

City of Bonners Ferry – 2009 Water Quality Report

Water System Information

City of Bonners Ferry
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Bonners Ferry, Idaho 83805

PWS ID#1110003
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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. This report will not be mailed to our customers, but may be picked up at Bonners Ferry City Hall.

Water Sources

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.

Source water assessment and its availability

The Idaho Department of Environmental Quality (DEQ) developed a Source Water Assessment for the City which can be obtained at City Hall.

Definitions

- **Action Level:** The concentration of a contaminant, which, if exceeded, triggers treatment, or other requirements which a water system must follow.
- **Initial Distribution System Evaluation (IDSE):** IDSE is an important part of the Stage 2 Disinfection By-Products Rule (DBPR). The IDSE is a one-time study conducted by some water systems, providing disinfection or chlorination, to identify distribution system locations with concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs). Water systems will use results from the IDSE, in

conjunction with their Stage 1 DBPR compliance monitoring data, to select monitoring locations for Stage 2 DBPR. Not all water systems were required to perform an IDSE.

- **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.
- **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.
- **NTU** – Nephelometric Turbidity Unit, an increment of turbidity measurement
- **ppb** - Parts per billion
- **ppm** – Parts per million; also equivalent to mg/L
- **Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.
- **Turbidity** – A measure of water clarity

Health Information

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/>.

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/>.

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 in source water before we treat it include:

- **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.

Lead Informational Statement (Health effects and ways to reduce exposure)

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. The City of Bonners Ferry 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 drinking 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>.

Level of Detected Contaminants and Associated Health Effect Language

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. 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.

Level of Detected Chemical and Radiological Contaminants and Associated Health Effects Language

Unless otherwise noted, the data presented in this water quality table is from testing done between January 1, 2009 - December 31, 2009.

Contaminant	Violation (Y/N)	MCL	MCLG	Lowest Level Detected:	Highest Level Detected:	Date Tested (mm/yy):	Typical Source of Contamination	Health Effects Language
Chemical and Radiological Contaminants								
2,4-D (ppb)	N	70	70	0.000	0.000	01/09	Runoff from herbicide used on row crops.	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
2,4-D (ppb)	N	70	70	0.000	0.000	04/09	Runoff from herbicide used on row crops.	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
Arsenic (ppb)	N	10	0	0.000	0.000	2/09	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.	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.
Nitrate (ppm)	N	10	10	0.000	0.000	2/09	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Nitrate (ppm)	N	10	10	0.000	0.092	5/09	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Picloram (ppb)	N	500	500	0.000	0.000	1/09	Herbicide runoff.	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.

Contaminant	Violation (Y/N)	MCL	MCLG	Lowest Level Detected:	Highest Level Detected:	Date Tested (mm/yy):	Typical Source of Contamination	Health Effects Language
Picloram (ppb)	N	500	500	0.000	0.000	4/09	Herbicide runoff.	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
Simazine (ppb)	N	1000	1000	0.000	0.000	1/09	Herbicide runoff.	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
Simazine (ppb)	N	1000	1000	0.000	0.000	4/09	Herbicide runoff.	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.

Disinfection and Disinfection Byproducts

The City of Bonners Ferry uses chlorine as a disinfectant. 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.

Maximum Residual Disinfectant Level:

Contaminant	Violation (Y/N)	MCL	MCLG	Highest Level Detected	Running Annual Average	Sample Frequency	Typical Source of Contamination	Health Effects Language(include only if system exceeds MCL)
Chlorine	N	MRD L= 4	n/a	.9233	.5492	Monthly	Water additive used to control microbes	

To meet the Safe Drinking Water Act the City uses chlorine to disinfect your water. However this also produces disinfection by-products that may be harmful when consumed at elevated quantities over extended periods of time. In 2009, the City exceeded the disinfection by-product limit for Haloacetic Acid Group 5 and Total Trihalomethanes. The maximum level of Haloacetic Acid Group 5 was 67.8 ug/l, detected on May 5, 2009. The maximum level of Total Trihalomethanes was 82.7 ug/l, detected on November 4, 2009. The running annual averages for 2009 for Haloacetic Acid Group 5 and Total Trihalomethanes were below the MCLs.

Disinfection Byproducts

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)
Total Trihalomethanes	No	80	n/a	82.7	49.6	17.4 to 82.7	By product of drinking water chlorination	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
Haloacetic Acid Group 5	No	60	n/a	67.8	51.6	10.6 to 67.8	By product of drinking water chlorination	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

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 <i>(applies to surface water systems practicing conventional filtration only)</i>								
TOC	No	TT	n/a	31.3%	23.0-41.7%	Monthly (Jan – May)	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.

Turbidity Testing

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

Turbidity results:

Turbidity/Units	MCL/TT	MCLG	Level Found	Range	Sample Dates	Violation Y/N	Typical Source
Turbidity (NTU)	1 NTU	0	.69	.02-.69	October 22, 2009	N	Soil runoff
	95% of samples < 0.3NTU		97%	n/a	October 2009	N	Soil runoff

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 David Sims at 267-3105. Copies of this report are available at City Hall at 7232 Main Street in Bonners Ferry.