

**2017 CONSUMER CONFIDENCE REPORT**  
**SUDDENVIEW WATER SYSTEM, ID 12451 F, SNOHOMISH COUNTY**

Valued Customer,

We are pleased to present this year's annual water quality report. The purpose of this report is to keep you informed of the continued safe and dependable supply of quality drinking water we provide to you. It is through our commitment to careful monitoring and continued improvement of the water distribution process and protection of your water resource that we ensure the quality of your water.

**The Suddenview water system is owned and operated by Iliad Water Company LLC.** Iliad provides water services to 23 communities in Washington State. To learn more please visit our website at [www.iliadnw.com/water/](http://www.iliadnw.com/water/). Your certified operators are Jared Hays and Jamin Udman. If you have any questions about your water system or this report contact our office Monday – Friday between the hours of 8:00am and 4:30pm by mail at 1107 S. Bailey St., Seattle WA 98108, email at [services@iliadnw.com](mailto:services@iliadnw.com), or by phone at 206-764-3345 / 800-928-3750. For emergencies after business hours please call our 800-928-3750 number.

**Iliad Water Company purchases water from the City of Snohomish and supplies it to you through our source S03 well.** Activity is restricted to the area to minimize contamination of the well. The City of Snohomish has two sources for water: the Pilchuck River and water they purchase from the City of Everett. The City of Everett gets their water from the Spada Lake Reservoir located in the Upper Sultan River Watershed which is patrolled and human activities limited to minimize impact on the water supply. From the Spada Lake Reservoir the water flows to the Chaplain Reservoir where the City of Everett's water treatment facility is located. The water is treated using coagulation, flocculation, filtration, and chlorine for disinfection. The City of Snohomish 2017 water quality Sampling Results are attached. To see their entire 2017 Water Quality Report please visit [www.ci.snohomish.wa.us](http://www.ci.snohomish.wa.us).

**We routinely monitor for contaminants in your drinking water according to Federal and State Laws.** The water quality information presented in the table below is from the most recent round of testing done according to regulations. All data shown were collected during the last, January 1<sup>st</sup> to December 31<sup>st</sup>, 2017, unless otherwise noted in the table. There were no water quality maximum contaminant level violations.

**GENERAL INFORMATION REQUIRED BY THE DEPARTMENT OF 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 pose a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA's) Safe Drinking Water Hotline (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 microbial contaminants are available from the Safe Drinking Water Hotline (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 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 drinking water, including bottled water, and the sources of contamination:**

- **Microbial contaminants**, such as viruses, parasites, and bacterial that may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife.
- **Inorganic contaminants**, such as salts and metals, which can occur naturally or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming.
- **Pesticides and herbicides**, which may come from various sources such as agriculture, urban stormwater runoff, and resident uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production. They can also come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants**, which can occur naturally or result from oil and gas production and mining activities.

**Department of Health (DOH) and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems.** The Food and Drug Administration (FDA) and the Washington Department of Agriculture (AGR) regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Website: Department of Health [www.doh.wa.gov](http://www.doh.wa.gov), U.S. Environmental Protection Agency [www.epa.gov](http://www.epa.gov), Food and Drug Administration [www.fda.gov](http://www.fda.gov), and Washington Department of Agriculture [www.agr.wa.gov](http://www.agr.wa.gov).

**The Washington State Department of Health reduced the monitoring requirements** for Asbestos, Dioxin, Endothall, EDB and other soil fumigants, Glyphosphate, and Diquate because the sources are not at risk of contamination. The last sample collected for these contaminants were found to meet all applicable standards.

**SOURCE WATER PROTECTION TIPS**

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides.
- Dispose of chemicals properly, for example, take used motor oil to a recycling center.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Volunteer in your community. Find a watershed or wellhead protection organization you community and volunteer to help. If there are no active groups, consider starting one. Use the EPA's Adopt Your Watershed to locate groups in your community, or their Information Network to find out how to start a watershed team.

**REQUIRED ADDITIONAL INFORMATION ON LEAD**

In Washington State, lead in drinking water comes primarily from materials and components used in household plumbing. The more time water has been sitting in piped, the more dissolved metals, such as lead, it may contain. Elevated levels of lead can cause serious health problems, especially in pregnant women and young children.

To help reduce potential exposure to lead: for any drinking water tap that has not been used for 6 hours or more, flush water through the tap until the water is noticeably colder before using for drinking or cooking. You can use the flushed water for watering plants, washing dishes, or general cleaning. Only use water from the cold-water tap for drinking, cooking, and especially for making baby formula. Hot water is likely to contain higher levels of lead. If you care concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water is available from EPA's Safe Drinking Water Hotline at 1-800-426-4791 or online at <http://www.epa.gov/safewater/lead>.

