



2016 Water Quality Report

Published data for 2015



GOOD NEWS: your tap water meets or exceeds ALL standards for safe drinking water! This report shows how your water tested for safety and quality in 2015—and the steps we take every day to ensure it remains safe.

It's important for you to know how the water you drink is protected. Providing you high quality water is our #1 priority. 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

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.

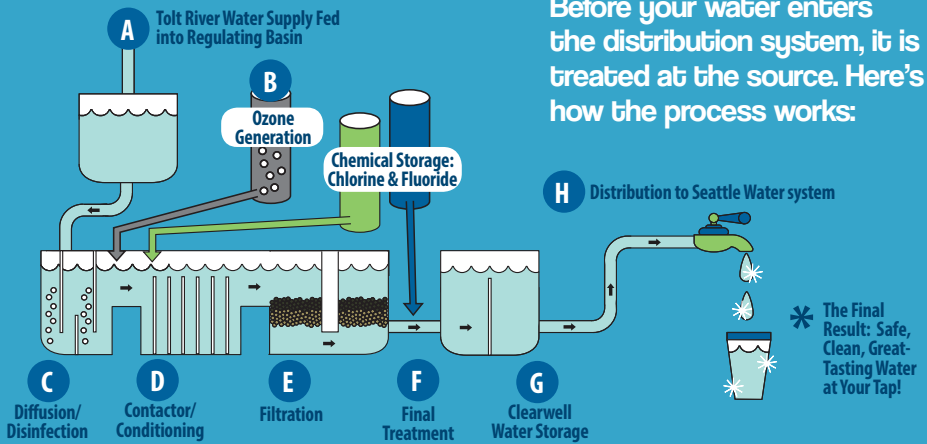
In Seattle's surface water supplies, the potential sources of contamination include:

- ▶ 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/>.

Source to Tap: The Water Treatment Process

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.

Not only do we carefully treat your water BEFORE it gets to you, we also monitor its quality and safety DAILY.

WE CONSTANTLY WATCH YOUR WATER.

Remote monitoring systems running 24 hours/day at 8 locations alert us instantly to any change in water pH, temperature, or disinfectant levels. In addition, we test samples from 16 additional sites 63 times per month.

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.**



2015 Water Quality Data

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 2015. If the compound isn't on the table, it wasn't found. **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	1	ND - 8	ND	ND	✓	Naturally present in the environment
Total Organic Carbon	ppm	NA	TT	0.7	0.5 - 1.5	1.5	1.2 - 1.8	✓	Naturally present in the environment
FINISHED WATER									
Turbidity	NTU	NA	TT	0.4	0.1 - 1.2	0.07	0.04 - 1.4+	✓	Soil runoff
Arsenic	ppb	0	10	0.5	0.4 - 0.7	0.6	0.4 - 0.7	✓	Erosion of natural deposits
Barium	ppb	2000	2000	1.6	one sample	1.3	one sample	✓	Erosion of natural deposits
Bromate	ppb	0	10	ND	ND	0.4	ND - 2	✓	By-product of drinking water disinfection
Chromium	ppb	100	100	0.27	0.25 - 0.33	0.25	ND - 0.25	✓	Erosion of natural deposits
Fluoride	ppm	4	4	0.8	0.7 - 0.9	0.8	0.7 - 0.9	✓	Water additive, which promotes strong teeth
Hexavalent Chromium (Dissolved)	ppb	Unregulated NA	Unregulated NA	NA	NA	0.091	ND - 0.091	✓	Erosion of natural deposits
Nitrate	ppm	10	10	0.01	one sample	0.10	one sample	✓	Erosion of natural deposits
Strontium	ppb	Unregulated NA	Unregulated NA	NA	NA	30	ND - 30	✓	Erosion of natural deposits
Vanadium	ppb	Unregulated NA	Unregulated NA	NA	NA	.28	ND - .28	✓	Erosion of natural deposits
Coliform, Total	%	0	5%	None detected in 2015				✓	Naturally present in the environment
Total Trihalomethanes	ppb	NA	80	Average = 35.95		Range = 30.5 - 42.8		✓	By-products of drinking water chlorination
Haloacetic Acids (5)	ppb	NA	60	Average = 31		Range = 24.1 - 44.3		✓	By-product of drinking water chlorination
Chlorine	ppm	MRDLG=4	MRDL=4	Average = .86		Range = .11		✓	Water additive used to control microbes

* Cryptosporidium was not detected in any samples from the Tolt (10 sample studies). It was detected in 2 of 9 samples from the Cedar supply.

