2012 Drinking Water Quality Report

City of Everett Public Works Department

From our Director:

We are pleased to provide this annual drinking water quality report which summarizes the findings of our 2012 drinking water quality testing program. You are receiving this report as part of a federal reporting requirement for municipal water systems. We are happy to comply because we want you to be informed about the water you drink.

Providing you safe, high-quality drinking water is our number one priority. In 2012, our water treatment plant processed 18.6 billion gallons of water. That means, on average, about 50 million gallons of water was treated and tested each day. The good news is these tests confirm that the water you receive is exceptional and meets or exceeds all government standards.

We have tried to make this report easy to understand. If you have questions, please email us at everettpw@everettwa.gov or call 425-257-8800 and ask to speak to a water quality specialist. You can also obtain a complete list of all of the compounds your water was tested for in 2012 online at: www.ci.everett.wa.us/Get_PDF.aspx?pdfID=3845.

DAVE DAVIS
Public Works Director
May 2013

Clean, Safe Drinking Water Delivered to Your Tap

Your drinking water comes from Spada Reservoir, located about 30 miles east of Everett at the headwaters of the Sultan River. This 50-billion-gallon storage facility serves as a collection point for rain and snowmelt from the Cascade Mountains. It was created in 1964 through a partnership between the City of Everett and the Snohomish County PUD as part of the Jackson Hydroelectric Project.

Spada Reservoir is located in the Upper Sultan River Watershed, an area encompassing more than 80 square miles. This is one of the wettest watersheds in the continental United States. The average annual rainfall is about 165 inches—five times the rainfall in Everett.

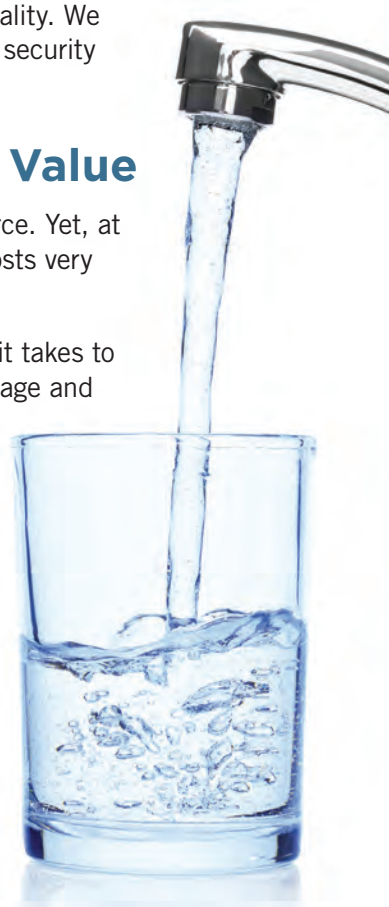
Water quality in the Sultan Basin is carefully monitored. To protect the naturally pristine water in Spada Reservoir, the watershed is patrolled and human activities are limited to minimize the impact on water quality. We continue to evaluate and adjust our security measures on an ongoing basis.

Taste, Quality and Value

Water is a life-essential resource. Yet, at about a penny a gallon, it costs very little compared to its value.

Your water rates pay for everything it takes to operate our water system, from storage and treatment, to delivering the water to your tap. Your water rates also help pay for water system improvements that ensure that we will provide high-quality drinking water for generations to come.

As this year's Drinking Water Quality Report shows, this is an exceptional value for the clean, safe, great-tasting drinking water you receive.



The Drinking Water Treatment Process

1 *IT STARTS HERE:*
Precipitation and snowmelt from the mountains are collected in Spada Lake Reservoir.

