

Highline Water District Consumer Confidence Report 2016

“Providing
safe, clean
water to
residents of
South King
County since
1946”

Highline Water District is pleased to provide our 2016 Consumer Confidence Report

This report describes the sources of your drinking water and how it compares to stringent standards set by regulatory agencies. Please take a few minutes to read through and familiarize yourself with the quality of water you and your family use every day. If you have any questions, please contact our Operations Supervisor at 206-592-8920.

The Facts on Contaminants



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. As water travels over the surface of the land or through the ground, naturally occurring minerals and, in some cases radio active materials, dissolve in the water. Water can also pick up substances resulting from the presence of animals or human activity. Contaminants

that may be present in source water are microbes, pesticides, herbicides, organic and inorganic chemicals, and radioactive materials. More information about contaminants and potential health effects can be found by calling the EPA's Safe Drinking Water Hotline: 1-800-426-4791.

Immuno-Compromised Persons

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised individuals such as people with cancer undergoing chemotherapy, people 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. Environmental Protection Agency and Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from:



*Environmental
Protection
Agency
Safe Drinking
Water Hotline
(800-426-4791)*

Sources of Supply

In 2016, approximately 73 percent of Highline Water District's water came from Seattle Public Utilities Cedar River supply. The remaining supply came from Highline Water District's four groundwater wells.

Water from the District's four wells: Des Moines Well (So2), Angle Lake Well (So3), Tye Well (So4), and McMicken Well (S10), is directed to one of three treatment plants where it is filtered, treated and tested before it is blended with water from Seattle.

Seattle Public Utility - Cedar River Supply

Although the water supply is aggressively protected, it goes through a treatment process to ensure that it is safe to drink. Before the water reaches Highline Water District, it goes through the six treatment steps outlined below:

- * The water is screened to remove debris.
- * Fluoride is added for dental health.
- * Lime is added to control corrosion of plumbing materials.
- * Ozone is added to disinfect the water.
- * Water passes through Ultra Violet Light to destroy harmful organisms.
- * Chlorine is added to provide a disinfectant residual.



Physically Protected Sources

To preserve the high quality of water that originates in the Cedar River Watershed, recreational, agricultural and industrial activities in the area are not permitted. According to the Washington State Department of Health (DOH), all surface water has been rated highly susceptible, but the vulnerability is low due to the watershed protection afforded by Seattle Public Utilities (SPU's) Comprehensive Watershed Protection Plan.

Highline Water District's groundwater sources are protected by naturally occurring "confining layers" of material above the water bearing aquifer. The "restricted use" and "confining layers" protect the watershed and raw water quality from degradation, and is the primary reason the DOH classified these water sources as having "low vulnerability" to contamination. For a complete copy of the source water assessment, contact the regional DOH Drinking Water Office at (253) 395-6750.

Highline Water District - Well Water

Highline Water District pumps water from four wells and treats the water at three facilities. The District's treatment consists of the following:

- * The water is passed through greensand filters to remove low levels of manganese and iron.
- * Chlorine is added to provide a disinfection residual.
- * Fluoride is added for dental health
- * Sodium Hydroxide is added to control corrosion of plumbing materials.



Setting Drinking Water Standards



The EPA (Environmental Protection Agency) adopts regulations setting water quality standards for public water systems. "Primary Standards" pertain to contaminants that could pose a health problem

such as arsenic, while "Secondary Standards" pertain to aesthetic concerns such as iron and manganese. The Department of Health Drinking Water Division has been given the responsibility to ensure both primary and secondary water quality standards are met in Washington State. The Federal Food and Drug Administration and The Washington Department of Agriculture regulate contaminants in bottled water and are responsible for providing a similar level of public health protection.

Lead in Drinking Water

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 private service lines and home plumbing.

Highline 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 or at <http://www.epa.gov/safewater/lead>.

