

THREE LAKES WATER ASSOCIATION

# 2015 Annual Water Quality Report

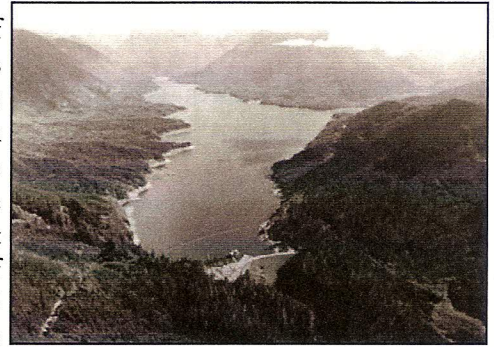
March 2016

## What's in Your Drinking Water?

The Three Lakes Water Association is pleased to provide our customers with our 18th annual water quality report. The purpose of this water quality report is to inform our customers about the high quality of their drinking water and their water system. We want you to know where your water comes from, what it contains, and how it compares to stringent state and federal water quality standards.

The water you drink is supplied from Spada Lake, which is managed by the City of Everett. A map located on the last page of this report illustrates the City's supply system which provides service to many water systems in the area. Drinking water quality is determined by testing for a variety of natural and man-made contaminants that can enter the water system.

The City of Everett conducts an aggressive testing program which goes beyond the government requirements. Of the more than 175 substances the City tested for this



Spada Lake

past year, most were not detected and those that were detected were found at levels far below the most stringent drinking water standards. Please read through this report and if you have any questions, please contact the Water Association at (360) 568-8022.

## Cross-Connection Control

On January 21, 2008 the Association's Board approved a Cross-Connection Control Program as required by the Washington State Department of Health (DOH). The full text of this program is available at the Association office. The program describes the purveyor's responsibility to protect the water system from contamination via cross-connections.

What's a cross-connection? Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the

pressure in the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to unusual occurrences (main breaks, heavy water demand) causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage). Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool, animal water trough or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals.

## Association Website

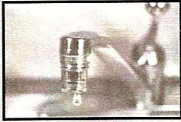
The Association has established a website! It can be accessed at <http://3lwa.org>. To access the "members only" area, login with the username "threelakes" and the password "171st". The Association bylaws, approved minutes and other reference materials will be posted there. Please note that the username and password are case sensitive.

## Water Use Efficiency

In October 2010, the State Supreme Court affirmed that the 2003 Municipal Water Law applies to privately-owned systems, including this Association. With the recent adoption of its new water system plan, the Association extended the goal to reduce annual average day demand per connection by 0.5% per year. The measures planned to achieve this goal include system-wide leak detection efforts and customer conservation. There has been a total of over 16.3 million gallons in net savings for the seven years since the goal was originally set! Please continue to do your part!

**Be Water Smart!**

## Residential Tap Monitoring for Lead and Copper

 <b>Combined Regional Monitoring for Lead and Copper</b>				
Parameter & Units	MCLG	Action Level	90th % Level	# Homes exceeding action level
Copper, ppm	1.3	1.3	0.122	0 of 108 (0.0%)
Lead, ppb	0	15	2	0 of 108 (0.0%)

Source of Contamination: Corrosion of household plumbing system.

USEPA and state regulations require water 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 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.

The City of Everett's source waters contain virtually **no lead or copper**. 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.

Three Lakes Water Association 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>

Although there is no detectable lead in water, tests from household taps in the distribution system show there can be low levels of lead and copper in tap water. This is primarily caused from corrosion of household plumbing systems. You may potentially have small levels of lead and copper in your home. Everett treats the water to minimize the potential for lead to enter the water and the results indicate that the program is successful.

The Three Lakes Water Association contributes to this testing by providing randomly taken water samples to the City for testing. The results provided in this report represent all testing performed by the City of Everett.

## Additional Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons – such as persons with cancer who are undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, or some elderly persons and infants can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

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 USEPA.

