EXPLANATIONS

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All 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. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

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 service lines and home plumbing. Highland 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.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Please call our office if you have questions. We at Highland Water District work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

Highland Water District is an Equal Opportunity provider.

HIGHLAND WATER

CONSUMER CONFIDENCE REPORT FOR 2012

CONTACT INFORMATION

If you have any questions about this report or concerning your water utility, please contact the office at 360-794-6900. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings.

Meeting Location:
The District Office at 24602 Old Owen Rd.

Meeting Time:
The second Thursday of every month, at 7:00p.m.

Highland Water District routinely monitors for constituents in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st to December 31st, 2012. As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

We're pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. We purchase our water from the City of Everett which is treated surface water from Lake Chaplin.

Definitions

Perchlorate - In Janurary 2009, the US EPA released a health advisory for perchlorate. Perchlorate is an inorganic contaminant used in solid propellant for rockets, missiles, fireworks and elsewhere (e.g., production of matches, flares, explosives, etc.). Sodium hypochlorite solutions used for disinfection of water and waterwaste in treatment plants have also been identified as a potentional source of perchlorate contamination. Perchlorate can interfere with iodide uptake by the thyroid gland and decrease production of thyroid horomones, which are needed for prenatal and postnatal growth and development, as well as for normal metabolism and mental functions in adults. EPA set the safe health advisory limit for drinking water at 0.015 ppm (15 parts per billion). In mid 2009, Everett implemented a monthly perchlorate monitoring program at the water treatment plant to determine if the hypochlorite used for disinfection at the water plant contributed measurable levels of perchlorate to Everett's drinking water. The method used is capable of detecting perchlorate as low as 0.0004 ppm (0.4 ppb). Through 2012, no perchlorate has been detected in the drinking water.

Cryptosporidium - is a one celled intestinal parasite that if ingested may cause diarrhea, fever, and other gastrointestinal distress. It can be found in all of Washington's rivers, streams, and lakes and comes from animal or human wastes deposited in the watershed. Cryptosporidium is resistant to chlorine, but is removed by effective filtration and sedimentation treatment such as that used by Everett. It can also be inactivated by certain types of alternate disinfection processes such as ozonation and UV light contactors. Past monitoring results suggest that Cryptosporidium is present in the source only occasionally and at very low concentrations. In 2012, Everett collected monthly Cryptosporidium oocysts samples from the source water at the plant intakes. No oocysts were detected.

Treatment Polymers:
During water treatment, organic polymer coagulants are added to improve coagulation and filtration that remove particulates from water. The particulates that are removed can include viruses, bacteria and other disease causing organisms. The US EPA sets limits on the type and amount of polymer that a water system can add to the water. In addition to the EPA limits, the State of Washington also requires that all polymers used be certified safe for potable water use by an independent testing organization (NSF International). During treatment, Everett adds only NSF approved polymers and the levels used are far below the safe limits set by US EPA.

Important Terms:
Maximum Contaminant Level Goal (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 (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 water treatment technology.
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.
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.
Treatment Technique (TT) – A required process and performance criteria intended to reduce the level of a contaminant in drinking water.
Action Level (AL) – The concentration of a contaminant, which, if exceeded, triggers a treatment or other requirements which a water system must follow.
Parts per Million (ppm)/ Parts per Billion (ppb) – A part per million means that one part of a particular contaminant is present for every million parts of water. Similarly, parts per billion indicate the amount of a contaminant per billion parts of water.
Not Applicable (N/A) - Means EPA has not established MCLGs for these substances.

