

City of Bonners Ferry - 2008 Water Quality Report

This report is a summary of last year's water quality for the City of Bonners Ferry Water System. Included are details about where your water comes from, what it contains, and how it compares to EPA and state standards. We are committed to providing you with information because informed citizens are our best allies.

The Idaho Department of Environmental Quality (DEQ) developed a Source Water Assessment for the City which can be obtained at City Hall. The City utilizes two surface water sources for their drinking water supply that require filtration and disinfection at the City's Water Treatment Plant (WTP). The primary source is Myrtle Creek, while the Kootenai River provides the City with a secondary source. The City water system is also interconnected with the Cabinet Mountain Water District (CMWD), which utilizes groundwater wells adjacent to the Kootenai River. The Kootenai River and the CMWD sources are rarely used by the City, but do provide good emergency back-up sources.

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. 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 or <http://www.epa.gov/safewater/hotline/>.

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/Centers for Disease Control and Prevention (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 at 1-800-426-4791 or <http://www.epa.gov/safewater/hotline/>.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Contaminants that may be present generally in source water include the following:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also, come from gas stations, urban stormwater runoff, and septic systems.

Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

The following terms and abbreviations are used to describe the results of water quality testing:

Maximum Contamination 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 treatment technology.

Maximum Contamination 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.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Action Level (AL): The concentration of a contaminant, which, if exceeded, triggers treatment, or other requirements which a water system must follow.

Maximum Residual Disinfectant Level (MRDL): The highest level of 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 contamination.

Variations and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Turbidity - A measure of water clarity

NTU - Nephelometric Turbidity Unit, an increment of turbidity measurement

ppm - Parts per million; also equivalent to mg/L

ppb - Parts per billion

The table below summarizes turbidity testing during 2007:

Turbidity/Units	MCL/TT	MCLG	Level Found	Range	Sample Dates	Violation Y/N	Typical Source
Turbidity (NTU)	1 NTU	0	1.5	0.02-1.50	See Note 1	Y	Soil runoff
	95% of samples < 0.3NTU		69%	n/a	August 2007	Y	Soil runoff

Note 1: the turbidity reached or exceeded 1.0 NTU on the following dates: July 16th, 17th, August 10th, and October 4th 2007

On October 4th 2007 the chlorine level leaving the water treatment was less than the required 0.20 mg/L. This event was a violation. We continuously monitor your water for turbidity (cloudiness). This tells us whether we are effectively filtering the water supply. On July 16th, 17th, August 10th and October 4th 2007, the source water of Myrtle Creek experienced high levels of turbidity. This resulted in turbidities of the treated water of over 1.00 turbidity units (ntu) , with the standard being 1.00 ntu standard. On October 4th 2007, the finished water turbidity reached a peak of 1.4 NTU. Normal turbidity levels at our plant are below 0.3ntu.

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

Although chlorine quickly kills most bacteria, it is less effective against organisms such as viruses and parasites. For this reason, water needs to mix with chlorine for a longer time period to kill such organisms. The amount of time necessary, or the contact time, depends on the amount of disinfectant in the water and the temperature of the water. We routinely monitor for disinfectant residual in the distribution system. This measurement tells us whether we are effectively disinfecting the water supply. Disinfectant residual is the amount of chlorine or related disinfectant present in the pipes of the distribution system. If the amount of disinfectant is too low, organisms could grow in the pipes.

Contaminant	Violation (Y/N)	MCL	MCLG	Highest Level Detected	Running Annual Average*	Range*	Typical Source of Contamination	Health Effects Language (include only if system exceeds MCL)
Disinfection By Products (applies to all systems practicing chlorination) * running annual average and range apply only to systems collecting disinfection by products on a quarterly basis. Systems that collect DBPs on an annual or less frequent basis should report detections in the highest level detected column and omit running annual averages and range data.								
Total Trihalomethanes	No	80	n/a	44.7	36.9	31 to 44.7	By product of drinking water chlorination	
Haloacetic Acid Group 5	No	60	n/a	45	39.1	31 to 45	By product of drinking water chlorination	
Contaminant	Violation (Y/N)	MCL	MCLG	Average Percentage Removal	Range of Percentage Removal	Sample Date	Typical Source of Contamination	Health Effects Language (include only if system has TT violation)
Total Organic Carbon (TOC) Precursors Removal Ratios (applies to surface water systems practicing conventional filtration only)								
TOC	No	TT	n/a	27.7%	0 to 53%	Monthly	Naturally present in the environment	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

If a contaminant exceeds a Maximum Contaminant Level (MCL), or if a required testing is not performed, a violation may exist. The City of Bonners Ferry is required to test for nitrates at each source. The City's Myrtle Creek nitrate sample yielded a result of less than 0.05 mg/L, which is well below the standard of 10 mg/L. To meet the Safe Drinking Water Act the City uses chlorine to disinfect your water. However this also produces disinfection by-products (HAA5) that may be harmful when consumed at elevated quantities over extended periods of time. In 2006, the City exceeded the disinfection by-product limits, however in 2007, the City did not exceed these limits.

The City continues to optimize its filtration and disinfection processes with the goal of providing the best possible drinking water to its customers.

If you have any questions about your drinking water, you may call Doug Ladely or Mike Klaus at 267-3105. Copies of this report are available at City Hall at 7232 Main Street in Bonners Ferry. The Bonners Ferry City Council normally meets in open public session at City Hall the first and third Tuesdays of each month.