

GENERAL WATER 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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or 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 800-426-4791](tel: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 are available from the [Safe Drinking Water Hotline at 800-426-4791](tel:800-426-4791).

Chaska's water is of good quality and meets these EPA standards. The water is monitored by City staff on a daily basis. Again, if you have any questions about drinking water supplied by Chaska or information in this brochure, please call the [Chaska Utility Department at 952-448-4335](tel:952-448-4335).

Other secondary contaminants that may be causing aesthetic problems:

IRON AND MANGANESE

Iron and manganese occur naturally in water, especially in ground water. Neither of the elements causes adverse health effects, they are, in fact, essential to the human diet. However, water containing excessive amounts

of iron and manganese can stain clothes, discolor plumbing fixtures, and sometimes add a "rusty" taste and look to the water. Chaska operates a treatment plant to reduce iron and manganese levels from its six deep wells. The water system is also flushed annually to address localized problem areas.

LEAD

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. City of Chaska 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>.

HARDNESS

Water becomes hard by being in contact with calcium and magnesium. The elements are also non-hazardous but do create certain system problems such as bathtub ring and dingy laundry while feeling unpleasant on the skin (red, itchy, or dry skin). The best way to deal with hardness issues involves use of an in-line water softener. The hardness of the water is 29 grains per gallon.

IN SUMMARY

The U.S. Environmental Protection Agency (EPA) has established national drinking water standards. These standards contain federally enforceable maximum contaminant level (MCL) standards for substances known to be hazardous to public health.

Water quality parameters are defined and regulated by two sets of standards – Primary and Secondary. Primary Standards are set for those substances known to be a hazard to public health. Secondary Standards are set for those substances that, although not hazardous to public health, may cause drinking water to have objectionable aesthetic qualities, such as taste and odor.

WATER CONSERVATION

Consistent with provisions of a State mandated water conservation plan, and to ensure an adequate water supply for fire protection, Chaska has implemented an **odd-even** lawn watering program. This program greatly reduces the City's peak water demand during the heavy usage between **May 1 thru September 30**. Unestablished seed and unrooted sod areas are exempt from the program. Violators are subject to a \$100 fine.

TO: CURRENT RESIDENT

City of CHASKA
One City Hall Plaza
Chaska, MN 55318-1962

June 2012

**Drinking Water
Consumer Confidence Report**

INTRODUCTION

In accordance with the Federal Safe Drinking Water Act, the City of Chaska is issuing the results of monitoring done on its drinking water for the period from January 1 to December 31, 2011. 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 the **Chaska Utility Department at 952-448-4335** if you have questions about the drinking water or would like information about opportunities for public participation in decisions that may affect the quality of the water.

WATER SYSTEMS

Chaska has 6 ground water wells that pump water from wells that are 333 ft to 817 ft deep. Water is drawn from the following aquifers: Mt. Simon, Hinkley, Franconia, Ironton, Galesville, Jordan, and Quaternary Buried Artesian aquifers. Chaska has a Water Treatment Plant that is capable of treating 12.6 million gallons per day, for iron and manganese removal to only trace levels by gravity filtration. Sodium hypochlorite is used to disinfect the water for bacteria and fluoride is added to enhance tooth protection, as required by state law. Water is pumped to the distribution system after treatment and is stored in 4 elevated towers that have the capacity to hold 4.35 million gallons.



RESULTS OF MONITORING

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency prescribes regulations which limit the amount of certain contaminants in public water systems. **In 2011, no contaminants were detected in Chaska's water supply at levels that violated these federal standards.** However, some contaminants were detected in trace amounts that were below legal limits. The table included in this report 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 2011. 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 detection occurred.)

	MCLG	MCL	Level Found		Typical Source of Contaminant
			Range 2011	Average/Result *	
Alpha Emitters (pCi/l)	0	15.4	nd-3.8	3.8	Erosion of natural deposits
Combined Radium (pCi/l)	0	5.4	Nd-1.1	1.1	Erosion of natural deposits
Haloacetic Acids (ppb) (HAA5)	0	60	NA	4	By-product of drinking water disinfection.
Fluoride (ppm)	4.0	4.0	1-1.6	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.
Nitrate (ppm) (as Nitrogen)	10.4	10.4	nd -.78	.78	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
TTHM (ppb) (total trihalomethanes)	0	80	NA	18	By-product of drinking water disinfection.

* This is the value used to determine compliance with federal standards. It sometimes is the highest value detected & 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	6-1	.72	Water additive used to control microbes.

****Highest and Lowest Monthly Average. *****Highest Quarterly Average.

Contaminant (units)	MCLG	AL	90% Level	# Sites Over AL	Typical Source of Contaminant
Lead (ppb) (06/24/2010)	0	15	4.3	1 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper (ppm) (06/24/2010)	1.3	1.3	.37	0 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits.

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 on line at www.health.state.mn.us/divs/eh/water/swp/swa.

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 Found		Typical Source of Contaminant
	Range 2011	Average/Result	
Sulfate (ppm) (07/29/2009)	N/A	108	Erosion of natural deposits.
Sodium (ppm) (07/29/2009)	N/A	27	Erosion of natural deposits.

Monitoring for unregulated contaminants as required by U.S. Environmental Protection Agency rules (40 CFR 141.40) was conducted in 2010. Results of the unregulated contaminant monitoring are available upon request from Cindy Swanson, Minnesota Department of Health, at 651-201-4656.

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.
- 90% Level.....This is the value obtained after disregarding 10% of the samples taken that had the highest levels. (Example: In a situation where 10 samples were taken, the 90% level is determined by disregarding the highest result, which represents 10% 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 90% level.
- pCi/l.....Pico Curies 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).

