



2021

# Drinking Water Quality Report

- **Quality**
- **Taste**
- **Value**

**W**ater is a life-essential resource—yet, at less than a penny a gallon, it costs very little compared to its value. Your water rates pay for everything it takes to operate your water system, from storage and treatment, to delivering the water to your tap. Your water rates also help pay for water system improvements, ensuring we continue to provide high-quality drinking water for generations to come. As this year's Drinking Water Quality Report shows, this is an exceptional value for the clean, safe, great tasting drinking water you receive.



**Mukilteo Water and Wastewater District**

7824 Mukilteo Speedway Mukilteo, WA 98275

425-355-3355 • [www.mukilteowwd.org](http://www.mukilteowwd.org)



Precipitation and snowmelt from the Cascade Mountains are collected in Spada Lake Reservoir.



From Spada Lake water travels to Chaplain Reservoir where City of Everett's Water Treatment Plant is located.



City of Everett's Water Treatment Plant treats the water using coagulation, flocculation, filtration, and disinfection.



Water transmission lines carry drinking water to the City of Everett which is then transmitted to MWWD.



Treated water is delivered to about 640,000 businesses and households in Snohomish County.

## FROM SPADA TO YOU

### Clean and safe drinking water delivered to your tap

Your drinking water comes from Spada Lake Reservoir, located about 30 miles east of Everett at the headwaters of the Sultan River. This 50-billion-gallon storage facility serves as a collection point for rain and snowmelt from the Cascade Mountains. It was created in 1964 through a partnership between the City of Everett and the Snohomish County PUD as part of the Jackson Hydroelectric Project.

Spada Lake Reservoir is in the Upper Sultan River Watershed, an area encompassing more than 80 square miles. This is one of the wettest watersheds in the continental United States. The average annual rainfall is about 165 inches, roughly five times the rainfall in our area.

Water quality in the Sultan Basin is carefully monitored. To protect the naturally pristine water in Spada Lake Reservoir, the watershed is patrolled, and human activities are limited to minimize the impact on water quality.

## ENSURING AN ADEQUATE SUPPLY

### Conservation helps meet the needs of people, industries, businesses and farms, while also helping fish and other aquatic life

Water is a precious resource. Conservation helps fill the needs of people, industries, businesses, and farms while also keeping fish and other aquatic life alive and well. Mukilteo Water and Wastewater District (District) has set conservation goals in accordance with the Water Use Efficiency Rule (WUER) and is required to report our progress and accomplishments annually.

One of our conservation goals is met by participating in the City of Everett's Regional Water Conservation Program. This program is planned and developed in coordination with the water systems that are served with treated water from the City of Everett and funded from water system revenues. The WUER goals for 2020 - 2029 are to reduce the regional demand for water by approximately 2 million gallons per day (MGD) annually, continue to provide education to local schools, and distribute conservation kits.

Since 2001, more than \$8.3 million dollars has been invested in regional water conservation activities. These activities include school education, indoor and outdoor water conservation kits, leak detection, business water audits, and school irrigation audits. In 2021, regional conservation programs continued even

with many facilities closed to the public due to COVID-19. Through online water conservation lessons, 541 workshops were conducted with school classes throughout Snohomish County, reaching over 13,000 students. Water systems purchased 1,405 indoor conservation kits and 1,165 outdoor conservation kits. These activities saved an estimated 0.63 MGD regionally.

An additional conservation goal is to maintain a distribution leakage rate significantly less than the 10% required by the WUER. In 2021, the District distributed over 604 million gallons of water. By tracking the purchases and sales the District can calculate the difference. In 2021, the difference indicated a distribution system leakage rate of 1.52%, well under the WUER requirement.

The District pursued an aggressive conservation approach prior to the WUER requirement that included annual customer leak surveys, distribution leak surveys, blow-off replacements, customer consumption databases, and irrigation management. The District continues to utilize this approach in achieving substantial savings and meeting all stated water conservation goals.

# 2021 Water Quality Analysis Results

## Detected Regulated Contaminants

Parameter	Major Source	Units	EPA Regulations		MWWD Water Results		
			Ideal Level/ Goal (MCLG)	Maximum Allowable (MCL)	Range or Other	Average Value or Highest Result	Comply?
Total Coliform Bacteria	Naturally present in the environment	% Positive	0	5% Positive	0 – 0%	0%	Yes
Total coliform bacteria monitoring tracks microbial quality in the water distribution system. There are 30 samples collected per month (360 annually). No more than 5 % of the monthly totals can be positive for total coliform. There were no positive outline total coliform samples collected in 2021.							
Fluoride	Dental health	ppm	2	4	0.5 - 0.8	0.7	Yes
Fluoride is added to your water in carefully controlled levels for dental health.							
Residual Disinfectant Level (free chlorine)	Added as a drinking water disinfectant	ppm	4.0 (MRDLG)	4.0 (MRDL)	0.2 - 1.0	0.6	Yes
Haloacetic Acids (5) (HAA5)	By-product of drinking water chlorination	ppb	N/A	60	25 - 41 <sup>1</sup>	41 <sup>2</sup>	Yes
Total Trihalomethanes (TTHM)	By-product of drinking water chlorination	ppb	N/A	80	25 - 53 <sup>1</sup>	53 <sup>2</sup>	Yes
Haloacetic acids and trihalomethanes form as by-products of the chlorination process that is used to kill or inactivate disease-causing microbes. The TTHM and HAA5 results are from four monitored locations in Mukilteo and Everett to determine compliance with current regulations. <sup>1</sup> Range of results taken from all four locations. <sup>2</sup> Highest result of the four sites monitored.							
Turbidity	Soil erosion	NTU	N/A	TT	100%	0.09	Yes
The values reported are the lowest monthly percentage of samples that met the EPA turbidity limit and the highest 4-hour combined filtered water turbidity measurement obtained during the year. The EPA turbidity limit is 0.3 NTU. In 2021, no filtered water turbidity results exceeded 0.3 NTU so the lowest percentage that met the EPA limit was 100%. The City of Everett Water Plant targets production of filter water turbidities of 0.10 NTU or less.							

