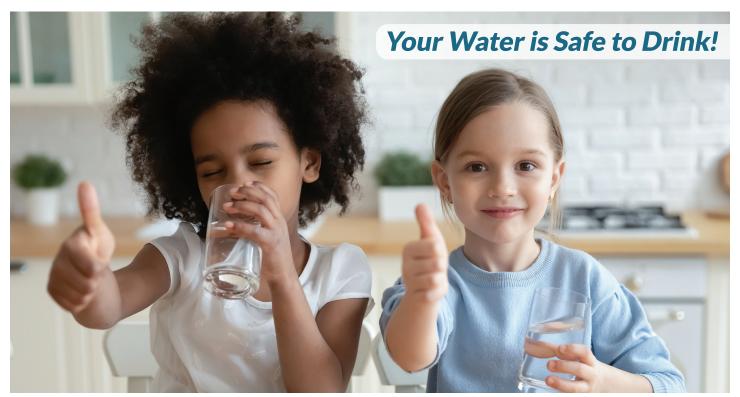
Snohomish County PUD Integrated Water System





2021 Annual Water Quality Report

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NOHOMISH COUNTY PUD is pleased to report that your drinking water safely complies with federal and state drinking water quality standards. This report summarizes the key findings of the PUD's 2021 water quality testing program. It illustrates the utility's commitment to delivering the highest quality drinking water.

Each year, the PUD prepares a Water Quality Report for its customers. We want you to know where your water comes from, how it is treated and that it is safe to drink. The purpose of this report is to help people, especially those with special health needs, make informed decisions about their drinking water.

Special Health Information

Some 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).

Where Your Water Comes From

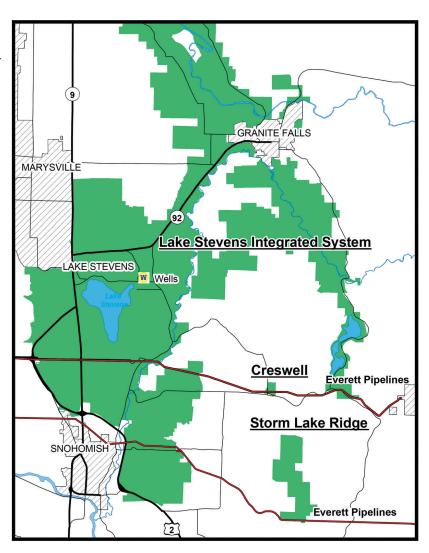
The majority of the water distributed to your home is purchased from the City of Everett. The water comes from the Spada Lake Reservoir, which is located at the headwaters of the Sultan River about 30 miles east of Everett.

Spada Reservoir is located in the Sultan Basin Watershed, which covers nearly 84 square miles. A watershed is a geographic area where all precipitation drains into a single body of water. In the Sultan Basin Watershed, rainfall and snowmelt from the Cascade Mountains flow into Spada Reservoir. One of the wettest watersheds in the continental United States, the basin's average rainfall is about 165 inches.

Created in 1965 by construction of the Culmback Dam, and increased in size in 1984, Spada Lake Reservoir holds approximately 50 billion gallons of water. Water from Spada Lake travels eight miles by tunnel and pipeline to the PUD's Jackson Hydroelectric Project where turbines generate enough power to supply electricity to about 35,800 homes.

The water is then routed by pipeline from the powerhouse to Everett's Lake Chaplain, where it is held in preparation for treatment. Everett's treatment plant uses coagulation and advanced filtration techniques to remove suspended particles that may contaminate the water. The pH (acidity) of the water is adjusted to reduce its corrosiveness, thereby reducing the likelihood of lead and copper being leached from household plumbing. Chlorine is added as a disinfectant to make sure the water is free of harmful microorganisms, and fluoride is added for enhanced dental protection. The levels of these two additives are monitored constantly to assure proper dosages are being used.

In September 2012, the PUD completed the construction of a new treatment facility in Lake Stevens (northeast of the downtown area) and began producing water from two wells. The water from these wells receives treatment for iron and manganese removal and is chlorinated. Fluoride is added to match levels found in the City of Everett drinking water. The water from this treatment facility is then blended with water received from the City of Everett in the distribution system.



