GRANITE FALLS

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CITY OF GRANITE FALLS
2016 DRINKING WATER QUALITY REPORT

2016 Water Quality Report

This report summarizes the findings of Granite Falls/Everett's water quality testing program. If the information looks familiar, it should. We have provided this information to customers each year since 1999. Why? It's the law. The Safe Drinking Water Act requires water systems to provide customers with annual reports on the quality of their drinking water. We agree because we support your right to know. The key piece of information for most people is this: **our drinking water meets or exceeds all government standards.**

We're proud of our water system and enjoy the opportunity to communicate with you about your water. We want you to know where your water comes from, how it is treated, and what substances are in it. This information allows people, especially those with special health needs, to make informed decisions about their drinking water. Much of the water quality information in this report is technical. Our goal is to provide it in a format that is as understandable as possible. However, drinking water is a complex issue. If you have any question, please contact our staff at (360) 691-6441.

Drinking Water Source

The City of Granite Falls purchases your drinking water from Snohomish County PUD. Snohomish County PUD purchases the water from the City of Everett. Most of your drinking water comes from the Spada Reservoir that is located about 30 miles east of Everett, at the headwaters of the Sultan River. Spada Reservoir was created in 1965 by the construction of the Culmback Dam and holds 50 billion gallons of water. From Spada Reservoir, the water travels through a pipeline to Chaplain Reservoir, where the City of Everett's treatment facility is located. Chaplain Reservoir is about 8 miles downstream from Spada Reservoir and holds about 4.5 billions gallons of water.

Spada Reservoir is located in the Sultan Basin Watershed. A watershed is a geographic area where all the precipitation drains into a single body of water. In the Sultan Basin Watershed, rain and snowmelt from the Cascade Mountains flow into the Spada Reservoir. The Sultan Basin Watershed covers and area of about 84 square miles and is one of the wettest watersheds on the west side of the Cascade Mountains. The average rainfall is about 165 inches per year. To protect the naturally pristine waters in Spada Reservoir, water quality in the Sultan Basin is carefully monitored. Everett has long been committed to a strong security program to protect water quality in the Sultan Basin. The watershed is patrolled and human activities are carefully managed to minimize the potential impact on water quality.

In September 2012, PUD began producing water from two ground water wells located in the north east corner of the City of Lake Stevens. The water from these wells receives treatment for iron and manganese removal, is chlorinated and as a last step, fluoride is added to match levels found in the City of Everett water. The water from these two sources is then blended in the distribution system with City of Everett Water.

Drinking Water Treatment

Your drinking water is treated with filtration and chlorination. First, chemicals are added to the water to cause particles to lump together or coagulate. Particles are then filtered out of the water using advanced filtration techniques. Finally, chlorine is added as a disinfectant to eliminate any potentially harmful organisms that were not eliminated by the filtration process.

During the treatment process, some other things are added to your water. Fluoride is added for dental health purposes and the pH level of the water is adjusted with sodium carbonate to make it less corrosive on pipes and plumbing fixtures. Polymers are also added to improve the filtration process. Throughout the treatment process, additives are carefully monitored and the water is continually tested to make sure it is safe.

Detected Regulated Contaminants

Parameter	Major Source	Units	EPA Regulations		Everett/PUD 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	0-0.8	0.8%	Yes
Total coliform bacteria monitoring tracks the microbial quality in the water distribution system. Everett collects approximately 125 samples per month or 1,500 per year. Not more than 5 percent of the monthly total can be positive for total coliforms. One routine sample collected in May 2016 was positive. The location was retested and the results were negative. No total coliform was detected the remainder of 2016.							
Fluoride	Dental health additive	ppm	2	4	0.1–1.0	0.7	Yes
Fluoride is added to your water in carefully controlled levels for dental health. In April 2016, the Washington State Department of Health changed the fluoridation requirements to a target of 0.7 ppm from the previous target of 1.0 ppm. The minimum value of 0.1 ppm is due to several maintenance-related feed outages lasting no more than a few hours in duration.							
Residual Disinfectant Level (free chlorine)	Added as a drinking water disinfectant	ppm	4.0 (MRDLG)	4.0 (MRDL)	0.2–1.0	0.7	Yes
Haloacetic Acids (5) (HAA5)	By-product of drinking water chlorination	ppb	N/A	60	27–39*	36**	Yes
Total Trihalomethanes (TTHM)	By-product of drinking water chlorination	ppb	N/A	80	28–65*	48**	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 the eight locations in Everett which are monitored to determine compliance with the current regulations. *= range of results taken from all eight locations. **= highest locational running annual average of the eight sites that were monitored.							
Turbidity	Soil erosion	NTU	N/A	TT	100%	0.05	Yes
Turbidity is a measure of the amount of particulates in water 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 used to remove these particulates. The values reported are the lowest monthly percentage of samples that met the EPA turbidity limit and the highest single filtered water turbidity measurement obtained during the year. In 2016, no filtered water turbidity results were above the EPA 0.3 NTU limit so the lowest percentage was 100%. The plant targets production of filter water turbidities of 0.10 NTU or less.							

