

Drinking Water quality

Report 2015

City of Monroe Public
Works Department



Taste, Quality & Value

Water is a life-essential resource. Yet, at less than 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.

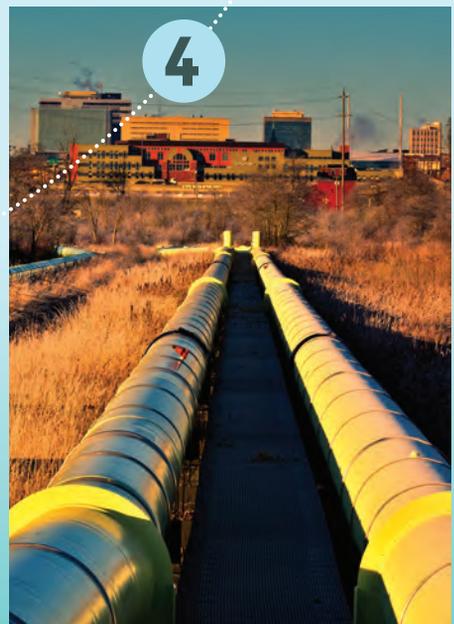
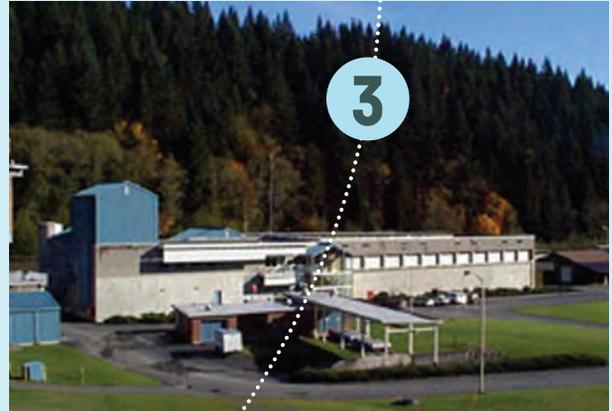
As this year's Drinking Water Quality Report shows, this is an exceptional value for the clean, safe, great-tasting drinking water you receive.

Clean, Safe Drinking Water Delivered to Your Tap

Your drinking water comes from Spada Lake Reservoir, located about 25 miles north-east of Monroe 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 Lake 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 Lake 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.



From Spada
to YOU

1. Precipitation and snowmelt from the Cascade Mountains are collected in Spada Lake Reservoir.
2. From Spada, water travels to Chaplain Reservoir, where the Everett Water Treatment Plant is located.
3. The Everett Drinking Water Treatment Plant treats the water using coagulation, flocculation, filtration and disinfection.
4. Water transmission pipelines carry drinking water across Snohomish County
5. Treated water is delivered to about 570,000 people or 80 percent of the businesses and households in Snohomish County.



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.

Your Drinking Water Facts & Figures

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.

Lead & Drinking Water

Monroe's source water contains virtually no lead, and Monroe has eliminated lead pipes and connections from its distribution system. However, lead can enter drinking water through household plumbing materials.

In 1991, EPA published a regulation to control lead and copper in drinking water. This regulation, known as the Lead and Copper Rule, requires water systems to monitor the presence of lead in drinking water at customer taps. If lead concentrations exceed an action level of 15 ppb in more than 10% of customer taps sampled, the system must undertake a number of actions.

Everett, Monroe's water provider, conducted its latest round of monitoring in 2015. The highest level found in the 108 homes tested was 8 parts per billion. The 90th percentile result—the highest result obtained in 90 percent of the samples—was 2 parts per billion. This indicates that lead found at household taps is most likely due to the corrosion of home plumbing systems with lead-containing pipes, fixtures or solder.

There are simple steps you can take to reduce the risk of lead in your drinking water. If you live in housing built before the mid-1940s, run your tap for at least 2 minutes after water has sat in your pipes for more than 6 hours. If you live in newer housing, run your tap until the water is noticeably cooler. Use only cold water for drinking, cooking and making baby formula, as hot water carries more lead. You can also have your water tested by a certified lab.

For more information on lead in drinking water, steps you can take to minimize exposure, or to find a certified lab, go to www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/Contaminants/Lead.



Your drinking water is tested
365
days a year.

Detected Regulated Contaminants

Parameter	Major Source	Units	EPA Regulations		Monroe 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	≥2 Positive per Month	None	0	Yes
Total coliform bacteria monitoring is used to track microbial quality in the water distribution system. Monroe collects 29 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.							
Fluoride <i>(sampled by Everett staff)</i>	Dental health additive	ppm	2	4	0.6–0.9	0.8	Yes
Fluoride is added in carefully controlled levels for dental health. 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 0.7 ppm 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 1.0 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 Department will change the requirements and water systems will begin adjusting fluoride levels to the new recommended level.							
Residual Disinfectant Level (free chlorine)	Added as a drinking water disinfectant	ppm	4.0 (MRDLG)	4.0 (MRDL)	0.14–1.24	0.65	Yes
Haloacetic Acids (5) (HAA5)	By-product of drinking water chlorination	ppb	N/A	60	21.4–39.6*	29.6**	Yes
Total Trihalomethanes (TTHM)	By-product of drinking water chlorination	ppb	N/A	80	30.9–93.8*	56.8**	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 four locations in Monroe which are monitored to determine compliance with current regulations. * = range of results taken from all four locations. ** = highest locational running annual average of the four sites that were monitored.							
Turbidity <i>(sampled by Everett staff)</i>	Soil erosion	NTU	N/A	TT	100%	0.06	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 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.							

