2019 Water Quality Report

FOR 2018 TEST RESULTS

Cedar River Watershed
photo courtesy
Julie Stonefelt, SPU

WHAT'S IN THIS REPORT?

- WATER QUALITY DATA FOR 2018
- OUR REGIONAL WATER SOURCE
- WATER TREATMENT & TESTING PROCESS
- LEAD & COPPER MONITORING: ARE YOU AT RISK?
- CONSERVING TO PROTECT OUR FUTURE WATER SUPPLY

This report contains important information about your drinking water. If English is not your first language, please have someone translate it for you, or speak with someone who understands it.

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

В этом сообщении содержится важная информация о воде, которую вы пьёте. Попросите кого-нибудь перевести для вас это сообщение или поговорите с человеком, который понимает его содержание.

此报告包含有关您的饮用水的重要信息。请人帮您翻译出来，或请看懂此报告的人将内容说给您听。

WHAT'S IN THIS REPORT? 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 2018—and the steps we take every day to ensure it remains safe.

IT'S IMPORTANT TO TRUST THAT THE WATER YOU DRINK EVERY DAY IS SAFE, CLEAN AND HEALTHY.

Our #1 priority is providing you safe, clean, high quality drinking water. Please contact us if you have questions about any of the information contained in this report.

You can find contact information below, and more information on all water quality topics and frequently asked questions at www.nud.net/water-quality. Thank you for taking the time to learn more about your water quality.

FOR MORE INFORMATION ON THE INFORMATION IN THIS REPORT:

NUD WATER QUALITY OFFICE
(425) 398-4419 ■ waterquality@nud.net
www.nud.net/water-quality

SEATTLE PUBLIC UTILITIES WATER QUALITY LAB
(206) 684-7834 ■ drinkingwater.quality@seattle.gov
www.seattle.gov/util/MyServices/Water/Water_Quality

EPA SAFE DRINKING WATER HOTLINE
1 (800) 426-4791 ■ water.epa.gov

WASHINGTON STATE DEPARTMENT OF HEALTH OFFICE OF DRINKING WATER
1 (253) 395-6760 ■ www.doh.wa.gov/YouandYourFamily/HealthyHome/DrinkingWater

FOR TRANSLATION SERVICES:
Call NUD at (425) 398-4400 and we will connect you with a translator in your language.

MORE CUSTOMER RESOURCES AND CONTACT INFORMATION:

GENERAL CUSTOMER SUPPORT
(425) 398-4400 ■ www.nud.net

WATER LEAKS, PRESSURE, OR SEWER CONCERNS
(425) 398-4403 ■ dispatch@nud.net

BILLING AND LOW-INCOME DISCOUNT PROGRAM
(425) 398-4402 ■ billing@nud.net ■ www.nud.net/LIDP

WATER-SAVING INFO AND REBATES
www.nud.net/water-wise and www.savingwater.org

BOARD OF COMMISSIONERS
(425) 398-4400 x 125 ■ www.nud.net/board

DRINKING WATER FACTS FROM THE U.S. EPA AND THE WA DEPARTMENT OF HEALTH

HOW CAN WATER SOURCES CONTAIN CONTAMINANTS?

Drinking water (both tap water and bottled water) comes from many sources, including rivers, lakes, streams, ponds, reservoirs, springs and wells.

As water travels 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.

POTENTIAL CONTAMINANTS IN WASHINGTON WATER SOURCES

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, bacteria and protozoa from wildlife;
- Inorganic contaminants, such as salts and metals, which are naturally occurring; and
- Organic contaminants, which result from chlorine combining with the naturally occurring organic matter.

Information on the source water assessments is available from the Washington State Department of Health (DOH) website at https://fortress.wa.gov/doh/swap/.

HOW SAFE WATER STANDARDS ARE SET AND ENFORCED

To ensure that your tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) and/or the Washington State Board of Health prescribes regulations that limit the amount of certain contaminants in water provided by public water systems.

The U.S. Food and Drug Administration and/or the Washington State Department of Agriculture regulations set limits for contaminants in bottled water to provide the same public health protection.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1 (800) 426-4791 or visiting www.epa.gov/ground-water-and-drinking-water.

