





## SNOHOMISH HAS HIGH QUALITY WATER, WHERE DOES IT COME FROM?

The City of Snohomish has two sources for providing drinking water: the Pilchuck River and water purchased from the City of Everett.

The City of Snohomish surface water treatment plant is located about 16 miles northeast of the city, near Granite Falls on the Pilchuck River. The plant (built in 1981) treats an average of 275,000 gallons of water daily that is drawn from the Pilchuck River at the weir dam (built in 1936) and sends it through 16 miles of transmission main to reservoirs with the capacity to hold over 5 million gallons of water. It is then distributed to the south pressure zone, which is generally the area south of Tenth Street and includes the outlying areas of Ludwig Road, Sexton Road, 92nd Street, and Airport Road.

The area north of Tenth Street - the north pressure zone - is supplied with water purchased from the City of Everett. This water is delivered directly to customers and is stored in a 2.7-million-gallon reservoir located off of Terrace Avenue.

City of Everett water is supplied from Spada Reservoir, which was created in 1965. The reservoir holds about 50 billion gallons of water and is located about 30 miles east of Everett in the Sultan Basin Watershed. From Spada Lake, the water flows through about 7 miles of tunnels and pipelines to Chaplain Reservoir where the City of Everett water treatment facility is located. Chaplain Reservoir holds about 4.5 billion gallons of water.



### Water Treatment Process:

The treatment process for providing safe, quality drinking water consists of a series of steps. First, raw water is drawn from our water source (Pilchuck River) and sent to a mixing tank where Alum, polymer, and soda ash are added. The addition of the Alum and polymer causes small particles to adhere to one another (referred to as floc), making the particles large enough to be removed from the water by filtration. The addition of soda ash adjusts the pH of the water, making it less corrosive to pipes and plumbing. Next, the water is filtered through layers of gravel, sand, and fine coal, to remove floc created in the first step. Finally, chlorine is added for disinfection, to remove harmful viruses and bacterial parasites that may remain in the water following filtration.



### COMMUNITY PARTICIPATION

You are invited to participate in our public City Council meetings and voice your compliments or concerns about our drinking water. We meet on the first and third Tuesday of each month, beginning at 7:00 p.m. at the Snohomish School District Resource Center in the George Gilbertson Room, 1601 Avenue D, Snohomish, Washington 98290.

# FIGHT F.O.G.

(Fats, Oils & Grease)

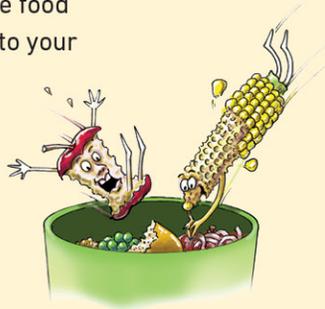
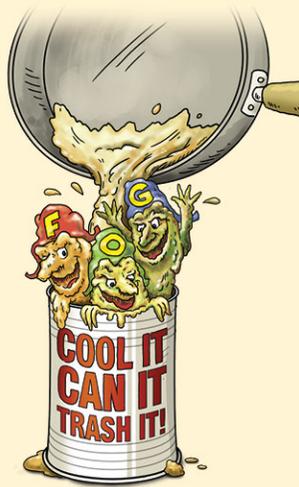
## Keep Fats, Oils and Grease Out of Your Drain and Prevent Clogged Pipes and Sewer Back-ups!

1 Pour cold fats, oils and grease into a covered, disposable container and throw it into your garbage. Never pour fats, oil or grease down sink drains or toilets.

2 Soak up spilled oils and grease with an absorbent material such as paper towels or kitty litter and throw into your garbage.

3 Before you wash dishes, scrape food scraps, fats, oils and grease into your garbage.

4 Use sink strainers to catch any remaining food waste while washing dishes.



### PREVENTION, REDUCTION AND ELIMINATION OF FATS, OILS AND GREASE

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## WHY PROVIDE A WATER QUALITY REPORT?

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 source water include:

**Microbial contaminants**, such as viruses and bacteria, which may come from wastewater 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 stormwater runoff, 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 stormwater runoff, and residential uses.

**Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can 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, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

## CROSS CONNECTIONS AND YOU!

Did you know common hazards in and around your house can contaminate your drinking water as well as your neighbors?

These hazards are known as cross-connections, and can result in contaminated water back-flowing into your home's drinking supply without you even knowing.

### TWO COMMON CROSS-CONNECTIONS ARE:

Any hose is a cross-connection when left submerged in a swimming pool, laundry sink, or car wash bucket.

To protect your water from these cross connections, make sure to have air vacuum breakers installed on each of your hose bibs.

These simple devices are inexpensive and can be purchased from your local hardware store. They are easy to install; you just screw them on.

Your in-ground irrigation system is also a cross connection so make sure to do the following:

1. Confirm your irrigation system has a back flow assembly device, if not, get one installed.
2. Test the backflow prevention device annually
3. Turn in your test results to the City of Snohomish Water Department.

If you have any questions, please contact Ann Ray, Water Quality Control Specialist at 360-568-7070 x232.



**SAMPLING RESULTS:** During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. Although all of the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance was present in the water.

