

A clear glass is being filled with water from a tap. The water is captured mid-pour, creating a dynamic splash and bubbles. The background is a soft, out-of-focus green, suggesting a natural, fresh environment.

2017 Drinking WATER Quality Report

Value • Quality • Taste

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

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 Mukilteo.

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. Security measures are continuously evaluated and adjusted.

Treated water is delivered to about 603,000 people or 80 percent of the businesses and households in Snohomish County.



1

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



2

From Spada Lake, water travels to Chaplain Reservoir, where the City'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 pipelines carry drinking water to Everett.



5

2017 Water Quality Analysis Results

MUKILTEO WATER & WASTEWATER DISTRICT

Detected regulated contaminants

Parameter	Major Source	Units	EPA Regulations		MWWD 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 the microbial quality of the water distribution system. Everett collects approximately 125 samples per month and no more than 5 percent of the monthly tests can be positive. No total coliform was detected in 2017.							
Fluoride	Dental health additive	ppm	2	4	0.2–0.8	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)	0.06–1.16	0.68	Yes
Haloacetic Acids (5) (HAA5)	By-product of drinking water chlorination	ppb	N/A	60	26.4–46.2	36.5	Yes
Total Trihalomethanes (TTHM)	By-product of drinking water chlorination	ppb	N/A	80	24.8–54.7	36.2	Yes
Haloacetic acids and trihalomethanes form as by-products of the drinking water chlorination process. The TTHM and HAA5 results are from eight locations in Everett which are monitored to determine compliance with current regulations.							
Turbidity	Soil erosion	NTU	N/A	TT	100%	0.15	Yes
The EPA turbidity limit is 0.3 NTU. In 2017, no filtered water turbidity results exceeded 0.3 NTU so the lowest percentage that met the EPA limit was 100%. During the months of March, April and May 2017, an equipment malfunction caused erroneous turbidity data to be recorded and reported to the Dept. of Health. Although the problem was resolved and correct data was provided to the Dept. of Health, this constitutes a monitoring violation that requires public notification (see below).							
Required Monitoring Violation Statement: We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During March, April and May 2017, we did not complete all monitoring or testing for turbidity, and therefore cannot be sure of the quality of your drinking water during that time. There is nothing you need to do. At no time was the quality of your drinking water compromised. The plant has resolved the problem and taken steps to prevent a repeat occurrence.							

Detected unregulated contaminants

Parameter	Units	Ideal Level/Goal (MCLG)	MWWD Results	
			Range Detected	Average Value
Bromodichloromethane	ppb	0	1.2–2.2	1.6
Chloroform (trichloromethane)	ppb	70	23.4–52.5	35.1
Dichloroacetic Acid	ppb	0	3–16.6	12.4
Trichloroacetic Acid	ppb	20	19.9–28.7	23.8
These substances are disinfection by-products for which no MCL standard has been set, but which must be monitored to determine compliance with the EPA MCL's 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. 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.

Lead, copper and pH

Parameter	Major Source	Units	EPA Regulations		MWWD 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	None	Yes
Copper	Plumbing, erosion of natural deposits	ppm	1.3	1.3	0.0062	None	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 2015. The next required round of sampling will be in 2018. 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.							
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 7.1	Yes
Everett is required to operate corrosion control treatment at or above a minimum daily average pH of 7.4. The average daily pH cannot be below 7.4 for more than nine days every six months. In 2017, the average daily pH dropped below 7.4 for eight days.							

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 <http://www.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.

Lead and drinking water

► We test
your drinking
water 365
days a
year.

All of the Mukilteo Water & Wastewater District (MWWD) source water is treated at the City of Everett's Filter Plant and contains virtually no lead or copper. Everett has eliminated lead pipes and connections from its distribution system. MWWD has no known lead pipes in their system. However, lead and copper can enter drinking water through household plumbing materials.

