



2016 PUBLIC WORKS REPORT ON WATER QUALITY

System I.D. #072207

IF YOU ARE A LANDLORD OR SOMEONE WHO RECEIVES THE BILLING FOR THE WATER CONSUMED BY LARGE POPULATIONS, PLEASE SEND A COPY OF THIS TO EACH OF YOUR RENTERS OR POST THIS REPORT IN A MANNER THAT ALL CONSUMERS HAVE UNINHIBITED ACCESS TO THIS REPORT.

Annual Drinking Water Quality Report

The City of Black Diamond is pleased to present to you our Annual Drinking Water Quality Report. This report is to inform you about the quality of water we deliver to you every day. As your public works professionals, we are careful, diligent and attentive to provide you with safe dependable supply of drinking water. The source of our drinking water is the **Black Diamond Springs**, a series of springs located within the City's watershed on the south side of the Green River approximately 2 miles SE of the City. The spring water is chlorinated to provide disinfection

protection from the risks of microbial contamination and then is pumped almost two miles to the City's 4.3 million gallon reservoir located on the north side of Lawson Street across from Botts Drive intersection, where the water is treated to reduce the corrosiveness of our water by raising the pH with the addition of Sodium Hydroxide before distributing to customers.

The City has a backup supply connection with the City of Tacoma in case of a supply emergency (currently off line).



VULNERABLE POPULATIONS...

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).

Our Partners for Safe Water

The United States Environmental Protection Agency (EPA) establishes national standards for public drinking water to ensure that tap water is safe to drink. The State Department of Health and EPA coordinate to establish maximum allowable levels for contaminants, as well as goals and action levels for contaminants. Because contaminants are defined as **ANY** substance in water, it is important to note

that some substances are of concern only if they are present above certain levels. In order to remain in compliance with State and Federal regulations, the City of Black Diamond's drinking water must be below the permitted level of these substances. This report is intended to share information regarding the City's water quality with you and to explain any violations. Pursuant to Federal

regulations, the City is required to provide all water customers of the City with a copy an Annual Drinking Water Quality Report. Annual Drinking Water Quality Reports are provided to our customers in July of each year.



BLACK DIAMOND SPRING SOURCE TEST RESULTS

DEFINITIONS: The following definitions may be helpful in understanding the information included within the table above:

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (µg/l) - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level - The "Maximum Allowed" (MCL) is 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 treatment technology.

Maximum Contaminant Level Goal - The "Goal" (MCLG) is 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.

Millions of Fibers per Liter (MFL) - Identifies the risk of developing benign intestinal polyps.

Inorganic Contaminants - Blended Springs Sample - Tested May 2012

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL max contaminant level	Likely Source of Contamination
1. Arsenic	NO	< 0.001	ppm (Parts per million)	n/a	0.01	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
3. Asbestos	NO	< 0.2	MFL	7	7	Decay of asbestos cement water mains; erosion of natural deposits
4. Barium	NO	< 0.01	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
5. Beryllium	NO	< 0.0003	ppm	0.004	0.004	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
6. Cadmium	NO	< 0.0001	ppm	0.005	0.005	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
7. Chromium	NO	< 0.007	ppm	0.1	0.1	Discharge from steel and pulp mills; erosion of natural deposits
8. Copper (Test Date of 09/30/13)	NO	< .02	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
9. Cyanide	NO	< 0.01	ppm	0.2	0.2	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
10. Fluoride	NO	< .2	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

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Contaminant	Violation Y/N	Level Detected	Unit parts per million	MCLG	MCL	Likely Source of Contamination
11. Lead (Test Date of 09/30/13)	NO	< 0.001	ppm	0	AL=0.015	Corrosion of household plumbing systems, erosion of natural deposits
12. Mercury (inorganic)	NO	<0.0002	ppm	2	0.002	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
13. Nitrate (as Nitrogen) (Test Date of 07/26/16)	NO	0.8	ppm		10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
14. Nitrite (as Nitrogen)	NO	< .1	ppm		1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
15. Selenium	NO	< 0.002	ppm	0.05	0.05	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
16. Thallium	NO	< 0.001	ppm	0.002	0.002	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Synthetic Organic Contaminants including Pesticides and Herbicides: No Contaminants Detected. Test Date July, 2008.						
Volatile Organic Contaminants: No Contaminants Detected. Test Date May, 2016.						

BLACK DIAMOND DISTRIBUTION TEST RESULTS

Microbiological Contaminants - Sampled in three locations twice a month. No contaminants detected in 2016.

Testing for **Disinfectant Byproducts**; When chlorine is in contact with organic materials in the water for a long period of time, it can form the chemicals listed below. The disinfectant byproducts in our water are very low because our water quality is very high. Disinfectant byproducts are typically a problem with unfiltered surface water sources.

Chemical Name TTHM (Trihalomethanes), HAA (Halo Acetic Acids)	Level Detected	Units in ug/L	State Reporting Level	MCL (The Total of TTHM's and HAA Chemicals)
Chloroform	1.6	ug/L	0.25	
Bromo Dicholoro Methane	1.1	ug/L	0.5	
Chloro Dibromo Methane	0.9	ug/L	0.5	
Bromoform	Not detected	ug/L	0.5	
TOTAL TTHM's	3.6	ug/L	0.5	80
Monochloroacetic Acid	Not detected	ug/L	2.0	
Dichloroacetic Acid	Not detected	ug/L	1.0	
Trichloroacetic Acid	Not detected	ug/L	1.0	
Monobromoacetic Acid	Not detected	ug/L	1.0	
Dibromoacetic Acid	Not detected	ug/L	1.0	
TOTAL HAA's	Not detected	ug/L	15	60

Pipe Distribution - Asbestos: <0.123 mfl (MCL's = 7 mfl) (State Reporting Level = 0.2 mfl) - Test Date June 2013

Lead and Copper

The City is required to test for lead and copper at the tap of 10 homes within the distribution system every 3 years. This is required to make sure that the water delivered to the customer is not corrosive and leaching metals out of household plumbing that would present a risk to the customer. City tests have shown that Lead and Copper leaching from household plumbing is well under state levels. **Tips to reduce metals in your drinking water even further:** 1) It is always a good idea to flush stagnant water out of the faucet before using for drinking water. 2) A good rule of thumb is to let the water run until the water gets noticeably colder. 3) Another good recommendation for better water quality is to avoid using hot water for cooking.