⁺ On December 29, 2015, turbidity for the Tolt supply exceeded 1.0 NTU for about 17 minutes. Turbidity has no health effects, however, it can interfere with disinfection and provide a medium of microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Customers did not need to take any action at the time, as mentioned in the previous mailing. **Your water was and continues to be safe to drink.**

✓ = Compound levels met EPA requirements for safe drinking water

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.

NTU: Nephelometric Turbidity Unit

Turbidity is a measure of how clear the water looks. The turbidity MCL that applied to the Cedar supply in 2015 is 5 NTU, and for the Tolt it was 0.3 NTU for at least 95% of the samples in a month. 99.96% of the samples from the Tolt in December 2015 were below 0.3 NTU.

TT: Treatment Technique

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

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.

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.

Water Samples:

ppm: 1 part per million, or milligrams per liter = mg/L

ppb: 1 part per billion, or micrograms per liter = ug/L

1 ppm = 1000 ppb

ND - Non-Detected

NA - Not Applicable

TT - Treatment Technique

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 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 at (800) 426-4791**.

Monitoring Lead & Copper, Addressing Concerns

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*).



The chief source of lead in water is pipe corrosion in older plumbing materials—usually caused by high water acidity. **SPU carefully regulates water pH levels at the water source to reduce corrosion.**

Your water's acidity is adjusted to prevent pipe corrosion.

All tests in at-risk homes showed safe lead levels.

NUD customers can rely on another safeguard: our newer system contains none of the lead “gooseneck” fittings found in older systems like Seattle’s and Tacoma’s that caused concern earlier this year. Please be assured that we take all concerns seriously and are continuously monitoring your water for safety.



No “gooseneck” fittings in NUD system

Homes or buildings that were built or re-plumbed with copper pipes and lead-based solder prior to 1985 are considered “high risk.” (Lead solder was banned in King County in 1985.) “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://water.epa.gov/drink/info/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.

Partners in Conservation

Using water wisely to ensure our future supply

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 2015, the SWP met the goal, using 96.9 mgd despite a record hot summer.**

In 2015, NUD purchased just over 19.6 billion gallons of water from Seattle Public Utilities. Of that, 2.8% was unmetered (lost), or 54.2 million gallons. *Note: this amount may seem like a lot, but it's actually quite low compared to the 20% national average of 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.



SAVE WATER, SAVE SALMON!

Our salmon need water for a healthy habitat. When you use water wisely in the summer and fall months when stream flows are lowest, you are protecting salmon AND saving money!



TELL US WHAT YOU THINK ABOUT WATER EFFICIENCY

Take our water conservation survey at savingwater.org and enter to win a **FREE** home water and energy saving kit!

Tips for using water wisely:

Here are some great ways to use water wisely and keep your water bills as low as they can be:

- ▶ **Check for leaks and fix them** as soon as you can—see www.nud.net/leaks for step-by-step guides and video links addressing common home leaks.
- ▶ **Get a \$100 rebate for replacing old toilets with premium models.** These toilets use 1.1 gallons of water per flush, compared to 5 gallons per flush with older toilets. That can add up to big water bill savings! Find rebate info at www.savingwater.org/rebates.
- ▶ **Place a thick layer of mulch around plants** to help use less water in your garden.
- ▶ **Visit www.savingwater.org** for gardening tips, videos and classes.
- ▶ **Call the Garden Hotline** for more advice, at (206) 633-0224 or e-mail help@gardenhotline.org.

Thank you for all you are doing to use water wisely. It makes a difference!



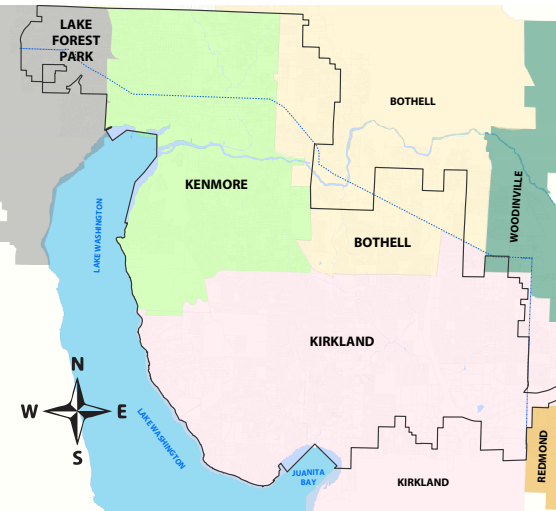
NUD Top 10

2015 Service Highlights

1 WHO WE SERVE



70,000 PEOPLE & PETS
22,000 CONNECTIONS
ACROSS **5 CITIES** + **17** SQ. MILES



2 A RELIABLE SYSTEM FOR RELIABLE SERVICE

We maintain our system assets regularly to ensure you receive the safe, reliable service you depend on, every single day.