In 1991 the Environmental Protection Agency (EPA) published a regulation to control lead and copper in drinking water. This regulation, known as the Lead and Copper Rule, requires water systems to monitor the presence of lead and copper in drinking water at customer taps. If lead concentrations exceed an action level of 15 parts per billion in more than 10% of customer taps sampled, the system must undertake a number of actions.

MWWD and the City of Everett conducted its latest round of monitoring in 2015. The highest level found in the 108 homes tested was 8 parts per billion. The 90th percentile result—the highest result obtained in 90 percent of the samples—was 2 parts per billion. This indicates that lead found at household taps is most likely due to the corrosion of home plumbing systems with lead-containing pipes, fixtures or solder.

There are simple steps you can take to reduce the risk of lead in your drinking water. If you live in housing built before the mid-1940s, run your tap for at least 2 minutes if water has sat in your pipes for more than 6 hours. If you live in newer housing, run your tap until the water is noticeably cooler. Use only cold water for drinking, cooking and making baby formula, as hot water can carry more lead. You can also have your water tested by a certified lab.

For more information on lead in drinking water, steps you can take to minimize exposure, or to find a certified lab, go to www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/Contaminants/Lead.



Ensuring an adequate supply

2017 MUKILTEO WATER & WASTEWATER DISTRICT ANNUAL WATER USE EFFICIENCY PERFORMANCE REPORT (WUER)

Water is a precious resource. Conservation helps meet the needs of people, industries, businesses and farms, while also keeping fish and aquatic life alive and well. We have set conservation goals in accordance with The WUER and report our progress annually. Because Everett provides water to the majority of water systems in Snohomish County, we have partnered with them on a regional water conservation program as our first goal of the WUER. This program is developed collaboratively with the water systems served by the City of Everett and funded from water system revenues.



More than \$7 million has been invested in regional water conservation activities since 2001. This includes 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. Through these efforts, we have saved more than 4.5 million gallons per day (MGD) program wide—enough water to fill more than 100,000 bathtubs each day.



In 2017, more than 19,000 students attended water conservation workshops in classrooms throughout Snohomish County, water systems distributed more than 2,400 indoor conservation kits and 2,900 outdoor conservation kits, and 15 large water customers received water conservation audits. These activities saved an estimated 0.67 million gallons per day (MGD) regionally.

Our second goal of the WUER is to maintain a distribution system leakage rate of less than the 10% requirement. In 2017 we purchased over 696 million gallons of water. The difference between purchases and authorized uses indicated a leakage rate of 5.14%, well below the WUER requirement.



MWWD pursued an aggressive conservation approach prior to the WUER requirement. Several additional measures are utilized to help us and our customers achieve our conservation goals. The District's estimates show substantial savings. The average savings for the last ten years is estimated at 1.3%. This calculates to 23,529 gallons saved per day, or 8.6 million gallons per year, utilizing 2017 production data. We are on track to meet our stated goals.

Conserve. Be informed. Get involved.

Mukilteo Water & Wastewater District Water Quality Office

Phone: 425-355-3355
www.mukilteowwd.org

State Department of Health (DOH)

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

US Environmental Protection Agency (EPA)

Phone: 1-800-426-4791
www.epa.gov/safewater

To get involved

in decisions affecting your drinking water, attend and comment at Mukilteo Water & Wastewater District Board meetings held on the first and third Wednesdays of every month at 7:00 pm located at 7824 Mukilteo Speedway, Mukilteo, WA 98275. Agendas are available on the District's website at www.mukilteowwd.org.

Mukilteo Water & Wastewater District Board of Commissioners

Mike Johnson
Thomas Rainville
Thomas McGrath

Your Opinion Matters

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

Learn more about your water at
www.mukilteowwd.org



Conservation tips

For additional tips and information about our water conservation programs, go to www.mukilteowwd.org.

Install water-efficient showerheads and take shorter showers.

Fix leaky faucets and toilets. Install low-flow toilets.

Only run full loads in your dishwasher and clothes washer.

Put a layer of mulch around plants and trees.

Use a broom—not a hose—for cleaning walks and driveways.