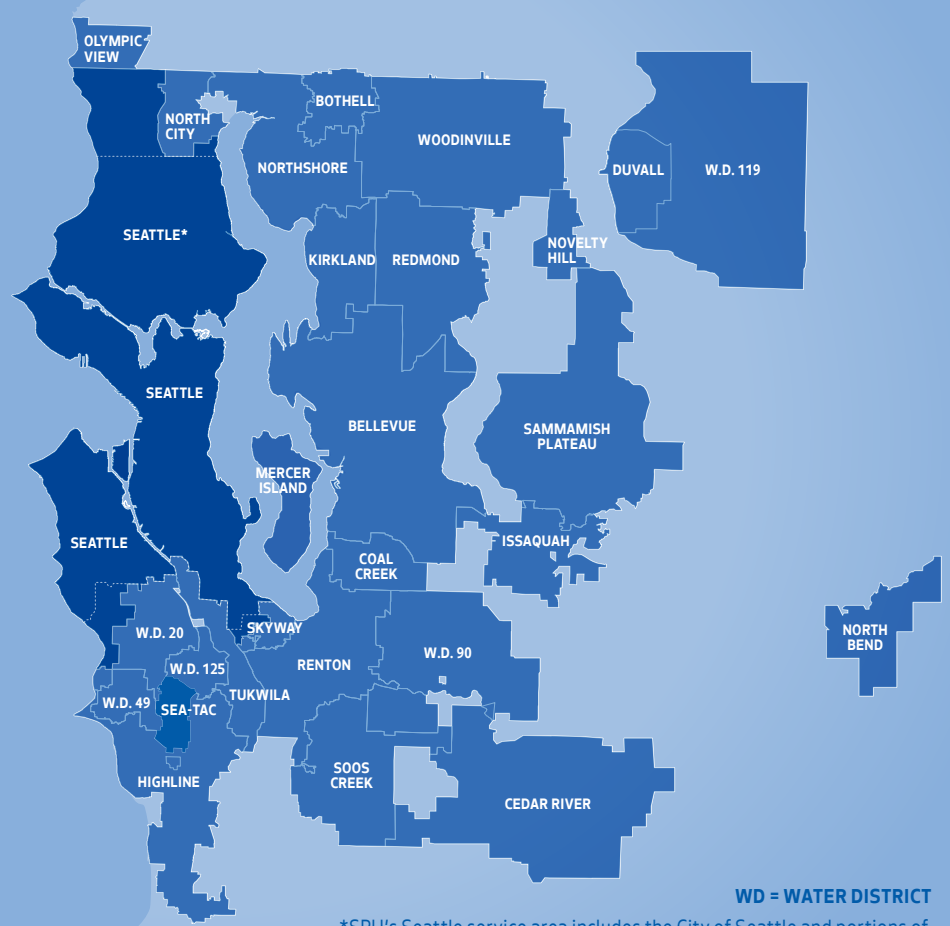
Bottled water can be up to 1,000 times more expensive than tap water. The average cost of a 20-ounce bottle of water is around $1.50. Seattle's drinking water costs less than a penny per gallon.

More reasons why Seattle's water is better than bottled: bit.ly/BetterThanBottled



Water **WORKS**

SPU delivers water to your tap through carefully maintained infrastructure. This requires keeping our well-designed systems operating at peak performance and investing in new infrastructure that can better withstand disruptive events. Our infrastructure is essential, not only for Seattle, but for the whole region since SPU provides wholesale water through wholesale partnerships with nearby cities and water districts. 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.



WD = WATER DISTRICT

*SPU's Seattle service area includes the City of Seattle and portions of Burien, Shoreline, and Lake Forest Park (indicated by the dotted lines).

What is Water Resilience?