### CITY OF SNOHOMISH

Contaminant	Year	MCL	MCLG	Amt Detect	Range <sup>1</sup>	Violation
Chlorine (ppm)	2015	4	4	0.59	0.01 - 1.39	No
Turbidity (ntu)	2015	TT	NA	0.03	0 - 0.1	No
Turbidity (lowest %)	2015	TT=95%	NA	0	100%	No
Haloacetic Acids (ppb)	2015	60	NA	27.3**	1.4 - 46.3*	No
Total Trihalomethanes(ppb)	2015	80	NA	55.9**	33.0 - 83.0*	No
Total Coliform (% Positive)	2015	5% month	0	ND	NA	No

<sup>1</sup> Range of results when more than one sample taken per year

\* Range of results taken from all four monitoring locations

\*\* Highest Locational Running Annual Average of all four monitoring locations

Contaminant	Year	Action Level (AL)	MCLG	Amt Detect	Homes exceed AL	Violation
Copper (ppm)	2015	1.3	1.3	0.059	0/37	No
Lead (ppb)	2015	15	0	1.6	0/37	No

Contaminant (Unregulated)	Year	MCL	MCLG	Amt Detect	Range	Violation
Bromodichloromethane (ppb)	2015	NA	NA	2.5	1.5 - 4.3	No
Chloroform (ppb)	2015	NA	70	53.5	31.5 - 80.3	No
Dichloroacetic Acid (ppb)	2015	NA	NA	8.1	2.4 - 18.1	No
Trichloroacetic Acid (ppb)	2015	NA	20	19.3	1.4 - 32.4	No
Monochloroacetic Acid (ppb)	2015	NA	20	2.3	2.3 - 2.4	No

These substances are individual disinfection by products for which no MCL/MCLG standard may have been set, but must be monitored to determine compliance with the USEPA Stage 2 Disinfection by products Rule MCLs for Total Trihalomethanes and Haloacetic Acids (5).

Contaminant	Year	MCL	MCLG	Amt Detect	Range	Violation
Sodium (ppm)	2013	NA	NA	15.5	15.5 - 15.5	No
Magnesium (ppm)	2013	NA	NA	1.5	1.5 - 1.5	No
Calcium (ppm)	2013	NA	NA	3.87	3.87 - 3.87	No

USEPA and State regulations require water systems to monitor for the presence of lead and copper at household taps every three years. Snohomish under the administration of the City of Everett participate in a regional monitoring program. The above data was collected in 2015. 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.

### TABLE DEFINITIONS

**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.

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

**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 contamination.

**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.

### CITY OF EVERETT

Contaminant	Year	MCL	MCLG	Amt Detect	Range <sup>1</sup>	Violation
Chlorine (ppm)	2015	4	4	0.6	0.1 - 1.0	No
Turbidity (ntu)	2015	TT	NA	0.06	100%	No
Fluoride (ppm) <sup>2</sup>	2015	4	2	0.8	0.6 - 0.9	No
Haloacetic Acids (ppb)	2015	60	NA	37.0**	20.0-40.0*	No
Total Trihalomethanes(ppb)	2015	80	NA	50.0**	26.0-60.0*	No
Total Coliform (% Positive)	2015	5% month	0	None	0%	No

<sup>1</sup> Range of results when more than one sample taken per year

<sup>2</sup> Fluoride is added in carefully controlled levels for dental health

\* Range of results taken from all eight monitoring locations

\*\* Highest Locational Running Annual Average of all eight monitoring locations

Contaminant	Year	Action Level (AL)	MCLG	Amt Detected	Homes exceed AL	Violation
Copper (ppm)	2015	1.3	1.3	0.122	0/108	No
Lead (ppb)	2015	15	0	2	0/108	No

Contaminant	Year	Daily Avg	Min Daily Avg	Average	Minimum	Violation
pH (s.u.)	2015	7.6	7.4	7.6	7.4	No

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. The pH is measured six times per day and the average daily pH cannot be below 7.4 for more than nine days every six months. In 2015, the average daily pH never dropped below 7.4.

Contaminant (Unregulated)	Year	MCL	MCLG	Amt Detect	Range	Violation
Bromodichloromethane (ppb)	2015	NA	NA	1.9	1.1 - 3.0	No
Chloroform (ppb)	2015	NA	70	40	25.0 - 57.0	No
Dichloroacetic Acid (ppb)	2015	NA	NA	9	2.0 - 15.0	No
Trichloroacetic Acid (ppb)	2015	NA	20	21	17.0 - 27.0	No

These substances are individual disinfection by products for which no MCL/MCLG standard may have been set, but must be monitored to determine compliance with the USEPA Stage 2 Disinfection byproducts Rule MCLs for Total Trihalomethanes and Haloacetic Acids (5).

In January 2011, the US Department of Health and Human Services (HHS) released a proposal to reduce the recommended drinking water fluoride concentration target to a single national standard of 0.7ppm based on recent research on changed fluoride and water consumption patterns in the U.S. This recommendation has not been made final in Washington State, but in 2011 Everett and other water systems in Washington reduced the target fluoride residual in their drinking water from 1.0ppm to 0.8ppm. 0.8ppm is the lowest level allowed under current State regulations. The Washington State Board of Health is expected to adopt 0.7ppm as the new standard. At that time, the Washington State Department of Health will change the requirements and water systems will begin adjusting fluoride levels to the new recommended level.

**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.

**NA:** Not applicable

**ND:** Not detected

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

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

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

**Trihalomethanes (THM) and Haloacetic Acids (HAA5)** 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.

### Message from the EPA

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 microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

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 Snohomish 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 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking 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://water.epa.gov/drink/info/lead>.