System Improvements

In 2021, the PUD completed improvements to, and the repainting of, its Lake Stevens Walker Hill 2 MG reservoir and replaced an aging section of water main crossing SR 9 at 32nd Street SE. In addition, staff worked closely with its consultant to draft an updated Water System Plan that looks at all Water Utility needs over the next 20 years, and started the design and planning effort to replace all water meters as part of the PUD's Connect Up infrastructure and technology program that includes new metering technology. The PUD also continued making needed improvements to its Warm Beach Water System, which is described in a separate water quality report.

General Information About Drinking Water

Substances Expected to be in Drinking Water

To ensure that tap water is safe to drink, the Washington State Department of Health (DOH) and the U.S. Environmental Protection Agency (EPA) set regulations limiting the amount of certain contaminants in the water provided by public water systems. The U.S. Food & Drug Administration (FDA) and the Washington State Department of Agriculture regulations establish limits for contaminants in bottled water that 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

The sources of drinking water (both tap water 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 – in some cases, radioactive material – and substances resulting from the presence of animals or from human activity. The following substances may be present in source water (drinking water quality is determined by testing for these contaminants).

May come from wildlife, agricultural livestock or septic systems.
Can occur naturally or may result from urban storm-water runoff, industrial or domestic wastewater discharges, mining or farming.
May come from a variety of sources such as farming, urban stormwater runoff, and homes or businesses.
Are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff and septic systems.

Radioactive Can be naturally occurring or may be the result contaminants of oil and gas production and mining activities.

Water Conservation Requirements

The Water Use Efficiency Rule sets planning requirements, leakage standards and water conservation goal setting and reporting requirements. The PUD's 2021 demand-side and supply-side conservation goal results:

	Goal	2021 Results	How Goal was Met
Demand- Side	Participate in Everett's program to help reduce regional water demand by about 1.4 MGD between 2020 and 2029 (about a 2% reduction compared to projected 2029 demand, or 0.2% savings annually).	The total regional savings were estimated to be 0.63 MGD.	Public outreach and education, including school presentations, plus distribution of indoor/outdoor conservation kits.
Supply- Side	Maintain the PUD's distribution system leakage below the state standard of 10% and strive to progressively achieve lower percentages of non-revenue water, where possible.	5.34% PUD Distribution System Leakage (combined result for all PUD water systems)	Continued emphasis on accurate water usage reporting with PUD crews and local fire departments and with repair of discovered leaks.



Definition of Terms Used in This Report

How Do I Read This Report?

The **Maximum Allowable** column provides you with the maximum level established by the EPA or the DOH. These are standards that all drinking water suppliers serving over 15 customers must meet.

The **Minimum/Maximum Range** and **Average Value** show you the contaminant level detected in the water analysis test.

The last column tells you whether or not the test complies with regulations. A "YES" indicates that the range detected is within EPA regulations.

Snohomish County PUD also regularly performs tests for unregulated compounds for which state and federal agencies have not set standards at this time.



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

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.

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.

MRDL (Maximum Residual Disinfectant Level): The highest level of disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant (e.g., chlorine, chloramines, chlorine dioxide) 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.

N/A: The EPA has not set MCLGs for these substances.

N/D: Not detected.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water.

ppm (parts per million): One part per million (corresponds to one dollar in \$1,000,000).

ppb (parts per billion): One part per billion (corresponds to one dollar in \$1,000,000,000).

SMCL (Secondary Maximum Contaminant Level): These standards are developed to protect the aesthetic qualities of drinking water and are not health-based.

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

Turbidity: Has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms that include bacteria, viruses and parasites. These organisms can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

Testing Results

GREATER LAKE STEVENS, ARLINGTON AND GRANITE FALLS WATER SYSTEM

The PUD's Integrated System is supplied water from the City of Everett and a PUD-owned well field. The system provides water to approximately 22,000 connections (estimated customer base of approximately 59,000 people) and includes 360 miles of pipe, 14.1 million gallons of storage, 12 pump stations, 9 City of Everett taps, and 25 pressure zones.

