Conserving Water with Local and Regional Programs

During 2018, North City Water District purchased 571 million gallons of water, with a distribution leakage rate of 2.5% throughout our system. The District is extremely proud of this rate and will continue to keep it as low as possible through proactive monitoring and maintenance.

The Saving Water Partnership (SWP)—which is made up of North City Water District and 17 other water utility partners—is still on target with its six-year conservation goal to reduce per capita use to less than 105 mgd average annually from 2013 through 2018, once again meeting the goal with 96.6 mgd in 2017, slightly higher than last year, attributed primarily to the hot summer, according to SPU Economist Bruce Flory. Our District's customers helped achieve this through the following events and programs:

- Over 3,475 people visited our Water Education Booths at the Lake Forest Park Green Fair, Lake Forest Park Picnic in the Park, Shoreline Science (STEM) Festival, Ridgecrest's Ice Cream Social, Celebrate Shoreline Festival, and YMCA's Healthy Kids Day;
- 159 people learned about water-wise gardening tips at our free Savvy Gardener classes;
- 28 classroom presentations were made about water;
- 6 households within our District boundaries took advantage of the single family toilet rebate program; and
- 3 single family households received a rebate for installing an irrigation timer.

Upcoming Community Events:

We LOVE to connect with our customers! Come visit us at:

• June 1	STEM Fair at Shoreline Community College
• June 29-30	Shoreline Arts Festival at Shoreline Comm. College
• August 13	North City Jazz Walk (the District is a Venue)
• August 17	Celebrate Shoreline at Cromwell Park
• September 7	LFP Picnic In the Park at Animal Acres Park

More About Water Quality

The sources of drinking water (both tap water and bottled water) include 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. 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.

In order to ensure that tap water is safe to drink, the Environmental Protection Agency and/or the Washington state board of health prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration and/or the Washington state department of agriculture regulations establish limits for contaminants in bottled water that 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 Environmental Protection Agency's Safe Drinking Water Hotline at 800.426.4791.

We at North City Water District encourage public interest and participation in the decisions that affect our drinking water. If you would like to learn more about our water, have questions about its quality, or would like to know what you can do to help keep our water supply clean, safe and abundant, please don't hesitate to contact us at 206.362.8100, or visit one of our Board of Commissioners meetings (every first and third Tuesday of each month at 3:00 pm) at our District office, or you can contact any one of the following organizations:

Seattle Public Utilities
Phone: 206.684.3000
Website: http://www.seattle.gov/util/MyServices/Water/Water_Quality

United States Environmental Protection Agency (EPA) and the Safe Drinking Water Hotline
Phone: 800.426.4791
Website: http://www.epa.gov/safewater

Washington State Department of Health (DOH):
Phone: 800.521.0323
Website: http://www.doh.wa.gov/ehp/dw/

Ongoing Water System Planning

1 Overview *Purpose, Policies, Rules and Regulations, Conservation, Customer Service, and long term water supply contract with SPU*

2 Basic Planning Data

3 Existing Water System *Supply, Emergency, Facilities, Equipment, System, and Water Treatment*

4 Minimum Design Criteria *For All System Components*

5 System Analysis *Source, Storage, Pumping, Distribution, and Monitoring*

6 Capital Improvement Planning

7 Operations & Maintenance *Personnel, Processes, Records, Water Quality, Safety, Emergency, Public Notification, and Preventive Maintenance*

8 Financials *Water Supply, Cost of Service, Connection Charges, Funding, Capital Improvement Financing, Developer Policies, Standard Details and Specs, and Multi-Year Rate Study*

Highlighting Three Appendices to Our Plan

This Water System Planning effort will also update our Water Use Efficiency/Conservation Plan and our Coliform Monitoring Plan. We are also introducing a new program, "ShakeAlert."

