

2018 DRINKING WATER QUALITY REPORT

Taste ▪ Value ▪ Quality

Water 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 our water system, from storage and treatment, to delivering the water to your tap. Your water rates also help pay for water system improvements that ensure that we will 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

FROM SPADA TO YOU: Clean, safe drinking water delivered to your tap

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

2 From Spada, water travels to Chaplain Reservoir, where the City of Everett's water treatment plant is located.

3 The Everett Drinking Water Treatment Plant treats the water using coagulation, flocculation, filtration and disinfection.

4 Water transmission lines carry drinking water to Everett and then to the District's system.

5 Treated water is delivered to about 570,000 people or 80 percent of the businesses and households in Snohomish County.

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 located 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—five times the rainfall in Everett.

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. We continue to evaluate and adjust our security measures on an ongoing basis.

ENSURING AN ADEQUATE SUPPLY

Water is a precious resource.

Conservation helps meet the needs of people, industries, businesses and farms, while also keeping fish and other aquatic life alive and well.

The District has set conservation goals in accordance with the WUER and is required to report our progress and accomplishments annually.

2018 Mukilteo Water and Wastewater District Annual Water Use Efficiency Performance Report (WUER)

One of the District's conservation goals is met by our continued participation in the City of Everett's Regional Water Conservation Program. This program is planned and developed with the water systems that are served with treated water from the City of Everett and is funded from water system revenues.

More than \$7.7 million dollars has been invested in regional water conservation activities since 2001. This includes such things as school education, indoor and outdoor water conservation kits, rebates for water efficient clothes washers and toilets, leak detection, business water audits and school irrigation audits. In 2018, 780 water conservation workshops were conducted in

classrooms throughout Snohomish County, reaching more than 18,500 students. Water systems distributed more than 2,400 indoor conservation kits and 2,900 outdoor conservation kits. These activities saved an estimated 0.66 million gallons per day (MGD) regionally. Through these efforts, the program has saved more than 3.9 million gallons per day (MGD), enough water to fill more than 92,000 bathtubs a day.

The District's second conservation goal is to maintain a distribution leakage rate significantly less than the 10% requirement of the WUER. All the water MWWDD distributed to our customers in 2018 was treated by the City of Everett. In 2018, the District purchased over 680 million

gallons of water. The difference between purchases and sales in 2018 indicates a distribution system leakage rate of less than 4.7%, well under the WUER requirement.

Mukilteo Water and Wastewater District pursued an aggressive conservation approach prior to the WUER requirement. Annual customer leak surveys, distribution leak surveys, blow-off replacements, customer consumption databases and irrigation management were and still are utilized to help us and our customers achieve our conservation goals. The District estimates it has received substantial water savings and is on track to meet all its stated goals.

For conservation tips and information, visit www.mukilteowwd.org

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 per Month	None	0%	Yes
Total coliform bacteria monitoring tracks microbial quality in the water distribution system. MWWD collects around 30 samples per month or 360 per year. No more than 5 percent of the monthly tests can be positive for total coliforms. No total coliforms were detected in 2018.							
Fluoride	Dental health additive	ppm	2	4	0.03-0.9	0.7	Yes
Fluoride is added to your water in carefully controlled levels for dental health. The minimum value of 0.03 ppm was due to a maintenance related feed outage that lasted no more than one day in duration.							
Residual Disinfectant Level (free chlorine)	Added as a drinking water disinfectant	ppm	4.0 (MRDLG)	4.0 (MRDL)	0.08-1.05	0.6	Yes
Haloacetic Acids (5) (HAA5)	By-product of drinking water chlorination	ppb	N/A	60	21.6-44.4 ¹	33.2 ²	Yes
Total Trihalomethanes (TTHM)	By-product of drinking water chlorination	ppb	N/A	80	27.4-52.2 ¹	37.6 ²	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 locations, which are monitored to determine compliance with current regulations. ¹ Range of results taken from all four locations. ² Running annual average of the four sites that were monitored.							
Turbidity	Soil erosion	NTU	N/A	TT	100%	0.06	Yes
Turbidity is a measure of the amount of particulates in water expressed in Nephelometric Turbidity Units (NTU). Particulates in water can include bacteria, viruses and protozoans that can cause disease. Turbidity measurements are used to determine the effectiveness of the treatment processes in removing these particulates. The EPA turbidity limit is 0.3 NTU. The values reported are the lowest monthly percentage of samples that met the EPA limit and the highest four-hour combined water turbidity measurement obtained during the year. In 2018, no filtered water turbidity results were above the EPA limit so the lowest percentage was 100 percent. The plant targets production of filtered water turbidities of 0.1 NTU or less.							