### Definitions

**Action Level (AL)** – The concentration of a contaminant that triggers treatment or other requirements that a water system must follow.

**ppm/ppb** – One part per million/one part per billion. A part per million means 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.

**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 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.

**N/A** – Not Applicable. Means the EPA has not established MCLGs for these substances.

**Nephelometric Turbidity Unit (NTU)** -Turbidity, which is a measure of the water's clarity, has no direct health effect but indicates the overall quality of the water.

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

### Association Office—Verizon Lease

Monthly Board meetings are held at the office located at 17503-58th St SE on the 2<sup>nd</sup> Tuesday at 7 pm. Come join us! Exciting news! Verizon Wireless is now a customer. They lease space on our tank for their cell antennas serving our local area. Annual lease payments began Jan. 16 for this multi-year agreement.

## 2015 Water Quality Monitoring Results

As water travels over the land, it dissolves natural minerals and picks up other substances produced by human and animal activities. The Dept. of Health and the U.S. Environmental Protection Agency sets national standards for over 100 potential drinking water contaminants.

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, *Cryptosporidium* and potential health effects can be obtained by calling the U.S. Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

The results for the 2015 testing of your water supply are illustrated in the table below. The first column lists each compound tested and the units of measure. The second and third is the highest levels allowed by the U.S. EPA. The fourth column illustrates the levels found in the City of Everett's drinking water supply, including an average and a range. The last column shows the source of the compounds.

All of the compounds found in the City of Everett's water supply were found to be at **levels lower than the maximum allowed** by the U.S. EPA.

Detected Parameter & Units of Measure	EPA's Goal (MCLG)	Maximum Allowed (MCL)	Levels in your water		Complies with Required Levels Compliance	Where does it come from? Typical Sources
			Average or Highest	Range or Other		
Turbidity, NTU <sup>1</sup>	N/A	TT	0.06	100%	<b>YES!</b>	Soil Erosion
Fluoride, ppm <sup>2</sup>	2	4	0.8	0.6-0.9	<b>YES!</b>	Water additive which promotes strong teeth
Total Trihalomethanes (TTHM), ppb <sup>3</sup>	N/A	80	50.0**	26.0-60.0*	<b>YES!</b>	By-product of drinking water chlorination
Haloacetic Acids (5) (HAA5), ppb <sup>3</sup>	N/A	60	37.0**	20.0-40.0*	<b>YES!</b>	By-product of drinking water chlorination
Total Coliform Bacteria, % positive samples <sup>4,5</sup>	0	5% positive per month	0%	None	<b>YES!</b>	Naturally present in the environment
Residual Disinfectant Level (free chlorine), ppm	4.0 (MRDLG)	4.0 (MRDL)	0.6	0.1-1.0	<b>YES!</b>	Drinking water disinfectant
Detected Unregulated Contaminants						
Bromodichloromethane, ppb	0	N/A	1.9	1.1-3.0	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).	
Chloroform (trichloromethane), ppb	70	N/A	40.0	25.0-57.0		
Dichloroacetic Acid, ppb	0	N/A	9.0	2.0-15.0		
Trichloroacetic Acid, ppb	20	N/A	21.0	17.0-27.0		

<sup>1</sup>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 for the year. In 2015, 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.

<sup>2</sup>Fluoride is added in carefully controlled levels for dental health. In January 2011, the US Dept of Health and Human Services (HHS) released a proposal to reduce the recommended drinking water fluoride concentration target to a single national standard of 0.7 ppm based on recent research on changed fluoride and water consumption patterns in the United States. 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 1.0 ppm to 0.8 ppm. 0.8 ppm is the lowest level allowed under current State regulations. The Washington State Board of Health is expected to adopt 0.7 ppm as the new standard. At that time, the Washington State Dept of Health will change the requirements and water systems will begin adjusting fluoride levels to the new recommended level.

