

CITY OF VIRGINIA PWSID: 1690046
2009 Drinking Water Report

The City of Virginia is pleased to provide you with the results of the water quality monitoring performed on its drinking water for the period from 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. Our goal is and always will be, to provide you a safe and dependable drinking water supply. You can be assured that the City of Virginia will take corrective action and notify its customers immediately if any health issue related to drinking water standards ever arise. **The quality of the water provided by the Virginia Department of Public Utilities satisfies all requirements of the Minnesota Department of Health. This report is for informational purposes only and does not require a response unless you have any questions or concerns.**

Source of Water and Treatment

The City of Virginia provides drinking water to its residents from a surface water source: surface water drawn from the Missabe Mountain Mine Shaft. 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 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 800-818-9318 (and press 5) during regular business hours. Also, you can view it online at www.health.state.mn.us/divs/eh/water/swp/swa.

The treatment plant is a conventional water treatment facility, which is classified by the Minnesota Department of Health (MDH) as a Class A facility, their highest water treatment facility classification. The water treatment plant is managed by the Virginia Department of Public Utilities with the assistance of Northeast Technical Services, Inc., which provides the required MDH-certified operation of the treatment facility.

Call Greg French at 218-748-7540 or Michael Appelwick of Northeast Technical Services, Inc. at 218-742-1026 if you have questions about the City of Virginia drinking water or if you would like information about opportunities for public participation in decisions that may affect the quality of the water.

Results of Monitoring

No contaminants were detected at levels that violated the 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.

TT-Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

NTU-Nephelometric Turbidity Unit, used to measure clarity in drinking water.

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 that 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).

NA-Not Applicable (does not apply)

Contaminant (units)	MCLG	MCL	Level Found		Typical Source Of Contaminant
			2009 Range	Average Result*	
Fluoride (ppm)	4.0	4.0	1.2-1.3	1.2	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)	0	60.0	NA	6.0	By-product of drinking water disinfection.
Nitrate (as Nitrogen) (ppm)	10.0	10.0	NA	0.16	Runoff from fertilizer use; Leaking from septic tanks, sewage; Erosion of natural deposits.
TTHM (Total Trihalomethanes) (ppb)	0	80.0	NA	24.5	By-product of drinking water disinfection.
Total Coliform Bacteria	0 present	>1 present	NA	1 **	Naturally present in the environment.

* 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 results from the previous year.

** Follow-up sampling showed no contamination present.

Contaminant (units)	MCLG	MCL	**	***	Typical Source of Contaminant
Turbidity (NTU)	NA	TT	100%	0.10	Soil Runoff

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- ** Lowest Monthly Percentage of Samples Meeting the Turbidity Limits.
- *** Highest Single Measurement.

Turbidity is a measure of the clarity of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

Contaminant (units)	MRDLG	MRDL	****	*****	Typical Source of Contaminant
Chlorine (ppm)	4.0	4.0	0.5-1.1	0.83	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
Copper (ppm) (09/17/2007)	NA	1.3	0.89	1 out of 21	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb) (09/17/2007)	NA	15	3.0	0 out of 21	Corrosion of household plumbing systems; Erosion of natural deposits

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 Virginia 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 over corrective actions. In the table that follows are the unregulated contaminants that were detected:

Contaminant (units)	Level Found		Typical Source of Contaminant
	Range (2009)	Average/Result	
Sodium (ppm)	NA	16	Erosion of natural deposits
Sulfate (ppm)	NA	55.1	Erosion of natural deposits

Monitoring for unregulated contaminants as required by U.S. Environmental Protection Agency rules (40CFR 141.40) was conducted in 2009. Results of the unregulated contaminant monitoring are available upon request from Cindy Swanson, Minnesota Department of Health, at 651-201-4656.

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 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.

In order to ensure that tap water is safe to drink, the U.S. 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 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.

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 available from the Safe Drinking Water Hotline at 1-800-426-4791.

This report is being published in its entirety in the Mesabi Daily News on June 4, 2010. It is also posted on the Virginia Public Utilities website at www.vpuc.com. It is not being mailed to customers. A copy is available upon request by contacting the Business Office at Virginia Public Utilities at (218) 748-7540.