About Your Water Quality

The sources of drinking water (both tap and bottled) 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 human activity. In Seattle's surface water supplies, potential contamination sources 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 can result from chlorine combining with the naturally occurring organic matter.

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 from the DOH website at fortress.wa.gov/doh/swap

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. We encourage you to learn more at any of the following:

Coal Creek Utility District: (425) 235-9200
www.ccud.org

Seattle Public Utilities: (206) 684-3000
www. seattle.gov/utilities/your-services/water/water-quality

Washington State Department of Health: (800) 521-0323
www.doh.wa.gov/ehp/dw

Environmental Protection Agency: (800) 426-4791
www.epa.gov/safewater

U.S. Food and Drug Administration: (888) 463-6332
www.www.fda.gov

Washington State Department of Agriculture: (360) 902-1800
www.agr.wa.gov

Conserving Water Together... *at every step*

Step 1: efficiency

In 2021 Coal Creek Utility District (CCUD) purchased 506 million gallons of water from Seattle Public Utilities (SPU). Of this amount, approximately 12 million gallons were lost to leakage from all sources (from our pipes to your home)—which represents a loss rate of 2.4%. This is a relatively low level of leakage, and well below the Washington State standard of no more than 10% water loss.

Step 2: teamwork

The Saving Water Partnership (SWP) – which is made up of CCUD and 18 other water utility partners – has set a ten-year conservation goal: keep the total average annual retail water use of SWP members under 110 millon gallons per day (mgd) through 2028, despite forecasted population growth, by reducing per capita water use. During 2021, SWP met the goal with a usage rate of 95.5 mgd.

Step 3: your household

The average person uses an estimated 80-100 gallons of water every day. How can you reduce that?

- Inside, water-saving shower heads and newer water-sense toilets can reduce water use up to 35% depending on the household. The Saving Water Partnership offers new toilet rebates: **www.savingwater.org/rebates**
- Outside, let your lawn go dormant by watering deeply once a month to keep roots alive. Limit ornamental plant and flower watering to twice a week, applying water directly by hand or drip irrigation where possible, and water early or late in the day to reduce evaporation.

5 Ways to Help Protect Salmon

1. Wash your car at a car wash facility (where used water is routed to treatment facilities).
2. Avoid installing hard pavement; use permeable or porous pavement.
3. Avoid chemical weed killers to protect groundwater and backyard wildlife habitat.
4. Safely dispose of batteries, motor oil, and other hazardous wastes.
5. Plant a rain garden to filter stormwater runoff.

You're Invited...

We at Coal Creek Utility District invite you to join our Board meetings, either in person (masks optional) or by phone.

Meeting are held on the 2nd and 4th Wednesday of each month; agendas can be found on our website under the 'Agenda' tab at www.ccud.org

To attend by phone, call (253) 215-8782, using Meeting ID: 210 020 5821, and Passcode: 6801. Those attending by phone will be able to hear everyone who speaks.

Should you wish to make a comment during a meeting, please contact us in advance—before Noon on the day of the meeting at the very latest—by email at: customerservice@ccud.org

An example of a backflow preventer

Does Your Home or Business Need Backflow Prevention?

If you have any of the following...

- ❑ Fire Sprinkler system
- ❑ Lawn irrigation system
- ❑ Swimming pool
- ❑ Hot tub / jacuzzi tub
- ❑ Livestock watering system
- ❑ Decorative fountain
- ❑ Hydraulic boat lift
- ❑ Water makeup lines (to supply a boiler or hydronic heating)

...OR if you are a business of (most) any kind;

...OR if you raise farm animals...

Washington State Department of Health requires you to:

1. Have a "Backflow Prevention Assembly" installed on your water service;
2. Get it tested annually by a certified backflow assembly tester; and
3. Send a copy of the test record to Coal Creek Utility District.

Give us a call for more info: (425) 235-9200

Chester Morse Lake

About Your Water Source

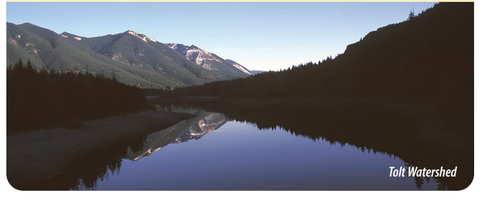
Coal Creek Utility District purchases the water we provide from Seattle Public Utilities (SPU), which sources its water primarily from the publicly-owned Cedar River, and on rare occasions the Tolt River watersheds. Cedar River Water is pumped to the Lake Youngs Facility, where it undergoes a treatment process that includes both ozonation and ultraviolet light (UV) disinfection, which kills disease-causing bacteria, giardia and cryptosporidium. The UV process limits the amount of chemicals required for disinfection and is not known to produce any harmful by-products. Finally, the water is fluoridated to help prevent tooth decay, controlled with alkalinity for corrosion reduction, and chlorinated.