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

Keeping your water safe
every step of the way

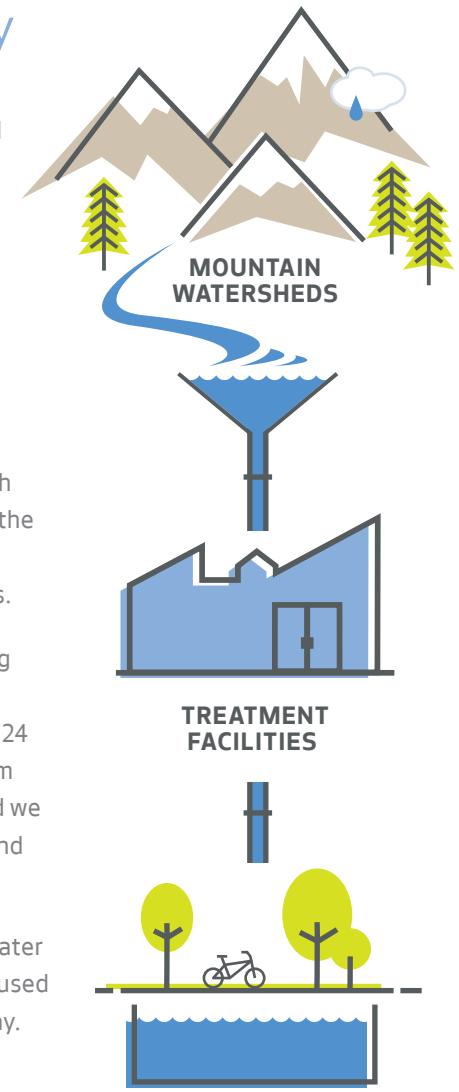
Testing and Treatment: Two plants treat and test your water to make sure it's safe. Because our source water is protected and pristine, we don't have to do as much treatment to meet the same water quality regulations as other cities.

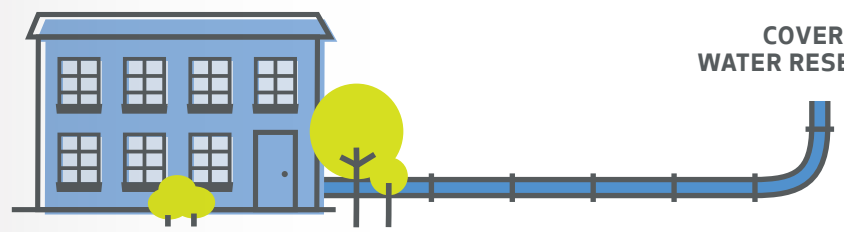
Safe Storage: Covered reservoirs are located throughout the city and are protected from contamination.

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.





750K RESIDENCES

1,800+ MILES OF PIPE

1.5M CUSTOMERS SERVED

We test & monitor continuously for safety & quality.

ESSENTIAL Service, Exceptional People

Sourced from pristine watersheds and monitored using the best available science, Seattle tap water is some of the best in the nation—it's fresh, safe, and tastes great. Hundreds of people at SPU help protect, manage, monitor, test, and deliver our drinking water. A few of these unsung heroes are featured below:

Mother Nature

She isn't an employee, but Mother Nature provides us with our beautiful source water. Our drinking water starts as snow and rain, high in the mountains. The water journey begins when melting snow and rain flow downstream and collect in two reservoirs, Chester Morse Lake and the Tolt Reservoir.

Watershed Managers

Our watershed management team includes wildlife biologists, hydrologists, firefighters, inspectors, operators, and many more skilled employees who carefully protect our source water and the rich diversity of plants and animals that live in our watersheds.

Water System Experts

We are fortunate to have systems experts working round the clock to ensure our water stays safe and keeps flowing to over 1.5 million people in the greater Seattle area. From system operators to water supply managers to water pipe workers, each member of our skilled staff plays an integral role in bringing you safe, abundant water.

Photo: Adam Jabari

Photo: Adam Jabari

Water Planning Staff

Conservation experts, climate scientists, seismic engineers, and more ensure SPU is prepared to continue delivering safe, high quality water for people and fish despite challenges like climate change and population growth.

Water Quality Scientists

Chemists, microbiologists, and others trained to monitor and test water quality are committed to safe, clean water. They conduct microbial, chemical, and physical monitoring every day, testing over 25,000 samples each year.

Water Meter Specialists

Our meter readers complete over 1 million meter reads per year and our repair crews service more than 2,000 meters annually. This work ensures your water bills are timely and accurate, and can help you understand your water consumption and detect sneaky leaks, like those from faucets and toilets.

You

Our customers and community help keep our shared water supply safe, available, and tasting great. Everyday actions to protect the water you drink include maintaining your home plumbing and using water wisely. Reading this report counts too!

Photo: Adam Collet

Keeping Water **SAFE**

Federal, State, and Local Agencies Work Together to Keep Water Safe

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) 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 EPA's Safe Drinking Water Hotline (1-800-426-4791).