DOH #	23 (Copper)	9 (Lead)
State Reporting Level (SRL)	0.02 mg/L	0.001 mg/L
Action Level (AL)	13 mg/L	0.015 mg/L
Test Method	200.8	200.8

Date Collected	Site	Copper (mg/L)	Lead (mg/L)
12/08/16	Site 1	< 0.02	< 0.001
12/09/16	Site 2	0.06	< 0.001
12/10/16	Site 3	< 0.02	< 0.001
12/11/16	Site 4	0.05	0.002
12/08/16	Site 5	< 0.02	< 0.001
12/09/16	Site 6	0.03	0.002
12/09/16	Site 7	0.03	0.001
12/13/16	Site 8	< 0.02	< 0.001
12/09/16	Site 9	< 0.02	< 0.001
12/10/16	Site 10	< 0.02	< 0.001

The City of Black Diamond routinely monitors for contaminants in your drinking water according to Federal and State laws. The table shows the results of our monitoring for the period of **January 1 to December 31, 2016**. Where the City was not required to test during this period, the most recent test results are indicated.

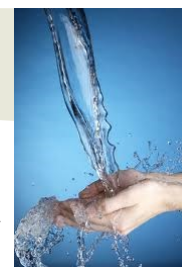
The City tests **twice each month** for the presence of coli form bacteria and **once** each year for nitrate. Once every **three** years testing is done unless a waiver is granted for inorganics, volatile organics, and synthetic organic compounds pursuant to regulations. Testing was completed for **inorganics** in 2012, for **volatile organics** in 2016, and for **synthetic organics** in 2008.

Samples are collected by City Water Department Staff and then analyzed by a state certified laboratory. **The City is required to report all instances where a contaminant is detected, even if the level is far below the EPA's Maximum Contaminant Level.**

A number of additional contaminants are tested for on a

regular basis, but were Non-Detectable during the last testing period. If you would like additional information regarding the full list of contaminants that we test for, please feel free to contact **Dan Dal Santo, Utilities Supervisor at (360) 886-5712**. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants and minerals. The presence of contaminants and minerals does not necessarily indicate that the water poses a health risk. It is also important to understand that **Maximum Contaminant Levels (MCLs)** are set at **very stringent levels**. A person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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**.



Conservation TIPS...

Toilets, Taps, Showers, Laundry, and Dishes

- 1994 was the year that federally mandated low-flow showerheads, faucets, and toilets started to appear on the scene in significant numbers.
- On average, 10 gallons per day of your water footprint (or 14% of your indoor use) is lost to leaks. Short of installing new water-efficient fixtures, one of the easiest, most effective ways to cut your footprint is by repairing leaky faucets and toilets.
- If you use a low-flow showerhead, you can save 15 gallons of water during a 10-minute shower.
- Every time you shave minutes off your use of hot water, you also save energy and keep dollars in your pocket.
- It takes about 70 gallons of water to fill a bathtub, so showers are generally the more water-efficient way to bathe.
- All of those flushes can add up to nearly 20 gallons a day down the toilet. If you still have a standard toilet, which uses close to 3.5 gallons a flush, you can save by retrofitting or filling your tank with something that will displace some of that water, such as a brick.
- Most front-loading machines are energy- and water-efficient, using just over 20 gallons a load, while most top-loading machines, unless they are energy-efficient, use 40 gallons per load.
- Nearly 22% of indoor home water use comes from doing laundry. Save water by making sure to adjust the settings on your machine to the proper load size.
- Dishwashing is a relatively small part of your water footprint—less than 2% of indoor use—but there are always ways to conserve. Using a machine is actually more water efficient than hand washing, especially if you run full loads.
- Energy Star dishwashers use about 4 gallons of water per load, and even standard machines use only about 6 gallons. Hand-washing generally uses about 20 gallons of water each time.

Yards and Pools

- Nearly 60% of a person's household water footprint can go toward lawn and garden maintenance.
- Climate counts - where you live plays a role in how much water you use, especially when it comes to tending to a yard.
- The average pool takes 22,000 gallons of water to fill, and if you don't cover it, hundreds of gallons of water per month can be lost due to evaporation.

As we head into summer, **please help by using your drinking water wisely.** If you water outside, water plants and lawns in the early morning or late evening, and only water as necessary. High PEAK water use results in increased costs and unnecessary stress upon our pumping facilities. **If we do experience hot, dry weather, watering restrictions may have to be implemented.** Thank you for

Conserve
Water



STAFF SERVING YOU

A big thank you to **Dan Dal Santo, Ken Blakely and Jason Pittam** for diligently monitoring and maintaining the drinking water system each day to provide you with reliable, clean safe drinking water.

CONTACT INFORMATION

Seth Boettcher for Public Relations and Technical, 360-886-5711

Dan Dal Santo for Maintenance, 360-886-5712

Scott Hanis for General Information at (360) 886-5713.

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