



Madison, SD- 2005 Water Quality Report

Water Quality

Last year, we monitored your drinking water for more than 80 possible contaminants. This brochure is a snapshot of the quality of the water that we provided last year. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies.

Water Source

We serve more than 6540 customers an average of 801,540 gallons of water per day. Our water is groundwater that we produce from local wells. The state of South Dakota has performed an assessment of our source water and they have determined that the relative susceptibility rating for the City of Madison public water supply system is medium.

For more information about your water and information on opportunities to participate in public meetings, call (605) 256-7515 and ask for Jerry Mikel. E-mail – jerry.mikel@cityofmadisonsd.com

Additional Information

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 can pick up substances resulting from the presence of animals or from 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 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.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits or 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 potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (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 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/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Detected Contaminants

The following table lists all the drinking water contaminants that we detected during the 2005 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 to December 31, 2005. 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.

2005 Table of Detected Contaminants for Madison

Terms and abbreviations used in this table:

- Maximum Contaminant 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 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.
- Action Level (AL): the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

Units:

MFL: Million Fibers per Liter pCi/l: picocuries per liter ppt: parts per trillion/nanograms per liter
 Mrem/year: millirems per year ppm: parts per million/milligrams per liter ppq: parts per quadrillion/picograms per liter
 NTU: Nephelometric Turbidity Units ppb: parts per billion/micrograms per liter pspm: positive samples per month

Regulated Contaminants

<u>Substance</u>	<u>Highest Level Detected</u>	<u>Range</u>	<u>Date Last Tested</u>	<u>Highest Level Allowed (mcl)</u>	<u>Ideal Goal (mclg)</u>	<u>Unit</u>	<u>Major Source of Contaminant</u>
Antimony	0.2		03/04/2002	6	6	ppb	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.
Barium	0.007		03/04/2002	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium	1.6		03/04/2002	100	100	ppb	Discharge from steel and pulp mills; erosion of natural deposits.
Combined Radium	0.80		11/19/2002	5	0	pCi/l	Erosion of natural deposits
Trichloroethylene	0.757	ND-0.757	09/19/2005	5	0	ppb	Discharge from metal degreasing sites and other factories.
Selenium	2.9		03/04/2002	50	50	ppb	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Copper	0.14	# sites>1.3 AL-0	07/19/2005	AL=1.3	0	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead	3.5	# sites>1.5 AL-1	07/20/2005	AL=15	0	ppb	Corrosion of household plumbing systems; erosion of natural deposits.
Total Trihalomethanes	67.8	59.7-67.8	08/23/2005	80	0	ppb	By-product of drinking water chlorination.
Haloacetic Acids	8.4		05/09/2005	60	0	ppb	By-product of drinking water chlorination.

WE DON'T TAKE OUR DRINKING WATER FOR GRANTED, DO YOU?

To learn more visit our Web Site at www.cityofmadisonsd.com or write us at PO Box 308, Madison, SD 57042.

Copies of this document are available at the City Water Department, City Hall, and the Madison Public Library.