

## SOURCE OF CAMBRIDGE WATER

The City of Cambridge provides drinking water to its residents from a groundwater source: five wells ranging from 337 to 536 feet deep, that draw water from the Eau Claire-Mt. Simon and Mt. Simon-Hinckley aquifers.

The water provided to customers may meet drinking water standards, but the Minnesota Department of Health has also made a determination as to how vulnerable the source of water may be to future contamination incidents. If you wish to obtain the entire source water assessment regarding your drinking water, please call 651-201-4700 or 1-800-818-9318 (and press 5) during normal business hours. Also, you can view it online at [www.health.state.mn.us/divs/ehlwater/swp/swa](http://www.health.state.mn.us/divs/ehlwater/swp/swa).

Call 763.689.1800 if you have questions about the City of Cambridge drinking water or would like information about opportunities for public participation in decisions that may affect the quality of the water.

## SPRINKLING GUIDELINES

To maintain an adequate water supply and to ensure the public's safety, the City of Cambridge adopted Ordinance No. 450 that states that residents comply with the following guidelines on water sprinkling:

For instance, all city properties with odd numbered house number address only sprinkle lawns on odd numbered days. (Example: 981 Cypress Street South may sprinkle lawn on May 21, 23, 25, etc.) There will be NO sprinkling from noon to 6:00 p.m. All non-established lawns can water every day for a period of six weeks except for the hours of noon to 6:00 p.m. Over seeding or spot patching of existing established yards can be watered every day with a hand controlled hose. This is in effect from May 1 through August 31<sup>st</sup>.

## WATER CONSERVATION

### Indoor tips

Verify that your home is leak free. Many homes have hidden water leaks. Turn off all your fixtures and check your meter for movement. If the dial or sweep hand moves, there is a leak.

Repair dripping faucets by replacing washers. Even small leaks can add up to thousands of gallons per month.

Check for toilet tank leaks by adding food coloring to the tank. If the toilet is leaking, color will appear in the toilet bowl within 30 minutes. Check the toilet for worn out, corroded or bent parts. Most replacement parts are inexpensive, readily available and easily installed. (Flush as soon as test is done, since food coloring may stain tank.)

### Outdoor tips

Adjust sprinklers so only the lawn is watered and not the house, sidewalk, or street. Water your lawn every third day. Water during early morning to minimize evaporation, and avoid watering during peak consumption hours (6 p.m. – 12 a.m.).

When mowing, raise the blade on your lawn mower to the highest level. Closely-cut grass makes the roots work harder, requiring more water. For landscaping, use native or other low water use plants. Mulch around plants reduces evaporation and promotes plant growth.

## LAWN FERTILIZING TIPS

For dense growth, grass requires the addition of some form of nitrogen fertilizer. Nitrogen is a very mobile nutrient and attention must be paid to application rates and timing to eliminate the possibility of water contamination.

1. Do not apply more than 1 lb. of actual nitrogen per 1,000 square feet of lawn per year. If soils are sandy or grass is sparse, 1/2 lb. of nitrogen per 1,000 square feet per application is appropriate. (The analysis of fertilizers is a percentage by weight. For example, a 34-0 fertilizer is 34% nitrogen by weight; 3 lbs. of fertilizer contains 1 lb. of actual nitrogen.)
2. The use of slow-release nitrogen is desirable. This may be some form of organic fertilizer or "synthetic" slow-release form.
3. Never apply fertilizer to frozen ground or snow.
4. Use extreme caution when applying fertilizers near water. Never allow any fertilizer to enter surface water or wetlands.
5. Always sweep up any fertilizer that is on hard surfaces and reapply to the grass. Never wash it off.
6. Apply commercial fertilizers just before moderate rain or irrigate immediately after application.

## 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 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 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 agriculture, 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 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, 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 1-800-426-4791.

*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 are available from the Safe Drinking*



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The City of Cambridge is issuing the results of monitoring done on its drinking water for the period of January 1 to December 31, 2009. The purpose of this report is to advance consumers' understanding of drinking water and heighten awareness of the need to protect precious water resources.

Call Todd Schwab at 763-689-1800 if you have questions about the City of Cambridge drinking water or would like information about opportunities for public participation in decisions that may affect the quality of the water.

# Cambridge Water Quality Report 2009

## RESULTS OF MONITORING

No contaminants were detected at levels that violated federal drinking water standards. However, some contaminants were detected in trace amounts that were below legal limits. 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 2009. If any of these contaminants were detected the last time they were sampled for, they are included in the table along with the date that the detection occurred.)

### Key to abbreviations:

**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 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.

**pCi/l**-PicoCuries per liter (a measure of radioactivity).

**ppb**- Parts per billion, which can also be expressed as micrograms per liter (ug/l).

**ppm**-Parts per million, which can also be expressed as milligrams per liter (mg/l).

**nd**-No Detection.

**N/A**-Not Applicable (does not apply).

Contaminants (units)	Level Range (2009)	Found Average/ Result*	Typical Source of Contaminant
Radon (pCi/l) (10/02/2007)	N/A	31	Erosion of natural deposits.

\*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.



Radon is a radioactive gas which is naturally occurring in some ground water. 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 pCi/l 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)	MCLG	MCL	Level Range (2009)	Found Average/ Result*	Typical Source of Contaminant
Barium (ppm) 01/23/2007	2	2	N/A	.03	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride (ppm)	4	4	1.1-1.5	1.35	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.
Haloacetic Acids (HAA5) (ppb) (09/19/2007)	0	60	N/A	2.2	By-product of drinking water disinfection.
Mercury (inorganic) (ppb) (01/23/2007)	2	2	N/A	.06	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland.
Nitrate (as Nitrogen) (ppm)	10	10	nd-5.9	5.9	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
TTHM (Total trihalomethanes) (ppb) (09/19/2007)	0	80	N/A	17.8	By-product of drinking water disinfection.

Nitrate in drinking water at levels above 10 parts per million is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

Contaminant (units)	MRDLG	MRDL	****	*****	Typical Source of Contaminant
Chlorine (ppm)	4	4	6-9	69	Water additive used to control microbes.

Contaminants (units)	MCLG	AL	90% Level	# sites over AL	Typical Source of Contaminant
Copper (ppm) (7/19/2007)	N/A	1.3	.61	0 out of 20	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead (ppb) (07/19/2007)	N/A	15	nd	0 out of 20	Corrosion of household plumbing systems; Erosion of natural deposits.

If present, infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. City of Cambridge 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.epa.gov/safewater/lead>.

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)	Level Range (2009)	Found Average/ Result	Typical Source of Contaminant
Sodium (ppm)	N/A	64.9	Erosion of natural deposits.
Sulfate (ppm)	N/A	29.8	Erosion of natural deposits.