Detected Unregulated Contaminants

Parameter	Units	Ideal Level/Goal (MCLG)	MWWD Water Results	
			Range Detected	Average Value
Bromodichloromethane	ppb	0	0.9-2.0	1.6
Chloroform (trichloromethane)	ppb	70	26.0-50.7	32.6
Dichloroacetic Acid	ppb	0	3.0-16.3	10.7
Trichloroacetic Acid	ppb	20	17.2-30.9	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

Maximum Contaminant Level Goal (MCLG) – 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.

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.

Detected Contaminants from Unregulated Contaminant Monitoring Rule 4 (UCMR4) Sampling

Parameter	Major Source	Units	Everett Water Results	
			Range Detected	Average Value or Highest Result
Total Organic Carbon (TOC) ¹	Naturally present in the environment	ppm	<0.81-2.6	1.35
Manganese ²	Naturally present in the environment	ppb	<0.4-1.1	0.57
Bromochloroacetic Acid ³	By-product of drinking water chlorination	ppb	<0.3-0.67	0.47
Bromodichloroacetic Acid ³	By-product of drinking water chlorination	ppb	<0.52-1.04	0.74
Brominated Haloacetic Acids (HAA6Br) ³	By-product of drinking water chlorination	ppb	<0.6-1.7	1.2
Haloacetic Acids (9) (HAA9) ³	By-product of drinking water chlorination	ppb	29.0-47.6	38.9

¹Samples taken at treatment plant influent. ²Samples taken at treatment plant effluent. ³Samples taken in the distribution system.

Lead, Copper and pH

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	<0.0005	0 of 5 (0.0%)	Yes
Copper	Plumbing, erosion of natural deposits	ppm	1.3	1.3	0.0756	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 2018. The next required round of sampling will be in 2021. The 90th level is the highest result obtained in 90 percent of the samples collected when the results are ranked in order from lowest to highest. Results for water tested before it enters household plumbing are lower than tap results, which indicates that household plumbing may contribute to lead and copper at the tap.							
pH	Soda ash is added to reduce water corrosivity by increasing pH and alkalinity	s.u.	Daily Avg 7.6	Min Daily Avg 7.4	Average 7.6	Minimum 7.3	Yes
The Washington State Department of Health requires Everett to operate corrosion control treatment at or above a minimum daily average pH of 7.4. 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 2018, the average daily pH dropped below 7.4 for two days.							
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 City of Everett Utilities Division 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 or at epa.gov/safewater/lead .							

THE FOLLOWING STATEMENTS ARE REQUIRED BY
THE US 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.

In order to ensure that tap water is safe to drink, US Environmental Protection Agency (EPA) prescribes regulations which limit the amount 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.



**CONSERVE
BE INFORMED
GET INVOLVED**

Mukilteo Water and Wastewater District Water Quality Office

425-355-3355
mukilteowwd.org

State Department of Health

1-800-521-0323
doh.wa.gov/ehp/dw

US Environmental Protection Agency

1-800-426-4791
epa.gov/safewater

To get involved in decisions affecting your drinking water, attend and comment at MWWD meetings the 1st and 3rd Wednesdays of each month at 7824 Mukilteo Speedway.

MWWD Board of Commissioners

Thomas Rainville
Thomas McGrath
Mike Johnson

Your opinion matters.

Let us know how we're doing and what you think of your water. Call 425-355-3355 or email info@mukilteowwd.org



**Mukilteo Water and
Wastewater District**

WE TEST YOUR DRINKING WATER 365 DAYS A YEAR.
Learn more about your water at mukilteowwd.org