Water District 19

2011 Water Quality Report

This Consumer Confidence Report is designed to give you, our customer, an overview of Water District 19's water quality for 2011. Inside you will discover where your water comes from and what steps are taken to guarantee you receive water that is safe to drink every time you turn on the tap.

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 all the way to the tap. We have adopted voluntary state health department goals that go well beyond the basic requirements.

The water quality in our distribution system—the pipes that carry the water from our tanks and treatment plant to your home—is regularly monitored for quality control. Monthly samples are taken for analysis and sent to a state certified laboratory to test for coliform bacteria. Additional yearly sampling is done on a schedule dictated by the Washington 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)

Additional efforts to ensure the highest quality water gets to your home include annual system flushing through fire hydrants and an extensive cross connection control program which protects the system against cross contamination. 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.

If you have any concerns regarding the quality of your water, contact the District office and we will investigate it immediately.

For More Information On Water Quality Please Contact

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

Or

U.S. Environmental Protection Agency
Safe Drinking Water Hot-line 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

Inside this report:

Mission:

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

Water Usage and Conservation

There are principally two aspects of conservation we are able to address: the supply side and the demand side. We provide the water, you the customer consume it. We have been working to develop a comprehensive approach to conservation which fully addresses this relationship. The table below shows our system leakage (supply side). Primarily a product of aging infrastructure The Statewide goal is 10%. If you see or suspect a water leak please call our office.

Distribution System Leakage Summary 2011		
Total Water Produced (TP) - Annual Volume	106,317,455	Gallons
Authorized Consumption (AC) - Annual Volume	98,638,280	Gallons
Distribution System Leakage (DSL) - Annual Volume TP - AC	7,679,175	Gallons
Distribution System Leakage - Percent DSL	7.2	%
3 year Annual Average - Percent	6.1	%

Sources for Water District 19

Water District 19 uses both 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 , the Morgan Hill Well on SW 216th St. and the Beall Well at our Treatment Plant.

Water from the creeks is pumped to our Treatment Plant. There the water is filtered and chlorinated before being pumped into the distribution system. Excess water then fills the 1 million gallon storage tank.

The Well field on 103rd Ave consists of three wells, two of which are used for water withdrawal and the third for monitoring. The water is chlorinated before entering a 625,000 gallon storage tank. The water is then pumped to the 1,000,000 gallon tank which maintains the pressure to our entire distribution system.

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

The Beall Well is blended with our surface water prior to treatment and filtration at the Treatment Plant. It is utilized primarily to meet seasonal demand.

At Water District 19 we subscribe to the tenets of the Washington State Source Water Assessment Program (SWAP) which evaluates potential threats to the safety of public water supplies by assessing sources of contamination. For information on this program contact the regional DOH Drinking Water Office at (253) 395-6750.

Surface Water Treatment Process

REGULATIONS FOR TREATING GROUNDWATER AND SURFACE WATER DIFFER

Raw surface water entering the treatment plant is combined with water from the filter wash recycle pond which comprises no more than 15% of the water entering the plant. Water is treated with NSF certified chemicals to bind with minerals and organic matter which aid in coagulation and filtration. The water then passes through the filtration process. During this process water flows up through an adsorption clarifier to the filtration chamber, is chlorinated and stored in a clear well. Once in the clear well, the chlorinated 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.

Chlorination

Liquid sodium hypochlorite is used as our primary disinfectant. We sample chlorine concentrations in the water as it enters the distribution system and throughout the system, daily.

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

2011 Results:

Chlorine Monitoring Point	Unit	MRDGL	MRDL	Average	Range
Entry into Distribution System	mg/L*	4.0	4.0	1.0	0.3 - 1.75
Throughout Distribution System	mg/L	4.0	4.0	0.48	0.0 - 2.2

DPB's	Units	MCL	Ave	Max	Min
Total HAA's *	µg/L*	60	29.9	52.6	13.2
Total THM*	µg/L	80	36.7	62.1	11.2

* 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 Department of Health 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

Water Quality Test Results 2011±

Synthetic Organic Compounds (SOCs) and Volatile Organic Compounds (VOC's): Per DOH requirements, we sampled our surface water for SOC's in 2007 and for VOC's in 2011. We tested the wells in 2010 for VOCs and for SOCs in 2009. There were no detectable VOCs or SOCs at any of our sources. Examples of SOCs include herbicides, pesticides, and insecticides while VOCs would be solvents, fuels, paints, industrial by-products . In 2009 we sampled all sources for radioactive contaminants with no contaminants detected. We also sampled our distribution system for the presence of Asbestos in 2009 and none was detected. We sample monthly for coliform bacteria, an indicator for potential disease causing bacteria in water. All samples taken for 2011 were satisfactory.

This table shows the most recent data concerning inorganic contaminant (IOC) sampling. The groundwater data is from 2010 and the surface water data is from 2011. Of the 20 regulated chemicals tested for, we provide data on the chemicals detected.