			EPA Regulations		Your Water Testing Results		
Substance	Major Source	Units	Maximum Goal (MCLG)	Maximum Allowable (MCL)	Min./Max. Range	Average or Highest Value	Comply?
Nitrate	Erosion of natural deposits, animal waste	ppm	10	10	N/D - 0.09	0.02	YES
Arsenic	Erosion of natural deposits	ppb	0	10	N/D – 2	1	YES
Barium	Erosion of natural deposits	ppm	2	2	0.0035 - 0.014	0.01	YES
Manganese	Erosion of natural deposits	ppm	N/A	0.05 (SMCL)	$N/D - 0.3^{1}$	0.01	YES
Iron	Erosion of natural deposits	ppm	N/A	0.3	N/D - 0.09	0.02	YES
Two Manganese meas	urements above the SMCL occurred in 2021 and treatment	operation	was corrected Comt	diance with the SMCL i	s hased on average	concentration	

Total Coliform Bacteria	Naturally present in the environment	% positive	0	Not more than 5%	0%	0%	YES
				positive per month			

Total coliform bacteria testing is used to monitor microbial quality in the water distribution system. The PUD collects 60 coliform samples per month from dedicated sites within the Lake Stevens Integrated Water System. No unsatisfactory results were detected in 2021.

Fluoride	Dental health additive	ppm	2	4	0.4* - 0.9	0.7	YES
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Fluoride is added to your water in carefully controlled levels for dental health. In 2016, state regulations changed the standard to 0.7 ppm with an operating range of 0.5 to 0.9.

^{*} The minimum value of 0.4 ppm was due to a short-term maintenance-related feed outage that lasted no more than a day in duration.

Haloacetic Acids ²	By-product of drinking water chlorination	ppb	N/A	60	20 - 40	34	YES
Total Trihalomethanes ²	By-product of drinking water chlorination	ppb	N/A	80	14 – 56	44	YES
Free Chlorine Residual	Measure of disinfectant added to water	ppm	4 (MRDLG)	4 (MRDL)	0.15 - 1.31	0.69	YES

²Haloacetic acids and Trihalomethanes form as by-products of the chlorination process that is used to kill or inactivate disease-causing microbes. Although goals have not been set for these compounds as a group, MCLGs for related individual compounds can be seen in the Unregulated Substances table on the next page.

Turbidity	Soil erosion	NTU	N/A	TT	100%	0.09	YES

The EPA turbidity limit is 0.3 NTU. In 2021, no filtered water turbidity results at the Everett filtration plant exceeded 0.3 NTU so the lowest percentage that met the EPA limit was 100%. The treatment plant operators target production of filter water turbidities of 0.10 NTU or less. The value reported here is the highest four-hour combined filtered water turbidity measurement obtained during the year.

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.

			EPA Reg	ulations	Your W	ater Testing F	Results
			Maximum	Action	90th	0th Homes Exceeding	
Substance	Major Source	Units	Goal (MCLG)	Level (AL)	% Level	the AL	Comply?
Copper	Plumbing, erosion of natural deposits	ppm	1.3	1.3	0.275	None	YES
Lead	Plumbing, erosion of natural deposits	ppb	0	15	1	None	YES

US Environmental Protection Agency (USEPA) and state regulations require Snohomish PUD and the systems it supplies to monitor for the presence of lead and copper at household taps in their service area every three years. The next round of required sampling will be conducted in late summer of 2024. 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. The results for water tested before it enters household plumbing were even lower. This indicates that there is virtually no lead or copper in the water you are provided, but your household plumbing may contribute to the presence of lead and copper at your tap.

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. Snohomish County PUD 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 the USEPA's website at www.epa.gov/safewater/lead.

GREATER LAKE STEVENS, ARLINGTON AND GRANITE FALLS WATER SYSTEM (CONT.)

UNREGULATED SUBSTANCES

I.	Maximum	Your Water Testing Results		
Substance	Goal (MCLG)	Min./Max. Range	Average Value	
Bromodichloromethane ¹ (ppb)	0	0.9 - 2.2	1.6	
Chloroform (trichloromethane)1 (ppb)	70	12.9 - 53.8	32.1	
Dichloroacetic Acid¹ (ppb)	0	2.2 - 17.7	10.8	
Trichloroacetic Acid¹ (ppb)	20	9.5 – 26.2	17.6	
Monochloroacetic Acid¹ (ppb)	None	N/D - 3.5	1.7	
Chlorodibromomethane Acid¹ (ppb)	60	N/D - 0.7	0.02	

¹Although these substances are not regulated individually, their results are added together to obtain the Total Trihalomethane and Haloacetic Acid results shown on the previous page.