## IMPORTANT TERMS:

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

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

**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 a known or expected risk to health. MCLGs allow for a margin of safety.

**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.

**MRDL (Maximum Residual Disinfectant Level Goal):** 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.

**Trihalomethanes (TTHM) and Haloacetic Acids (HAAS):** Form as by-products of the chlorination process that is used to kill or inactivate disease causing microbes.

**Turbidity:** A measurement 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.

### UNITS OF MEASURE

**mg/L (milligrams per Liter):** One part substance per liter of water. One milligram per liter is equal to one part per million (ppm).

**NA:** Not applicable

**ND:** Not detected

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

**pCi/L (Picouries per liter):** A measure of radioactivity.

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter mg/l).

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter ug/l).

**ug/L (Micrograms per Liter)**

**µS/cm (Siemens per cm)**

SUDDENVIEW WATER SYSTEM							
REGULATED SUBSTANCES WATER ANALYSIS DATA TABLE							
Substance	Typical Sources	Sample Date	Unit Meas.	Maximum Allowable (MCL)	Ideal Level/Goal (MCLG)	Level Detected	Comply? Y/N
Total Coliform Bacteria	Naturally present in the environment	Monthly	% Positive	5% per month	0	ND	YES
E-Coli	Human and animal fecal waste	Monthly	% Positive	5% per month	0	ND	YES
Total coliform bacteria testing is used to monitor microbial quality in the water distribution system. Iliad collects one coliform sample per month.							
<b>DISINFECTANT BY-PRODUCT (DBP) Tested for 12 substances. Detected contaminants are listed below.</b>							
Substance	Typical Sources	Sample Date	Unit Meas.	Maximum Allowable (MCL)	Ideal Level/Goal (MCLG)	Level Detected	Comply? Y/N
<b>Halo-Acetic Acids</b>							
Monochloroacetic Acid	By-product of drinking water chlorination	7/19/2017	ug/L			2.3	YES
Dichloroacetic Acid	By-product of drinking water chlorination	7/19/2017	ug/L			9.9	YES
Trichloroacetic Acid	By-product of drinking water chlorination	7/19/2017	ug/L			9.4	YES
HAA(5)	By-product of drinking water chlorination	7/19/2017	ug/L		60	21.6	YES
<b>Other</b>							
Bromochloroacetic Acid		7/19/2017	ug/L			1.2	YES
<b>EPA Regulated - Under Trihalomethanes Program</b>							
Chloroform	By-product of drinking water chlorination	7/19/2017	ug/L			20.4	YES
Bromodichloromethane	By-product of drinking water chlorination	7/19/2017	ug/L			3.9	YES
Chlorodibromomethane	By-product of drinking water chlorination	7/19/2017	ug/L			1.8	YES
Total Trihalomethane	By-product of drinking water chlorination	7/19/2017	ug/L		80	26.1	YES
These substances are individual disinfection by-products for which no MCL standard has been set, but which must be monitored to comply with the USEPA Disinfection By-products Rule. Based on population served and that the water is purchased from the city of Snohomish, coming from the city of Everett, we are required to collect one TTHM sample and one HAA5 sample every year.							
<b>LEAD and COPPER</b>							
Substance	Typical Sources	Sample Date	Unit Meas.	AL	Level Detected	Average	Comply? Y/N
Lead - 5 sites	Plumbing, erosion of natural deposits	10/18/2017	ppb	0.015	0.004-0.007	0.0064	YES
Copper - 5 sites	Plumbing, erosion of natural deposits	10/18/2017	ppm	1.3	0.034-0.038	0.038	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 2017 and the next round will be in 2020.							

**ILIAD Water Company LLC**

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## 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 19,000 connections (estimated customer base of approximately 47,900 people) and includes 360 miles of pipe, 14.1 million gallons of storage, 12 pump stations, 9 City of Everett taps, and 19 major pressure zones.

Substance	Major Source	Units	EPA Regulations		Your Water Testing Results		
			Maximum Goal (MCLG)	Maximum Allowable (MCL)	Min./Max. Range	Average or Highest Value	Comply?
Nitrate	Erosion of natural deposits, animal waste	ppm	10	10	0 – 0	0	YES
Arsenic	Erosion of natural deposits	ppb	0	10	< 0.1 – 0.2	0.1	YES
Barium	Erosion of natural deposits	ppm	2	2	0.01	0.01	YES
Manganese	Erosion of natural deposits	ppm	N/A	0.05 (SMCL)	0.1 – 0.03	0.02	YES
Iron	Erosion of natural deposits	ppm	N/A	0.3	0.01 – 0.05	0.03	YES
Gross Beta <sup>1</sup>	Decay of man-made & natural deposits	pCi/L	0	50	0 – 1.02	0.26	YES

<sup>1</sup>EPA considers 50 pCi/L to be the level of concern for beta particles.