278 MILES OF WATER MAIN + **252 MILES OF SEWER MAIN**



3 MAKING YOUR NEEDS A PRIORITY

Service is our mission, so we make being readily available to help you one of our top priorities. Most times we can give same-day appointments. And customer service calls are always no charge.

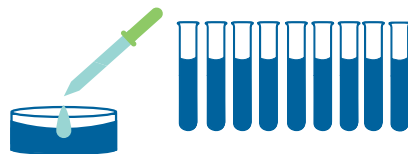
IN 2015, WE RESPONDED TO **OVER 600** CUSTOMER SERVICE CALLS



24 hours a day, 7 days a week, when you have an emergency, our goal is to get there within 30 minutes or faster.

EMERGENCY RESPONSE TIME: UNDER 30 MIN!

4 TESTING DAILY FOR YOUR SAFETY



To make sure you have safe, clean water to drink—our #1 priority—we monitor your water 24 hours/day and perform frequent tests.

IN 2015, WE TESTED **774** WATER SAMPLES FROM **16** DIFFERENT LOCATIONS.

5 FIXING THINGS FAST

Things break, but our mission is to never leave you without service for long.



IN 2015, WE REPAIRED:
45 SERVICE LINES
+ **6** MAIN LINES
WITHIN **6 HOURS**
(ON AVERAGE)

6 QUALITY + VALUE: YOUR WATER COSTS LESS THAN 1/2 CENT PER GALLON!

PLUS it is better-regulated for safety and quality than bottled water (often just tap water anyway). AND it produces NO waste!



2 GALLONS OF TAP FOR \$.01

=
APX 200 TIMES CHEAPER THAN BOTTLED!

7 EARLY PAYMENT DISCOUNT

92% OF OUR CUSTOMERS took advantage of the extra 5% discount at least once in 2015.



FOR 92%, 5% MORE SAVINGS!

8 INVESTING IN THE FUTURE



Growing communities put more pressure on services. To keep up with demand and ensure future reliable service, we invest continually in asset replacements and upgrades.

IN 2015 WE INVESTED **\$3 MILLION** IN SYSTEM UPGRADES.

9 STILL THE BEST RATES AROUND

WATER BI-MONTHLY*		SEWER BI-MONTHLY*	
NUD	\$99.75	NUD	\$107.73
Kirkland	\$114.88	Kirkland	\$151.26
LFP	\$119.00	LFP	\$118.24
Woodinville	\$126.32	Woodinville	\$138.36

Rate surveys done this year still position NUD's rates below other area utilities. Even with city-added fees and taxes, we're proud to stay at the bottom (while still giving you top-notch service!)

*Sample only shown above; full comparison at nud.net/rates.

10 COMMUNITY CARE



The heart of our business is service. We aim to help make lives better in our communities wherever we can.

IN 2015 WE INVESTED IN OUR COMMUNITIES BY:



- ♥ Helping make 3,000+ kids safer with our safety vest giveaway!
- ♥ Employee donations of \$1,200 to benefit Hopelink programs.
- ♥ Sponsoring 104 free classroom programs for 2,712 students.



Questions or Comments?



Contact us anytime! (425) 398-4400 | www.nud.net

We always welcome your input. We're always available to help you.

We take your questions, concerns, and comments very seriously.

We think you should be involved in 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.

Board of Commissioners

Trudy Rolla, President

Don Ellis, Board Secretary

Bruce Gardiner

Robert Peterson

Margaret Wiggins

For more information on drinking water safety:

Northshore Utility District Water Quality Office

Contact: (425) 398-4419 | waterquality@nud.net

Website: www.nud.net/waterquality

State Department of Health (DOH)

Contact: (800) 521-0323

Website: www.doh.wa.gov/ehp/dw/

US Environmental Protection Agency (EPA)

Contact: (800) 426-4791

Website: www.epa.gov/safewater



Connect with NUD socially! We share:

- ▶ Emergency updates
- ▶ Tips on saving money, conserving water, and protecting your pipes
- ▶ Updates on projects that may affect your area