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Brainerd Public Utilities 2011 Drinking Water Report *The Water We Drink*



Brainerd Public Utilities is pleased to provide you with the results of monitoring done on its drinking water for the period from January 1 to December 31, 2011. The purpose of this report is to advance our customers understanding of drinking water and heighten awareness of the need to protect precious water resources. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Source of Water

Brainerd Public Utilities provides drinking water to its customers from a groundwater source: six wells ranging from 120 to 187 feet deep, which draw water from the quaternary water table aquifer.

The Minnesota Department of Health has determined that one or more sources of your water is potentially susceptible to contamination. If you wish to obtain the entire source water assessment regarding your drinking water, please call 1-651-201-4700 or 1-800-818-9318 (and press 5) during normal business hours. You can view it online at www.health.state.mn.us/divs/eh/water/swp/swa.

Call 218-829-2193 if you have any questions about the City of Brainerd's drinking water or would like information about opportunities for public participation in decisions that may affect the quality of the water. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the last Tuesday of the month at 9:00 AM at the Brainerd Public Utilities Service Center, 8027 Highland Scenic Road.

Results of Monitoring

Brainerd Public Utilities routinely monitors for constituents in your drinking water according to Federal and State laws. The table that follows shows the contaminants that were detected in trace amounts last year. (Some contaminants are sampled less frequently than once a year, as a

result, not all contaminants were sampled for in 2011. If any of these contaminants were detected the last time they were sampled for, they are included in the table along with the date the detection occurred.

In the following tables you will find terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

MCLG—Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allows for a margin of safety.

MCL—Maximum Contaminant Level: 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.

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

90th Percentile Level—This is the value obtained after disregarding 10 percent of the samples taken that had the highest levels. (For example, in a situation in which 10 samples were taken, the 90th percentile level is determined by disregarding the highest result, which represents 10 percent of the samples.) Note: In situations in which only 5 samples are taken, the average of the two with the highest levels is taken to determine the 90th percentile level.

ppb—Parts per billion, which can also be expressed as micrograms per liter (ug/l) - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

ppm—Parts per million, which can also be expressed as milligrams per liter (mg/l) - one part per million corresponds to one minute in two years, or a single penny in \$10,000.

N/A— Not Applicable. (does not apply)

Contaminant (units)	MCLG	MCL	Level Found		Typical Source of Contaminant
			Range (2011)	Average /Result*	
Fluoride (ppm)	4.0	4.0	nd-.95	.93	State of Minnesota requires all municipal water systems to add fluoride to the drinking water to promote strong teeth. Erosion of natural deposits; Discharge from fertilizer and aluminum factories.
Nitrate (as Nitrogen)(ppm)	10.4	10.4	N/A	.62	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
TTHM (Total trihalomethanes) (ppb)	0	80	N/A	49.7	By-Product of drinking water disinfection.
Total Coliform Bacteria	0 present	>1 present	N/A	1 ♡	Naturally present in the environment
Haloacetic Acids	0	60	N/A	31	

*This is the value used to determine compliance with federal standards. It sometimes is the highest value detected and sometimes is an average of all the detected values. If it is an average, it may contain sampling results from the previous year.
♡ Follow up sampling showed no contamination present.

Contaminant (units)	MCLG	AL	90% Level	# Sites over AL	Typical Source of Contaminant
Lead (ppb)	0	15	3.6	0 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	1.3	1.3	2.59*	21 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.

*** 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. Brainerd Public Utilities 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.gov/safewater/lead>.

* We are in exceedance of the action level for copper at the consumer's water tap. The copper level from the City's ground water source is less than 0.050 ppm. Therefore the main source of copper at the consumer's water tap is from consumer's copper piping. Copper is an essential nutrient, but some people

who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

In response to this issue, we performed a corrosion control study and installed treatment to make the water less likely to absorb materials such as copper from your plumbing.

Some contaminants do not have Maximum Contaminant Levels established for them. These "unregulated contaminants" are assessed using state standards known as health risk limits to determine if they pose a threat to human health. If unacceptable levels of an unregulated contaminant are found, the response is the same as if an MCL has been exceeded; the water system must inform its customers and take other corrective actions. In the table that follows are the unregulated contaminants that were detected.

Contaminants (units)	Level Found		Typical Source of Contaminant
	Range (2010)	Average/Result	
Sulfate (ppm) (11/14/2007)	N/A	20.9	Erosion of natural deposits
Sodium (ppm) (11/14/2007)	N/A	9.4	Erosion of natural deposits

Compliance with National Primary Drinking Water regulations. 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 cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity.

Contaminants that may be present in source water 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 storm water 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 agricultural, urban storm water 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 storm water, and septic systems.

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

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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 the potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791.

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 undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline at 800-426-4791.

Brainerd Public Utilities works around the clock to provide quality water to every consumer in Brainerd. We ask that all of our customers help protect our water sources, which is the heart of our community, our way of life and our children's future.

Business & Repair Office Hours

7:00 a.m.—3:30 p.m.

Business: 829-8726

Repair: 829-2193

Emergency 24 hour service 365 days a year: 218-829-2193

EMAIL@BPU.ORG
WWW.BPU.ORG

NOTICE: All electrical work performed in the City of Brainerd requires a "Request for Electrical Inspection" form to be filed, and work inspected by our inspector. Please call **825-3210** or **829-2193** for more information.

BEFORE DIGGING: Call Gopher State One at **1-800-252-1166** for water and electric locations. All requests for locations must be made by calling the above toll free number at least **48 hours** before digging begins.