Total Coliform Bacteria	Naturally present in the environment	% positive	0	Not more than 5% positive per month	0%	0%	YES
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Total coliform bacteria testing is used to monitor microbial quality in the water distribution system. The PUD collects 50 coliform samples per month from dedicated sites within the Lake Stevens Integrated Water System. Not more than 5 percent of the monthly total can be positive for total coliforms.

Fluoride	Dental health additive	ppm	2	4	0.5 – 0.8	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.

Haloacetic Acids <sup>2</sup>	By-product of drinking water chlorination	ppb	N/A	60	24.1 – 47	37.8	YES
Total Trihalomethanes <sup>2</sup>	By-product of drinking water chlorination	ppb	N/A	80	18.5 – 46.2	39.5	YES
Free Chlorine Residual	Measure of disinfectant added to water	ppm	4 (MRDLG)	4 (MRDL)	0.3 – 1.13	0.86	YES

<sup>2</sup>Haloacetic 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%	0.15	YES
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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 Department of Health. Although the problem was resolved and correct data was provided to the Department of Health, this constitutes a monitoring violation that requires public notification.

**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, the City of Everett 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.

Substance	Major Source	Units	EPA Regulations		Your Water Testing Results		
			Maximum Goal (MCLG)	Action Level (AL)	90th % Level	Homes Exceeding the AL	Comply?
Copper	Plumbing, erosion of natural deposits	ppm	1.3	1.3	0.766	None	YES
Lead	Plumbing, erosion of natural deposits	ppb	0	15	4	1	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 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. 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](http://www.epa.gov/safewater/lead).

**If you are interested in participating in our 2018 Lead & Copper sampling program, please call us at 425-397-3000 during business hours.**

(Testing results for this water system continued on next page)

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

### UNREGULATED SUBSTANCES

Substance	Maximum Goal (MCLG)	Your Water Testing Results	
		Min./Max. Range	Average Value
Bromodichloromethane <sup>1</sup> (ppb)	0	1.1 – 2.2	1.6
Chloroform (trichloromethane) <sup>1</sup> (ppb)	70	17.3 – 44.0	32.0
Dichloroacetic Acid <sup>1</sup> (ppb)	0	3.4 – 23.8	12.7
Trichloroacetic Acid <sup>1</sup> (ppb)	20	15.3 – 27.7	22.2
Monochloroacetic Acid <sup>1</sup> (ppb)	None	0 – 4.2	0.7

<sup>1</sup>Although these substances are not regulated individually, their results are added together to obtain the Total Trihalomethane and Haloacetic Acid results in the above table.

### 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)	14 – 101	42
Aluminum (ppb)	0.01 – 0.2	0.02
pH (standard unit)	6.9 – 9.2	8.1
Sodium (ppm)	8.3 – 8.5	8.4
Total Hardness (ppm)	12 – 110	69
Chloride (ppm)	5.8	5.8
Sulfate (ppm)	12	12

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 23 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.

Substance	Major Source	Units	EPA Regulations		Your Water Testing Results		
			Maximum Goal (MCLG)	Maximum Allowable (MCL)	Min./Max. Range	Average 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 2017.

Haloacetic Acids <sup>2</sup>	By-product of drinking water chlorination	(ppb)	N/A	60	39.3	39.3	YES
Total Trihalomethanes <sup>2</sup>	By-product of drinking water chlorination	(ppb)	N/A	80	44.4	44.4	YES
Free Chlorine Residual	Measure of disinfectant added to water	(ppm)	4 (MRDLG)	4 (MRDL)	0.19 – 0.82	0.58	YES

<sup>2</sup>Haloacetic 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.

Substance	Major Source	Units	EPA Regulations		Your Water Testing Results		
			Maximum Goal (MCLG)	Action Level (AL)	90th % Level	Homes Exceeding the AL	Comply?
Copper	Plumbing, erosion of natural deposits	ppm	1.3	1.3	0.021	None*	YES
Lead	Plumbing, erosion of natural deposits	ppb	0	15	0	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. These results are from 2015. The next round of required sampling will be conducted in 2018.

\*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.

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](http://www.epa.gov/safewater/lead).

### UNREGULATED SUBSTANCES

Substance	Maximum Goal (MCLG)	Your Water Testing Results	
		Min./Max. Range	Average Value
Bromodichloromethane <sup>3</sup> (ppb)	0	2.2	2.2
Chloroform (trichloromethane) <sup>3</sup> (ppb)	70	42.2	42.2
Dichloroacetic Acid <sup>3</sup> (ppb)	0	16.9	16.9
Trichloroacetic Acid <sup>3</sup> (ppb)	20	19.6	19.6

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