For more information on lead see www.highlinewater.org

MEASURED AT CUSTOMER'S TAP							
2016 RESULTS							
Tested Compounds	Unit	MCLG	**90th Percentile Action Level	90th Percentile	# Of Homes Over Action level	Compliance	Source
Lead	ppb	0	15	2	1	YES	Corrosion of household plumbing
Copper	ppm	1.3	1.3	0.03	0	YES	Corrosion of household plumbing

Footnotes and Definitions

*Cryptosporidium was detected in 2 of 12 samples from the Cedar River.	NTU - Nephelometric Turbidity Unit: Turbidity is a measure of how clear the water looks.
**Value shown represents the 90th percentile (2016). 90% of the samples were less than the values shown.	TT - Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
MRDL - Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.	ppm - One part per million CCF - (100 cubic feet or 748 gallons)
MRDLG - Maximum Residual Disinfectant Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.	+ Not a health based regulatory standard - EPA does list a "Lifetime Health Advisory Level" of 70 ppb. NA - Not Applicable ppb - One part per billion
MCLG - Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.	ug/L = Micrograms per Liter ND - Not Detected
MCL - Maximum Contaminant Level: The highest level of contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.	AL - Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Contaminant Detection Tables

CONTAMINANTS FOUND IN YOUR TAP WATER				AMOUNT FOUND IN YOUR TAP WATER		IS YOUR WATER SAFE?	
		EPA ALLOWABLE LIMITS		LEVELS IN SOURCE WATER			
DETECTED COMPOUNDS	UNIT	MCLG	MCL	AVERAGE	RANGE	COMPLIANCE	MAJOR SOURCES
MEASURED AFTER CEDAR RIVER WATER TREATMENT – Raw Water							
Total Organic Carbon	ppm	NA	TT	0.8	0.3 TO 2.1		Naturally present in the environment
Cryptosporidium*	#/100L	NA	NA	0.3	ND TO 2		Naturally present in the environment
MEASURED AFTER CEDAR RIVER WATER TREATMENT – Finished Water							
Turbidity	NTU	NA	TT	0.3	0.2 TO 2.3		Soil Runoff
Arsenic	ppb	0	10	0.5	0.4 TO 0.6		Erosion of natural deposits
Barium	ppb	2000	2000	1.6	1.5 TO 1.8		Erosion of natural deposits
Bromate	ppb	0	10	ND	ND		By-product of water disinfection
Chromium	ppb	100	100	0.27	0.25 TO 0.33		Erosion of natural deposits
Fluoride	ppm	4	4	0.7	0.6 TO 0.9		Erosion of natural deposits
Nitrate	ppm	10	10	0.02	1 Sample		Erosion of natural deposits
MEASURED IN THE HIGHLINE WATER DISTRICT DISTRIBUTION SYSTEM							
Total Trihalomethanes	ppb	NA	80	41	19.5 TO 43.0		By-product of water chlorination
Haloacetic Acids (5)	ppb	NA	60	27	13.4 TO 34.0		By-product of water chlorination
Chlorine	ppm	MRDLG=4	MRDL=4	1.02	0.20 TO 1.51		Additive used to control microbes
Total Coliform	%	0	5%	ND	ND		Naturally present in the environment
LEVELS IN HIGHLINE WATER DISTRICT AFTER TREATMENT							
Nitrate	ppm	10	10	ND	3 Samples		Erosion of natural deposits
Fluoride	ppm	4	4	.77	0.49 TO 1.29		Additive which promotes strong teeth
DCPA Acid Metabolites +	ppb	NA	NA	2.2	1 Sample	YES	Pre-emergent herbicide for annual grasses and weeds

This table shows all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Upon request, we will provide you with a list of compounds we looked for but did not find.

*Cryptosporidium was detected in 2 of the 12 samples from the Cedar supply.

Highline's Testing Results for Unregulated Contaminants - UCMR3		
Chromium (Total)	Average 0.28 ug/L	Range 0.27 ug/L to 0.28 ug/L
Chromium-6	Average 0.10 ug/L	Range 0.097 to 0.10 ug/L
Strontium	Average 36 ug/L	Range 30 - 41 ug/L
Vanadium	Average 0.63 ug/L	Range 0.56 - 0.69 ug/L
Chlorate	Average 21 ug/L	Range ND - 42 ug/L

The EPA required Highline Water District and approximately 6,000 other water systems to collect water samples under the Unregulated Contaminant Monitoring Rule 3 (UCMR3). The EPA uses the information they receive from this monitoring effort to help them decide if further regulations are necessary.

