



# Water District 19

## 2012 Water Quality Report

**For More Information  
On Water Quality  
Please Contact**

**Water District 19  
(206) 463-9007**

[water19@water19.com](mailto:water19@water19.com)

Or

**U.S. Environmental  
Protection Agency  
Safe Drinking Water Hot-  
line 1-800-426-4719**

[www.epa.gov/safewater](http://www.epa.gov/safewater)

Or

**Washington State  
Department of Health  
Regional Office  
(253) 395-6750**

[www.doh.wa.gov/ehp/dw](http://www.doh.wa.gov/ehp/dw)

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### Mission:

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

This Consumer Confidence Report is designed to give you, our customer, an overview of Water District 19's water quality for 2012. 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.

### 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

Distribution System Leakage Summary 2012		
Total Water Produced (TP) - Annual Volume	110,947,696	Gallons
Authorized Consumption (AC) - Annual Volume	103,247,494	Gallons
Distribution System Leakage (DSL) - Annual Volume TP - AC	7,600,202	Gallons
Distribution System Leakage - Percent DSL	6.9	%
3 year Annual Average - Percent	6.9	%

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.

## 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.

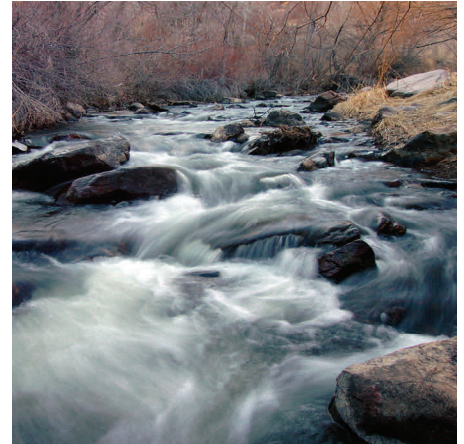
Water from the creeks is pumped to our Treatment Plant. There the water is filtered and chlorinated before being pumped into the distribution system. Excess water then fills the 1 million gallon storage tank.

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 sur-

face water prior to treatment and filtration at the Treatment Plant. It is utilized primarily to meet seasonal demand.



## 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 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 ma-

terials 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 the EPA MCL’s\*.

### 2012 Results:

DPB's	Units	MCL	Ave	Max	Min
Total HAA's *	µg/L*	60	20.2	78.0	14.0
Total THM*	µg/L	80	49.0	89.6	8.6

Chlorine Monitoring Point	Unit	MRDGL	MRDL	Average	Range
Entry into Distribution System	mg/L*	4.0	4.0	1.0	0.3 - 2.2
Throughout Distribution System	mg/L	4.0	4.0	0.24	0.2 - 2.2



\* 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 Washington State Depart-

ment 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

## Water Quality Test Results 2012±

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.

Contaminant	Units	MCL	Test Result				In Compliance	Typical Source of Contamination
			Well field 103rd	Morgan Hill Well	Beall Well	Surface Water		
<b>EPA Regulated (Primary)</b>								
Arsenic	µg/L	10	7	2	2.6	ND	yes	Erosion of Natural Deposits
Chloroform	mg/L	-	0.68	0.41	ND	0.37	n/a	Disinfection by-product
Nitrate	mg/L	10	ND	ND	1.3	1.3	yes	Erosion of Natural Deposits, leaching from septic systems
Radium 228	pCi/L	5	ND	0.2	ND	ND	yes	Erosion of Natural Deposits
<b>EPA Regulated (Secondary)</b>								
Hardness (CaCO3)	mg/L	-	70	96	80	100	n/a	Erosion of Natural Deposits
Manganese	mg/L	0.05	ND	0.075	ND	ND	n/a	Erosion of Natural Deposits
ND - Not Detected NTU - Nephelometric turbidity Units n/a - not applicable								

**Coliform bacteria:** An indicator for potential disease causing bacteria in water. All samples taken for 2012 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 McMurray Middle School in 2012 and no lead nor copper was 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

