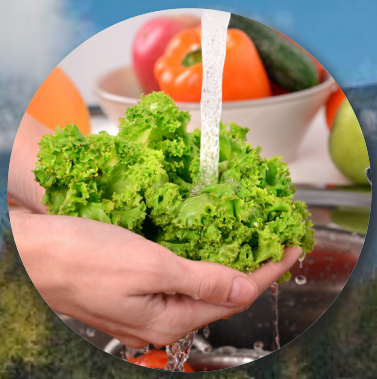
NORTHSHORE UTILITY DISTRICT
WATER SEWER

2017 WATER QUALITY REPORT

Published data for 2016



GOOD NEWS: Your tap water meets or exceeds all standards for safe drinking water. This report shows how your water tested for safety in 2016—and the steps we take every day to ensure it remains safe.

Our #1 priority is providing you safe, clean, high quality drinking water. If you have any questions about the information in this report, please contact us any time at (425) 398-4419 or waterquality@nud.net.

SAFE, CLEAN WATER STARTS AT THE SOURCE

Tolt River background photo courtesy Jean Sherrard, pauldorpat.com

We are fortunate to have one of the purest, most protected water sources in the nation.

Northshore Utility District purchases our drinking water from Seattle Public Utilities (SPU). The South Fork Tolt River Reservoir and the Cedar River Reservoir supply almost all of Seattle's water. These two surface water sources are located in remote, uninhabited areas of the Cascade Mountains.

Seattle keeps the water supply safe and untouched by forbidding any agricultural, industrial or recreational activities within these water sources.

Northshore Utility District's water comes from the Tolt River via the SPU Tolt Pipeline.

Tolt River water is treated on-site at the Tolt Water Treatment Facility. This ensures that safe, clean water starts long before it ever reaches your tap.

Some risk of source contamination, even with stringent safeguards.

Seattle Public Utilities enforces a vigorous water source protection program. This gives little opportunity for contaminants to get into the water.

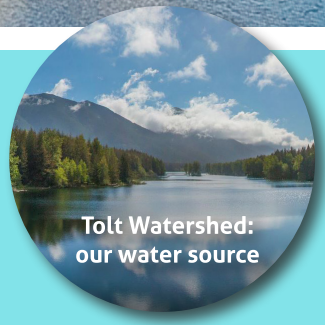
However, there is always some potential for naturally-occurring sources of contamination. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. Their presence does not necessarily indicate that the water poses a health risk.

In Seattle's surface water supplies, the potential sources of contamination include:

- Microbial contaminants, such as viruses and bacteria, from wildlife;
- Inorganic contaminants, such as salts and metals, which are naturally occurring;
- Organic contaminants that are by-products of disinfection processes;
- Radioactive contaminants that can be naturally occurring.

You can learn more about the DOH Source Water Assessment Program at the DOH website at **https://fortress.wa.gov/doh/eh/dw/swap/maps/**.

SAFEGUARDING SOURCE TO TAP



DID YOU KNOW?
Your water is monitored 24/7 to ensure continuous safety and quality.

Before your water enters the distribution system, it is treated at the source. Here's how the process works:

"Raw" water from the Tolt River Watershed is treated on-site at the Tolt Water Treatment Facility. The treatment process uses a variety of compounds and steps to achieve the highest water quality, including:

- **Ozonation**—ozone gas disinfects the water and eliminates unwanted flavors. *The ozonation process is very effective at destroying Cryptosporidium and other microbes.*
- **Filtration**—all particles are removed through high-rate filters.
- **Chlorination and fluoridation**—the water is disinfected further and fluoride is added for dental health *(fluoride levels reduced to the lowest allowed by state law).*
- **Corrosion control treatment**—water pH and alkalinity are adjusted to reduce plumbing corrosion.

The bottom line:

Our water testing exceeds what's required by the Environmental Protection Agency (EPA) and the state Department of Health (DOH) to limit the amounts of certain contaminants in water provided by public water systems.

