

# 2019

# Drinking Water Report

The City of Apple Valley is dedicated to delivering safe, clean drinking water to everyone in our community. Apple Valley works hard to provide you with safe and reliable drinking water that meets federal and state water quality requirements. The purpose of this report is to provide you with information on your drinking water and how to protect our precious water resources. As new challenges to drinking water safety emerge, we remain vigilant to meeting source water protection, water conservation and community education goals.



The water Apple Valley provided to customers in 2018 met all drinking water standards.

Contact Carol Blommel Johnson, Public Works Superintendent-Utilities, at 952-953-2400 if you have questions about Apple Valley's drinking water. You can also ask for information about how you can take part in decisions that may affect water quality.



### • Water Source

Twenty wells, ranging from 487 to 1127 feet deep draw drinking water from the Jordan, Prairie Du Chien-Jordan, and Mount Simon groundwater aquifers. Five of these wells in the Jordan and Mount Simon aquifers are available only for emergency use.



### • Step 1: Oxidization - Remove Iron and Manganese

Water is treated with chlorine and permanganate to bring the minerals, iron and manganese, out of suspension.



### • Step 2: Filtration

Water passes through filter cells containing sand media to remove the iron and manganese.



### • Step 3: Disinfection

Water is treated with chlorine to disinfect and kill bacteria and other microbes that can cause illness.



### • Step 4: Improve Dental Health

Fluoride is added to improve dental health, per Minnesota State Statute 144.145



### • Drinking Water

Treated water is pumped into the water distribution system, which consists of five water towers/reservoirs to homes, businesses and hydrants in the City.

In 2018, the Apple Valley Water Treatment Plant (WTP) processed 2,105,947,000 gallons of drinking water. The WTP removes iron and manganese from the groundwater. Iron and manganese are minerals found in abundant quantities throughout the region. Although these minerals are not harmful to human health, these minerals can cause a nuisance. Iron concentrations greater than 0.3 parts per million (ppm) can leave rust colored stains on laundry, porcelain and fixtures. Manganese levels greater than 0.05 ppm can tint the water, cause black spots in ice cubes and cause the water to have a bitter metallic taste.

Aesthetic water properties are not expected to have an impact on public health, however they may impact consumers' choices regarding use of water softeners, plumbing fixtures, home brewing, cleaning products, etc.

This aesthetic water properties table is provided as a handy reference.

Component <i>unit</i>	Before Treatment	After Treatment
Iron <i>ppm</i>	0.385	0.058
Manganese <i>ppm</i>	0.091	0.035
Chlorine <i>ppm</i>	N/A	0.5-1.0
Fluoride <i>ppm</i>	0.19	0.5-0.9
Hardness <i>grains/gallon</i>	17	17

## Aesthetic Water Properties



## From the EPA

Minnesota's primary drinking water sources are groundwater and surface water. Groundwater is the water found in aquifers beneath the surface of the land. Groundwater supplies 75% of Minnesota's drinking water. Surface water is the water in lakes, rivers, and streams above the surface of the land. Surface water supplies 25% of Minnesota's drinking water. Contaminants can get in drinking water sources from the natural environment and from people's daily activities.

The U.S. Environmental Protection Agency (EPA) sets safe drinking water standards. These standards limit the amounts of specific contaminants allowed in drinking water. This ensures that tap water is safe to drink for most people. The U.S. Food and Drug Administration regulates the amount of certain contaminants in bottled water. Bottled water must provide the same public health protection as public tap water.

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 at 1.800.426.4791.



### There are five main types of contaminants in drinking water sources:

**Microbial contaminants**, such as viruses, bacteria, and parasites. Sources include sewage treatment plants, septic systems, agricultural livestock operations, pets, and wildlife.

**Inorganic contaminants**, include salts and metals from natural sources (e.g. rock and soil), oil and gas production, mining and farming operations, urban stormwater runoff, and wastewater discharges.

**Pesticides and herbicides** are chemicals used to reduce or kill unwanted plants and pests. Sources include agriculture, urban stormwater runoff, and commercial and residential properties.

**Organic chemical contaminants** include synthetic and volatile organic compounds. Sources include industrial processes and petroleum production, gas stations, urban stormwater runoff, and septic systems.

**Radioactive contaminants**, such as radium, thorium, and uranium isotopes come from natural sources (e.g. radon gas from soils and rock), mining operations, and oil and gas production.

## Source Water Assessment

The Minnesota Department of Health provides information about your drinking water source in a Source Water Assessment. The assessment addresses ways Apple Valley is protecting your water source, nearby threats to your drinking water source, and how easily water and pollution can move from the surface of the land into drinking water sources, based on natural geology and the way wells are constructed.