Detected Unregulated Contaminants

Parameter	Units	Ideal Level/Goal (MCLG)	Monroe Water Results	
			Range Detected	Average Value
Bromodichloromethane	ppb	0	1.7–3.6	2.55
Chloroform (trichloromethane)	ppb	70	29.2–90.5	54.2
Dichloroacetic Acid	ppb	0	1.49–16.0	9.5
Trichloroacetic Acid	ppb	20	15.7–23.6	19.1
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).				

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

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

Lead, Copper and pH

Parameter	Major Source	Units	EPA Regulations		Monroe Water Results		
			Ideal Level/Goal (MCLG)	Action Level (AL)	90th % Level	Homes Exceeding the AL	Comply?
Lead	Plumbing, erosion of natural deposits	ppb	0	15	0.7	None	Yes
Copper	Plumbing, erosion of natural deposits	ppm	1.3	1.3	0.0348	None	Yes
pH <i>(sampled by Everett staff)</i>	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

USEPA and state regulations require water systems to monitor for the presence of lead and copper at household taps every three years. Monroe conducts lead and copper monitoring throughout the service area. 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 even 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 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.

USEPA required lead statement. The USEPA drinking water 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>.

ENSURING AN Adequate Supply

FUTURE GENERATIONS
DEPEND ON US
TODAY.



Water is a precious resource. Conservation helps fill the needs of people, industries, businesses and farms, while also keeping fish and other aquatic life alive and well.

Since Everett provides water to the majority of water systems in Snohomish County, we operate a regional water conservation program. This program is planned and developed with the water systems we serve and funded from water system revenues.

More than \$7 million has been invested in regional water conservation activities since 2001. This includes such things as school education, indoor and outdoor water conservation kits, rebates for water efficient clothes washers and toilets, leak detection, business water audits and school irrigation audits. Through these efforts, we have saved more than 3.7 million gallons per day (MGD) through 2015—enough water to fill more than 88,000 bathtubs a day.

Previous regional conservation programs were planned and implemented in six-year cycles, as part of Everett's comprehensive water plan. The first plan covered the period from 2001 through 2006; the second from 2007 through 2012. Everett's latest comprehensive water plan covers the period through 2020. The water conservation program will continue to include school education and conservation kits, and will also include new activities to assist large water users.

In 2015, 620 water conservation workshops were conducted in classrooms throughout Snohomish County, reaching more than 15,600 students. Participating water systems also distributed more than 2,400 indoor conservation kits and 2,800 outdoor conservation kits. These activities are estimated to have saved about 0.64 million gallons per day (MGD) regionally.

CONSERVATION

tips:

- Install water-efficient showerheads and take shorter showers.
- Fix leaky faucets and toilets. Leaks waste a lot of water.
- Install low-flow toilets. This can reduce indoor water use by as much as 20 percent.
- Only run full loads in your dishwasher and clothes washer.
- Use a soaker hose on steep slopes to prevent wasteful runoff.
- Water small areas by hand to avoid watering the sidewalk and driveway.
- Replace grass in seldom-used areas of your yard with groundcovers and plants that use less water.
- Adjust your mower to a higher setting. A taller lawn retains moisture and requires less water.
- Put a layer of mulch around plants and trees. Mulch holds moisture and discourages weed growth.

For more information about our water conservation programs, go to www.monroewa.gov.

Drought Prompts Advisory

In July, 2015, Everett activated its Drought Response Plan—the first time since the plan was created in 2001. The drought plan is activated when the water level in Spada Lake or snowpack drops below normal levels and there is a reasonable probability that conditions will not return to normal. At the time, the level of Spada Lake was 68 percent of normal which triggered the first “advisory” stage of the plan. The advisory stage asks consumers to use water wisely and advises them that further actions may be required if conditions don't improve.



In August, as water supply conditions continued to worsen, Everett moved to the second “voluntary” stage of the plan. The voluntary stage asks consumers to reduce discretionary water use and advises them that water-use restriction may be required if conditions don't improve. The goal was to reduce water use by 10 percent. Through the efforts of local homes and businesses this goal was surpassed and, with the return of fall rains, the drought response plan was deactivated in November.

We thank our customers who played a huge role in helping us to stretch our water supplies during the drought. The response showed a real commitment to the environment and the natural resources we all depend on. With the current water supply, the challenge has passed and outlook is good. However, we will keep a close eye on the situation as we head into 2016.



City of Monroe
Public Works Department

806 West Main Street
Monroe, WA 98272

INSIDE:

- Clean, Safe Drinking Water Delivered to Your Tap
- Your Drinking Water Quality Report: Water Analysis Results; Facts & Figures
- Conservation Tips

In 2015, 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 360-863-4520 or 360-863-4616 or email us at tchristian@monroewa.gov or sbarr@monroewa.gov.

WHAT YOU CAN DO:

CONSERVE • BE INFORMED • GET INVOLVED

City of Monroe Water Quality Office

Phone: 360-863-4520 or 360-863-4616
Website: www.monroewa.gov

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 Monroe City Council meetings every Tuesday in the Council Chambers at 806 West Main St.

Meetings begin at 7:00pm. Agendas are available on the City's website at www.monroewa.gov.

City of Monroe Elected Officials

MAYOR: Geoffrey Thomas
CITY COUNCIL: Kevin Hanford, Patsy Cudaback, Jeff Rasmussen, Jim Kamp, Ed Davis, Jason Gamble, Kirk Scarboro

Learn more about your water at www.monroewa.gov