WATER DISTRICT 19

2020 Consumer Confidence Report

Mission:

To provide a sufficient quantity of good quality water at a reasonable cost to our customers, in perpetuity.

Inside this report:

For more information:

Water District 19
(206) 463-9007
water19@water19.com

Or

U.S. Environmental Protection Agency
Safe Drinking Water Hotline 1-800-426-4719
www.epa.gov/safewater

Or

Washington State Department of Health
Regional Office
(253) 395-6750
www.doh.wa.gov/ehp/dw

This Consumer Confidence Report is designed to give you, our customer, an overview of Water District 19's operation and water quality test results for 2020. You can see where your water comes from, where it goes and the steps taken to provide safe drinking water every time you turn on the tap. We also highlight some of our accomplishments and concerns from 2020, and the actions we will be taking in 2021.

Water District 19 strives to provide our customers with drinking water that meets or exceeds the stringent standards set by the state and federal government. We constantly monitor the water from the water's source to your tap, and have adopted voluntary state health department goals that go beyond the basic requirements. On October 14, 2020, our testing showed that at least one section of our water system contained Distribution Byproducts, approx. 2.3% above the State's recently tightened maximum allowable level. Distribution Byproducts are residuals from the chemical reaction between chlorine and the pathogens that naturally occur in water.

In response, the District has increased the testing for Distribution Products and increased main flushing to reduce the possibility of byproducts building up in the system, thus improving the overall quality of the water in our distribution system. The replacement of old sections of the distribution system will also reduce the accumulation of these byproducts. Since October 2020, our water tests indicate that the District is consistently below the required threshold. Upon receipt of the notice, the District provided notification of the overage to all customers.

In 2020 the District received multiple calls regarding brown or red coloration in the water. While water quality in in the system was safe to drink, the aesthetics of the water was naturally troubling for our customers. Many of the pipes that carry water from our tanks and treatment plant to your home are old steel pipes and have reached the end of their useful life. Even though they are regularly monitored for quality control, removing the coloration will require new pipe. The Commissioners are currently working to finalize its Capital Improvement Plan that will start the replacement process, and plans on spending $7.3 million over the next eight years. Two small projects were completed in late 2020 and early 2021, and the remainder of the replacements are laid out in our Water System Plan, which will be released this year.

Monthly samples are taken for analysis and sent to a state certified laboratory to test for coliform bacteria, and other yearly sampling is done on a schedule dictated by the Washington Department of Health. Water quality system-wide consistently exceeds US EPA standards. (results of recent analyses are on pages 2 and 3 of this report)

Distribution System Leakage Summary 2020		
Total Water Produced (TP) - Annual Volume	112,539,366	Gallons
Authorized Consumption (AC) - Annual Volume	101,938,173	Gallons
Distribution System Leakage (DSL) - Annual Volume TP - AC	10,601,193	Gallons
Distribution System Leakage - Percent DSL	10.8	%
3 year Annual Average - Percent	13.1	%

All water quality information is available to the public during office hours (M - F, 8 a.m. to 4 p.m.). Additionally, the Washington State Department of Health Office of Drinking Water maintains a comprehensive database of every water system in the state called Sentry Internet, which can be accessed at:

https://fortress.wa.gov/doh/eh/portal/odw/si/Intro.aspx. Water District 19's system I.D. is 38900. Enter this I.D. number to access all of our records.

Sources for Water District 19

Water District 19 utilizes surface water and groundwater sources. Our surface water comes from Beall and Ellis Creeks and our groundwater comes from our main well field on 103rd Ave. SW, the Morgan Hill Well on SW 216th St. and the Vashon Meadows Well. Water from the creeks is pumped to our Treatment Plant. There the water is filtered and chlorinated before being pumped into the distribution system and the million gallon storage tank located at our wellfield.

The wellfield on 103rd Ave consists of three wells and two tanks. Pumped groundwater is chlorinated before entering a 625,000 gallon storage tank. This water is transferred to the million gallon tank, where it is blended with surface water. This tank sets the system pressure for the entire distribution system.

Morgan Hill Well water is chlorinated and stored in a 100,000 gallon tank on site before being pumped into the distribution system.. Vashon Meadows water is chlorinated and pumped directly into the system at 184th Avenue SW. Beall Well is blended with surface water and will only used if it is absolutely required to meet high seasonal demand, and then it is blended with treated water.

Creeks supply 60% of annual water.

Surface Water Treatment Process

Surface water enters the treatment plant and is treated with National Science Foundation (NSF) certified chemicals which aid filtration. The water then passes through the filtration process. Post filtration, the water is chlorinated and stored in the clear well. Once in the clear well, the water flows through a series of baffles and chambers to provide adequate contact time for disinfection. This contact time ensures the chlorine will be effective against bacteria, viruses and pathogens. Water is then pumped from the clear well into the distribution system.

