CEDAR RIVER WATER & SEWER DISTRICT

WATER QUALITY REPORT 2021

Staff at Cedar River Water & Sewer District (the District) is pleased to provide its customers with this 24th annual Water Quality Report. This report is required as part of the Federal Safe Drinking Water Act and is for the calendar year 2021. Its purpose is to update our customers' knowledge about the District's water sources, water quality, District projects, and programs related to their drinking water. It is hoped this report will help you and your families make well educated decisions about a very important subject – your drinking water. In 2021 CRWSD took over 360 water quality samples and had no samples test positive for Total Coliform.

ABOUT THE DISTRICT

In 2021 the District purchased most of its water from Seattle Public Utilities (SPU). This water comes from the Cedar River Watershed (90,495 acres). It is considered a surface water source and is located in a remote, uninhabited area of the Cascade Mountains. It is made up primarily of melted snow- pack. The water for Cedar River's customers is drawn downstream from the Lake Youngs Reservoir and treatment facility.

The District added a well in the Maple Valley area as an additional water source in 2009. This well supplies water to homes in the East Area of the District, mostly during the summer months. The well is closely monitored and is fluoridated and chlorinated to match and blend with the water being purchased from SPU.

In 2021 an inter-tie with Covington Water District (CWD) was used on an intermittent basis. Those customers who live or work near the southeast area of the District may have received CWD and/or Tacoma water for short periods of time. CWD water is considered groundwater and Tacoma City water is considered surface water. CWD water may come from district owned and operated wells, a Green River surface water source operated by Tacoma Public Utilities, or from interties with neighboring utilities. Information on CWD and their sources can be found in the chart on page 3.

In 2021, the District produced or purchased 792,280,104 gallons of water and had an authorized consumption (including sales) of 733,497,776 gallons, which translates into a Distribution System Leakage (DSL) of 58,782,328 gallons or 7.4%. This is below the Department of Health requirement of 10% DSL.

WATER QUALITY

Seattle Public Utilities (SPU) protects the quality of our drinking water by enforcing an aggressive watershed protection plan. Agricultural and industrial activities within the watershed are prohibited. Access to the watershed is restricted to authorized staff and scheduled educational programs conducted by SPU staff.

The excellent quality of our source water allows drinking water to be provided with very little additional treatment. Chlorine is added for disinfection at the Landsburg Diversion Dam and again just before entering the District's system. Chlorinization destroys Giardia, bacteria, and viruses that may be present in the source water.

The District also operates a re-chlorination system at our SE 216th Pump Station. This system supplements the chlorine residuals for disinfection in an area of the District furthest from the Lake Youngs Reservoir. The District closely monitors chlorine residuals, and if the residuals drop below acceptable levels, District staff responds by flushing the affected area to re-establish proper chlorine levels and investigates the cause of the residual.

Our water is naturally soft, (hardness as CaCo3 is 1.4-1.6 grains/gal) with a pH average of 8.28; minerals (calcium oxide) are added to help inhibit corrosion in building plumbing systems. In accordance with a Seattle public vote held in November 1968, fluoride is added to the drinking water at appropriate levels to prevent tooth decay.

After the water enters the District's system, great care is taken to ensure its excellent quality all the way to your meter. SPU and District staff monitor water quality in the source water, treatment processes, and distribution system 365 days a year. Testing is conducted at specific frequencies (continuously, daily, monthly, quarterly, or annually) at locations prior to treatment, after treatment, and throughout the distribution system in accordance with state and federal regulations.

ADDITIONAL INFORMATION

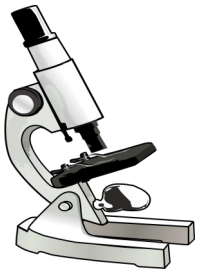
The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and radioactive material, and it can pick up substances resulting from the presence of animals or human activity. **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 the 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 (1-800-426-4791).** In order to ensure that tap water is safe to drink, the Environmental Protection Agency prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Federal Food and Drug Administration has established limits for contaminants in bottled water and is responsible for providing public health protection in this area.

CRYPTOSPORIDIUM

Cryptosporidium is a disease-causing organism commonly found in surface waters. Sources include deer, elk and voles in the watershed. *Cryptosporidium* was first recognized as a health threat in 1976.

There have been no disease outbreaks associated with SPU's drinking water. An ozonation and ultraviolet light treatment plant was constructed and put online at the Lake Young's Reservoir in July 2004. Ozonation is very effective at destroying *Cryptosporidium* .

Even if small numbers of *Cryptosporidium* oocysts are ingested, flu-like symptoms (e.g. diarrhea, abdominal cramps, headache, nausea, vomiting and low-grade fever) can occur. Not everyone who ingests the oocysts will become ill, however the immuno-compromised population, persons with HIV/AIDS, cancer and organ transplant patients can be at great risk if they contract cryptosporidiosis.