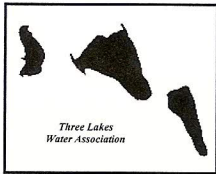
<sup>3</sup>Haloacetic acids and trihalomethanes form as by-products of the chlorination process that is used to kill or inactivate disease-causing microbes. The TTHM and HAA5 results are from the eight locations in Everett which are monitored to determine compliance with the current regulations.

\*Range of results taken from all eight locations.

\*\*Highest locational running annual average of the eight sites that were monitored.

<sup>4</sup>Total coliform bacteria monitoring is used to track microbial quality in the water distribution system. Everett collects 120-125 samples per month. Not more than 5 percent of the monthly total can be positive for total coliforms. No total coliforms were detected in 2015.

<sup>5</sup>The Association samples twice per month for disease-causing organisms. These samples are taken from representative points in the Association's distribution system on regular time intervals. All samples taken had satisfactory results.



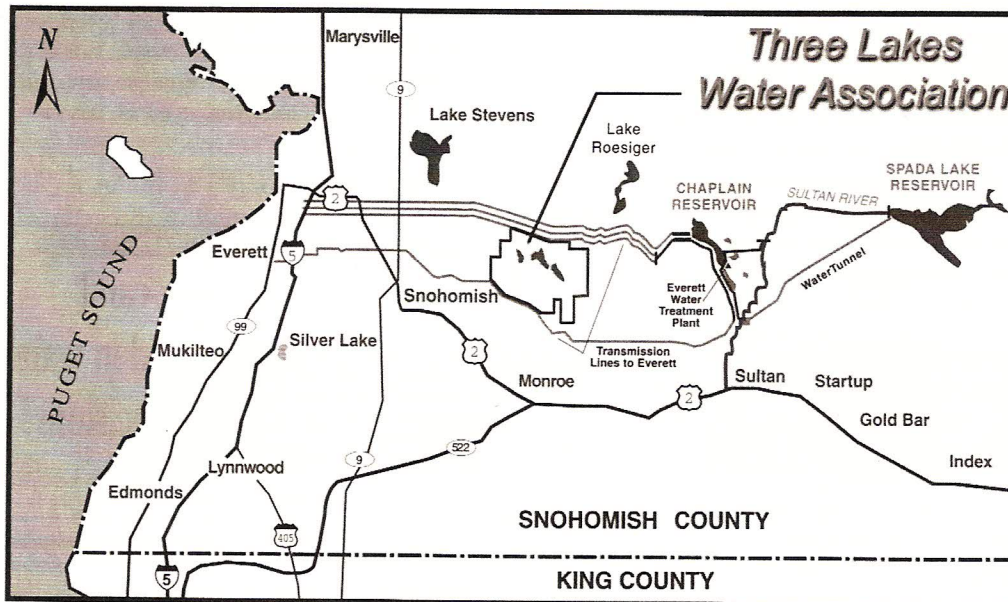
## ANNUAL WATER QUALITY REPORT

Three Lakes Water Association

P.O. Box 24

Snohomish, WA 98291

(360) 568-8022



### ***Drinking Water Source***

The source of your drinking water is rain and snowmelt collected in the Spada Lake Reservoir, which is located in the Sultan Basin Watershed. Water from this 50 billion gallon reservoir flows through a tunnel and pipeline to Chaplain Reservoir where it is held in preparation for treatment. The City of Everett maintains five large transmission pipelines, which run between the Chaplain Reservoir and the City. The Three Lakes Water Association obtains your water from two different taps located on two separate Everett transmission mains.

### ***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 Everett's source only occasionally and at very low concentrations. In 2015, Everett collected monthly *Cryptosporidium* oocysts samples from the source water at the plant intakes. No oocysts were detected.

### ***Bottled Water***

To ensure that tap water is safe to drink, the Department of Health 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 regulations establish limits for contaminants in bottled water that must provide the same protection for public health.