



### Utility News

- Well 19 is under construction at 140th Street and Pilot Knob Road. When complete, water from the well will be pumped to the Water Treatment Plant.
- A 1.5 million gallon water tower will be constructed in the northwest corner of 160th Street and Pilot Knob Road. This project is scheduled to begin fall of 2006.
- It is against City ordinance to connect a sump pump discharge to the sanitary sewer system.

### 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, infiltration areas, vegetation buffer strips around water bodies, and erosion and sediment prevention. The goals for stormwater management include:

- **Maintain groundwater quality and quantity**
- **Reduce stormwater pollutant loads**
- **Protect wetlands and habitats**
- **Prevent or reduce flooding**
- **Education**



Water system security is a high priority. We ask that residents assist with security by calling 952-953-2400 if unusual activity is observed around any water system building, fire hydrant, or reservoir. After hours, call the Police Department at 952-953-2700.

- To have your water shut off for a repair, call 48 hours in advance.
- For questions or concerns about your water quality, to schedule a speaker for your group, or for information about opportunities for public participation in decisions that may affect the quality of water, contact Carol Blommel Johnson, Public Works Superintendent Utilities at 952-953-2400.



### Water Conservation

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

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.

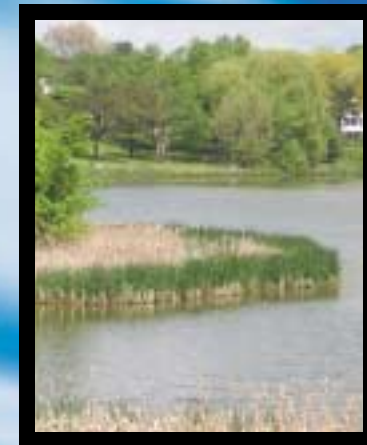
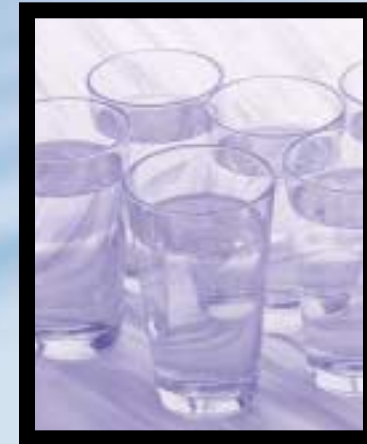
Deep-soak your lawn. When you do water, do it long enough for the moisture to soak to the roots where it will be most beneficial. A light sprinkling can evaporate quickly and tends to encourage shallow root systems.

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.

If daily water pumpage exceeds 18 million gallons per day, water restrictions will be implemented. Notices will be posted on the City website, local government access channel 16, and at the Municipal Center. The water restrictions would be no watering daily from noon to 8:00 p.m.

Contact us at 952-953-2500  
[www.cityofapplevalley.org](http://www.cityofapplevalley.org)  
 Printed June 2006



# Water Quality Report



Water (wô'tar) n.

A clear, colorless, odorless, and tasteless liquid, H<sub>2</sub>O, essential for most plant and animal life and the most widely used of all solvents.



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## Apple Valley Water Source

Apple Valley is fortunate to have a reliable drinking water source from a groundwater aquifer. The water in Apple Valley's aquifers is pumped from the Prairie du Chien-Jordan aquifer and Jordan aquifer. The Utilities Division operates 18 wells. The wells range in depth from 487 to 1,127 feet. If the City needs additional water in an emergency, 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.

The wells pump water from the aquifers to the water treatment plant. The treatment plant is designed to remove iron and manganese. Chlorine and potassium permanganate are added to oxidize the iron and manganese so they can be filtered from the water. After filtration, additional chlorine is added for disinfection, and fluoride is added for dental protection. The water is then pumped to the distribution system which includes the water mains, reservoirs, hydrants, and your home.

### Iron

Before Treatment 0.385 ppm  
After Treatment 0.058 ppm

### Manganese

Before Treatment 0.091 ppm  
After Treatment 0.035 ppm

### Chlorine 0.5 ppm

Hardness 17 grains per gallon

## 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. The Environmental Protection Agency (EPA)/Center for Disease Control (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 651-201-4370 during business hours, or view it online at [www.health.state.mn.us/divs/eh/water/swp/swa](http://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.

**Radon** is a radioactive gas which is naturally occurring in some groundwater and is caused by the erosion of natural deposits. Testing during 2001 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. For more information on radon, see <http://www.co.dakota.mn.us/enviro/radon%5Ftest.htm>



## 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 by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

## 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 2005, 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 below which 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. **MRDL**: Maximum Residual Disinfectant Level. **MRDLG**: Maximum Residual Disinfectant Level Goal.

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

## DRINKING WATER TESTING RESULTS

### APPLE VALLEY DRINKING WATER 2005

Detected Substance(units) MCL (highest level allowed in water by EPA) MCLG (level where there is no known health risk)	Results for Apple Valley Tap Water		Typical Source of Substance in Drinking Water
	Level Found	Range of Detections	
Barium (ppm) 7/26/02 MCL:2.0 MCLG:2.0	0.15	—	Discharge of drilling wastes and metal refineries; erosion of natural deposits.
Fluoride (ppm) MCL: 4.0 MCLG: 4.0	1.0	0.96-1.0	Additive for strong teeth; erosion of natural deposits; fertilizer and aluminum factory discharge.
Nitrate as Nitrogen (ppm) MCL: 10.0 MCLG: 10.0	0.13	nd-0.13	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks, sewage.
Lead (ppb) 7/23/04 AL: 15 (90% of samples tested must be <15 ppb)	90% of samples < 9.0	0 out of 30 samples tested > 15 ppb	Corrosion of household plumbing systems; erosion of natural deposits.
Copper (ppm) 7/23/04 AL: 1.3 (90% of samples tested must be <1.3 ppm)	90% of samples < 0.19	0 out of 30 samples tested > 1.3 ppm	Corrosion of household plumbing systems; erosion of natural deposits.
Sodium (ppm) 7/26/02 No established EPA limits	6.5	—	Erosion of natural deposits.
Sulfate (ppm) 7/26/02 No established EPA limits	30	—	Erosion of natural deposits.
Chlorine (ppm) MRDL: 4 MRDLG: 4	0.49 Highest Quarterly Avg	0.3-1.0 Highest and lowest Monthly Avg	Water additive used to control microbes.
Combined Radium (pCi/L) MCL: 5.4; MCLG: 0	2.88	1.6-4.2	Erosion of natural deposits.
Alpha Emitters (pCi/L) MCL: 15.4 MCLG: 0	9.7	6.8-9.7	Erosion of natural deposits.
Radon (pCi/L) 10/16/2001 Limit not yet established	202	—	Erosion of natural deposits.
Total Trihalomethanes (TTHM's) (ppb) MCL: 80 MCLG: 0	12.8	—	By-product of drinking water disinfection.
Haloacetic Acids (HAA5) (ppb) MCL:60 MCLG: 0	3.3	—	By-product of drinking water disinfection.
Total Coliform Bacteria MCL: >5% present MCLG: 0	3% present	—	Naturally present in the environment.