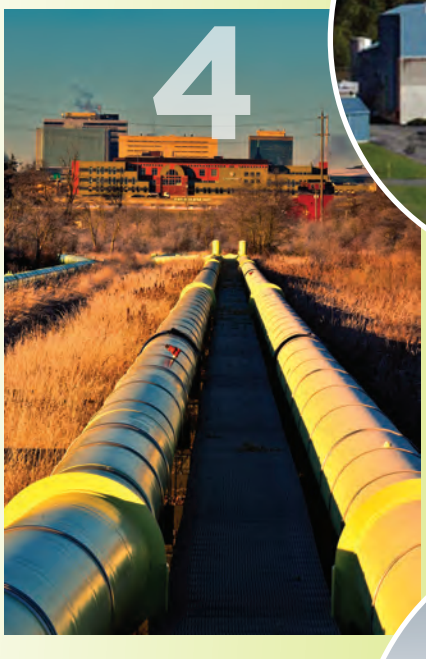
From Spada Reservoir, the water travels through a pipeline to Chaplain Reservoir which holds about 4.5 billion gallons of water. This is where the City's water treatment plant is located. At the plant, the water is treated with advanced filtration and disinfection.

First, agents are added to the water that cause particles to coagulate. Next, the water passes through large filters that remove the particles. These particles can include sediment and natural materials as well as viruses, bacteria and other disease-causing organisms. Finally, hypochlorite solution is added to the water to kill any organisms that were not removed by the filtration process.

During the treatment process, polymers are added as part of the filtration process, fluoride is added for dental health purposes and sodium carbonate is added to adjust the pH level of water so it is less corrosive on pipes and plumbing fixtures. These additives are carefully monitored and the water is continually tested to make sure it is safe to drink.

The water treatment process begins at Lake Chaplain reservoir, where the City's water treatment plant is located.

The Everett drinking water treatment plant treats water using coagulation, flocculation, filtration and disinfection.



Water transmission pipelines carry drinking water to Everett.

Treated water is delivered to about 600,000 people or 80 percent of the businesses and households in Snohomish County.

FACT: Everett's tap water continues to be some of the best in the nation.

Your Drinking Water Facts and Figures

The following statements are required by the US Environmental Protection Agency (EPA).

All water sources (both tap water and bottled water) contain impurities. As water flows 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 sewage 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 surface water, 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 surface water and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may 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, US Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which 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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA 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 people, such as people with cancer undergoing chemotherapy, people 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 and US Center for Disease Control (CDC) guidelines on appropriate means to lessen risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

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 waste 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 2012, Everett collected monthly *Cryptosporidium* oocysts samples from the source water at the plant intakes. No oocysts were detected.

PERCHLORATE

In January 2009, the US EPA released a health advisory for perchlorate. Perchlorate is an inorganic contaminant used in solid propellant for rockets, missiles, fireworks and elsewhere (e.g., production of matches, flares, explosives, etc.). Sodium hypochlorite solutions used for disinfection of water and wastewater in treatment plants have also been identified as a potential source of perchlorate contamination. Perchlorate can interfere with iodide uptake by the thyroid gland and decrease production of thyroid hormones, which are needed for prenatal and postnatal growth and development, as well as for normal metabolism and mental function in adults. US EPA set the safe health advisory limit for drinking water at 0.015 ppm (15 parts per billion). In mid 2009, Everett implemented a monthly perchlorate monitoring program at the water treatment plant to determine if the hypochlorite used for disinfection at the water plant contributed measureable levels of perchlorate to Everett's drinking water. The method used is capable of detecting perchlorate as low as 0.0004 ppm (0.4 ppb). In 2012, no perchlorate was detected in Everett's water.

TREATMENT POLYMERS

During water treatment, organic polymer coagulants are added to improve coagulation and filtration that remove particulates from water. The particulates that are removed can include viruses, bacteria and other disease causing organisms. The US EPA sets limits on the type and amount of polymer that a water system can add to the water. In addition to the US 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 US EPA.

