



2009 ANNUAL DRINKING WATER REPORT

Why am I receiving this report?

Congress passed the Safe Drinking Water Act 25 years ago and gave the U.S. Environmental Protection Agency (EPA) the job of making rules—National Primary Drinking Water Regulations (NPDWR)—to ensure that drinking water in the U.S. is safe.

In 1996, Congress passed amendments that require drinking water systems to give consumers important information about their water, including where it comes from, what is in the water, and how your water quality compares with federal standards.

This report is brought to you in accordance with EPA's 40 Code of Federal Regulation, NPDWR Parts 141 and 142.

What if I have questions about my water?

For more information about your water, call 882-4451 and ask for Brian Moore.

Where does our water come from?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some case, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Your water, groundwater, comes from two municipal wells located throughout the Village. Well No. 1A was drilled in 2003. The available records indicate that it is 218 feet deep and is located near Spring Valley Street. The water level in the well is above the level of Crystal Lake. This is a good indication that the well is screened in a confined aquifer. Tritium testing of samples has confirmed that the aquifer is protected by an impermeable formation.

Well No. 3 is approximately 400 feet deep and is located at the north end of town near Elmwood Street. The well is screened in a confined aquifer and has a protective clay layer above it.

Why must you treat my water?

Drinking water, including bottled water, may reasonably be expected to contain at least a small amount 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 (800-426-4791).

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. We treat our water according to EPA's regulations. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.



Your water is pumped from the two municipal wells and treated in two ways. The water is first treated to prevent precipitation of iron. This is done through the addition of polyphosphates. Second, chlorine is added to the water for disinfection.

What contaminants might be in water?

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

Are there contaminants in Beulah's water?

Last year, as in years past, your tap water met all EPA and state drinking water health standards. Beulah vigilantly safeguards its water supplies and once again we are proud to report that our system has never violated a maximum contaminant level of any other water quality standards. This brochure is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compared to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with

information because informed customers are our best allies.

Is our water safe for everyone?

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

What is Cryptosporidium?

[krip' · tō · spor · id' · ē · um] Cryptosporidium is a microscopic organism found in rivers and streams that can cause diarrhea, fever and gastrointestinal symptoms if ingested. It finds its way into the watershed through animal wastes. Cryptosporidium is effectively eliminated by a treatment process that includes filtration, sedimentation and disinfection.

Cryptosporidium is a concern for surface water sources only. The Village of Beulah's municipal drinking water comes from the groundwater.

Safe Drinking Water Hotline

1-800-426-4791

www.epa.gov/OGWDW

For more information,
Contact DPW Superintendent
Brian Moore
Phone: (231) 882-4451

2009 DRINKING WATER QUALITY

ZERO DISTRIBUTION AND TREATMENT VIOLATIONS

The table below lists all the drinking water contaminants that we detected during the 2009 calendar

year. The presence of these 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 January 1 – December 31, 2009. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

TABLE 1: REGULATED CONTAMINANTS

Contaminant (units)	MCL	MCLG	Range of Detections	Sample Date	Violation	Typical Source of Contaminant
Coliforms – Total and Fecal (per 100ml)	5%	0	0	Monthly	NO	Naturally present in the environment and feces. Fecal coliforms and E. coli only come from human and animal waste.
Fluoride (mg/l)	4.0	4.0	ND – 0.4	10/7/09	NO	Erosion of natural deposits; Discharge from fertilizer.
Sodium (mg/L)	N/A	N/A	4 – 9	10/7/09	NO	Naturally present in the environment.
Sulfate (mg/L)	N/A	N/A	3 – 8	10/7/09	NO	Naturally present in the environment.
Calcium (mg/l)	N/A	N/A	40-43	10/7/09	NO	Erosion of natural deposits.
Total Trihalomethanes (ppb)	80	N/A	ND- 6.8	10/14/09	NO	Disinfection Byproduct
Free Chlorine Residual (ppm)	MRDL/ MRDLG = 4	N/A	0.6 – 1.2	Monthly	NO	Disinfectant added to control microbes.
Hardness as CaCO₃ (mg/L)	N/A	50- 250	178-214	10/7/09	NO	Naturally present in the environment.
Iron (mg/L)	N/A	0.3	ND – 1.4	10/7/09	NO	Naturally present in the environment.
Magnesium (mg/L)	N/A	N/A	19 – 26	10/7/09	NO	Erosion of natural deposits.
Nitrate (mg/L)	10.0	10.0	ND	10/7/09	NO	Naturally present in the environment.
Nitrite (mg/L)	1.0	1.0	ND	10/7/09	NO	Naturally present in the environment.
Lead (ppb)	AL=15	0	0 - 0.006	9/15/09	NO	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	AL=1.3	1.3	ND - 0.09	9/15/09	NO	Corrosion of household plumbing systems; Erosion of natural deposits.
Haloacetic acids (ppb)	60	N/A	ND	10/14/09	NO	Disinfection Byproduct
SOC – Herbicides (ppm)	0.001- 0.5	0	ND	9/22/09	NO	Runoff from treatment of row crops.
SOC – Carbamates (ppm)	0.04- 0.2	0	ND	9/22/09	NO	Runoff from treatment of insects
SOC – Pesticides (ppm)	0.0002 -0.2	0	ND	9/22/09	NO	Runoff from treatment of row crops.

Terms:

- **Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is 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 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.
- **Action Level (AL):** The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

Abbreviations:

- **n/a:** not applicable
- **nd:** not detectable at testing limit
- **ppb:** parts per billion or micrograms per liter
- **ppm:** parts per million or milligrams per liter
- **pCi/l:** picocuries per liter (a measure of radiation)

About Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

About lead: 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 Village of Beulah 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>.