Highline Water District completed its monitoring in 2015. The chart above shows the 5 contaminants detected of the 30 contaminants we looked for. Chromium (total) is below the EPA's drinking water standard of 100 ug/L. Chromium -6, strontium and vanadium do not have a federal drinking water standard at this time. The EPA has a current reference concentration of 210 ppb per day for chlorate.

Wellhead Protection

The District's Wellhead Protection Program monitors the types of businesses and activities that surround our wells. To protect this hidden resource, the District notifies property owners and regulatory agencies of the District's water source locations. These notifications help prevent potentially harmful contaminants from polluting our water. These exercises contribute to the **"low vulnerability"** the Water District's groundwater has to contamination.

Conservation



How much water does the average person use at home per day? Estimates vary, but each person uses about 80-100 gallons of water per day. Are you surprised that the largest use of household water is to flush the toilet, and after that, to take showers and baths? By using water-saving features you can reduce your in-home use by as much as 35%. Installing water-saving devices is usually a simple operation which can

be done by the homeowner and does not require the use of tools. Water conservation at home is one of the easiest measures to put in place.

Think about the many ways you can conserve water. Visit our web page: www.highlinewater.org for a list of water saving ideas.



Citlalli Grijalua, Bow Lake Elementary

Water conservation aids in protecting our Pacific Northwest salmon as well as your pocketbook. Healthy salmon populations require a healthy habitat. This includes the quantity and quality of water in the streams that support them. Your actions to help conserve fresh water sources assist in protecting the natural habitat necessary to support the lives of our salmon and other species that live in and around our rivers and streams.

Highline Water District Customers have continued to do their part with water conservation. Conservation saves you money, protects fish and wildlife, and helps ensure a reliable future water supply despite regional growth and climate uncertainty.

As of spring, the supply outlook for the Seattle Regional Water System is good. The snowpack was normal this past winter.

SPU has tools and operational strategies in place to manage supply, including the following:

System monitoring and operational changes: Snowpack, rainfall and other water resource factors are monitored daily. Operational changes are made on how water is captured and released, as well as how it is moved through the water supply system, based on snowpack and predicted rainfall. Adjustments are continuously made to balance water supply, flood management, hydro power and fish habitat. Additional information is available from www.seattle.gov/util/ForBusinesses/GreenYourBusiness.



Water Use Efficiency

During 2016, Highline Water District produced and purchased a total of 2,384,903,004 gallons of water for our customers. Authorized consumption of this water totaled 2,132,510,600 gallons with a water loss of 252,393,152 gallons for a Distribution System Water Loss of 9.4%. The Washington State Department of Health has set a goal of less than 10% for water loss.

Highline continues its extensive effort to determine the causes of the water loss. Primary areas of concern include:

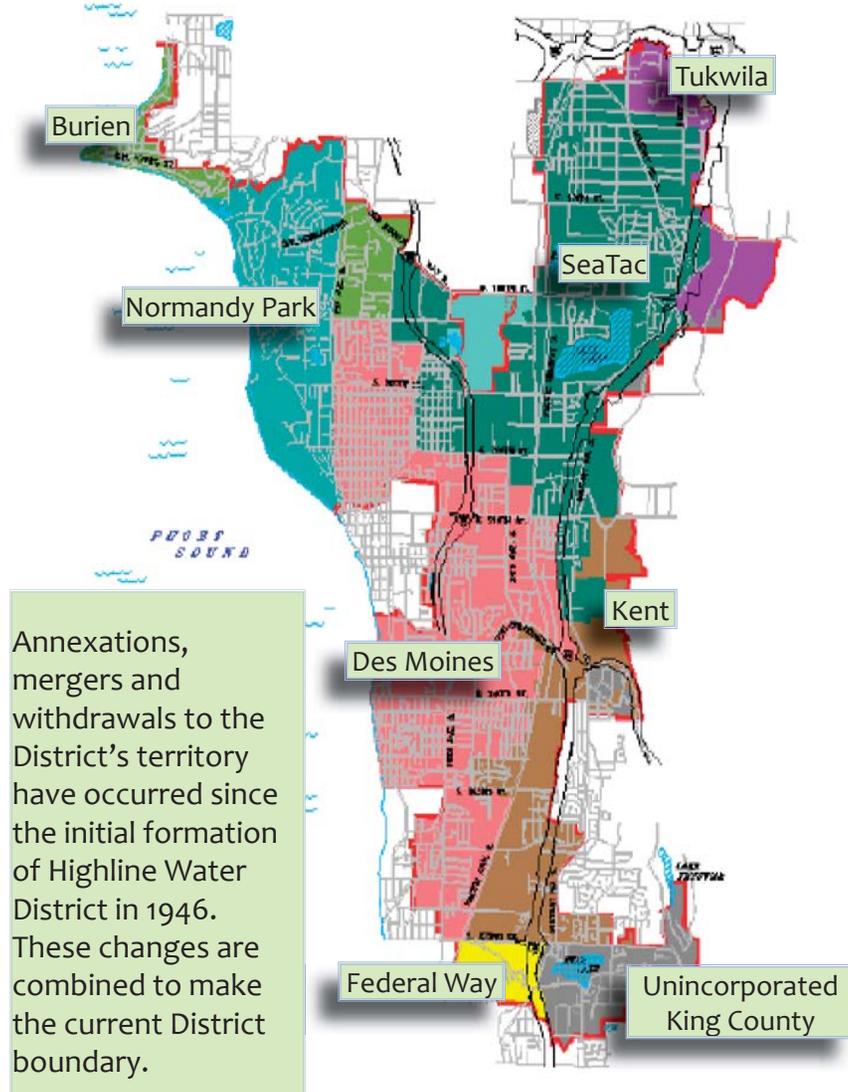
- + Fire Department uses
- + Old, leaking water pipes
- + Leaking hydrants
- + Unauthorized connections
- + Water theft from hydrants
- + Water meter discrepancies

