

## City of Bonners Ferry - 2007 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.

**Variances 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 tables below list contaminants that were detected during our most recent testing:

Turbidity/Units	MCL/TT	MCLG	Level Found	Range	Sample Dates	Violation Y/N	Typical Source
Turbidity (NTU)	1 NTU	0	1.00	0.02-1.00	See Note 1	Y	Soil runoff
	95% of samples < 0.3NTU		83%	n/a	August 2006	Y	Soil runoff

Note 1: the turbidity reached 1.0 NTU on the following dates: April 1, April 2, May 18, November 5, and November 10, 2006.

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 Kootenai River intake was not used in 2006, however a nitrate sample was taken the yielded a result of 0.10 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. A violation occurred in each quarter of 2006 when Haloacetic Acid sampling results exceeded the threshold for that contaminant. This is not an immediate risk. If it had been, you would have been notified immediately. However, some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased chance of getting cancer.

We continuously monitor your water for turbidity (cloudiness). This tells us whether we are effectively filtering the water supply. On April 1, 2, May 18, November 5, and 10, the source water of Myrtle Creek experienced high levels of turbidity. This resulted in turbidities of the treated water of 1.00 turbidity units (ntu) which is right at the threshold of the 1.00 ntu standard. 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.

The City continues to optimize its filtration and disinfection processes with the goal of providing the best possible drinking water to its customers. The City has completed construction of a new chlorine contact chamber and storage tank designed to lower the amount of disinfection by-products, in addition to adding needed storage, water pressure, and fire flow. Construction of the new water system components should be complete at the end of August 2007.

If you have any questions about your drinking water, you may call Chuck Lycans 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.