## Lead and Copper

Parameter	Major Source	Units	EPA Regulations		MWWD Water Results		
			Ideal Level/ Goal (MCLG)	Action Level (AL)	90th % Level	Homes Exceeding the AL	Comply?
Lead	Plumbing, erosion of natural deposits	ppb	0	15	0.0007	0 of 108 (0.0%)	Yes
Copper	Plumbing, erosion of natural deposits	ppm	1.3	1.3	0.0463	0 of 108 (0.0%)	Yes

USEPA and state regulations require water systems to monitor for the presence of lead and copper at household taps every three years. The above data was collected in 2021 and the next required round of sampling will be in 2024. The 90<sup>th</sup> percentile is the highest result obtained in ninety percent of the samples collected when the results are ranked in order from lowest to highest. In the past, the results for water tested before it enters household plumbing were even lower than the tap results. This indicates that there is virtually no lead or copper in the water and shows that household plumbing may contribute to lead and copper at the tap.

## pH

pH	Soda ash is added to reduce water corrosivity by increasing pH and alkalinity	s.u.	Daily Average 7.6	Min Daily Average 7.3	Average 7.6	Minimum 6.8	Yes
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The Washington State Department of Health requires the City of Everett's Water Plant to operate corrosion control treatment at or above a minimum daily average pH of 7.4. City of Everett measures pH six times per day (once every four hours). The average daily pH cannot be below 7.4 for more than nine days, every six months. In 2021, the average daily pH dropped below 7.4 for one day.

**USEPA required lead statement:** 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 Mukilteo Water and Wastewater District is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. 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. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or online at [epa.gov/safewater/lead](http://epa.gov/safewater/lead).

## Detected Unregulated Contaminants

Parameter	Units	Ideal Level/ Goal (MCLG)	MWWD Water Results	
			Range Detected	Average Value
Bromodichloromethane	ppb	0	1.3 - 2.2	1.7
Chloroform (trichloromethane)	ppb	70	24.1 - 50.5	36.8
Dichloroacetic Acid	ppb	0	2.9 - 16.8	10.8
Trichloroacetic Acid	ppb	20	16.2 - 29.2	22.5

These substances are disinfection by-products for which no MCL standard has been set, but which must be monitored to determine compliance with the USEPA Stage 2 Disinfection By-products Rule MCLs for Total Trihalomethanes and Haloacetic Acids (5).

### IMPORTANT TERMS

**Turbidity** – Turbidity is a measure of particulates suspended in water in nephelometric turbidity units (NTU) and is an important test in determining drinking water quality. Particulates in water can include bacteria, viruses and protozoans that can cause disease.

**Maximum Contaminant Level Goal (MCLG)** – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

**Maximum Contaminant Level (MCL)** – 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 water treatment technology.

**Maximum Residual Disinfectant Level (MRDL)** – 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.

**Maximum Residual Disinfectant Level Goal (MRDLG)** – 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.

**Treatment Technique (TT)** – A required process intended to reduce the level of a contaminant in drinking water.

**Action Level (AL)** – The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Parts per Million (ppm)/ Parts per Billion (ppb)** – A part per million means that one part of a particular contaminant is present for every million parts of water. Similarly, parts per billion indicate the amount of a contaminant per billion parts of water.

**Not Applicable (N/A)** – Means EPA has not established MCLGs for these substances.

### REQUIRED POLYMER STATEMENT:

During water treatment, organic polymer coagulants are added to improve the coagulation and filtration processes that remove particulates from water. The particulates that are removed can include viruses, bacteria, and other disease-causing organisms. The USEPA sets limits on the type and amount of polymer that a water system can add to the water. In addition to the EPA limits, the State of Washington requires that all polymers used be certified safe for potable water use by an independent testing organization (NSF International). During treatment, Everett adds only NSF approved polymers and the levels used are far below the safe limits set by the USEPA.

*THE FOLLOWING STATEMENTS ARE REQUIRED BY THE  
U.S. ENVIRONMENTAL PROTECTION AGENCY.*

## Your Drinking Water Facts and Figures

All water sources (both tap water and bottled water) contain impurities. As water flows 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. Contaminants that may be present in source water include:

- Microbial contaminants such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban surface water, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban surface water, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the number of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which 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 Safe Drinking Water Hotline at 1-800-426-4791. 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, people 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 and US Center for Disease Control (CDC) guidelines on appropriate means to lessen risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

**We test your drinking water 365 days a year.  
Learn more at [www.mukilteowwd.org](http://www.mukilteowwd.org)**



**Mukilteo Water and Wastewater  
District Water Quality Office**  
425-355-3355  
[info@mukilteowwd.org](mailto:info@mukilteowwd.org)

**To get involved**  
Attend and comment about  
decisions affecting your drinking  
water at  
MWWD Board meetings the 1<sup>st</sup> and  
3<sup>rd</sup> Wednesday of each month at  
5:00 p.m.

**MWWD Board of Commissioners**  
Jeff Clarke  
Mike Dixon  
Mike Johnson

**State Department of Health**  
1-800-521-0323  
[doh.wa.gov/ehp/dw](http://doh.wa.gov/ehp/dw)

**U.S. Environmental Protection  
Agency**  
1-800-426-4791  
[epa.gov/safewater](http://epa.gov/safewater)

**City of Everett**  
425-257-8800  
[everettwa.gov/water](http://everettwa.gov/water)