VOLUNTARILY MONITORED SUBSTANCES

The information below is voluntary and describes additional characteristics of the drinking water in the PUD distribution system.

	Min./Max. Value	Average Value
Alkalinity (ppm)	5 – 37	22
Aluminum (ppm)	0.003 - 0.04	0.02
pH (standard unit)	6.3 – 9.9	7.2
Sodium (ppm)	5.8 – 8.5	7.4
Total Hardness (ppm)	10.3 - 141	82
Chloride (ppm)	2.3 – 5.8	4.2
Sulfate (ppm)	2.8 – 12	7.4

The Creswell and Storm Lake Systems are also supplied water from the City of Everett; however, the systems are not hydraulically linked, which makes them separate or isolated systems. Therefore, in addition to the testing results found on pages 5-6, the PUD collects supplementary compliance samples as shown in the following tables.

CRESWELL WATER SYSTEM

The Creswell system supplies water to 36 connections along Dubuque Road and Creswell Road. Water is purchased directly from the City of Everett with taps on Everett's No. 2 and No. 3 pipelines.

			EPA Regulations		Your Wat	er Testing R	esults
			Maximum	Maximum	Min./Max.	Average	
Substance	Major Source	Units	Goal (MCLG)	Allowable (MCL)	Range	Value	Comply?
Total Coliform Bacteria	Naturally present in the environment	Samples positive	0	1 positive per month	0%	0%	YES

Total coliform bacteria testing is used to monitor microbial quality in the water distribution system. The PUD collects one coliform sample per month. No unsatisfactory results were detected in 2021.

Haloacetic Acids ²	By-product of drinking water chlorination	(ppb)	N/A	60	34	34	YES
Total Trihalomethanes ²	By-product of drinking water chlorination	(ppb)	N/A	80	47	47	YES
Free Chlorine Residual	Measure of disinfectant added to water	(ppm)	4 (MRDLG)	4 (MRDL)	0.46 - 0.96	0.66	YES

²Haloacetic acids and Trihalomethanes form as by-products of the chlorination process that is used to kill or inactivate disease-causing microbes. Although goals have not been set for these compounds as a group, MCLGs for related individual compounds can be seen in the Unregulated Substances table below.

			EPA Regulations		Your W	Results	
			Maximum	Action	90th	Homes Exceed	ing
Substance	Major Source	Units	Goal (MCLG)	Level (AL)	% Level*	the AL	Comply?
Copper	Plumbing, erosion of natural deposits	ppm	1.3	1.3	0.402	None	YES
Lead	Plumbing, erosion of natural deposits	ppb	0	15	7	None	YES

US Environmental Protection Agency (USEPA) regulations require monitoring for the presence of lead and copper at household taps in their service area every three years. The next round of required sampling will be conducted in 2024.

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. Snohomish County PUD 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 the USEPA's website at www.epa.gov/safewater/lead.

UNREGULATED SUBSTANCES

N	Maximum	Your Water Test	ing Results
	Goal	Min./Max.	Average
Substance	(MCLG)	Range	Value
Bromodichloromethane ³ (ppb)	0	2.0	2.0
Chloroform (trichloromethane) ³ (ppb)	70	45.0	45.0
Dichloroacetic Acid³ (ppb)	0	13.8	13.8
Trichloroacetic Acid³ (ppb)	20	17.7	17.7
Monochloracetic Acid ³ (ppb)	None	2.3	2.3

³Although these substances are not regulated individually, their results are added together to obtain the Total Trihalomethane and Haloacetic Acid results in the above table.

^{*}The 90th percentile level is the highest result obtained in 90% of the samples collected when the results are ranked in order from lowest to highest. This value is used to compare to the AL.

STORM LAKE RIDGE WATER SYSTEM

The Storm Lake Ridge system supplies water to approximately 270 connections in the Storm Lake Ridge community and surrounding area approximately three miles east of Machias and five miles north of Monroe. Water is purchased directly from the City of Everett's No. 5 pipeline and pumped to the distribution system and a concrete reservoir.