For your source water assessment call 651-201-4700 or 1-800-818-9318 between 8:00 a.m. and 4:30 p.m., Monday through Friday, or find it online at:

[www.health.state.mn.us/communities/environment/water/swp/swa](http://www.health.state.mn.us/communities/environment/water/swp/swa)

## Monitoring and Testing

We work with the Minnesota Department of Health (MDH) to test drinking water for more than 100 contaminants. It is expected that contaminants will be detected in small amounts. No water supply is ever completely free of contaminants. Drinking water standards protect Minnesotans from substances that may be harmful to their health. This report contains the results of all monitoring performed from January 1 to December 31, 2018.

To learn more about water quality testing, please visit the MDH webpage "Basics of Monitoring and Testing of Drinking Water in Minnesota."

[www.health.state.mn.us/communities/environment/water/factsheet/sampling.html](http://www.health.state.mn.us/communities/environment/water/factsheet/sampling.html)



### How to Read the Water Quality Data Tables

The table on the following page shows the contaminants we found last year or the most recent time we sampled for that contaminant. They also show the levels of those contaminants and the EPA's limits. Substances that we tested for but did not find are not included in the tables.

No contaminants were detected at levels that violated federal drinking water standards. We sample for some contaminants less than once a year because their levels in water are not expected to change from year to year. If we found any of these contaminants the last time we sampled for them, we included them in the tables below with the detection date.

We may have done additional monitoring for contaminants that are not included in the Safe Drinking Water Act. To request a copy of these results, call the MDH at 651-201-4700 or 1-800-818-9318 between 8:00 a.m. and 4:30 p.m., Monday through Friday.



*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. The developing fetus and therefore pregnant women may also be more vulnerable to contaminants in drinking water. These people or their caregivers should seek advice about drinking water from their health care providers. EPA/Centers 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 at 1.800.426.4791*

# 2018 Test Results

Substance (units) test date	MCLG	MCL	Level Detected	Range	Major Source of Contaminant	Meets Standards
Gross Alpha (pCi/l) 2017	0	15.4	10	N/A	Erosion of natural deposits.	✓
Total Chlorine (ppm)	4 (MRDLG)	4 (MRDL)	0.83*	0.47- 1.08**	Water additive used to control microbes.	✓
Combined Radium (pCi/l) 2017	0	5.4	2.2	N/A	Erosion of natural deposits.	✓
Fluoride (ppm)	4	4	0.64	0.57-0.76	Erosion of natural deposits; Water additive to promote strong teeth.	✓
Total Haloacetic Acids (ppb)	N/A	60	9.7	5.3-9.7	By-product of drinking water disinfection.	✓
Nitrate (ppm)	10	10.4	0.28	0-0.28	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	✓
Total Trihalomethanes (ppb)	N/A	80	26.2	18-26.2	By-product of drinking water disinfection.	✓
Substance (units) test date	MCLG	AL	90% Level	Sites Over AL	Major Source of Contaminant	Meets Standards
Copper (ppm) 6/29/2016	0	1.3	0.15	0 of 30 sites	Corrosion of household plumbing systems; Erosion of natural deposits.	✓
Lead (ppb) 6/29/2016	0	15	4.1	0 of 30 sites	Corrosion of household plumbing systems; Erosion of natural deposits.	✓

\*Highest quarterly average

\*\*Highest and lowest monthly average

## Key to Terms Used in Table

- **90% Level - 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.
- **AL - Action Level.** The concentration of a contaminant which, if exceeded, triggers treatment or other requirement which a water system must follow.
- **Level Detected** - 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.
- **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.
- **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.
- **MRDL - Maximum Residual Disinfectant Level.** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **MRDLG - Maximum Residual Disinfectant Level Goal.** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **N/A - Not Applicable (does not apply).**
- **pCi/L - picocuries per liter (a measure of radioactivity).**
- **ppm - Parts per million or milligrams per liter.** One ppm is like one drop in one million drops of water, or about one cup in a swimming pool.
- **ppb - Parts per billion or micrograms per liter.** One ppb is like one drop in one billion drops of water, or about one drop in a swimming pool.

You may be in contact with lead through paint, water, dust, soil, food, hobbies, or your job. Coming in contact with lead can cause serious health problems for everyone. There is no safe level of lead. Babies, children under six years, and pregnant women are at the highest risk.

Lead is rarely in a drinking water source, but it can get in your drinking water as it passes through lead service lines and your household plumbing system. Apple Valley provides high quality drinking water, but it cannot control the plumbing materials used in private buildings.

Read below to learn how you can protect yourself from lead in drinking water.

- 1. Let the water run** for 30-60 seconds before using it for drinking or cooking if the water has not been turned on in over six hours. If you have a lead service line, you may need to let the water run longer. A service line is the underground pipe that brings water from the main water pipe under the street to your home.

