

IRON: HOW WE REMOVE IT FROM THE WELL WATER

Iron is a mineral found in abundant quantities in groundwater throughout Minnesota, and our wells are typical of the region. Although Iron is not a threat to human health, water with iron concentrations greater than 0.3 parts per million (ppm) can be a nuisance in the home. It can leave rust-colored stains on laundry, porcelain, fixtures, and can impart a taste to the water, and generally make the water look “dirty”.

Well No. 5 on Otter Lake Road is the Town’s largest production well and has been fitted with an iron filter since 1990. Iron is removed there by a process called oxidation and filtration. Soluble iron is oxidized to an insoluble form and then, as the water passes through a sand filter, iron particles are removed.

Well No. 6 on Buffalo Street is the Town’s second largest production well. In 2008, this well was upgraded with polyphosphate treatment. In this process, the polyphosphate stabilizes the soluble iron so it remains in solution and does not form a visible particle. Polyphosphate is approved by the Minnesota Department of Health as a water treatment additive.

These are just two of the ways the Town works to improve the quality of its drinking water.

HYDRANT FLUSHING

The Township flushes hydrants twice each year, purging discolored water from the system and checking the hydrants. The water tanks are also cleaned twice a year. If you have discolored water you may run a cold water tap for 20 minutes to clear up the water. If the water is still discolored, call the Township and hydrants will be flushed in your area.



DRINKING WATER INFORMATION FROM EPA

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 humans. Substances that can 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 occur naturally or result from 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 byproducts 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 guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants can be obtained by calling the EPA's Safe Drinking Water Hotline at 800-426-4791.

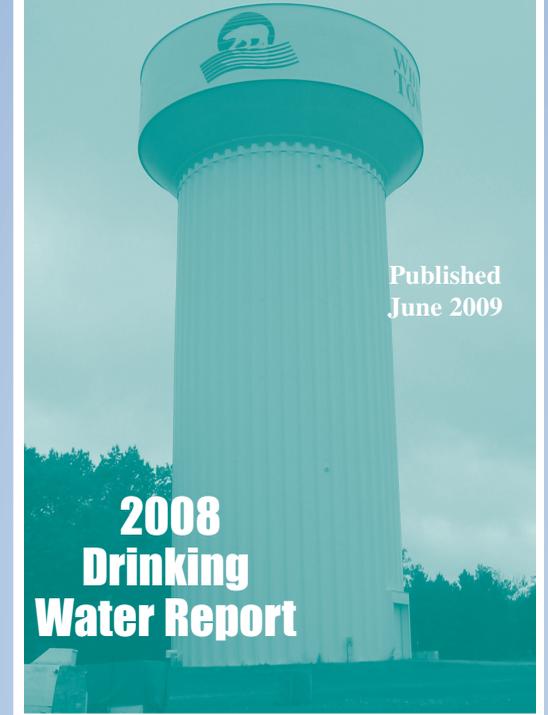
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WHITE BEAR TOWNSHIP



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2008 Drinking Water Report

This annual report delivers laboratory testing results for White Bear Township tap water for the period January 1 to December 31, 2008. These results, obtained from testing during 2008, show how your water measures up to safe drinking water regulations. If after reviewing the data, you have questions or want more information about water quality, please contact White Bear Township staff at 651-747-2750 or www.ci.white-bear-township.mn.us

Drinking Water Quality Table for 2008

TEST RESULTS SHOW TOWNSHIP WATER MEETS REGULATIONS

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 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:

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.

Contaminant (units)	MRDLG	MRDL	AL	MCLG	MCL	90% Level	# Sites Over ALL	Level Found		Typical Source of Contaminant
								Range (2008)	Average /Result*	
Alpha Emitters (pCi/l) (4/5/05)	–	–	–	0	15.4	–	–	N/A	6.5	Erosion of natural deposits.
Arsenic (ppb) (10/19/05)	–	–	–	0	10	–	–	N/A	1.36	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium (ppm) (10/19/05)	–	–	–	2.0	2.0	–	–	N/A	0.07	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Combined Radium (pCi/l) (4/5/05)	–	–	–	0	5.4	–	–	N/A	3.3	Erosion of natural deposits.
Fluoride (ppm)	–	–	–	4.0	4.0	–	–	1-1.3	1.33	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	10	–	–	nd-.07	.07	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
TTHM (Total trihalomethanes) (ppb)	–	–	–	0	80	–	–	N/A	1.3	By-product of drinking water disinfection.
Radon (pCi/l) (10/4/05)	–	–	–	–	–	–	–	N/A	293	Erosion of natural deposits.
Chlorine (ppm)	4	4	–	–	–	–	–	.2-.6****	.38*****	Water additive used to control microbes.
Copper (ppm) (09/28/07)	–	–	1.3	N/A	–	.23	0 out of 30	–	–	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead (ppb) (09/28/07)	–	–	15	N/A	–	6	0 out of 30	–	–	Corrosion of household plumbing systems; Erosion of natural deposits.
Sodium (ppm) (10/19/05)	–	–	–	–	–	–	–	N/A	7.1	Erosion of natural deposits.
Sulfate (ppm) (10/19/05)	–	–	–	–	–	–	–	N/A	16.8	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.

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

Radon: 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.

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 on 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 table to the left shows the unregulated contaminants from 2006.

Units of Measurement

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).

DRINKING WATER REGULATIONS

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations that 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 that must provide the same protection for the public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of the 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 EPA's Safe Drinking Water Hotline (800-426-4791).