Unique Source of Pure, Clean Water

Many cities source their drinking water from local rivers—the same rivers that are used for recreation, industry, and commerce. SPU's water is different. We capture our water as rain and melted snow in forested and protected mountain watersheds. As a result, we have one of the purest water supplies in the nation.

Two surface water sources provide all CCUD water: Lake Youngs, fed by the Cedar River from Chester Morse Lake, and the South Fork of the Tolt River. These two river systems begin in the Cascades and have large protected watersheds.

Since both watersheds are publicly owned, SPU is able to vigorously protect them through a comprehensive program that prohibits agricultural, industrial, and recreational activities in the watersheds, and no one is allowed to live within the watersheds. This means there is little opportunity for contaminants to enter the water. Even so, there is always some potential for natural sources of contamination, which is why your water is tested and treated so thoroughly.



Tolt Watershed

2021 Annual Report of Drinking Water Quality

Coal Creek Connection

Your newsletter for water and sewer-related issues and information in Newcastle and surrounding areas... since 1959

Summer 2022

Your Toilet: the #1 Cause of High Water Bills

Does your toilet make little hissing noises long after it's been flushed? Do you have to jiggle the handle to get it to stop running? A running toilet can waste as much water as taking 15 (or more) showers a day! If your water bill seems unusually high, the first place to look is your toilet. Here's how to identify and repair the problem:

Identify: remove the toilet tank lid and put several drops of food coloring in the tank. Wait 10-15 minutes—without flushing the toilet. If you see color appear in the bowl, you have a leak. The most common cause is the flapper, which is simple to replace:

Repair: turn off the water behind the toilet, remove the flapper, and take it to your nearest hardware store. They'll help you choose a replacement that fits. It typically only costs under $20.00, and comes with simple installation instructions.

Inside This Issue:

Coal Creek Connection: a publication by Coal Creek Utility District

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Annual Water Quality Report for 2021

This snapshot of last year's water quality reflects Coal Creek Utility District's ongoing record of maintaining state and federal guidelines that are significantly below EPA maximum levels.

All About Your Water

Who: Your drinking water is regulated by the Environmental Protection Agency (EPA), which sets drinking water quality standards, establishes testing methods and monitoring requirements for water utilities, sets maximum levels for water contaminants, and requires utilities to give public notice whenever a violation occurs.

CCUD field staff collect microbiology and water quality samples each month, and monitor the chlorine disinfectant residual each day from our reservoirs, and from 9 water sampling stands located throughout the distribution system. SPU staff likewise analyze for microbes and contaminates at their water quality lab in Seattle.

What: 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 (EPA) Safe Drinking Water Hotline at 1-(800) 426-4791.

When: Your water is monitored for quality 365 days a year.

Where: Your water comes from the Cedar River and Tolt Watersheds.

How: Last year your drinking water was tested for over 200 compounds and additional contaminants. Tests are done before and after treatment and while your water is in the distribution system. The Tables presented on the following page list all of the contaminants detected in the most recent required water testing and compare them to the limits and goals set by the EPA and the State of Washington to ensure your tap water is safe.

Not shown are more than 200 additional contaminants that were tested for, but not detected, in your drinking water. If you would like to see a list of these other compounds or if you have other water quality questions, do not hesitate to contact us. Please note: asbestos monitoring is not required for our District because all the asbestos concrete pipe in our distribution system was replaced prior to 1999.

The Best News: Your water falls safely within state and federal guidelines for each and every contaminant, significantly below the EPA's levels.

People Who May Be More at Risk

Some people may be more vulnerable to drinking water contaminants than the general population. Immuno-compromised persons including those 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. Appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available by calling the Safe Drinking Water Hotline at 1-(800) 426-4791.

If you would like to learn more about your water, or if you have questions about its quality, call Carla Snyder, our Lead Water and Sewer Compliance Specialist at (425) 235-9200.

