



Water Source

Shakopee Public Utilities' water source is groundwater. Water is pumped from 18 wells in the city. 14 of these wells tap the Jordan Aquifer, two are completed in the Mt. Simon Aquifer, and two are currently completed in the Franconia/Iron-ton-Galesville Aquifer. The wells range from 218 to 800 feet deep.

The water provided to customers meets or exceeds all drinking water standards. 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 651-201-4670 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.

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Contaminant (units)	MCLG	MCL	Level Found		Typical Source of Contaminant	Meets EPA Standards
			Range (2008)	Average Result*		
Alpha Emitters (pCi/l)	0	15.4	nd - 6.10	3.40	Erosion of natural deposits	✓
Barium (ppm)	2.0	2.0	.0319 -.406	.41	Erosion of natural deposits; runoff from orchards; runoff from glass & electronics production facilities.	✓
Combined Radium (pCi/l)	0	5.4	nd - 2.45	2.45	Erosion of natural deposits.	✓
Fluoride (ppm)	4.0	4.0	.98 - 1.2	1.10	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)	10.0	10.0	.68 - 9.80	9.80	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.	✓
Nitrite (as nitrogen) (ppm)	1	1	nd - .03	.03	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.	✓
TTHM (total tri-halomethanes) (ppb)	0	80	N/A	5.7	By-product of drinking water disinfection.	✓
Haloacetic Acids (HAA5) (ppb)	0	60	N/A	.50	By-product of drinking water disinfection.	✓
Total Coliform Bacteria	0	>1 Present	N/A	1**	By-product of drinking water disinfection	✓
Radon (pCi/l)			24 - 152	130.5	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 years.
 ** Follow-up sampling showed no contamination present.

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.

How to Read the Tables

It's easy! Our water is tested to assure it is safe and healthy. No contaminants were detected at levels violating federal drinking water standards. However, some contaminants were detected in trace amounts 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 2008. 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

AL (Action Level): The concentration of a contaminant, which if exceed, triggers treatment or other requirement that a water system must follow.

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.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk of health. MCLGs allow for a margin of safety.

MRDL: Maximum Residual Disinfectant Level

MRDLG: Maximum Residual Disinfectant Level Goal

N/A: Not Applicable (does not apply)

nd: no detection

pCi/l: picocuries per liter (a measure of radioactivity)

ppm: parts per million or milligrams per liter (mg/l)

ppb: parts per billion or micrograms per liter (ug/l)

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 five samples are taken, the average of the two with the highest levels is taken to determine the 90th percentile.

Concerning NITRATE IN OUR WATER



Nitrate in drinking water at levels above 10 ppm 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. While we have not detected nitrates in the water supply higher than the drinking water standard, we currently test our water more often than required by the Minnesota Health Department to ensure that the water is below 10 ppm when it is delivered to our users. However, if you are caring for an infant, you should ask advice from your health care provider.

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Contaminant (units)	MCLG	Action Level	90% Level	# Sites over AL	Typical Source of Contaminant
Lead (ppb) 08-14-07	N/A	15	4.0	0 out of 30	Corrosion of household plumbing systems; erosion of natural deposits.
Copper (ppm) 08-14-07	N/A	1.3	.21	0 out of 30	Corrosion of household plumbing systems; erosion of natural deposits.

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. The unregulated contaminants that were detected are in the table that follows:

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 Shakopee 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 two 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/safe-water/lead>.

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Contaminant (units)	Level Found		Typical Source of Contaminant
	Range (2008)	Average Result*	
Sodium (ppm)	5.5 - 8.7	8.7	Erosion of natural deposits
Sulfate (ppm)	8.61 - 15.0	15.0	Erosion of natural deposits

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 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.

Contaminant (units)	MRDLG	MRDL	****	*****	Typical Source of Contaminant
Chlorine (ppm)	4	4	.31-2.12	.97	Water additive to control microbes

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