Our #1 priority is providing you safe drinking water and reliable service. **If you have any questions about your water quality, please contact our Water Quality Office at (425) 398-4419 or waterquality@nud.net.**

WATER QUALITY DATA 2016

photo courtesy Seattle Public Utilities

In accordance with State and Federal standards, we continually monitor and test our drinking water. The following table lists the compounds that were detected in 2016. If the compound is not listed on the table, it was not found in any samples. **None of the detected compounds were above EPA allowable limits.**

		EPA'S ALLOWABLE LIMITS		CEDAR WATER LEVELS		TOLT WATER LEVELS		MEETS EPA STANDARDS?	
Detected Compounds	Units	MCLG	MCL	Average	Range	Average	Range	Compliance	Typical Sources
RAW WATER									
Cryptosporidium*	#/100L	NA	NA	0.3	ND - 2	ND	ND	✓	Naturally present in the environment
Total Organic Carbon	ppm	NA	TT	0.8	0.3 - 2.1	1.4	1.2 - 1.7	✓	Naturally present in the environment
FINISHED WATER									
Turbidity	NTU	NA	TT	0.3	0.2 - 2.3	0.07	0.01 - 0.2	✓	Soil runoff
Arsenic	ppb	0	10	0.5	0.4 - 0.6	0.5	0.4 - 0.6	✓	Erosion of natural deposits
Barium	ppb	2000	2000	1.6	1.5 - 1.8	1.3	1.0 - 1.6	✓	Erosion of natural deposits
Bromate+	ppb	0	10	ND	ND	0.1	ND - 1	✓	By-product of drinking water disinfection
Chromium	ppb	100	100	0.27	0.25 - 0.33	0.2	ND - 0.24	✓	Erosion of natural deposits
Fluoride	ppm	4	4	0.7	0.6 - 0.9	0.7	0.6 - 0.9	✓	Water additive, which promotes strong teeth
Nitrate	ppm	10	10	0.02	one sample	0.09	one sample	✓	Erosion of natural deposits
Coliform, Total^	%	0	5%	2.1% (highest month)				✓	Naturally present in the environment
Total Trihalomethanes	ppb	NA	80	Average = 43.0		Range = 26.0 - 52.0		✓	By-products of drinking water chlorination
Haloacetic Acids (5)	ppb	NA	60	Average = 39.0		Range = 24.0 - 51.0		✓	By-product of drinking water chlorination
Chlorine	ppm	MRDLG=4	MRDL=4	Average = 1.0		Range = 0 - 1.67		✓	Water additive used to control microbes

* Cryptosporidium was not detected in any samples from the Tolt supply (12 sample studies). It was detected in 2 of 12 samples from the Cedar supply.

+ 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 June 2016, we did not collect the monthly sample for bromate for the Tolt supply, and therefore cannot be sure of the quality of your drinking water during that time. Based on historical data, most bromate results for the Tolt supply are non-detect.

^ One sample of coliform was detected in July 2016.

TABLE DEFINITIONS

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.

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.

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.

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

NTU: *Nephelometric Turbidity Unit* - Turbidity is a measure of how clear the water looks. The turbidity MCL that applied to the Cedar supply in 2016 is 5 NTU, and for the Tolt supply it was 0.3 NTU for at least 95% of the samples in a month. 100% of the samples from the Tolt in 2016 were below 0.3 NTU.

NA: *Not Applicable*

ND: *Not Detected*

ppm: *1 part per million = 1 mg/L = 1 milligram per liter*

ppb: *1 part per billion = 1 ug/L = 1 microgram per liter*

1 ppm *=1000 ppb*

HOW MUCH IS 1 PPB?
In an Olympic-sized swimming pool (13,000 gallons), **1 ppb is equal to about 1 drop of water.**

PARTNERS IN CONSERVATION

How much water are we using?