EPA
United States Environmental Protection Agency

Washington State Department of Health

WHAT ABOUT PEOPLE WITH SPECIAL HEALTH CONCERNS?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons 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.

Environmental Protection Agency/Centers for Disease Control 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 1 (800) 426-4791**.

OUR SAFE, CLEAN DRINKING 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 and the Cedar River Reservoirs supply almost all of Seattle's water. These two surface water sources are located in remote, uninhabited areas of the Cascade Mountains.

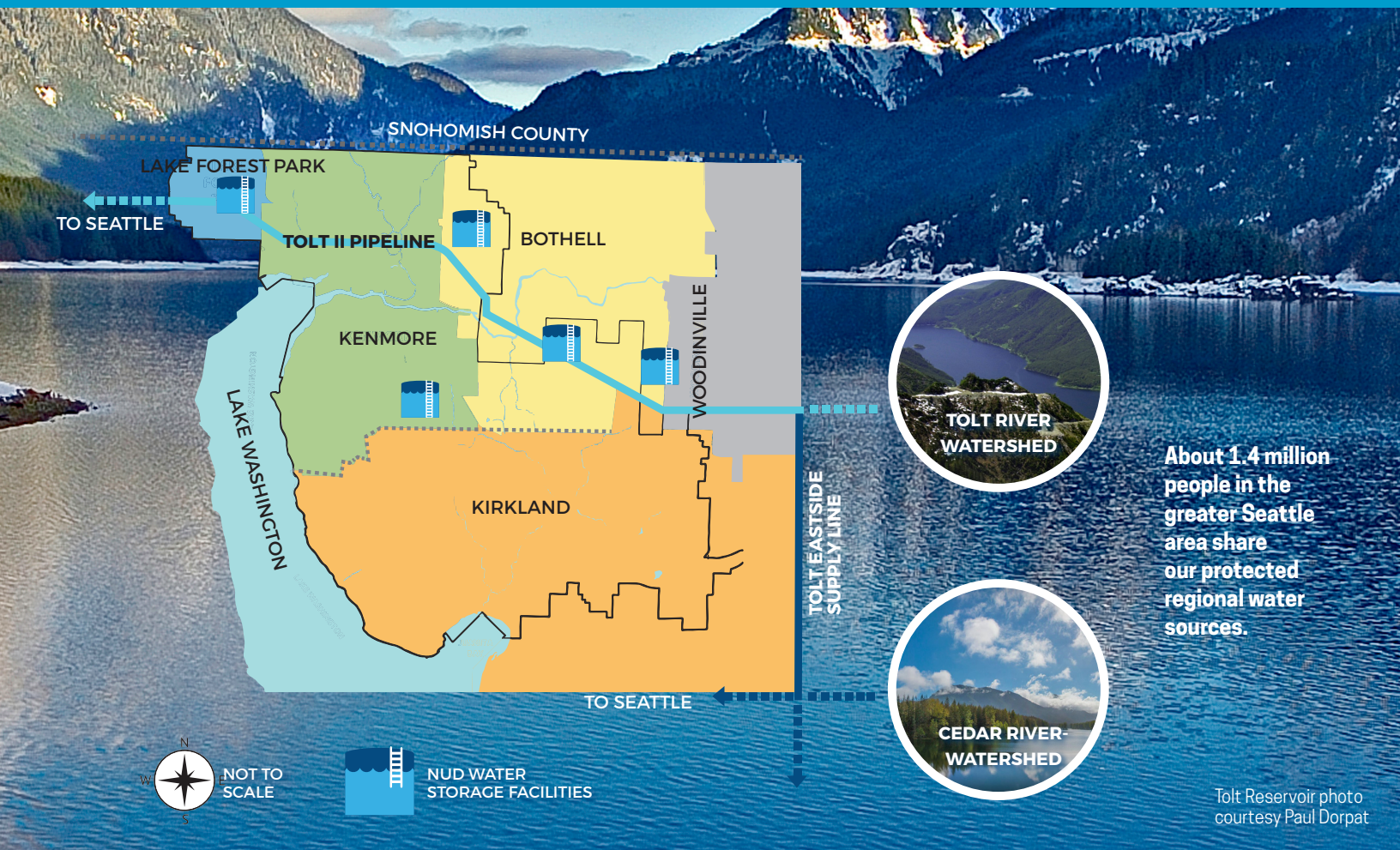
Since both of these watersheds are publicly owned, SPU can keep the water supply safe by forbidding any agricultural, industrial or recreational activities within these water sources. Only a few other U.S. cities have similar protections around their water supplies.