CITY OF EVERETT • 2012 Water Quality Analysis Results

DETECTED REGULATED CONTAMINANTS

Parameter	Major Source	Units	Ideal Level/Goal (MCLG)	Maximum Allowable (MCL)	Range or Other	Average or Highest Result	Comply?
Nitrate	Erosion of natural deposits, animal waste	ppm	10	10	0.042-0.175	0.096	Yes
Total Coliform Bacteria	Naturally present in the environment	% Positive	0	5% Positive per Month	None	0.0%	Yes
Fluoride[1]	Dental health additive	ppm	4	4	0.0-1.0	0.7	Yes
Residual Disinfectant Level (free chlorine)	Added as a drinking water disinfectant	ppm	4.0 (MRDLG)	4.0 (MRDL)	0.2-1.5	0.6	Yes
Haloacetic Acids (5) (HAA5)	By-product of drinking water chlorination	ppb	NA	60	22.6-42.5	36.9	Yes
Total Trihalomethanes (TTHM)	By-product of drinking water chlorination	ppb	NA	80	26.3-54.1	49.1	Yes
Turbidity[2]	Soil erosion	NTU	NA	TT	100%	0.11	Yes

[1]0.8 ppm is the lowest level allowed under State regulations. In 2012, the fluoridation system was shut down from February 15 to April 7. During this time no fluoride was added to the water. As a result, the annual average fluoride concentration dropped from 0.8 to 0.7.
[2]Turbidity is a measure of the amount of particulates in water in Nephelometric Turbidity Units (NTU). In 2012, 100 percent of the monthly samples were below the EPA limit of 0.3 NTU.

DETECTED UNREGULATED CONTAMINANTS

Parameter	Units	Ideal Level/Goal (MCLG)	Range Detected	Average Value
Bromodichloromethane	ppb	0	1.6-2.4	1.9
Chloroform (trichloromethane)	ppb	300	24.6-52.0	37.1
Dichloroacetic Acid	ppb	0	4.8-18.4	12.9
Trichloroacetic Acid	ppb	300	16.5-23.4	19.9
Monochloroacetic Acid	ppb	None	2.0-2.8	2.3

These substances are individual disinfection by-products for which no MCL standard has been set, but which must be monitored.

LEAD, COPPER AND pH

Parameter & Units	Major Source	Ideal Level/Goal (MCLG)	Action Level (AL)	90th % Level	Homes Exceeding the AL
Lead, ppb[1]	Corrosion of household pumbing	0	15	2	None
Copper, ppm[1]	Corrosion of household plumbing	1.3	1.3	0.109	None
pH, s.u.[2]	Soda ash added to increase pH	Daily Avg 7.6	Min Daily Avg 7.4	Average 7.5	NA

[1]This data is for household taps. The results for water tested before it enters households are even lower. This indicates 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.
[2]The average daily pH cannot be below 7.4 for more than nine days every six months. In 2012, pH dropped to 7.3 for two days in January.

DEFINITIONS:

- **AL:** Action Level—The concentration of a contaminant, which, if exceeded, triggers a treatment or other requirements which 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 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 contaminants.
- **NA:** Not Applicable
- **ND:** Not Detected
- **ppb:** 1 part per billion = 1ug/L = 1 microgram per liter.
- **ppm:** 1 part per million = 1 mg/L = 1 milligram per liter. 1 ppm = 1000 ppb.
- **s.u.** = Standard Units
- **TT:** Treatment Technique—A required process intended to reduce the level of a contaminant in drinking water.

US EPA regulations require that 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.

We're in this Together

Ensuring an Adequate Supply

Water is a precious resource. Conservation protects fish and wildlife and helps ensure that water is used as efficiently as possible. Since Everett provides water to the majority of water systems in Snohomish County, we operate a regional water conservation program. The program, which was collaboratively developed and implemented in 2007, was designed to save 1.97 million gallons of water a day (MGD) by the end of 2012.

Everett has spent more than $3 million on various water conservation activities since 2007. This includes such efforts as youth education, indoor and outdoor water conservation kits, rebates for water efficient clothes washers and toilets, and leak detection. We are required to report on the progress of this program annually to the state and the customers we serve.