Water District 19 Water Treatment Plant

Water quality is monitored continuously throughout this process. We consistently produce water which meets the Department of Health's Treatment Optimization Program (TOP). TOP goals are more stringent than the treatment requirements set forth by the EPA.

Chlorination and Disinfection

Liquid sodium hypochlorite is used as our disinfectant. Chlorine is very effective in killing disease-causing pathogens, such as bacteria, viruses, and protozoans. We are required to assure minimum chlorine residuals entering into the distribution system and a measurable chlorine residual throughout. We monitor chlorine concentrations daily as water enters the distribution system and throughout the system. The table below shows the range of chlorine concentrations in our system.

Chlorine Monitoring Point	Unit	Minimum	MRDL	Average	Range
Entry Into Distribution System	Mg/L	0.25	4.00	1.17	.25 - 1.98
Distribution System Samples	Mg/L	detectable	4.00	0.34	.01 - 1.44

While disinfection helps to maintain the safety of our water, chlorine can react with natural materials to form "Disinfection Byproducts" (DBP's) that may pose a health risk. We have been collecting data on DBPs every year since 2005 and we sample for them quarterly. Though our results are typically below the EPA MCL's*; we continue to investigate ways to reduce their formation.

2019 Disinfectant By-Products Results					
DBP's	Units	MCL	Avg	Max	Min
Total HAA's *	µg/L*	60	46.1	67.0	2.8
Total TTHM*	µg/L	80	61.8	93.0	11.0

* see Definition of Terms page 3

Water Quality Standards

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 the water poses a health risk.

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/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 (1-800-426-4791).

In order to ensure that tap water is safe to drink, the Washington State Department of Health (WA DOH) and EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulates contaminants in bottled water.

Contaminants that may be present in source water before treatment include:

Microbial contaminants

Inorganic contaminants

Pesticides and herbicides

Organic chemical contaminants

Radioactive contaminants

WA DOH prescribes the water quality monitoring requirements yearly. See Table below for the most recent results.

Water Quality Test Results 2020

This table shows the most recent data concerning the quality of our drinking water. Sampling is done at the entry point to the distribution system, post treatment. Of the 135 regulated chemicals tested for, we provide data on the chemicals detected. The table does not include the regulated chemicals we tested for but did not detect, including synthetic and volatile organic chemicals such as oils, solvents herbicides and pesticides. If you have any questions regarding Water Quality please give us a call. 206-463-9007.

Contaminant	Units	MCL	Test Result				In Compliance	Typical Source of Contamination
EPA Regulated (Primary)			Well field 103rd	Morgan Hill Well	Beall Well[1]	Surface Water		
Arsenic	mg/L	**0.01**	0.0049	0.0016	0.04	ND	yes	Erosion of Natural Deposits
Nitrate	mg/L	**10**	ND	ND	1.3	ND	yes	Erosion of Natural Deposits, leaching from septic systems
Radium 228	pCi/L	**5**	<0.9	<.209	0.940	ND	yes	Erosion of Natural Deposits
EPA Regulated (Secondary)								
Hardness (CaCO3)	mg/L	-	64	85	76	76	n/a	Erosion of Natural Deposits
Manganese	mg/L	0.05	0.084	0.093	ND	ND	n/a	Erosion of Natural Deposits

ND - Not Detected **n/a** - not applicable

[1] Due to arsenic levels in Beall Well (33 ug/L), it is blended with surface water at the plant to well below the MCL. **Results in Table are post treatment.** Beall Well was not operated in 2019 and will only be operated in the future if absolutely necessary to meet system demand.

Coliform bacteria: An indicator for potential disease causing bacteria in water. All samples taken for 2020 were satisfactory.

Arsenic: Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

Lead and Copper: Lead and copper are typically a result of corrosion of household plumbing systems. The action levels* for lead and copper are 0.015 mg/L and 1.3 mg/L, respectively. We sampled 10 homes and the Vashon School District in 2020. The 90th percentile concentration level for lead was 0.0024 mg/L. One sample was measured above this at 0.0052 mg/L. The 90th percentile concentration level for copper was 0.16 mg/L. Two samples were above this at 0.17 mg/L. Lead and Copper in drinking water is primarily from materials and components associated with service lines and home plumbing. Water District 19 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. 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*

* Definition of Terms

Maximum Contaminant Level Goal or 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 or 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 technology.

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

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

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 (e.g. chlorine, chloramines, chlorine dioxide).

90th Percentile value: The 90th percentile is the value for which 90% of the data points are smaller.

mg/L: Milligrams per liter = parts per million.

µg/L: Micrograms per liter, equal to parts per billion.

pCi/L: PicoCuries per Liter

THM: Trihalomethane, a regulated disinfection by-product.

