

Drinking Water Report

City of Saint Peter Water Utility 2002

“Meeting your drinking water needs today and
in the future”

City of Saint Peter Water Quality Report 2002

The City of Saint Peter is issuing the results of monitoring done on its drinking water for the period from January 1 to December 31, 2002. The purpose of this report is to advance consumers' understanding of drinking water and heighten awareness of the need to protect precious water resources. City staff encourages you to share this information with anyone you may know who has occasion to consume the water and may not have received a copy of this report, for example renters.

Source of Water

In 2002, the City of Saint Peter provided 381,688,500 gallons of drinking water to the community from groundwater sources. Three separate aquifers (Jordan, Ironton-Galesville and Mt. Simon-Hinckley) supply water to seven wells that vary in depth from 130' to 670' deep. These wells feed two water filtration plants that pump water into the distribution system, which contains 50 miles of water main, and 2,500,000 gallons of treated water storage.

Water Utility officials are actively involved in protecting your drinking water supply by developing and implementing source protection programs as identified in the Saint Peter Wellhead Protection Plan (SPWHPP). The Minnesota Department of Health reviewed and approved the SPWHPP in 1998, which provides a plan for education and implementation of protective measures for our wellhead recharge area. Implementation of the plan will provide for a higher level of protection of the City's water supply now and in the future.

The City of Saint Peter treats all water that enters the distribution system through two filtration plants; the Jefferson Filter Plant which was built in the early 1950's and the Saint Julien Filter Plant (located at the Department of Public Works) was constructed in the late 1980's. Both of these plants add fluoride as directed by state law, remove iron and manganese from the raw water, and disinfect the finished water. Utility staff monitors chlorine residual levels on a daily basis to assure the water is disinfected.

A new water main feeder was constructed in 1991, from the Saint Julien Plant to the Greenhill Reservoir. The new water main assured blending of the water prior to entering the distribution system, which means that each residence receives the same characteristic of water at the tap and a more stable water pressure.

Call the City of Saint Peter, Department of Public Works, Water Utility at 934-0670 if you have questions about the drinking water in Saint Peter or if you would like information about opportunities for public participation in decisions that may affect the quality of the water.

Compliance with National Primary Drinking Water Regulations

The source 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 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 that 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.



Results of Monitoring

City staff works diligently to assure that the treated water in Saint Peter is **SAFE** to drink. The drinking water does contain some substances at levels below the state and federal standards, however the Minnesota Department of Health reviews City operations to confirm the drinking water meets requirements.

No contaminants were detected at levels that exceeded the federal 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 2002. 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 not know 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.

*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).

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

Contaminant (units)	MCLG	MCL	Level Found		Typical Source of Contaminant
			Range - 2002	Average/ Result *	
Alpha Emitters (pCi/l)	0	15.4	N/A	7.9	Erosion of natural deposits
Arsenic (ppb)	0	50.0	N/A	1.01	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic waste
Barium (ppb)	2.0	2.0	N/A	0.03	Discharge of drilling waste; Discharge of metal refineries; Erosion of natural deposits.
Combined Radium (pCi/l)	0	5.4	N/A	2.67	Erosion of natural deposits
Fluoride (ppm)	4.0	4.0	1.0-1.3	1.18	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	2.7-4.6	4.6	Runoff from fertilizer use; Leaching from septic tanks; Erosion of natural deposits
Selenium (ppb)	50.0	50.0	N/A	6.33	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
TTHM (total trihaloethanes) (ppb)	N/A	100.0	N/A	16.2	By-product of drinking water disinfection.



Contaminant (units)	Level Found		Typical Source of Contaminant
	Range (2002)	Average/Result	
Radon (pCi/l) (11/28/2001)	N/A	78.0	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 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 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 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)	MCLG	AL	90% Level	# sites over ALL	Typical Source of Contaminant
Lead (ppb)	N/A	15	8.0	2 out of 20	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper (ppm)	N/A	1.3	0.176	0 out of 20	Corrosion of household plumbing systems; Erosion of natural deposits.

Lead—Infants and young children are typically more vulnerable to lead in drinking water than the general population. The lead levels in your water system were found to be in compliance with drinking water standards; however, it is possible that lead levels at your home may be higher than at other ones in the community as a result of materials used in your home’s plumbing. If you are concerned about elevated lead levels in your homes water, you may wish to have your water tested and flush your tap for 30 seconds to two minutes before using tap water.

Some contaminants do not have a Maximum Contaminant Levels established for them. These “unregulated contaminants” are assed using state standards known as health risk limits to determine if they pose a threath to human health. If unacceptable levels of an unregulated contaminant arte 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

Contaminant (units)	Level Found		Typical Source of Contaminant
	Range (2002)	Average/Result	
Sodium (ppm)	N/A	71.9	Erosion of natural deposits.
Sulfate (ppm)	N/A	95.0	Erosion of natural deposits.

Some people may be more vulnerable 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.