Water Use Efficiency/Conservation Plan

Because North City Water District is part of a regional water system, we take an active role in managing water use to minimize the amount of water that is purchased but goes unused. Thanks to heightened conservation efforts, our region has achieved some dramatic results: in the early 1990s, the average gallons used per person per day was over 160. Today, the actual use is 85 gallons per person per day in our region, enabling us to delay the need for an additional water source. Conservation efforts have included everything from public outreach, rebate programs, and tiered pricing, to changes in federal and state plumbing codes—all shared annually by our regional program, the Saving Water Partnership: www.savingwater.org.

This year, North City Water District is adding in a routine review of the water use efficiency/conservation program, in order to adopt a specific goal for North City along with the regional goal. We expect to have a public hearing on this new program at our Board meeting on July 16 at 3:00 pm. Our proposed conservation program is currently being developed and can be viewed at www.northcitywater.org/about/conservation.

Coliform Monitoring Plan

As a regional partner with Seattle Public Utilities, your District participates in the Regional Coliform monitoring program. Water samples are taken throughout the regional system to ensure our water quality remains outstanding. In 2015 and 2016, the District added several additional water quality monitoring stations to better monitor water movement and quality. We are updating this plan to include the new stations, and meet new regulations.

ShakeAlert

With all the talk about a "big one earth quake," North City Water District is working with a local consultant to plan for any necessary measures to ensure ongoing water supply, should an earthquake cause our region to be without water for more than a couple days.

The Pacific Northwest Seismic Network (PNSN) at the University of Washington and the US Geological Survey (USGS) have developed a system to provide early warning of earthquakes referred to as "ShakeAlert." Consisting of a network of sensors spread throughout the west coast, ShakeAlert has been approved for pilot testing in selected water and sewer utilities in Washington and Oregon.

The pilot system is designed to provide early warning alerts, which can be used to establish safety measures that protect people, equipment and facilities. The amount of time for early detection depends on the epicenter of an earthquake, which is expected to be between 0.5 and 4 minutes.

North City Water District will work with a local consultant to plan for and complete a predesign report, and a Pilot Application to participate in the regional program, along with the purchase of any necessary equipment. We look forward to keeping you updated as we have more information. Learn more about ShakeAlert on their website at: www.shakealert.org/

If you have any questions about these three new sections, or about our Water System Planning process in general, please don't hesitate to give us a call at 206.362.8100.

The North City Waves Newsletter is brought to you by North City Water District, and its Board of Commissioners:
Ron Ricker (President), Charlotte Haines (Vice President), and Patty Hale (Secretary).
Feel free to contact us at PO Box 55367, or 1519 NE 177th Street, Shoreline, WA 98155.
206.362.8100 • www.northcitywater.org • / NorthCityWaterDistrict

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North City WATER DISTRICT
2018 ANNUAL REPORT of DRINKING WATER QUALITY

Issue 2: April • May • June 2019

A newsletter for water-related issues and info
Serving the communities of Shoreline and Lake Forest Park since 1931

From Our Board...

by Ron Ricker, President

Spring has officially arrived... as evidenced by the number of construction projects underway in our community. Yet this year, for the first time since 1954, we expect our service connections to decrease by nearly 100 accounts. Looking back to 1965, our Engineering Report stated that the majority of the District's growth in the 1950 and 1960s, with an expected saturation point of approximately 6500 connections by the year 1980. By 1982, our Water System Plan reported 7300 connections; in 2018 we had a total of 8200 connections. So why are we projecting less connections, rather than our historic slow but steady increase? Two words: Sound Transit. As light rail arrives in Shoreline, single family residences will be demolished to make room for new parking garages, light rail stations, and approximately 500 multi-family housing units built by others (with more water-efficient plumbing and fixtures that mitigate their residential density). In some areas, roadways and utilities will be relocated, but the vast majority will be removed from our system. The District has been and will continue to work closely with Sound Transit to ensure the design is as cost effective as possible, both for our ratepayers and the regional transportation system.

Inside This Issue

Increased rate reduction available for 150 eligible low income customers.
Call us or visit www.northcitywater.org

Three Ways to Stay in Touch

1) Join www.nextdoor.com for neighborhood news and notices
2) Follow us on www.Facebook.com/NorthCityWaterDistrict
3) Sign up for news, alerts, free classes and more on our website at www.northcitywater.org

North City Waves Newsletter ~ a publication by North City Water District

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Cedar River Watershed, with not as much snow as we expected; photo courtesy of Seattle Public Utilities

Annual Water Quality Report for 2018

North City Water District continues to maintain state and federal water quality guidelines that are significantly below EPA maximum levels.