LEAD & COPPER MONITORING

District water delivered to your home does not contain lead or copper. However, lead and copper can leach into water from building plumbing systems. Structures plumbed with copper before the 1985 King County lead solder ban could possibly contain lead-based solder. The Environmental Protection Agency considers these residences as "high risk". Brass fixtures also generally contain lead, which can leach into standing water with contact time greater than six hours.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components.

There are a few simple steps you can take in the home to reduce the risk of lead in your drinking water:

- If water has been standing in pipes for over 6 hours, flush out the pipes by running the tap for 2 minutes. To save water, use the water you flush out for watering plants or doing dishes.
- Always draw drinking and cooking water from **cold** water tap — lead dissolves more quickly in hot water.
- Never make baby formula or other drinks or food for children from the **hot** water tap. Start with water taken from the cold water faucet (after flushing) and warm it if necessary.

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 800-426-4791 or at http://www.epa.gov/safewater/lead.

WATER QUALITY MONITORING RESULTS

		Federal Standards		Water Supplied to CRWSD Customers						Typical Source
Detected Substance	Unit of Measure	Ideal Goal to be below (MCLG)	Allowable Level (MCL)	SPU Water Average	SPU Water Range	East Area Well Average	East Area Well Range	Regulation Met SPU Water East Well	Covington Water	
Measured Before Treatment										
Total Organic Carbon	PPM	NA	TT	0.62	0.35-0.96	Not Required		Yes	Not Reported	Naturally present in the environment
Measured After Treatment										
Turbidity	NTU	NA	TT	0.29	0.17-1.97	0	0	Yes	Not Reported	Soil Runoff
Fluoride	PPM	4	4	0.7	0.6-0.8	0.62-0.77 Average 0.70		Yes	Highest 1.00 Average 0.56	Water additive to promote healthy teeth
Arsenic	PPB	0	10	0.42	0.36-0.52	.003 2013 Sample		Yes	Not Reported	Erosion from Natural Deposits
Barium	PPB	2000	2000	1.52	1.49-1.54	2 2013 Sample		Yes	Not Reported	Erosion from Natural Deposits
Nitrate	PPM	10	10	ND	ND	ND 1 Sample		Yes	Highest 0.64	Erosion from Natural Deposits
Radium 228	pCi/L	0	5	0.6	ND-1.15	ND 2018 Sample		Yes	0.67-1.16	Erosion from Natural Deposits
Measured in the Distribution System				**SPU Water & East Area Well Average**		**Range**				
TTHM	PPB	NA	80	40 Highest LRAA		13.2-48.3		Yes	Highest 34.01 LRAA 18.42-23.94	By-product of drinking water chlorination
Chlorine	PPM	4	4	1.18		0.31-1.90		Yes	Range 0.36-1.70	Drinking Water Disinfectant
HAA5	PPB	NA	60	43 Highest LRAA		8.15-58.80		Yes	Highest 16.93 LRAA 13.75-14.40	By-product of drinking water chlorination
Total Coliform Bacteria	% Positive Samples	0	Presence of Bacteria in ≥ 5% monthly samples	Cedar River Water & Sewer had no positive Total Coliform samples in 2021				Yes	1 positive sample 11/09/2021 Total samples collected 660	Naturally present in the environment
Fecal Coliform and E Coli	% Positive Samples	0	0							Commonly found in the intestines of animals and humans

***Covington Water District may also receive water from Tacoma Public Utilities, City of Auburn, and Lake Meridian Water District.**

Lead and Copper Monitoring Results 2019

Parameter and Units	MCLG	Action Level+	2019 Results*	Homes Exceeding Action Level	Regulation Met SPU Water	Source
Lead, PPB	0	15	0.89	0 of 30	Yes	Corrosion of household plumbing systems
Copper, PPM	1.3	1.3	0.055	0 of 30	Yes	

* 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.

The U.S. Environmental Protection Agency mandates Lead & Copper tap water monitoring once every 3 years. Cedar River Water & Sewer is scheduled to complete Lead & Copper testing the summer of 2022.

Unregulated Contaminants Monitoring Rule 4 (UCMR4)

In 2018, Cedar River Water & Sewer began EPA required Unregulated Contaminants Monitoring Rule 4 (UCMR4).

The tables below show the detected analytes for 2018/2019. More information can be found by visiting the EPA's website: https://www.epa.gov/dwucmr/fourth-unregulated-contaminant-monitoring-rule.

