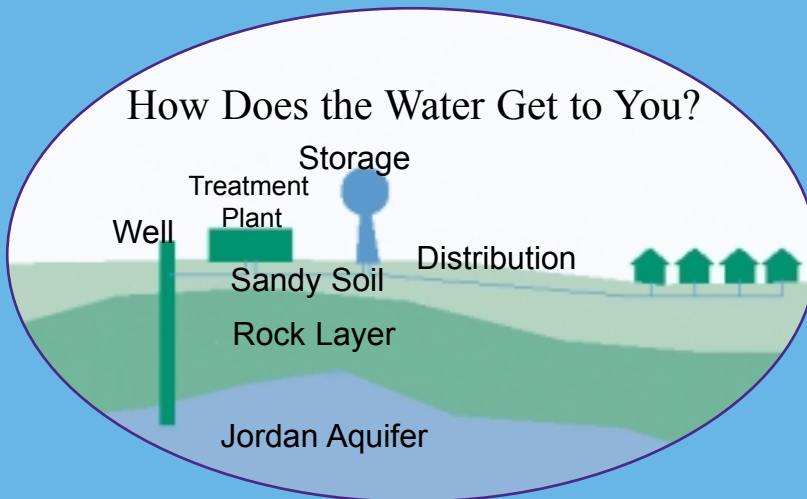




Where Does the Water Come From?

Water supplied to Apple Valley residents is groundwater, which is pumped from the Prairie du Chien-Jordan aquifer and Jordan aquifer. The Utilities Division operates 18 wells. Our newest well is located on Flint Lane in Greenleaf Park and will start supplying water in June. The wells range in depth from 487 to 1,127 feet. If the City needed additional water in a special situation, water can also be drawn from the Mt. Simon aquifer. The Prairie du Chien-Jordan, Jordan and Mt. Simon are bedrock aquifers, well-defined hydrological units where the water exists in spaces between the rock grains or in the fractures within the more solid rock.



Water Conservation

Your help in the efficient use of water will reduce the need for implementing water restrictions. Check for leaks both in your home and at outside fixtures. Leaks will needlessly cause your water bill to increase. Below are some suggestions for conserving water during summer.

Water in the early morning; it is the best time to water for all plants.

Avoid watering during the afternoon, which is the hottest period of the day and when evaporation is greatest.

Water only when your lawn needs it. If you step on the grass and it springs back, it doesn't need watering. An established lawn needs only one inch of water per week.

Deep-soak your lawn. When you do water, do it long enough for the moisture to soak to the roots where it will be most beneficial. A light sprinkling can evaporate quickly and tends to encourage shallow root systems.

Position your sprinklers so the water lands on the lawn or garden, not on paved areas.

Plant drought resistant trees and plants. Add mulch around them to slow evaporation of moisture and discourage weed growth.

Water System Security

The Apple Valley Utilities Division continues to evaluate security needs and points where the water system may be vulnerable. We ask that residents also assist with security by calling 952-953-2400 if you notice suspicious activity around any water system building, fire hydrant, or reservoir. After hours, call the Police Department at 952-953-2700.

After the water is pumped from the well, it goes to the treatment plant where minerals are taken out to meet EPA standards and fluoride is added for strong teeth. After the water is treated, it moves to the storage tanks and out to your home!

Last year 2,638,191,000 gallons were pumped. Each Apple Valley resident uses approximately 110 gallons of water per day.



Questions? Concerns?
Contact us at 952-953-2500 or on the web at
www.cityofapplevalley.org

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Learn About Your Apple Valley Drinking Water

For questions or concerns about your water quality, to schedule a speaker for your group, to schedule a tour of our facilities, or for information about opportunities for public participation in decisions that may affect the quality of water, contact Carol Blommel, Public Works

Superintendent-Utilities at
 952-953-2400.

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Special Health Information

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 (1-800-426-4791).

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 EPA's Safe Drinking Water Hotline (1-800-426-4791).

The Minnesota Department of Health has determined that one or more sources of your drinking water is susceptible to contamination. If you wish to obtain the entire source water assessment regarding your drinking water, please call 651-215-0800 and press 5 during business hours, or view it online at www.health.state.mn.us/divs/eh/water/swp/swa.

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

Water Hardness

The hardness of Apple Valley's water is 17 grains per gallon (g/g). Water defined as "hard" has high concentrations of dissolved minerals, specifically calcium and magnesium, which are naturally found in the environment. Hard water is not a health risk, but a nuisance because of mineral buildup on plumbing fixtures and poor soap and/or detergent performance.