CITY OF EVERETT
2012 WATER QUALITY ANALYSIS RESULTS

Detected Regulated Contaminants

PARAMETER	MAJOR SOURCE	UNITS	EPA REGULATIONS		EVERETT WATER RESULTS		
			IDEAL LEVEL/GOAL (MCLG)	MAXIMUM ALLOWABLE (MCL)	RANGE OR OTHER	AVERAGE VALUE OR HIGHEST RESULT	COMPLY?
Nitrate	Erosion of natural deposits, animal waste	ppm	10	10	0.042-0.175	0.096	Yes
Total Coliform Bacteria	Naturally present in the environment	% Positive	0	5% Positive per month	None	0.0%	Yes
Total coliform bacteria monitoring is used to track microbial quality in the water distribution system. Everett collects 120-125 samples per month. Not more than 5 percent of the monthly total can be positive for total coliforms. No total coliform was detected in 2012.							
Fluoride	Dental health additive	ppm	2	4	0.0 - 1.0*	0.7	Yes
Fluoride is added to your water in carefully controlled levels for dental health. In Janurary 2011, the US Dept of Health and Human Services (HHS) released a proposed new recommendation to reduce the drinking water fluoride concentration target to 0.7 ppm. The recommendation is based on recent research on fluoride and water consumption patterns in the US. The recommendation has not been made final, but in the spring of 2011 Everett and other water systems in Washington reduced the taret fluoride residual in the drinking water from 1.0 ppm to 0.8 ppm. 0.8 ppm is the lowest level allowed under current State regulations. When HHS finalizes the recommendation next year, the State Board of Health is expected to adopt 0.7 ppm as the new standard. Following revision on the regulations, the Dept of Health will change the requirements and water systems will begin adjusting fluoride levels to the proposed recommended level. *In 2012, the fluoridation system at the treatment plant was shut down from February 15 to April 7 for routine maintenance and equipment modernization. During this time no fluoride was added to the water. As a result, the annual fluoride concentration dropped from 0.8 to 0.7.							
Residual Disinfectant Level (free chlorine)	Added as a drinking water disinfectant	ppm	4.0 (MRDLG)	4.0 (MRDL)	0.2 - 1.5	0.6	Yes
Haloacetic Acids (5) (HAA5)	By-product of drinking water chlorination	ppb	N/A	60	22.6 - 42.5	36.9*	Yes
Total Trihalomethanes (TTHM)	By-product of drinking water chlorination	ppb	N/A	80	26.3 - 54.1	49.1*	Yes
Haloacetic acids and trihalomethanes form as by-products of the chlorination process that is used to kill or inactivate disease-causing microbes. The results for TTHM and HAA5 reported are from the eight locations in Everett which are monitored to determine compliance with the current regulations. *The values reported are the highest running annual average of the eight sites that were monitored in 2012.							
Turbidity	Soil erosion	NTU	N/A	TT	100%	0.11	Yes
Turbidity is a measure of the amount of particulates in water in Nephelometric Turbidity Units (NTU). Particulates in water can include bacteria, viruses and protozoans that can cause disease. Turbidity measurements are used to determine the effectiveness of the treatment processes used to remove these particulates. The values reported are the lowest monthly percentage of samples that met the EPA turbidity limit and the highest single filtered water turbidity measurement obtained for the year. In 2012 no filtered water turbidity results were above the EPA 0.3 NTU limit so the lowest percentage was 100%.							

Detected Unregulated Contaminants

PARAMETER	UNITS	IDEAL LEVEL/GOAL (MCLG)	EVERETT WATER RESULTS	
			RANGE DETECTED	AVERAGE VALUE
Bromodichloromethane	ppb	0	1.6 - 2.4	1.9
Chloroform (Trichloromethane)	ppb	300	24.6 - 52.0	37.1
Dichloroacetic Acid	ppb	0	4.8 - 18.4	12.9
Trichloroacetic Acid	ppb	300	16.5 - 23.4	19.9
Monochloroacetic Acid	ppb	None	2.0 - 2.8	2.3
These substances are individual disinfection by-products for which no MCL standard has been set, but must be monitored to determine compliance with the US EPA Stage 2 Disinfection By-products Rule MCL'S for Total trihalomethanes and Haloacetic Acids (5).				

Lead and Copper

PARAMETER	MAJOR SOURCE	UNITS	EPA REGULATIONS		EVERETT WATER RESULTS		
			IDEAL LEVEL/GOAL (MCLG)	ACTION LEVEL (AL)	90th% LEVEL	HOMES EXCEEDING THE AL	COMPLY?
Copper	Plumbing, erosion of natural deposits	ppm	1.3	1.3	0.109	None	Yes
Lead	Plumbing, erosion of natural deposits	ppb	0	15	2	None	Yes
US EPA and state regulations require Everett and the systems it supplies to monitor for the presence of lead and copper at household taps in their combined service area every three years. The above data was collected in 2009. The next round of required regional tap sampling will be conducted in the summer of 2012. The 90th% level is the highest result obtained in 90 percent of the samples collected when the results are ranked in order from lowest to highest. The results for water tested before it enters household plumbing were even lower. This indicates that there is virtually no lead or copper in the water, but household plumbing may contribute to the presence of lead and copper at the tap.							
pH	Soda ash is used to reduce water corrosivity by increasing pH and alkalinity	s.u.	Daliy Avg 7.6	Min Daliy Avg 7.4	Average 7.5	Minimum 7.3	Yes
The Washington State Dept of Health requires Everett to operate the corrision control treatment program at or above a minimum pH of 7.4. The average daily pH cannot be below 7.4 for more than nine days every six months. In 2012, the pH dropped to 7.3 for two days in Janurary.							

US EPA regulations require this statement be included with the lead and copper sampling results regardless of the levels observed:

If present, elevated levels of lead can cause serious health problems, espically for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Everett Utilities Division 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 potentional for lead exposure by flushing your tap for 30 seconds to two 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*

Voluntary Information

PARAMETER	UNITS	EVERETT WATER RESULTS	
		RANGE DETECTED	AVERAGE VALUE
Alkalinity [1]	ppm	12.7 - 23.4	16.0
Aluminum [1]	ppm	0.01 - 0.19	0.02
Arsenic [2]	ppb	ND[3]	ND[3]
Calcium Hardness [1]	ppm [4]	7.5 - 13.2	9.6
pH [1]	s.u.	7.6 - 8.9	7.9
Sodium [2]	ppm	5.5 - 6.5	6.0
Total Hardness [1]	ppm [4]	10.1 - 15.0	12.4

[1] Results are from samples collected from 26 locations in Everett's distribution system

[2] Arsenic and Sodium were monitored at the treatment plant effluent

[3] ND = Not Detected

[4] Hardness amd alkalinity units are in ppm as $CaCO_3$ (calcium carbonate equivalent units)