

2006 Minnetonka Drinking Water Report



THE CITY OF MINNETONKA IS ISSUING the results of monitoring done on its drinking water for the period from January 1 to December 31, 2006. Each of the past nine years, Minnetonka Public Works has distributed this annual report to summarize drinking water quality for the previous year; advance residents' understanding of drinking water; and heighten awareness of the need to protect precious water resources.

This report fulfills an obligation the city's water utility has to provide accurate and timely information about your drinking water and the city's water system. If you have questions about your drinking water, please contact Jim Malone at jmalone@eminnetonka.com or call (952) 988-8400. For information about opportunities for public participation in decisions that may affect the quality of water, please contact Minnetonka Public Works at (952) 988-8400.

Water source

The city of Minnetonka operates 18 wells ranging in depth from 405 to 575 feet that draw water from the Prairie du Chien-Jordan aquifer.

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.

Before a water source is used for a supply, it is tested for contaminants and other water quality parameters. Test results for the city of Minnetonka water supply are listed on the next page. The water provided to customers may meet drinking water

standards but the Minnesota Department of Health has determined that one or more of the sources of water is potentially susceptible to contamination.

If you wish to obtain the entire source water assessment regarding your drinking water, please call (651) 201-4700 or (800) 818-9318 (press 5) during normal business hours. Visit www.health.state.mn.us/divs/eh/water/swp/swa for the full report.

Are contaminants a concern?

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* are available from the Safe Drinking Water Hotline at (800) 426-4791.

Drinking water regulations

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 (FDA) 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 potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

Lawn watering schedule

To effectively conserve the community's water resources, city of Minnetonka ordinances permit watering under the following conditions:

- No watering between 11 a.m. and 5 p.m.
- Even-numbered addresses can water on even-numbered calendar days, and odd-numbered addresses can water on odd-numbered calendar day before 11 a.m. and after 5 p.m.
- Watering by handheld hose can be done at any time.
- Water of new sod, seed, shrubbery, or landscaping can take place outside of restricted times if residents have obtained a permit number from Minnetonka Public Works.

Private wells are exempt from these regulations provided the well has been registered and the resident posts a furnished yard sign. For more information or to obtain a permit number, call (952) 988-8400. ♻️



Laboratory Results for Minnetonka Tap Water: 2006

The results contained in the following table indicate an exceedance of a federal standard. Some other contaminants were detected in trace amounts that were below legal limits. The table that follows shows the contaminants that were detected last year.

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.

Water Testing Terms and 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 allow 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.

MRDL — Maximum Residual Disinfectant Level

MRDLG — Maximum Residual Disinfectant Level Goal

AL — Action Level

The concentration of a contaminant which, if exceeded, triggers treatment or other requirement 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 ten 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.

pCi/l — PicoCuries per liter

A measure of radioactivity.

ppb — Parts per billion

This can also be expressed as micrograms per liter (µg/l).

ppm — Parts per million

This can also be expressed as milligrams per liter (mg/l).

nd — No Detection

N/A — Not Applicable

Does not apply.

Average level found

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 detected values. If it is an average, it may contain sampling results from the previous year.

Contaminant (units)	Units of Measure	MCL	MCLG	Range (2006)	Average level found	Typical Source of Contaminant
Alpha Emitters	pCi/l	15.4	0	6.9–9.8	8.55	Erosion of natural deposits.
Barium	ppm	2	2	N/A	0.15	Discharge of drilling wastes; discharge from metal refineries, erosion of natural deposits
Combined Radium	pCi/l	5.4	0	4.0–7.6	5.3	Erosion of natural deposits
Fluoride	ppm	4	4	1–1.2	1.1	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	10	nd–0.47	0.47	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM (total trihalomethanes)	ppb	80	0	N/A	0.8	By-product of drinking water disinfection
Trichloroethylene	ppb	5	0	nd–.1	0.03	Discharge from metal degreasing sites and other factories
Radon	pCi/l	--	--	26–117	87.5	Erosion of natural deposits Radon is a radioactive gas which is naturally occurring in some groundwater. It poses a lung cancer risk when gas is released from water into air (as occurs during showering, bathing, or washing dishes or clothes) and a stomach cancer risk when it is ingested. Because radon in indoor air poses a much greater health risk than radon in drinking water, an Alternative Maximum Contaminant Level (AMCL) of 4,000 picoCuries per liter may apply in states that have adopted an Indoor Air Program, which compels citizens, homeowners, schools, and communities to reduce the radon threat from indoor air. For states without such a program, the Maximum Contaminant Level (MCL) of 300 pCi/l may apply. Minnesota plans to adopt an Indoor Air Program once the Radon Rule is finalized.

Contaminant (units)	Units of Measure	MRDL	MRDLG	Range (2006)	Average level found	Typical Source of Contaminant
Chlorine	ppm	4	4	0.3–0.9 Monthly Avg.	0.62 Quarterly Avg.	Water additive used to control microbes

Contaminant (units)	Units of Measure	AL	MCLG	90% Level	# sites over AL	Typical Source of Contaminant
Lead	ppm	15	N/A	2	0 out of 30	Corrosion of household plumbing systems; erosion of natural deposits
Copper	ppm	1.3	N/A	1.92	10 out of 30	Corrosion of household plumbing systems; erosion of natural deposits The city of Minnetonka is in exceedance of the action level for copper. 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, the city performed a corrosion control study to make the water less likely to absorb materials such as copper from your plumbing.

Unregulated contaminants

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:

Contaminant (units)	Units of Measure	Range (2006)	Average level found	Typical Source of Contaminant
Sodium	ppm	6.9–15	15	Erosion of natural deposits
Sulfate	ppm	4.09–28.4	28.4	Erosion of natural deposits