The Saving Water Partnership (SWP) – which is made up of Highline Water District and its 18 water utility partners – has set a six-year conservation goal: **Reduce per capita use from current levels so that the SWP's total average annual retail water use is less than 105 MGD from 2013 through 2018 despite forecasted population growth.** For 2016, the Saving Water Partnership met the goal, using 94.4 mgd despite actual population growth much greater than forecast the past three years plus a relatively warm dry summer.

For water-saving advice in your garden, call the Garden Hotline at (206) 633-0224 or e-mail help@gardenhotline.org.



Highline Water District



Mission Statement

“Our mission is to provide high quality water and excellent customer service while effectively managing District infrastructure for a reliable water system today and for future generations.”



Highline Water District is located south of Seattle, WA, and generally extends from just east of Interstate Highway 5 on the east to the Puget Sound on the west, and from State Route 518 on the north to South

284th Place on the south. The District lies within portions of the cities of Burien, Des Moines, Federal Way, Kent, Normandy Park, SeaTac, and Tukwila. Portions of the District are also within the limits of unincorporated King County.

Regular Board Meetings are held the 1st and 3rd Wednesday each month, and the Workshop meeting is held the 4th Tuesday each month. The meetings listed above start at 9:00 AM and are open to the public. The District office is located at 23828 30th Ave S., Kent, WA. Please go to our website www.highlinewater.org for driving directions and contact information.

2017 Board of Commissioners:

- Todd Fultz, Board President
- Daniel Johnson, Board Secretary
- Vince Koester, Commissioner
- George Landon, Commissioner
- Kathleen Quong-Vermeire, Commissioner

Staff:

- Matt Everett, General Manager
- Jeremy DelMar, P.E., Engineering Manager
- Debbie Prior, Administrative Manager
- Mike Becker, Operations Supervisor

CCR compiled by Polly Daigle, Admin. Assistant/D.E. Coordinator
For questions or more information please call 206-592-8924

Highline Water District
23828 30th Ave S
Kent, WA 98032

This report contains important information about your drinking water. Please have someone translate this information for you, or speak with someone who understands it.

Этот отчет содержит важную информацию о питьевой воде. Пожалуйста, попросите кого-нибудь перевести эту информацию для вас, или говорить с кем-то, кто понимает.

Este informe contiene información importante sobre su agua potable. Por favor, que alguien traduzir esta información para usted, o hablar con alguien que lo entienda.

這份報告包含有關飲用水的重要信息。請有有人為你翻譯這個信息，或口話的人了解它。

Báo cáo này chứa thông tin quan trọng về nước uống của bạn. Xin vui lòng có một người nào đó dịch thông tin này cho bạn, hoặc nói chuyện với một người hiểu nó.



2016

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