You can find out if you have a lead service line by contacting your public water system, or you can check by following the steps at: Are your pipes made of lead? Here's a quick way to find out

[www.mprnews.org/story/2016/06/24/npr-find-lead-pipes-in-your-home](http://www.mprnews.org/story/2016/06/24/npr-find-lead-pipes-in-your-home)

The only way to know if lead has been reduced by letting it run is to check with a test. If letting the water run does not reduce lead, consider other options to reduce your exposure.

- 2. Use cold water** for drinking, making food, and making baby formula. Hot water releases more lead from pipes than cold water.
- 3. Test your water.** In most cases, letting the water run and using cold water for drinking and cooking should keep lead levels low in your drinking water. If you are still concerned about lead, arrange with a laboratory to test your tap water. Testing your water is important if young children or pregnant women drink your tap water.

Contact an MDH accredited laboratory to get a sample container and instructions on how to submit a sample:

[www.health.state.mn.us/accreditation](http://www.health.state.mn.us/accreditation)

MDH can help you understand your test results.

- 4. Treat your water.** If a test shows your water has high levels of lead after you let the water run.

Read about water treatment units:

Point-of-Use Water Treatment Units for Lead Reduction

[www.health.state.mn.us/communities/environment/water/factsheet/poulead.html](http://www.health.state.mn.us/communities/environment/water/factsheet/poulead.html)



Visit Lead in Drinking Water

[www.health.state.mn.us/communities/environment/water/contaminants/lead.html](http://www.health.state.mn.us/communities/environment/water/contaminants/lead.html)

Visit Basic Information about Lead in Drinking Water

[www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead)

To learn how to reduce your contact with lead from sources *other than your drinking water*, visit Lead Poisoning Prevention: Common Sources

[www.health.state.mn.us/communities/environment/lead/sources.html](http://www.health.state.mn.us/communities/environment/lead/sources.html)

Call the EPA Safe Drinking Water Hotline at (800) 426-4791.

## Fluoride

If your drinking water fluoride levels are below the optimal concentration range of 0.7 to 1.2 ppm, please talk with your dentist about how you can protect your teeth and your family's teeth from tooth decay and cavities. For more information, visit:

MDH Drinking Water Fluoridation

[www.health.state.mn.us/communities/environment/water/com/fluoride.html](http://www.health.state.mn.us/communities/environment/water/com/fluoride.html)



## Water Meter Replacement!!!

The City is replacing all residential and commercial water meters with newer meter technology. The meter program will provide enhanced customer service with leak detection, water efficiency and conservation, improved billing functionality and elimination of manual meter reads. The City is working with Midwest Testing to install the water meters. The City will send you a letter about two weeks before you will receive a letter from Midwest Testing with instructions on how to schedule the meter replacement. Because your water meter is indoors, installers will need to access your property. Please make sure the valves on each side of the water meter are operational prior to scheduling your meter replacement appointment.

Additional information is available on the City website at [www.cityofapplevalley.org](http://www.cityofapplevalley.org) with a video and frequently asked questions.

## Water Restrictions

Lawn watering is permitted only before 11 a.m. and after 6 p.m. each day between May 1 and September 30.

Lawn watering refers to in-ground irrigation systems, mechanical sprinklers, and unattended hoses. Residents using alternate sources for irrigation such as private wells or water from lakes and ponds are subject to the same lawn watering restrictions as users of the municipal water supply.

New sod laid and trees planted in the calendar year are exempt. Additional water restrictions may be implemented if necessary to maintain normal domestic and fire flow requirements.

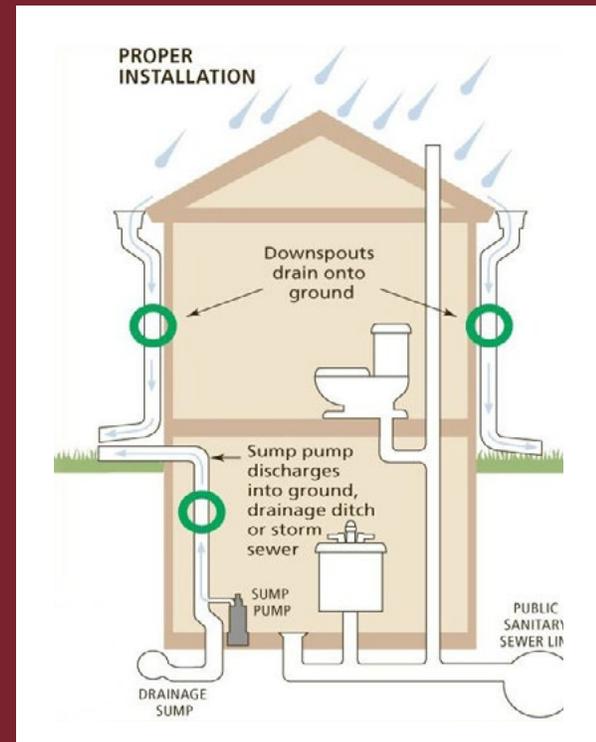
The water use restrictions do not apply to hand watering (hose must be attended) of plants, and children's water toys when in use by children; in addition to non-irrigation water use (such as vehicle washing).