Contaminant	Units	MCL	Test Result				In Compliance	Typical Source of Contamination
EPA Regulated (Primary)			Well field 103rd	Morgan Hill Well	Beall Well	Surface Water		
Arsenic	µg/L	**10**	7	ND	**39**	ND	**Beall Well out of compliance**	Erosion of Natural Deposits
Nitrate	mg/L	**10**	ND	ND	ND	ND	yes	Erosion of Natural Deposits, leaching from septic systems
Turbidity	NTU	**1**	0.37	0.2	0.37	0.14	yes	Erosion of Natural Deposits
Hardness (CaCO3)	mg/L	-	70	96	80	100	n/a	Erosion of Natural Deposits

ND - Not Detected **NTU** - Nephelometric turbidity Units

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. The result for Lead sampling completed in 2009 was 0.008 mg/L, well below EPA action levels*. Copper was not detected in any samples. Lead 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).

Maximum Residual Disinfectant Level Goal (MRDLG): 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.

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

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

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 the second Tuesday of every month at 4:30 p.m. at the District office and are always open to the public. Other special meetings as scheduled by the Board.

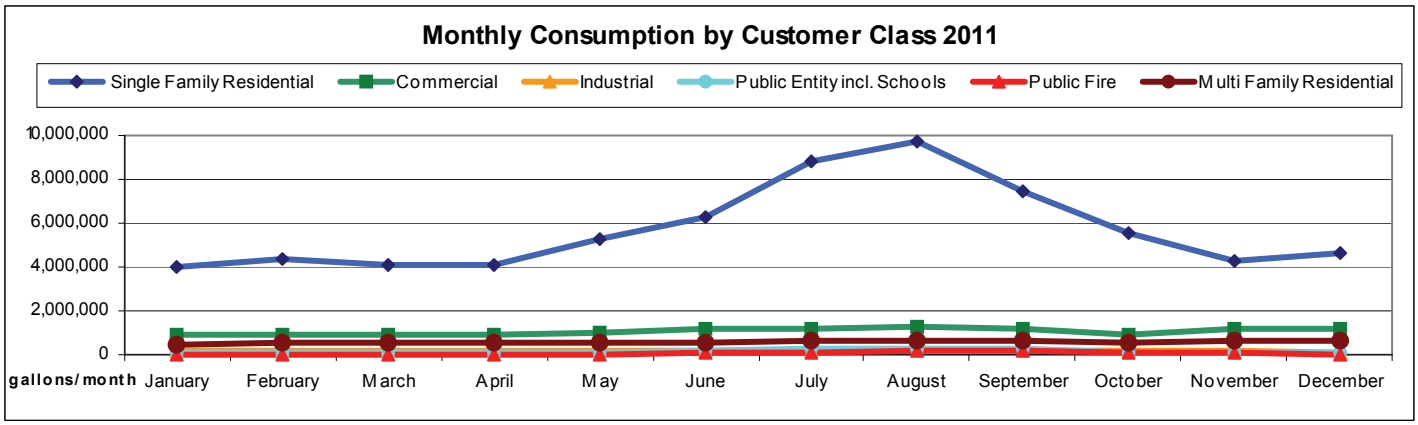
Water Use Efficiency, *continued from page 1*

We continue to encourage the conservation ethic, respond to citizen concerns regarding effective resource use and we educate the community about water supply issues. We have implemented steeper inclining block rates to establish Conservation Pricing. We encourage our customers to make use of our rebate programs for water efficient washers and low flow toilets. Please call or stop by our office for more information regarding these programs. When savings are realized, we can defer future capital costs for new supply and treatment facilities, protect our natural resources and comply with state guidelines. Production in 2011 was reduced by 7.4% compared to our 5 year annual average (2005 -2009) in large part as a function of our customers embracing conservation. The average home used 150 gallons per day. The most critical period for water usage is during the summer months when demand is highest and the supply of water from our creeks is lowest. Please don't over-irrigate or otherwise waste water during this period (see chart below that illustrates seasonal variations).

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

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

http://water19.com



Notable events 2011—What's planned for 2012

In 2011: DOH approved full use of the Beall Well; the effort to jointly study water resource development with King County as part of our Comprehensive Water System Plan was completed; the DOH authorized use of the Morgan Hill Well as an additional source. With that approval the District completed overhauls of the booster pumps as well as electrical upgrades; the District completed a project to replace our computing network server, at a total cost of approximately $13,000; 760 feet of 4-inch steel water main was replaced with 8-inch PVC on SW 184th Street and Ridge Road.

In 2012; the District plans to invest an additional $100,000 for main replacement projects. Work is scheduled to continue on SW 184th Street onto Ridge Road; an automated drive-by meter reading system will be commissioned; additional pressure reducing valves will be installed in the distribution system to establish a third pressure zone; e-billing will be offered to our customers; additional source development will be investigated.