The majority of Northshore Utility District's water comes from the Tolt River via the Tolt Pipeline.

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

WHERE DOES OUR WATER COME FROM?

NUD's water comes primarily from the Tolt River Watershed, located in the Cascade foothills in east King County, via the Tolt II Pipeline. The Cedar River Watershed above Rattlesnake Lake supplies about 70% of the region's water, and serves as NUD's emergency source.



Tolt Reservoir photo courtesy Paul Dorpat

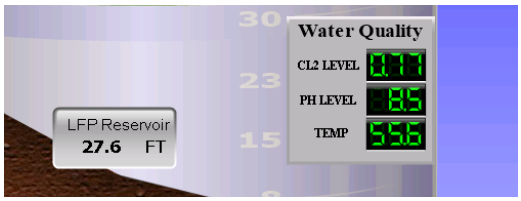
WATER TESTING AND TREATMENT

BEFORE YOUR WATER ENTERS THE DISTRIBUTION SYSTEM, IT IS TREATED AT THE SOURCE. HERE'S A LOOK AT THE PROCESS:

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

- **Ozonation**—The ozonation process 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. (More info about fluoride laws and levels SPU follows is at www.nud.net/water-quality-FAQ.)
- **Corrosion control treatment**—water pH and alkalinity are adjusted to reduce plumbing corrosion.

HOW DOES NUD MAKE SURE YOUR WATER REMAINS SAFE 24/7?



A remote monitoring system reports water quality data at NUD's Lake Forest Park storage reservoir.

NUD tests water at sample stands in 22 District sites.

After treated water enters NUD's distribution system, we have several controls in place to ensure ongoing water quality. These include:

- **24-hour monitoring via remote sensors** attached to 10 District locations (including water tanks, pumping facilities and District headquarters) track chlorine disinfectant levels (an indicator of protection from bacteria growth), water pH and temperature. Water quality staff receive immediate alerts of any changes.
- **Regular water main flushing throughout the District** to keep "fresh" water moving through areas on water main end-zones. The flushing also helps remove sediment from the mains to improve water quality. Our crews always dispose of flushed water in an environmentally-safe manner.
- **Continual sample testing throughout the District** to track disinfectant levels. The Department of Health sets guidelines on water disinfectant levels, to ensure continuous protection from bacteria growth. Our job is to keep the levels constant.

HOW OFTEN DOES NUD TEST THE WATER?

1,080 tests/year

In 2018, NUD performed **1080 water sample tests at 22 sample stands** distributed throughout the District. We also tested chlorine residual levels at a sample stand at our head-quarters twice weekly. Constant monitoring and regular tests make sure issues are caught and addressed immediately, and we can continue to deliver safe, high-quality drinking water.

2019 WATER QUALITY MONITORING RESULTS

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 2018. 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									
Total Organic Carbon	ppm	NA	TT	0.9	0.4 - 2.1	1.3	1.1 - 1.5	✓	Naturally present in the environment
FINISHED WATER									
Turbidity	NTU	NA	TT	0.3	0.2 - 2.3	0.04	0.01 - 0.35	✓	Soil runoff
Arsenic	ppb	0	10	0.4	0.4 - 0.6	0.4	0.4 - 0.44	✓	Erosion of natural deposits
Barium	ppb	2000	2000	1.5	1.3 - 1.6	1.1	1.0 - 1.2	✓	Erosion of natural deposits
Nitrate	ppm	10	10	ND	One sample	0.07	One sample	✓	Erosion of natural deposits
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	0.4 - 0.8	0.7	0.6 - 0.8	✓	Water additive, which promotes strong teeth
Coliform, Total	%	0	5%	None detected				✓	Naturally present in the environment
Total Trihalomethanes	ppb	NA	80	Average = 27.8		Range = 21.3 - 31.6		✓	By-product of drinking water chlorination
Haloacetic Acids (5)	ppb	NA	60	Average = 26.05		Range = 21.2 - 29.4		✓	By-product of drinking water chlorination
Chlorine	ppm	MRDLG=4	MRDL=4	Average = 0.76		Range = 0.11 - 1.57		✓	Water additive used to control microbes

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 2018 is 5 NTU, and for the Tolt supply it was 0.3 NTU for at least 95% of the samples in a month. For November 2018, 99.4% of the samples from the Tolt were below 0.3 NTU. For all other months in 2018, 100% of the samples from the Tolt 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 PART PER BILLION (PPB)?

