WATER DISTRICT 19

2017 Consumer Confidence Report

Mission:

As a non-profit, local government agency, Water District 19 provides water resource management with an emphasis on conservation to deliver a safe and reliable supply of high quality water to meet present and future needs in an environmentally sensitive and economically responsible way.

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 2017. Now as in previous years you will discover where your water comes from, where it goes and what steps are taken to provide you water that is safe to drink every time you turn on the tap. We also highlight some of our accomplishments from 2017 and our direction for the future years.

At Water District 19 we strive to provide our customers with drinking water that meets or exceeds the stringent standards set by the state and federal governments. To this end we constantly monitor the water from the sources to the tap. We have adopted voluntary state health department goals that go beyond the basic water quality requirements.

The water quality in our distribution system is monitored daily for your protection. Monthly samples are taken for analysis and sent to a state certified laboratory to test for coliform and fecal bacteria. Additional annual sampling is done on a schedule dictated by the Washington State Department of Health. We are pleased to report that our results indicate a water quality that consistently exceeds US EPA standards. (results of recent analyses are on pages 2 and 3 of this report)

All water quality information is available to the public during office hours (M - F, 8 a.m. to 4 p.m.). This includes all test results from either in-house analysis or from state certified labs. 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, it is 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 as far back as 1975 through to the current date.

If you have any concerns regarding the quality of your water, contact our office and we will investigate it promptly. Someone is available to you 24/7 for your convenience and safety.

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

Water Usage and Conservation

Our District has aging infrastructure which is the source of leaks and contributes to discolored water. It is the goal of the District to aggressively replace old water mains in our system to reduce leaks, improve water quality, and increase water for fire protection over the next 10 years. Currently our Distribution System Leakage is at a high of 12.9% which is over the State goal of 10%.
Continued on Page 4

Distribution System Leakage (DSL) Summary 2017		
Total Water Produced (TP) Wells and Streams 2017	123,965,281	Gallons
Authorized Consumption (AC) - Water Used by You & Us	107,953,952	Gallons
Distribution System Leakage (DSL) - the difference TP - AC	16,011,329	Gallons
Distribution System Leakage - Percent DSL	12.9	%
3 year Annual Average - Percent	9.0	%

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 a well field on 103rd Ave. SW, a well on SW 216th St. and the Beall Well at our Treatment Plant that we use for dry times. Water from the creeks is pumped to our Treatment Plant where 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, blending with surface water. This tank provides pressure to our entire distribution system.

Morgan Hill well on 216th St. the water is chlorinated and stored in a 100,000 gallon tank on site before being pumped into the distribution system.

Currently Beall Well can be blended with our surface water. It is utilized primarily to meet seasonal demand.

The creeks supply 65% of our yearly consumption, and the wells provide

Surface Water Treatment Process

Water entering the treatment plant is treated with certified chemicals which aid filtration. The water then passes through the filtration process. After filtration, the water is chlorinated and stored in a clear well. Once in the clear well, the water flows through a series of baffles 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 quality is monitored continuously throughout this process. We strive to 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, which the District consistently meets.

Water District 19 Water Treatment Plant

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 residuals in our system.

Chlorine Monitoring Point	Unit	Minimum	MCL	Average	Range
Entry Into Distribution System	Mg/L	0.20	4.00	0.78	.20 - 2.3
Distribution System Samples	Mg/L	detectable	4.00	0.34	.02 - 1.44

While disinfection helps to maintain the safety of our water, chlorine can react with organic matter 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 DBP formation. (µg/L is parts per billion).

2017 Disinfectant By-Products Results					
DBP's	Units	MCL	Avg	Max	Min
Total HAA's	µg/L*	60	14.2	28	5.2
Total THM*	µg/L	80	35.8	53	21.4

*** see Definition of Terms**

Water Quality Standards

Drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminant. 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 2017

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]**	**Beall/Ellis**		
Arsenic	µg/L (PPB)	**10 ug/L or .05 mg/L**	.007 mg/L	.0017 mg/L	.041 mg/L	.003 mg/L	3 locations	Erosion of Natural Deposits
Nitrate	mg/L (PPM)	**10 mg/L**	.2 mg/L	.2 mg/L	.2 mg/L	.2 mg/L	yes	Erosion of Natural Deposits, leaching from septic systems
Raduim 228	pCi/L	**5 PCi/L**	ND	0.2	0.16	.9	yes	Erosion of Natural Deposits
EPA Regulated (Secondary)								
Hardness (CaCO3)	mg/L	-	71	82	100	76	n/a	Erosion of Natural Deposits
Manganese	mg/L	**0.05 mg/L**	.053 mg/L	.07 mg/L	.12 mg/L	.01 mg/L	n/a	Erosion of Natural Deposits

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

[1] Due to arsenic levels in Beall Well (41 ug/L), it is blended with our surface water to significantly below the MCL. **Results in Table are post treatment.** Beall Well was not operated in 2017.