			EPA Regulations		Your Water Testing Results		esults
			Maximum	Maximum	Min./Max.	Average	
Substance	Major Source	Units	Goal (MCLG)	Allowable (MCL)	Range	Value	Comply?
Total Coliform Bacteria	Naturally present in the environment	Samples positive	0	1 positive per month	0%	0%	YES

Total coliform bacteria testing is used to monitor microbial quality in the water distribution system. The PUD collects one coliform sample per month. No unsatisfactory results were detected in 2021

Haloacetic Acids ¹	By-product of drinking water chlorination	ppb	N/A	60	37	37	YES
Total Trihalomethanes ¹	By-product of drinking water chlorination	ppb	N/A	80	43	43	YES
Free Chlorine Residual	Measure of disinfectant added to water	ppm	4 (MRDLG)	4 (MRDL)	0.46 - 1.08	0.76	YES

¹Haloacetic acids and Trihalomethanes form as by-products of the chlorination process that is used to kill or inactivate disease-causing microbes. Although goals have not been set for these compounds as a group, MCLGs for related individual compounds can be seen in the Unregulated Substances table below.

			EPA Reg	EPA Regulations		ater Testing R	ng Results	
			Maximum	Action	90th	Homes Exceedi	ng	
Substance	Major Source	Units	Goal (MCLG)	Level (AL)	% Level*	the AL	Comply?	
Copper	Plumbing, erosion of natural deposits	ppm	1.3	1.3	0.270	None	YES	
Lead	Plumbing, erosion of natural deposits	ppb	0	15	0	1 out of 11	YES	

US Environmental Protection Agency (USEPA) regulations require monitoring for the presence of lead and copper at household taps in their service area every three years. The next round of required sampling will be conducted in 2024.

*The 90th percentile level is the highest result obtained in 90% of the samples collected when the results are ranked in order from lowest to highest. This value is used to compare to the AL.

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. Snohomish County PUD 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 the USEPA's website at www.epa.gov/safewater/lead.

UNREGULATED SUBSTANCES

1	Maximum Goal	Your Water Test	ting Results Average
Substance	(MCLG)	Range	Value
Bromodichloromethane ² (ppb)	0	1.9	1.9
Chloroform (trichloromethane)2 (ppb) 70	41.1	41.1
Dichloroacetic Acid ² (ppb)	0	15.4	15.4
Trichloroacetic Acid ² (ppb)	20	18.8	18.8
Monochloroacetic Acid ² (ppb)	None	2.6	2.6

²Although these substances are not regulated individually, their results are added together to obtain the Total Trihalomethane and Haloacetic Acid results in the above table.





Water Utility PO Box 1107 Everett, WA 98206-1107

Customer Views Welcome

There are several ways you can get involved in water quality issues. You can call us at 425-397-3000 or communicate with elected officials, participate in public hearings and attend Snohomish County PUD Commission meetings. Check the local newspaper for information on public meetings regarding water quality, water policies and other issues.

The Snohomish County PUD Board of Commissioners meets at 1:30 PM on the first and third Tuesday of each month at Snohomish County PUD, 2320 California Street in Everett. Board sessions are open to the public. Please call 425-783-8611 in advance to confirm meeting dates and times, or check the meeting agenda on our website.

You can also find information for water customers at our website: **www.snopud.com/water.**

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Snohomish PUD participates in the AT&T language line service. If you need help with the English language or need an interpreter, please contact a PUD customer service representative at 425-783-1000 (Monday through Friday, 8 AM to 5:30 PM) and an interpreter will be called (Se llamará a un intérprete).

Safe Drinking Water & Water System Security

The PUD is committed to a strong security program to protect water quality. The PUD's facilities are secured; however, we could use your assistance. If you see suspicious activity in or around PUD pump stations, reservoirs or hydrants, please contact us at 425-397-3000 (after regular working hours, holidays or on weekends, please contact us at 425-783-8000).

For More Information

- PUD website: www.snopud.com/water
- Safe Drinking Water Act (SDWA) hotline: 1-800-426-4791
 E-mail: hotline-sdwa@epamail.epa.gov
- Washington State Department of Health Division of Drinking Water: 253-395-6750
 Website: www.doh.wa.gov/ehp/dw

Contact Us Water Utility: 425-397-3000

Monday through Friday, 7:30 AM - 4:00 PM

Toll-free in Western Washington and outside the Everett local calling area at 1-877-783-1000, extension 3000

Prepared June 2022