Table 1: Water Quality Testing Results - 2021

Types of Detected Compounds	Units	EPA's Allowed Limits (MCLG)	EPA's Allowed Limits (MCL)	Levels in the Cedar River Watershed Avg.	Levels in the Cedar River Watershed Range	Levels in the Tolt Watershed Avg.	Levels in the Tolt Watershed Range	Typical Sources
RAW WATER								
Total Organic Carbon	ppm	NA	TT	0.62	0.35 to 0.96	1.09	0.94 to 1.4	Naturally present in the environment
FINISHED WATER								
Turbidity	NTU	NA	TT	0.29	0.17 to 1.97	0.03	0.02 to 0.24	Soil runoff
Arsenic	ppb	0	10	0.42	0.36 to 0.52	0.27	0.23 to 0.31	Erosion of natural deposits
Barium	ppb	2000	2000	1.52	1.49 to 1.54	1.22	1.17 to 1.32	Erosion of natural deposits
Bromate	ppb	0	10	ND	ND	0.7	ND to 8	Byproduct of drinking water disinfection
Coliform, Total	%	0	5%	ND in 2021				Naturally present in the environment
Chlorine	ppm	MRDLG =4	MRDL =4	Average: 1.05 Range: 0.23 to 1.77				Water additive used to control microbes
Fluoride	ppm	4	4	0.7	0.6 to 0.8	0.7	0.6 to 0.8	Water additive to promote strong teeth
Haloacetic Acids (5)	ppb	NA	60	37	15.3 to 62.7	Byproduct of drinking water disinfection		
Radium 228*	pCi/L	0	5	0.6	ND to 1.15	0.8	ND to 1.69	Erosion of natural deposits
Total Trihalomethanes	ppb	NA	80	24.5	15.9 to 34.6	Byproduct of drinking water disinfection		

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

Table 2: Lead and Copper Monitoring Results - 2021

Parameter and Units	Ideal Goal MCLG	Action Level [1]	Results of 2021 Samplings [2]	# Homes Exceeding Action Level	Typical Sources in Drinking Water
Lead, ppb	0	15	1.57	0 of 3	Corrosion of household plumbing systems. Samples collected in homes within Coal Creek Utility District's service area.
Copper, ppm	1.3	1.3	0.141	0 of 3	

[1] The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
[2] 90th percentile: 90 percent of the samples were less than the values shown.

There is no detectable lead in Seattle Public Utility's (SPU) source water. 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.

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

The risk of lead contamination in water increases when water sits in pipes for longer than six hours. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. 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: 1-800-426-4791 or at www.epa.gov/safewater/lead. Finally, remember that drinking water is only a minor contributor to overall exposure to lead. Other sources, including paint, soil and food also contribute.

Table 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 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 is 5 NTU, and for the Tolt supply it was 0.3 NTU for at least 95% of the samples in a month. In 2021, 100% of Tolt samples were below 0.3 NTU.

NA: Not applicable.

ND: Not detected.

pCi/L: picocuries per liter.

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

umho = the unit of measurement for conductivity, aka micromhos, which is the reciprocal of the unit of resistance, the ohm

Table 3: Water Quality Aesthetics - 2021

Parameter	Units	MCL	Cedar Distribution	Tolt Distribution
pH	pH Unit	6.5 - 8.5	8.24	8.60
Hardness, Grains	Grains/gallon		1.58	1.50
Alkalinity, Total	mg/L		24.1	19.7
Conductivity	umho/cm	700	68.3	61.8

Your water is not only monitored for various chemical compounds, it is also monitored for overall aesthetics, which can be impacted by algae.

Source water from the Cedar River, and to a lesser extent from the Tolt Reservoir, can experience naturally occurring, seasonal algae blooms. Typically these blooms occur in the late Spring, but due to a number of environmental factors including sunlight and temperature, blooms can occur at other, unexpected times of the year. For similar reasons, some blooms are more intense than others. Although the algae we see in our water supplies is not associated with health concerns, it can create tastes and odors. Thankfully these are well controlled with current UV and ozone treatments.

Since the Cedar River supply is unfiltered, customers who filter water at home may experience their filters clogging sooner than usual during an algal bloom. To help alleviate this, you can either install an inexpensive pre-filter that can be periodically removed and cleaned with a brush, or replace your existing filter with a new one.


A type of backflow preventer


Backflow testing


Another type of backflow preventer

Cross Connection and Backflow

What's a Cross Connection?

A cross connection is a point in a plumbing system where the drinking water supply is connected to a non-potable water source, like an irrigation system, fire system, decorative water features, ponds, or other equipment that uses water. Pollutants or contaminants can enter the safe drinking water system through uncontrolled cross connections when a backflow occurs.

What's a Backflow?

Backflow is the unwanted flow of non-potable substances back into your plumbing system and/or the public water/drinking water system. A backflow can occur when there's a sudden difference in water pressure between the two systems—during waterline breaks, repairs, water meter change-outs, or a water shut off.

What's a Backflow Prevention Device?

Backflow preventers are mechanical devices designed to prevent backflow through cross connections. However, for backflow preventers to protect as designed, they must meet stringent installation requirements, ***and*** be inspected every year to ensure they're working properly and preventing contamination from entering the public drinking water supply.