Coliform bacteria: An indicator for potential disease causing bacteria in water. All samples taken for 2017 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 2015. 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

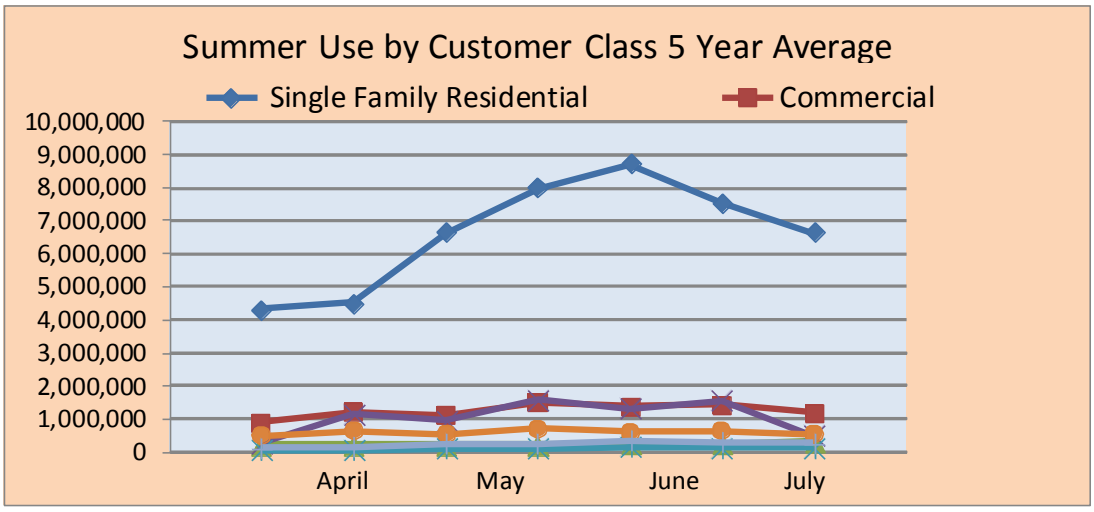
Regular Board of Commissioners meetings are held the second Tuesday of every month at 4:00 p.m. at the District office and are always open to the public. Other special meetings, as scheduled by the Board, are advertised and posted on our website.

Water Use Efficiency, *continued from page 1*

The more water we keep from leaking out of our pipes, the more energy efficient we become, and the more water we have available for our customers. Conservation reduces the need for expensive infrastructure for new water sources, which is easier on the environment.

We applaud our customers* for *their continued conservation through replacing inefficient toilets and dishwashers and installing low water use fixtures and washers!

It is the intention of the District to use conservation as one method to ensure enough water to meet our customers water needs. Management at the District is very focused on both present and future customer water needs. Our goal is to create a sustainable pattern of water supply while continually assessing the health of our wells, creeks, and infrastructure. We seek to improve water quality by protecting our watersheds, and wellheads from contamination and destruction from both man-made and natural events. Reforesting areas that have lost trees to disease and wind and strengthen our ability to have safe, cool, clean water for all species in our District.



Board of Commissioners

Bob Powell, President

Seth Zuckerman, Secretary

Jenny Bell

General Manager

Jim McRae

Lead Operator

Jamie Hatton

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 2017—What's planned for 2018

In 2017: the District invested in the water treatment plant on Soper Rd. We have completely rehabilitated one clarifier and one filter and we are just putting on the finishing touches for summer operation; from new coatings and paint to new media. We have updated instrumentation and chemical pumps, maintained and serviced our air blowers and other important equipment. Extra thanks to Keith Kassik for his great work on this much needed project.

Other accomplishments this year included the addition of a new general manager with holistic views; improvements in pump station maintenance; and better data collection for our well sites and pump stations in an effort to manage our resources and plan future maintenance projects more efficiently. And finally we will be wrapping up our latest comprehensive plan. What's in store for the future?

Investing in existing systems to ensure water now and for future generations.

Approximately 65% of our water comes from surface water, and 64% of the surface water comes from Beall Creek. Our aging station is due for a life extension. We are planning a new fish friendly pump station with improvements to aid in keeping good in-stream flows, cool water, and infrastructure that will require less