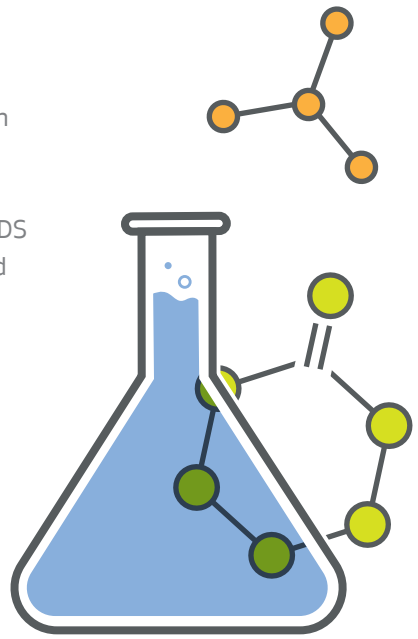
Our System Has Very Little Opportunity for Contamination

Because our watershed is closed to public access and free of agricultural, industrial, and recreational activities, 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.

Be Safe. Recognize Your Risk

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised individuals, including people with cancer; organ transplant recipients; persons with HIV/AIDS or other immune system disorders; and some elderly and infants, can be particularly at risk of infections. Such individuals should seek advice about drinking water from their health care providers. 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 (1-800-426-4791).



Tolt Regulating Basin

Landsburg Dam

Photo: Adam Jabari

LEAD Safety

Is There Lead in My Water?

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

There are more than 90 water sampling stations throughout Seattle.

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/utilities/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 for homes and businesses. It is very important for people to be aware of their privately owned plumbing, and how it 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 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.

If you are concerned about lead in your water, you may wish to have your water tested. You can find a list of labs certified to test drinking water at seattle.gov/utilities/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 or going to seattle.gov/utilities/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 two 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 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 include paint, soil, and food.

What About PFAS?

You may have heard about PFAS (per- and polyfluoroalkyl substances) in the news. Seattle's watersheds are protected, and recent test results showed no detection of PFAS in Seattle's drinking water. Very low levels of PFAS have been detected in one of Seattle's off-line back-up wells, but these levels were well below the EPA-recommended testing threshold. For more information, including the latest test results, go to seattle.gov/utilities/PFAS.

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 is contaminated by chemicals or bacteria to flow from the cross-connection into a building's drinking water pipes and potentially into the public water system from residential, commercial, or industrial sources. SPU's cross-connection control program helps protect Seattle's drinking water from these potentially harmful backflow events.

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

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 that a water system must follow.

2020 **Results**

The results of monitoring for parameters regulated by federal and state agencies in 2020 are shown below. For other water quality information, go to seattle.gov/utilities/waterquality 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 abbreviations, which 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.

		EPA'S ALLOWABLE LIMITS		LEVELS IN CEDAR WATER		LEVELS IN TOLT WATER			
Detected Compounds	**Units**	**MCLG**	**MCL**	**Average**	**Range**	**Average**	**Range**	**Typical Sources**	**Success**
RAW WATER				**RAW WATER**		**RAW WATER**			
Total Organic Carbon	ppm	NA	TT	0.7	0.3-1.1	1.15	1.0-1.3	Naturally present in the environment	✓
FINISHED WATER				**FINISHED WATER**		**FINISHED WATER**			
Turbidity	NTU	NA	TT	0.3	0.2-3.1	0.04	0.02-0.18	Soil runoff	✓
Arsenic	ppb	0	10	0.4	0.4-0.5	0.4	0.3-0.5	Erosion of natural deposits	✓
Barium	ppb	2000	2000	1.5	1.4-1.7	1.2	1.1-1.3	Erosion of natural deposits	✓
Bromate	ppb	0	10	0.2	ND-5	ND	ND	By-products of drinking water disinfection	✓
Fluoride	ppm	4	4	0.7	0.6-0.8	0.7	0-0.8	Water additive, which promotes strong teeth	✓
Total Trihalomethanes	ppb	NA	80	46	26-59	49	25-63	By-products of drinking water chlorination	✓
Haloacetic Acids (5)	ppb	NA	60	45	20-65	49	29-73	By-products of drinking water chlorination	✓
Chlorine	ppm	MRDLG = 4	MRDL = 4	1.1	0-1.9	1.1	0-1.9	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 2020 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 2020 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

SPU is here for you

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.

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

Community Donation Fund

The COVID-19 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.