Cedar River's 2018/2019 UCMR4 Monitoring Results (Distribution Samples)				
Analyte		**Unit**	**Range**	**Average**
Total Haa5	2018	ug/L	5.7-30	20.84
	2019	ug/L	4.5-44	26.7
Total Haa6Br	2018	ug/L	0.58-1.64	1.35
	2019	ug/L	.86-2	1.5
Total Haa9	2018	ug/L	6.28-31.64	22.9
	2019	ug/L	5.4-46	28.3
Cedar River's 2018/2019 UCMR4 Monitoring Results (East Well)				
Analyte		**Unit**	**Range**	**Average**
Manganese		ug/L	15-17	16
Cedar River's 2018/2019 UCMR4 Monitoring Results (Central Pump Station)				
Analyte		**Unit**	**Range**	**Average**
Manganese		ug/L	1.9-2.5	2.2

Definitions - For Water Quality Chart

LRAA: *Locational Running Annual Average* - The average of analytical results for a particular monitoring location during the previous four calendar quarters.

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.

MFL : Million Fibers Per Liter

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.

NA: *Not Applicable*

ND: *Not Detected*

ppm: *1 part per million = 1 mg/L = 1 milligram per liter*

ADDITIONAL IMPORTANT INFORMATION ABOUT DRINKING WATER

Certain 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. EPA/CDC 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).

CROSS CONNECTION CONTROL

Cedar River Water & Sewer District's Premise Isolation Cross Connection Control Program (CCCP), in conjunction with Washington State RCW 246-290-490, requires customers within the District that have the potential to back flow water into the public water system to install backflow prevention devices. The most common concerns are commercial and multi-family accounts, lawn irrigation and fire suppression systems. The protection required for these systems are a Double Check Valve or a Reduced Pressure Backflow Assembly, depending on the level of potential hazard, and must be on the Washington State list of approved devices. Because they are mechanical devices and are not impervious to failure, they must be tested by a certified Backflow Assembly Tester upon installation and annually thereafter. Annual test results are required to be sent to the District by May 31st each year. Newly installed devices require same day testing.

The primary purpose of the RCW and the Districts CCCP is to protect the public water supply and ensure that contaminants do not enter the public water system. *The District maintains records of all backflow devices it's aware of. However, there may be homes or businesses in the District requiring a backflow device that the District is unaware of.* Please remember that it is your responsibility as the property owner to prevent pollutants and contaminants from entering your water system, as well as the public water system. You could be held responsible if your water system contaminates the public water system.

The most common examples of cross-connections needing protection are:

Residential - Lawn Irrigation Systems, Boilers, Fire Sprinkler Systems, and Garden Hoses (using a garden hose that connects to attachments make it a number one source for cross connection.)

Commercial - Landscape Irrigation, Boilers, Fire Service Protection, Post Mix Soda Machines.

If you meet the requirements above or are considering installing an irrigation system or fire sprinkler system, please contact the District's Cross Connection Control Specialist at backflow@crwsd.com for our installation procedures and policies.

For additional information and commonly asked questions, see the District's website at:
https://www.crwsd.com/customers/cross-connection-faqs

This material can be made available to accommodate people with disabilities and those who need language translation at 425-255-6370.

Please remember, your input and questions are always welcome. You may call the District Monday through Friday 7:00 – 5:30, or write to the Board of Commissioners here at the District office. The Board meets at the District office the first and third Tuesday of every month at 3:30 p.m. Board meetings are open public meetings and the public is welcome to attend. Further questions regarding the water system operation should be directed to Daryl Remillard at 425-255-6370. The District's Public Water System ID# is 41800-7.

The District wishes to acknowledge the assistance of the staff at Seattle Public Utilities in the preparation of this annual Water Quality Report.

CONSERVATION 2021

Regional Water Use

The Saving Water Partnership (SWP) – which is made up of Cedar River Water & Sewer District and 19 water utility partners – has set a ten-year conservation goal: keep the total average annual retail water use of SWP members under 110 mgd through 2028, despite forecasted population growth, by reducing per capita water use. For 2021, the Saving Water Partnership met the goal, using 95.5 mgd.

How to Water

- Annuals generally need more water than other types of landscaping plants. Check the soil often and water anytime the soil is dry below the surface. Try not to let them wilt, many will die or be stunted if the soil dries out.

- Many established plants need little or no summer watering, so become familiar with your plants' watering needs. Look for wilted leaves that don't perk up in evening, deciduous leaves that are yellow before autumn, or evergreen leaves that are dull or bronze, all of which may be a sign the plants need water. When you do water, make sure to moisten the whole root zone (6 to 12 inches down). Dig into the soil before watering to see if water is needed, and an hour after watering to check for adequate moisture. #WaterWise

Conserving Water Helps People and Salmon
Now that summer's coming, it's time to remember to conserve water to leave plenty in the rivers for salmon and wildlife.

"Visit **www.savingwater.org** for information on rebates, tips for using water wisely, videos on fixing leaks, efficient landscaping practices and more."