Northshore Utility District partners with 18 other local utilities to form the *Saving Water Partnership* (SWP). SWP has set a six-year regional conservation goal: reduce per capita use from current levels so that the SWP's total average annual retail water use is less than 105 mgd *(millions of gallons per day)* from 2013 through 2018 despite forecasted population growth. **For 2016, the SWP met the goal, using 94.4 mgd.**

In 2016, NUD purchased just over 1.89 billion gallons of water from Seattle Public Utilities. Of that, 4.2% was unmetered (lost), or about 79 million gallons (a percentage far below national average of 20% water loss).

To reduce system leakage and increase water efficiency, we continue to actively monitor and replace aging pipes prone to leaks or breaks. We also run a "Leak Notification Program" to notify customers of potential leaks immediately when identified during meter reads.

Water-saving strategies you can do right now:

Check for leaks and fix them as soon as you can. Get videos and how-to guide at **www.nud.net/leaks**.

Replace old toilets with WaterSense-labeled toilets ($100 rebate for Premium model: see **www.savingwater.org/rebates**).

Water your garden less by putting a thick layer of mulch around plants.

Visit **www.savingwater.org** for more gardening tips and videos. Get expert advice from the Garden Hotline at (206) 633-0224 or **help@gardenhotline.org**.

TAKE OUR ANNUAL SURVEY! Tell us what you think about using water wisely and you can win a FREE home water and energy saving kit. Survey link at **www.savingwater.org**.

LEAD & COPPER: ARE YOU AT RISK?

Our source waters do not contain lead or copper.

However, lead and copper can leach into residential water from building plumbing systems. Lead and copper monitoring conducted at homes categorized as "high risk" was most recently completed in 2014 (see results in table data below).

Homes or buildings that were built or re-plumbed with copper pipes and lead-based solder prior to 1985 are considered "high risk." "Worst case" conditions occur when water has not been used and has been sitting stagnant in the pipes for six hours or longer—such as first thing in the morning. The risk decreases as the plumbing ages. If you do not have copper plumbing, your home is considered "low risk." However, some lead may also be leached from brass faucets.

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. Northshore Utility District is responsible for providing high quality drinking water, but cannot control the variety of materials used in private plumbing components.

If your home is considered at-risk for higher lead levels, there are a few steps you can take. 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 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 at (800) 426-4791** or at **http://www.epa.gov/safewater/lead.**

LEAD AND COPPER MONITORING PROGRAM RESULTS - TOLT RESERVOIR

Parameter & Units	MCLG	Action Level⁺	2014 Results*	# Homes Exceeding Action Level	Typical Sources in Drinking Water
Lead, ppb	0	15	2.9	0 of 50	Corrosion of household plumbing systems.
Copper, ppm	1.3	1.3	0.16	0 of 50	

*90th Percentile: i.e. 90 percent of the samples were less than the values shown

⁺The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

SPECIAL HEALTH CONCERNS

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as persons with cancer undergoing chemo-therapy, 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 at (800) 426-4791**.

FOR MORE INFORMATION

FOR MORE INFORMATION ON YOUR DRINKING WATER:

NUD Water Quality Office
(425) 398-4419 | waterquality@nud.net

Seattle Public Utilities, Water Quality Lab
(206) 684-7834 | drinkingwater.quality@seattle.gov | www.seattle.gov

Washington State Department of Health
www.doh.wa.gov/DrinkingWater

Environmental Protection Agency (EPA)
www.epa.gov/safewater

EPA Safe Drinking Water Hotline
1 (800) 426-4791

QUESTIONS? COMMENTS?
Please contact us anytime.
(425) 398-4400 | www.nud.net

We're always available to help you, and we take your comments and concerns very seriously.

Be involved in the decisions that affect your drinking water and your services.

You are invited anytime to attend our Board of Commissioners meetings, held the first and third Monday of each month at 5:30 p.m. at our office.