In 2012, 660 water conservation workshops were conducted in classrooms throughout Snohomish County, reaching more than 17,000 students. More than 1,300 rebates were issued for high-efficiency toilets. Participating water systems also distributed 3,000 indoor conservation kits, 5,000 outdoor conservation kits, leak detection brochures and summer lawn watering calendars.

Through these efforts, we collectively saved about 0.75 MGD in 2012. This brings the cumulative water savings from the regional program to 2.1 MGD—surpassing the program goal of 1.97 MGD and enough water to fill more than 50,000 bathtubs a day. By partnering together, these regional water savings were obtained for about $400,000 less than what was originally budgeted for the six-year program.

Water Conservation Opportunities

FREE Indoor Kits*

- Earth Massage shower head, two gallons per minute
- Faucet aerators, one gallon per minute
- Teflon tape

FREE Outdoor Kits*

- Garden hose nozzle
- Garden hose repair ends, female/male for 5/8 and 3/4 inch hoses

Dye Strips for Toilet Leak Detection*

- A leaking toilet can waste from 30 to more than 200 gallons of water per day
- Check your toilets for leaks using toilet dye strips

**Supplies are limited*

For more information go to: www.everettwa.org/conservation.

Our programs count on your voluntary participation.

Partnership for Safe Water

The Partnership for Safe Water is a voluntary effort supported by more than 200 water utilities, the US Environmental Protection Agency (EPA), the American Water Works Association and other prominent drinking water organizations in the United States. The goal of the program is for participating utilities to use a continuous improvement process developed by the Partnership members.

The program is designed to help drinking water utilities optimize their treatment plants to produce drinking water of a higher quality than is required by regulations. To participate, each treatment plant must demonstrate that it can consistently meet the Partnership's high water-quality standards.

Since the City of Everett began participating in the program over a decade ago, it has met the performance standards set by the Partnership. Recently, Everett renewed its commitment to continuously improve performance at its water treatment plant and is implementing some of the Partnership's tools to optimize performance at the plant.

The City of Everett will continue to participate in this cooperative effort to strive for excellence. We believe this is the best way to ensure our customers will always receive the highest quality drinking water possible.

City of Everett
Public Works
Department

3200 Cedar Street
Everett, WA 98201

INSIDE: Your Drinking Water Quality Report

In 2012, your water was tested for more than 100 possible contaminants. What does all the information in this report mean? Simply put, the data confirms that your drinking water meets or exceeds all government standards and is safe to drink.

Your Opinion Matters

Let us know how we're doing and what you think about your water. Call 425-257-8800 or email us at everettpw@everettwa.gov.

What You Can Do:

CONSERVE • BE INFORMED • GET INVOLVED

City of Everett Water Quality Office

Phone: 425-257-8800
Website: www.ci.everett.wa.us/pw

State Department of Health (DOH)

Phone: 1-800-521-0323
Website: www.doh.wa.gov/ehp/dw/

US Environmental Protection Agency (EPA)

Phone: 1-800-426-4791
Website: www.epa.gov/safewater

To get involved in decisions affecting your drinking water, attend and comment at Everett City Council meetings every Wednesday in the Council Chambers at 3002 Wetmore Ave.

Meetings begin at 6:30 p.m., except the meeting on the fourth Wednesday of each month which is at 12:30 p.m. Agendas are available on the City's website at www.ci.everett.wa.us.

City of Everett Elected Officials

MAYOR: Ray Stephanson
CITY COUNCIL: President Jeff Moore, Shannon Affholter, Scott Bader, Ron Gipson, Scott Murphy, Paul Roberts and Brenda Stonecipher.

This report is required and costs about 40 cents to produce and mail to you.

PUBLISHED BY THE CITY OF EVERETT PUBLIC WORKS DEPARTMENT • Editor: Greg Moore • Water Quality Specialist: Mark Weeks

Learn more about your water at www.ci.everett.wa.us/pw