All About Your Water

Where Is Your Water From? Tolt and Cedar River Watersheds.

Who Tests Your Water? Your drinking water is regulated by the Environmental Protection Agency (EPA), who sets drinking water quality standards, establishes testing methods and monitoring requirements for water utilities, sets maximum levels for water contaminants, and requires utilities to give public notice whenever a violation occurs. Your drinking water is tested frequently both by North City Water District and Seattle Public Utilities, our supplier, to ensure that high quality water is delivered to your home.

What is Your Water Being Tested For? 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 is available by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline 800.426.4791.

When is Your Water Tested? Continuously—365 days a year.

How is Your Water Tested? Your drinking water has been tested for over 200 compounds and additional contaminates. Tests are done before and after treatment and while your water is in the distribution system. The Tables presented on the following page list all of the contaminants detected in the most recent required water testing and compare them to the limits and goals set by the EPA and the State of Washington to ensure your tap water is safe. Not shown are more than 200 additional contaminants that were tested for, but not detected, in your drinking water. If you would like to see a list of these other compounds or if you have other water quality questions, do not hesitate to contact us. Please note: asbestos monitoring is not required for our District because all the asbestos pipe in our distribution system was replaced prior to 1991.

How Safe is Your Water? Your water falls safely within state and federal guidelines for each and every contaminant, significantly below the EPA's levels.

Lead and Copper Monitoring Results

Our regional water supply does not contain lead or copper. However it is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing.

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. North City Water District 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 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 1.800.426.4791 or at http://www.epa.gov/safewater/lead.

People With Special 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. EPA/Centers for Disease Control (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 1.800.426.4791.

If you would like to learn more about your water, or if you have questions about its quality, please don't hesitate to contact North City Water District at 206.362.8100.

Table 1: Water Quality Testing Results for 2018

Compounds that were not detected in 2018 are not included in these charts.

Types of Detected Compounds	Units	Primary Source	Ideal Goal (MCLG)	Max. Allowed (MCL)	Levels in the Cedar River Watershed Average	Levels in the Cedar River Watershed Range	Levels in the Tolt Watershed Average	Levels in the Tolt Watershed Range	Meets EPA Stds.?
RAW WATER									
Total Organic Carbon	ppm	Naturally present in the environment	NA	TT	0.9	0.4 to 2.1	1.3	1.1 to 1.5	Yes
FINISHED WATER SOURCE									
Turbidity	NTU	Soil runoff	NA	TT	0.3	0.2 to 2.3	0.04	0.01 to 0.35	Yes
Arsenic	ppb	Erosion of natural deposits	0	10	0.4	0.4 to 0.6	0.4	0.4 to 0.44	Yes
Barium	ppb	Erosion of natural deposits	2000	2000	1.5	1.3 to 1.6	1.1	1.0 to 1.2	Yes
Chromium	ppb	Erosion of natural deposits	100	100	0.27	0.25 to 0.33	0.2	ND to 0.24	Yes
Fluoride	ppm	Water additive to promote strong teeth	4	4	0.7	0.4 to 0.8	0.7	0.6 to 0.8	Yes
Nitrate	ppm	Byproduct of drinking water disinfection	10	10	ND	One sample	0.07	One sample	Yes
SPECIFIC SAMPLES FROM NORTH CITY WATER DISTRICT'S DISTRIBUTION SYSTEM									
Total Trihalomethanes	ppb	Byproduct of drinking water disinfection	NA	80	Average: 36 Range: 22 to 46				Yes
Haloacetic Acids (5)	ppb	Byproduct of drinking water disinfection	NA	60	Average: 38 Range: 18 to 41				Yes
Chlorine	ppm	Water additive to control microbes	MRDLG =4	MRDL =4	Highest Monthly Average: 0.72 Range: 0.08 to 1.21				Yes

Table 2: Lead and Copper Monitoring Results for the Tolt Watershed in 2017

Samples are taken every three years. Five of the 51 samples in the Tolt Watershed were taken in NCWD's service area. None of the samples for the Cedar River Watershed were from NCWD's service area.

