Quality on Tap

# Madison, SD- 2002 Water Quality Report

## Water Quality

*Last year, we tested for more than 8O drinking water 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 1,032,300 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 moderate.

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 - madh2o@iw.net

### 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 that 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 necessary 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 (800-426-479I).

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 2002 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, 2002. 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.

# 2002 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 thc 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**

| Substance | Highest Level Detected | Range | Date Last Tested | Highest Level Allowed (mcl) | Ideal Goal (mclg) | Unit | Major Source of Contaminant |
|---|---|---|---|---|---|---|---|
| Antimony | 0.2 | | 03/04/2002 | 6 | 6 | ppb | Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder. |
| Arsenic | 2.3 | | 01/11/2000 | 50 | NA | ppb | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes. |
| 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. |
| Fluoride | 1.48 | 1.24-1.48 | 04/08/2002 | 4 | 4 | ppm | Erosion of natural deposits; water additiive which promotes strong teeth; discharge from fertilizer and aluminum factories. |
| Selenium | 2.9 | | 03/04/2002 | 50 | 50 | ppb | Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines. |
| Copper | 0.07 | # sites>1.3 AL-0 | 08/12/2002 | AL=1.3 | 0 | ppm | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives. |
| Lead | 3.6 | # sites>1.5 AL-1 | 08/09/2002 | AL=15 | 0 | ppb | Corrosion of household plumbing systems; erosion of natural deposits. |
| Nitrate (as nitrogen) | 0.1 | | 09/09/2002 | 10 | 10 | ppm | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits. |
| Alpha emitters | 0.3 | | 03/12/2001 | 15 | 0 | pCi/l | Erosion of natural deposits. |

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