

## 2005 Drinking Water Report

The Centennial Utilities Water Department is publishing its 2005 Drinking Water Report for the City of Circle Pines—a report of water quality testing and monitoring for the period January 1 to December 31, 2005 as required by the Safe Drinking Water Act. This report includes a review of data from 2005 and information on Circle Pines' drinking water resources. If you have questions or would like more information about our drinking water, please call 763-784-6751.

### Source of Water

Circle Pines water is produced from a groundwater source; two wells ranging from 270 to 321 feet deep that draw water from the Quaternary Buried Artesian and Jordan-St. Lawrence aquifers.

Seldom does water come straight from the ground needing no treatment to improve its quality, and our water is typical of Minnesota groundwater sources in this regard. We remove iron and manganese from the water using oxidation and green sand filtration. While not a threat to health, these minerals can affect the taste and appearance of the water. Iron and manganese can also cause stains on laundry, fixtures, and porcelain.

We disinfect the water supply to eliminate any possible disease-causing microorganisms in the water or water lines. Regular bacteria monitoring of samples obtained throughout the city indicates that the water is safe. We also fluoridate the water at state-mandated levels. Fluoride has been proven to reduce tooth decay, especially in children. The dosages of all additives are carefully monitored on a regular basis.



### Circle Pines Water Found Safe

With media attention focused on drinking water safety, many people are wondering if their water is safe. Centennial Utilities believes the answer is a definite yes. During the calendar year of 2005, **no contaminants were detected in Circle Pines water that exceeded federal or state standards for safe drinking water.** 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 are potentially susceptible to contamination. If you wish to obtain the entire source water assessment regarding your drinking water, please call 651-201-4670 or 1-800-818-9318 (and press 5) during normal business hours. You can also view it online at [www.health.state.mn.us/divs/eh/water/swp/swa](http://www.health.state.mn.us/divs/eh/water/swp/swa).

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 potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791. Centennial Utilities water customers can rest assured that they will be informed immediately if a federal or state drinking water standard is ever exceeded so that corrective action can be taken.

### 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 and 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 from human activity. Your drinking water is tested for hundreds of substances so we all can be confident of its quality. Source and distribution water are regularly evaluated for the following contaminants:

- 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 occur naturally 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.

*Some people may be more vulnerable to contaminants found 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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800-426-4791).*

Circle Pines water is tested regularly for safety and quality. Our water is analyzed for dozens of substances that are divided into two groups: regulated and unregulated. Regulated substances have had Maximum Contaminant Levels (MCLs) established by the Safe Drinking Water Act of 1974. The tables below list the contaminants that were detected in trace amounts below legal limits in 2005.

**Key to tables:** **MCLG:** Maximum Contaminant Level Goal (the level of 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 the contaminant that is allowed in drinking water). **AL:** Action Level (the concentration of a contaminant which, if exceeded, triggers treatment or other requirement which a water system must follow). **ppb:** parts per billion. **ppm:** parts per million. **MRDL:** Maximum Residual Disinfectant Level. **MRDLG:** Maximum Residual Disinfectant Level Goal. **90<sup>th</sup> Percentile Level:** Value obtained after disregarding 10 percent of samples taken that had highest levels. **pCi/l:** PicoCuries per liter (measure of radioactivity). **N/A:** Not Applicable (does not apply).

Contaminant (units)	MCLG	MCL	Level Found
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			Range (2005)	Average/Result*	Typical Source of Contaminant
Barium (ppm)	2	2	N/A	.04	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Combined Radium (pCi/l) 03/05/02	0.0	5.4	N/A	.31	Erosion of natural deposits
Fluoride (ppm)	4.0	4.0	.9-1	.97	State of Minnesota requires all municipal water systems to add fluoride to the drinking water to promote strong teeth.
Haloacetic Acids (HAA5) (ppb)	0.0	60	N/A	3	By-product of drinking water disinfection
Nitrate (as Nitrogen) (ppm)	10	10	N/A	.07	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
TTHM (Total trihalomethanes) (ppb)	0.0	80	N/A	8	By-product of drinking water disinfection

Unregulated contaminants usually are less of a risk to human health, but they can affect taste and other aesthetic qualities of the water. They do not have established Maximum Contaminant Levels, but some are assessed using state standards known as Health Risk Limits, or have unenforceable recommended maximums set by the Safe Drinking Water Act.

Contaminant (units)	Level Found		Typical Source of Contaminant
	Range (2005)	Average/Result	
Sodium (ppm)	N/A	7	Erosion of natural deposits
Sulfate (ppm)	N/A	39	Erosion of natural deposits

Lead and copper are regulated in the distribution system. Their source is usually home plumbing systems. Our system was found to be **in compliance** with state and federal regulations. No Circle Pines samples tested above the action level for either of these parameters.

Contaminant (units)	MCLG	AL	90% Level	# sites over AL	Typical Source of Contaminant
Copper (ppm)	N/A	1.3	.9	0 out of 20	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	N/A	15	3	0 out of 20	Corrosion of household plumbing systems; 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)	Range Found (2005)	Average/Result*	Typical Source of Contaminant
Radon (pCi/l) (12/03/01)	N/A	297.0	Erosion of natural deposits

\* This is the value used to determine compliance with federal standards. It is sometimes 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.

Contaminant (units)	MRDLG	MRDL	***	****	Typical Source of Contaminant
Chlorine (ppm)	4	4	.2-.4	.37	Water additive used to control microbes

\*\*\*Highest and Lowest Monthly Average

\*\*\*\*Highest Quarterly Average