Lead and Copper Sampling Program and Units	Ideal Goal MCLG	Action Level [2]	Results of 2017 Samplings [3]	# Homes Exceeding Action Level	Typical Sources in Drinking Water
Lead, ppb	0	15	4.0	0 of 51	Corrosion of household plumbing systems. Samples collected in homes within the Tolt water service area.
Copper, ppm	1.3	1.3	0.15	0 of 51	

[2] The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
[3] 90th percentile: 90 percent of the samples were less than the values shown.

Additional Water Monitoring

North City Water District monitors the water in our distribution system for various compounds according to UCMR4 standards, as well as other parameters that can be impacted by algae. Our primary source water is from the Tolt River but we do also get water from the Cedar River, both of which can experience naturally occurring, seasonal algae blooms. Typically these blooms occur in the late spring, but due to a number of environmental factors including sunlight and temperature, blooms can occur at other times of the year. Although the algae we see in our water supplies is not associated with health concerns, it can create tastes and odors. Thankfully these are well controlled at both treatment facilities. Please contact us at our office if you would like to receive a copy of these results.

Rebates Available

Planning to replace or install a new toilet, or upgrade your sprinkler system? How about commercial kitchen equipment, medical equipment, industrial refrigeration units, or commercial laundry machines? Saving Water Partnership has an abundance of rebates for homeowners, apartment and condo owners, as well as institutions, and commercial/industrial businesses. Learn more at:
www.savingwater.org/rebates

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 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. All of the other months in 2018 had 100% of samples below 0.3 NTU for the Tolt.

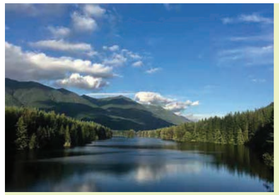
NA: Not applicable.

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.



Learning About Your Water at the Source

Did You Know? You and your family can enjoy an affordable, guided adventure to experience your watershed first-hand!

Located 35 miles east of Seattle along the shores of Rattlesnake Lake, the Cedar River Watershed Education Center offers you and your family a unique way to experience the water cycle.

Affordable tours and classes—such as the Family Watershed Tour, the Railroad History Treasure Tour, or the Junior Naturalist Class—can be reserved on SPU's website with this $5.00 off coupon!

www.seattle.gov/util/crwec/

Center and Exhibit Hours:
April – October:
Tuesday – Sunday | 10AM to 5PM
November – March:
Tuesday – Sunday | 10AM to 4PM
Closed Mondays and on City Holidays

Rattlesnake Lake Recreation Area Hours:
6am to dusk all year, day-use only.

More Information:
206.733.9421 | 425.831.6780
crwprograms@seattle.gov

WATERSHED TOURS

The Cedar River Watershed Education Center is only 35 miles east of Seattle, at beautiful Rattlesnake Lake. The Center is open year-round, Tuesday-Sunday from 10am to 5pm. Visiting the Center is free.

Guided tours of the Watershed are available July-September. ($10 adults; $5 youth & seniors ages 55 and older.)

$5 OFF EACH TICKET

CEDAR RIVER WATERSHED EDUCATION TOUR
Register and redeem at: **seattle.gov/util/crwec** Click on "Programs and Tours"
PROMO CODE: WATER Valid July-September 2019.

Project Update: New Maintenance Building

Our decades-long dream of a new maintenance facility is finally in sight... but it hasn't been easy: staggering construction costs in the northwest prompted us to separate the project into phases. Phase I site work has been completed (prior to the City of Shoreline's overlay program later this year); Phase II construction was awarded to Faber Construction in April. Although we couldn't afford to do everything (a wash facility at this site was too costly) , we'll get most of what we need by modifying other portions of our site. Construction will begin in mid June and should be complete in early 2020.