In an Olympic-sized pool (13,000 gallons), 1 ppb is equal to about 1 drop of water.

LEAD AND 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 2017 (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.

TO MINIMIZE THE RISK OF LEAD EXPOSURE:

If your home is considered at-risk for higher lead levels, there are a few steps you can take:

- **Flush tap about 2 minutes** before using when water has been sitting 6 hours or more. You can use flushed water for plants, washing dishes or cleaning.
- **Only use cold water for cooking, drinking, and mixing baby formula.** (Lead dissolves more quickly in hot water.) Flush cold water first (if needed), and heat the water afterward if necessary.
- **Select low-lead or no-lead fixtures** when making plumbing changes.
- **Use water filters or treatment devices for lead reduction** certified by independent organizations, such as the National Sanitation Foundation (NSF).

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 www.epa.gov/safewater/lead.

LEAD AND COPPER MONITORING PROGRAM RESULTS - TOLT RESERVOIR

Parameter & Units	MCLG	Action Level+	2017 Results*	# Homes Exceeding Action Level	Typical Sources in Drinking Water
Lead, ppb	0	15	4.0	0 of 51	Corrosion of household plumbing systems.
Copper, ppm	1.3	1.3	0.15	0 of 51	

*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.

CONCERNED ABOUT LEAD LEVELS IN YOUR HOME OR BUSINESS?

Although lead is not found in our source water, household plumbing materials can contribute to higher levels of lead and copper in home drinking water. As a homeowner or business owner, it is very important to be aware of the type of plumbing you own, any levels of corrosion in your home plumbing materials, and how these may affect your drinking water quality.

To help address concerns, Northshore Utility District is offering free lead tests for homes considered at-risk for higher lead levels (homes built prior to 1985). NUD's test, performed with field equipment by District staff, is considered informational only; results are not certified at the level of a water testing lab. A certified water lab can perform a thorough test for around $25.

To request the free informational test, contact our Water Quality Office at (425) 398-4419 or waterquality@nud.net.

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 2018, the SWP met the goal, using 96.5 mgd.

In 2018, NUD purchased just over 1.92 billion gallons of water from Seattle Public Utilities. Of that, 3.7% was unmetered (lost), or about 70.6 million gallons. Water loss typically results from broken pipelines, with the national average percentage of loss around 16%. NUD's far lower amount, by comparison, shows our infrastructure is in very good shape.

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-WISE TIPS TO PRACTICE NOW:

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

Water your garden less by putting a thick layer of mulch around plants. More sustainable, water-wise gardening advice is at www.nud.net/gardening.

Replace old toilets with WaterSense-labeled toilets. To get a $100 rebate for installing a Premium model, visit savingwater.org/rebates.

FREE RESOURCES TO HELP YOU SAVE—AT HOME, WORK, AND SCHOOL:

As a member of the Saving Water Partnership, Northshore Utility District customers have access to many great FREE resources to help your water-saving efforts—at home, in your landscape and garden, in your business, and in schools. These include expert advice, conservation materials, DIY videos, and more!

Visit www.savingwater.org to learn more about:

- Creating a healthy, water-wise landscape and garden
- Water-saving toilet and irrigation system rebates
- Water-efficient solutions for your business
- Free water education programs in your schools

WHY BOTHER SAVING WATER IN A RAINY CITY?

YES, it does rain here frequently, and we are fortunate to be able to store enough water for peak use in our hot, dry Northwest summers. But with a growing population, sometimes the periods of high demand can stress our lakes and streams. Using water wisely during the summer and early fall helps keep water in our lakes and streams for fish and other wildlife. **Your small actions can make a big difference to our important salmon population.**