How to Read the Water Quality Table

The **Level Found** can be the highest amount found in the water or the average of all samples tested, depending on the regulation for the substance. If multiple samples were tested in 2003, the lowest and highest detected values are listed under **Range of Detections**.

Regulated substances have **Maximum Contaminant Levels (MCLs)** set by the EPA. This is the highest level of the substance legally allowed in drinking water. Some contaminants also have **Maximum Contaminant Level Goals (MCLGs)**. It is the level of a substance where there is no known or expected health risk. MCLGs allow for a margin of safety. MCLs are set as close to MCLGs as practical using the best available water treatment processes.

The MCL for lead and copper is known as the **Action Level (AL)**. This is the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. Water from several Apple Valley homes is monitored for lead and copper levels; ninety percent of the samples tested must be less than the action level for compliance.

Unregulated substances do not have MCLs. They are assessed by comparing the detected amount to state standards known as health risk limits. If an unacceptable amount of any substance is ever found in our water, the City of Apple Valley will notify residents immediately and take corrective action to eliminate the problem.

ppm: parts per million ppb: parts per billion
pCi/L: picocuries per liter, a measure of radioactivity ND: Not Detected



Radon is a radioactive gas which is naturally occurring in some groundwater and is caused by the erosion of natural deposits. Testing during 2003 showed average radon levels of 202 pCi/L in Apple Valley water. 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 stomach cancer 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 4000 pCi/L 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 MCL of 300 pCi/L may apply. Minnesota plans to adopt an indoor air program once the radon rule is finalized.

Stormwater Management

Stormwater management is an important component of maintaining a safe drinking water supply. As an area develops, land that once allowed rain to soak into the ground is covered with impervious surfaces such as pavement and roofs. Running over these surfaces, water warms up, picks up pollutants, and reaches streams quickly, causing thermal and chemical pollution as well as erosion and sedimentation. Pollutants washed into streams can quickly infiltrate underground aquifers—that's why managing stormwater effectively helps keep our drinking water free from pollutants. The management practices the City of Apple Valley uses to control stormwater include ponds, wetlands, filtering, and vegetation. The goals for stormwater management include:

- maintain groundwater quality and quantity —reduce stormwater pollutant loads —protect wetlands and habitats
- prevent or reduce flooding —education

Drinking Water Information from the 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 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.



Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.



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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

Drinking Water Table No contaminants that were detected violated federal drinking water standards. Some, however, were detected in trace amounts that were below legal limits. The following table shows contaminants that were detected in trace amounts last year or in years prior, since some contaminants are sampled less frequently than once a year.

Drinking Water Quality Table for 2003 (Jan.-Dec.)

Detected Substance	Units of Measurement	Test Date	MCL: Highest Amount Allowed	MCLG: No Health Risk	Level Found in Apple Valley Water	Range of Detections	Typical Source of Substance in Drinking Water
Alpha Emitters	pCi/L	7/26/02	15.0	0	10.4	—	Erosion of natural deposits.
Radon	pCi/L	2001	4,000/300—see text above left	—	202	—	Erosion of natural deposits.
Barium	ppm	7/26/02	2.0	2.0	0.15	—	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride	ppm	2003	4.0	4.0	1.01	0.79-1.2	Water additive which promotes strong teeth; erosion of natural deposits; aluminum and fertilizer factories.
Nitrate as Nitrogen	ppm	2003	10.0	10.0	0.12	ND-0.12	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Sodium	ppm	7/26/02	No limit set	—	6.5	—	Erosion of natural deposits.
Sulfate	ppm	7/26/02	No limit set	—	30	—	Erosion of natural deposits.
Lead	ppb	7/27/01	90% of samples must be below 15 ppb (AL)	—	90% level: 8.0	1 out of 30 homes exceeded AL	Corrosion of household plumbing systems; erosion of natural deposits.
Copper	ppm	7/27/01	90% of samples must be below 1.3 ppm (AL)	—	90% level: 0.178	0 out of 30 homes exceeded AL	Corrosion of household plumbing systems; erosion of natural deposits.
Trihalomethanes (total)	ppb	2003	100	—	10.68	8.2-12.5	Byproduct of drinking water disinfection.
Combined Radium	pCi/l	7/26/02	5.0	0	1.5	—	Erosion of natural deposits
Haloacetic Acid	ppb	2003	60.0	—	4.18	4.1-4.4	By-product of fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.