Lead, Copper and pH

			EPA Regulations		Everett Water Results		
Parameter	**Major Source**	**Units**	**Ideal Level/Goal (MCLG)**	**Action Level (AL)**	**90th % Level**	**Homes Exceeding the AL**	**Comply?**
Copper	Plumbing, erosion of natural deposits	ppm	1.3	1.3	0.122	0 of 108 (0.0%)	Yes
Lead	Plumbing, erosion of natural deposits	ppb	0	15	2	0 of 108 (0.0%)	Yes
The US EPA and state regulations require systems to monitor for the presence of lead and copper at household taps every three years. Everett and many of the systems it supplies conduct lead and copper monitoring in their combined service area as a regional group. The above data was collected in 2015. The next round of required regional tap sampling will be conducted in the summer of 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. In the past, the results for water tested before it enters household plumbing were lower than the tap results. This indicates that there is virtually no lead or copper in the water, but household plumbing may contribute to the presence of 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 7.4	Yes
The Washington State Dept of Health requires Everett to operate the corrosion control treatment program at or above a minimum daily average pH of 7.4. pH is measured 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 2016, the average daily pH never dropped below 7.4.							

USEPA regulations require this statement be included with the lead and copper sampling results regardless of the levels observed:

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.

Detected Unregulated Contaminants

			Everett Water Results	
Parameter	**Units**	**Ideal Level/Goal (MCLG)**	**Range Detected**	**Average Value**
Bromodichloromethane	ppb	0	1.3– 3.0	1.7
Chloroform (trichloromethane)	ppb	70	26- 62	37
Dichloroacetic Acid	ppb	0	3- 16	13
Trichloroacetic Acid	ppb	20	17- 26	22
These substances are individual 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 MCL's for Total Trihalomethanes and Haloacetic Acids (5).				

Voluntary Information

Parameter	Units	Everett Water Results	
		Range Detected	Average Value
Alkalinity[1,2]	ppm	14- 26.5	17.2
Aluminum[1]	ppm	0.005- 0.080	0.02
Arsenic[3]	ppb	<0.1-0.2	0.2
Calcium Hardness[1,2]	ppm[4]	7.8- 13	9.5
pH[1]	s.u.	7.6- 9.8	8
Sodium[3]	ppm	5.5–7.2	6.2
Total Hardness[1,2]	ppm[4]	10.3–15.6	12.3

[1] Results are from samples collected from 26 locations in Everett's distribution system.
[2] Hardness and alkalinity units are in ppm as $CaCO_3$ (calcium carbonate equivalent units).
[3] Arsenic and Sodium were monitored at the treatment plant effluent.

Cryptosporidium

Cryptosporidium is a one celled intestinal parasite that if ingested may cause diarrhea, fever, and other gastrointestinal distress. It can be found in all of Washington's rivers, streams, and lakes and comes from animal or human wastes deposited in the watershed. *Cryptosporidium* is resistant to chlorine, but is removed by effective filtration and sedimentation treatment such as that used by Everett. It can also be inactivated by certain types of alternate disinfection processes such as ozonation and UV light contactors. Past monitoring results suggest that *Cryptosporidium* is present in the source only occasionally and at very low concentrations. In 2016, Everett collected monthly *Cryptosporidium* oocysts samples from the source water at the plant intakes. One sample contained 0.097 oocysts/L.

Treatment Polymers

During water treatment, organic polymer coagulants are added to improve 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.

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 and performance criteria intended to reduce the level of a contaminant in drinking water.

Action Level (AL) – The concentration of a contaminant, which, if exceeded, triggers a 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 the US EPA has not established MCLGs for these substances.

All 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 at 1-800-426-4791.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Conservation

The City of Granite Falls is continually working to reduce water loss caused by leaks in the system. Several leaks have been identified and repaired over time. The water loss rate is currently at only 7.5%, which is below the 10% standard set by the Washington State Water Use Efficiency Rule. Rate structures are based on encouraging conservation. Your help conserving water is always appreciated.

Want to Get Involved?

If you are interested in learning more about your water utility and water quality, or participating in the decision making process, there are a number of ways you can get involved. You can participate through public hearings associated with environmental permitting and the review of new facilities. There are regular briefings at City Council meetings. There are also formal or informal communications with elected officials. Check the local newspaper for information on public meetings on water quality, water policies and other issues, or call us at (360) 691-6441. The Council meets the first and third Wednesday of each month at 7:00 P.M. in the Council Chambers located at 206 South Granite Avenue.

This information is provided to you by:

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For more information about drinking water quality, please contact:

Environmental Protection Agency (EPA)
Phone: 1-800-426-4791
Website: www.epa.gov/safewater

State Department of Health (DOH)
Phone: 1-800-521-0323
Website: www.doh.wa.gov