### \* 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.

**pCi/L:** PicoCuries per Liter

**THM:** Trihalomethane, a regulated disinfection by-product.

**HAA:** Haloacetic Acids, regulated disinfection by-product.

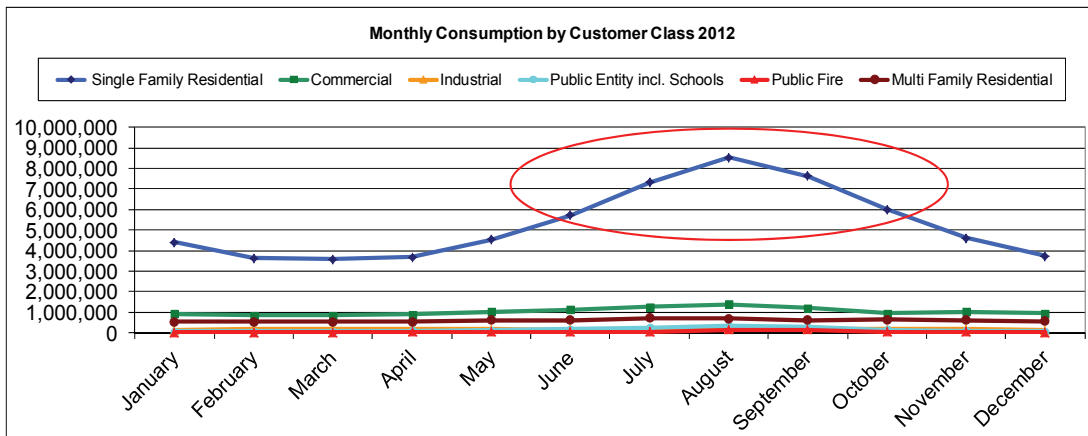
± Contains the most recent test results for water quality standards dictated by Washington State and EPA.

## 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, are advertised and posted on our website.

### 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 2012 was reduced by 3.4% compared to our 5 year annual average (2005 -2009) in large part as a function of our customers embracing conservation. The average home used 139 gallons per day, a 7.3% reduction from 2011. 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).



### Board of Commissioners

Steve Haworth, President

Bob Powell, Secretary

Richard Bard

### General Manager

Jeffrey Lakin

### Lead Operator

Armin Wahanik

### Administrative Offices

17630 100th Ave. S.W.

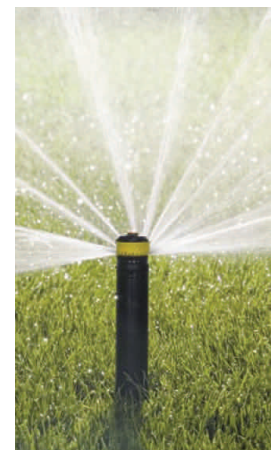
P.O. Box T

Vashon Island, WA 98070

Phone: 206-463-9007

Fax: 206-463-1262

<http://water19.com>



## Notable events 2012—What's planned for 2013

In 2012: DOH approved full use of the Beall Well; the DOH authorized use of the Morgan Hill Well as an additional source on our current well-field. With that approval the District completed overhauls of the booster pumps as well as electrical upgrades. the District offered e-billing for the first time; 760 feet of 4-inch steel water main was replaced with 8-inch

PVC on SW 184th Street and Ridge Road at a cost of \$69,640; an Automated Meter Reading System was launched at a cost of \$15,440, work began on installation of additional pressure reducing valves.

In 2013; the District plans to invest an additional \$145,000 for main replacement projects on Ridge Road; the automated meter reading system

will be expanded; additional pressure reducing valves will be installed in the distribution system to establish a fourth pressure zone - total project cost \$170,000; Beall Creek pump house will be replaced at a cost of \$40,000; additional source development will be investigated in an attempt to fully utilize our current water rights.