HAA: Haloacetic Acids, regulated disinfection by-product.

DOH: Washington State Department of Health.

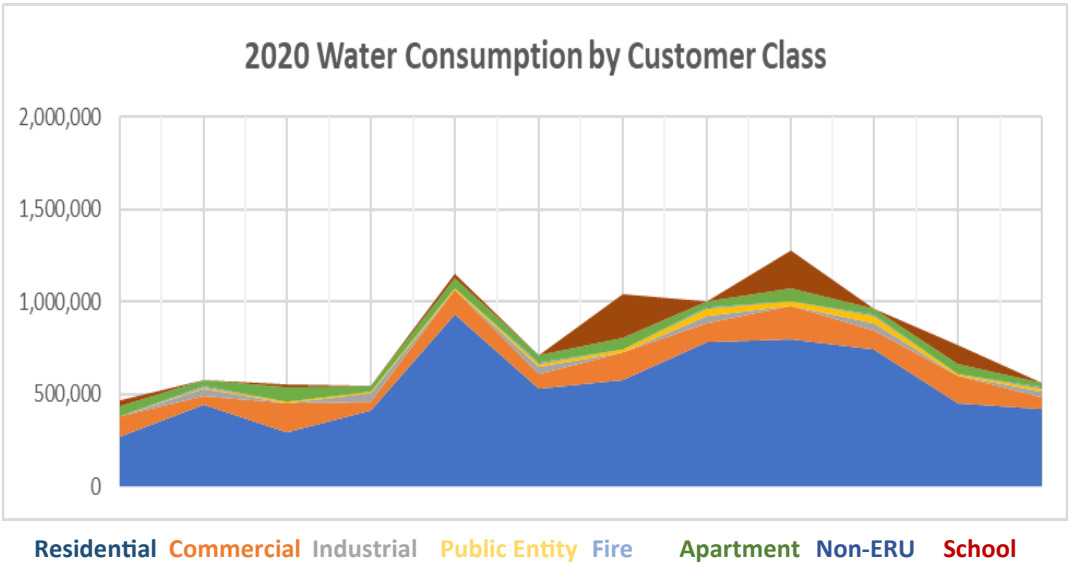
± Contains the most recent test results for water quality standards dictated by Washington State and EPA.

Public Participation Opportunities

Regular Board of Commissioners meetings occur on the second Tuesday of every month at 6:00 p.m. at the District office and are always open to the public. Other special meetings, as scheduled by the Board, are advertised and posted on our website.

Water Use Efficiency

The demand side is solely a function of the customer's usage. In 2020 we saw an overall decrease in consumption of 1.3% compared 2019, which represents almost 1.3 million gallons of water. Traditionally, lawn and garden irrigation are the primary source of increased summer demand, but in 2020 we saw a decrease of 862.600 gallons between April 1st and October 3rd, which is traditionally our peak time. Your personal use may be much different than the average, but weather patterns also effect irrigation, with summer months. However, as a community we used 1,286,000 fewer gallons than 2019. We thank you, our customers for your continued efforts to conserve water; you are making a difference. Call or stop by our office for more information, as we want to work with you to continue to reduce summer irrigation. With better conservation, we can defer future capital costs to develop new sources and comply with state guidelines by continuing this encouraging trend



Board of Commissioners

Bob Powell, President

Seth Zuckerman, Secretary

Mike Weller

General Manager

Jim McRae

Lead Operator

James Rossi

Administrative Offices

17630 100th Ave. S.W.
P.O. Box T
Vashon, WA 98070

Phone: 206-463-9007
Fax: 206-463-1262

http://water19.com

Notable events 2020—What's planned for 2021

In 2020: the District continued to rehabilitate its water wells at the main well site. Plans are to continue this practice on each of the three main wells on a three to four-year cycle , depending on each well's specific needs. The District hopes to continue to meet customer demands without having to develop additional water sources, unless island growth requires more water. Demand will ultimately be dependent on island population's growth, plus the success of conservation programs. The District hopes that water conservation will continue to improve on the island and slow the need for more water sources. In 2020 the District replaced mains along 107th and parts of Bank Road. Plans to replace mains along 216th & a section of Vashon Highway have been developed; start date in late 2021. The plan is to replace water mains on 216th & Vashon Hwy. Future plans are to replace water mains on Kingsbury And in 2027 the District will replace water mains along Bank Rd from 107th to the new main at 115th. For a copy of our Capital Improvement Projects, please contact the District. The change to electronic meters will continue as electronic reads help us identify leaky service lines. The District's Supervisory Control and Data Acquisition System (SCADA) has been significantly improved to ensure continuous operations, The Commissioners have completed the Comprehensive Water System Plan and public meetings will be held for our customers in the coming months.