Photo: Adam Collet

Photo: Adam Jabari

Customer Resources

Water Quality

Learn more about water quality online: seattle.gov/utilities/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: 1-800-426-4791

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

Conservation & 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/utilities/freetoilets or call Minor Home Repair: 206-448-5751

Learn how to find and fix leaks: savingwater.org

Accounts & 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)

Utility Services website: myutilities.seattle.gov

Emergency Alerts

Sign up at alert.seattle.gov

Having trouble affording your utility bill?

We know the COVID-19 pandemic has made it harder for many to afford essential services. We're here to help. Go to **seattle.gov/utilities/covidhelp** for easy instructions.

Seattle Public Utilities

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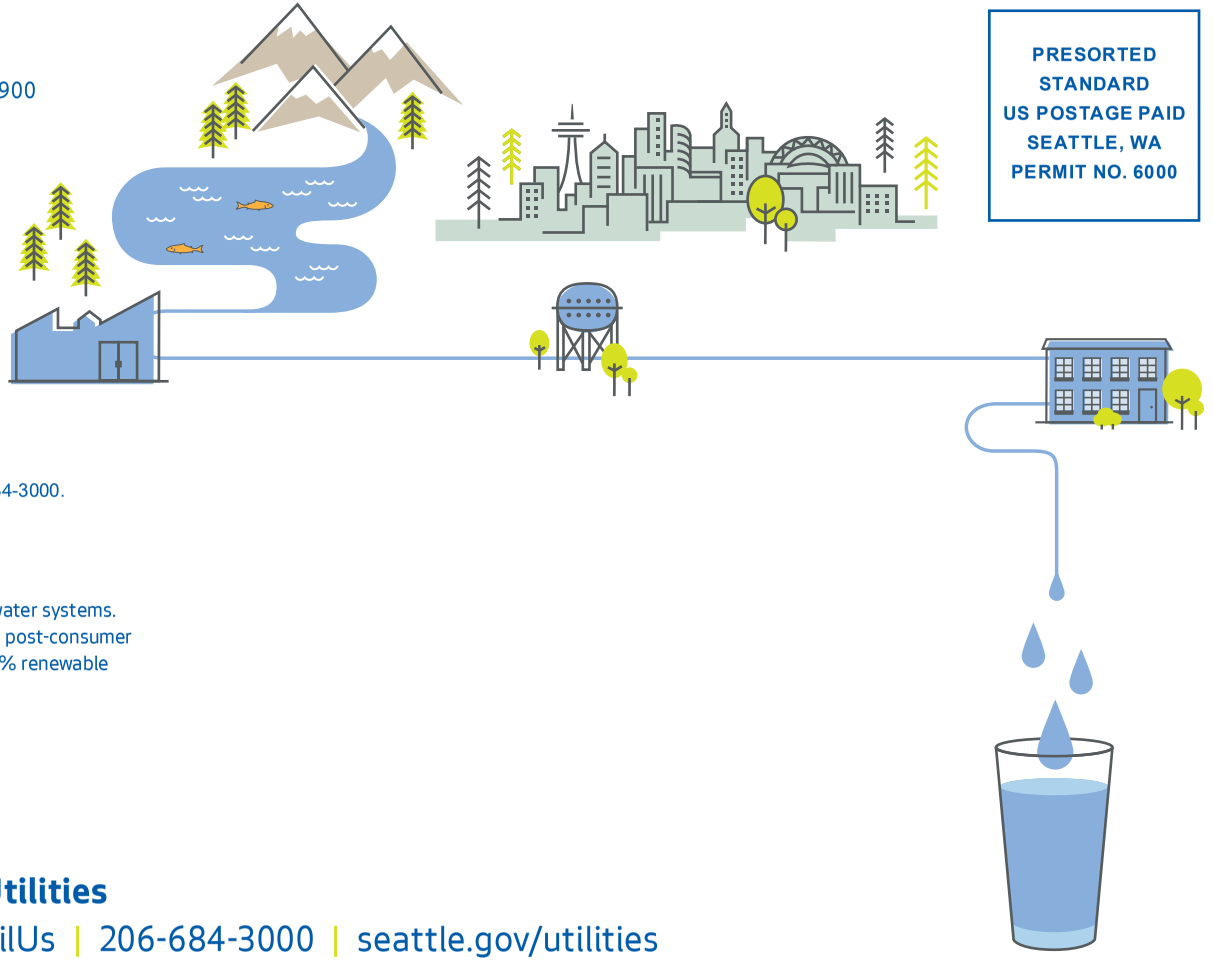

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