Water use restrictions were implemented to enhance water conservation, environmental stewardship, and comply with State regulations.



## Resident Information

- 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 952-322-2323 or 911.
- Fire hydrants should be kept clear of shrubs, landscaping, weeds, and trash. Hydrant markers are installed to aid emergency personnel in locating the hydrants. Many of the markers are constructed of fiberglass and should not be handled.
- Clear water entering the sanitary sewer system is referred to as inflow and infiltration (I&I). Sump pumps discharging into the laundry tub or floor drain are a form of I&I. Discharge from sump pumps is prohibited by law from entering the sanitary sewer system. The treatment of clear water/I&I can cause significant charges from the Met Council. The typical sump pump installation is rigid PVC pipe running from the sump pump to the outside of the house.



To have your water shut off for a repair, call 952-953-2400 a minimum of 48 hours in advance.

Know where the main water shut off valve is inside your home in case of an emergency.

A change in water pressure may be the result of a water softener problem. Try bypassing your water softener.

Check your homeowner's insurance policy to ensure coverage for sewer backups, water breaks and water damage. Many policies require additional riders for water and sewer coverage. The City is often not liable for damages.

Contact Gopher State One Call before you dig, plant trees, replace a driveway or landscape. Call either 651-454-0002 or 811.

The following items should NEVER be disposed of down the sink drain or toilet. They do not break down and are a major contributor to sewer backups.

- Food residue containing fats, oils, and grease (FOG) should be disposed of in the trash with household garbage.
- Non-biodegradable items such as diapers, baby wipes, cleaning wipes and towelettes, lint, q-tips, feminine hygiene products, paper towels, tissues, and makeup remover wipes. Many of these products are advertised as flushable but can cause significant problems in your sewer service.

Old medicines should not be put in the trash or down the drain. A medicine drop box is located in the Police Department lobby.



The storm drains are directly connected to neighborhood lakes, ponds and wetlands.

Pollutants, contaminants and substances entering the storm drainage system can impair surface waters and drinking water supply. Remember "only rain down the storm drain."

- Never dump any substance or materials, including aquatic plants and animals into the storm drains or water bodies.
- Sweep chemicals and yard wastes off driveways, sidewalks and streets when spills occur
- Reduce stormwater runoff volume by installing a rain garden or native plant garden.

**For after hour Water or Sewer Emergencies contact the Dakota Communications Center at 952-322-2323 or 911.**



## Water - Essential to Your Body

Water is your body's principal chemical component and nearly all of the major systems depend on it. Your body depends on water to survive. Here are a few important functions of water in your body.

- Regulates body temperature
- Helps dissolve minerals and other nutrients to make them accessible to the body
- Lubricates joints
- Carries nutrients and oxygen to cells
- Moistens tissues such as those in the mouth, eyes and nose
- Protects body organs and tissues
- Lessens the burden on the kidneys and liver by flushing out waste products

Daily intake:

- **Men:** About 15.5 cups of fluids
- **Women:** About 11.5 cups of fluids
- About 80% of daily fluid intake usually comes from drinks; about 20% usually comes from food

Water makes up about 60% of your body weight. Every day you lose water through your breath, perspiration, urine and bowel movements. For your body to function properly, you must replenish its water supply with beverages and foods that contain water.

Upping your water intake may seem easy. Yet many of us aren't coming close to getting enough water - 2.7 liters per day for women and 3.7 liters for men.

**Source: Mayo Newsletter Winter 2018**

**For more water tips, visit:**

[mayoclinichealthsystem.org/54321](http://mayoclinichealthsystem.org/54321)

## Protect Our Water

Conservation is essential, even in the land of 10,000 lakes. For example, in parts of the metropolitan area, groundwater is being used faster than it can be replaced. Some agricultural regions in Minnesota are vulnerable to drought, which can affect crop yields and municipal water supplies.

We must use our water wisely. Below are some tips to help you and your family conserve – and save money in the process.

- Fix running toilets. They can waste hundreds of gallons of water.
- Turn off the tap while shaving or brushing your teeth.
- Shower instead of bathe. Bathing uses more water than showering, on average.
- Only run full loads of laundry, and set the washing machine to the correct water level.
- Only run the dishwasher when it's full.
- Use water-efficient appliances (look for the WaterSense label).
- Use water-friendly landscaping, such as native plants.
- When you do water your yard, water slowly, deeply, and less frequently. Water early in the morning and close to the ground.

*For water conservation information check out these websites:*

[www.pca.state.mn.us/living-green/conserving-water](http://www.pca.state.mn.us/living-green/conserving-water)

[www.epa.gov/watersense](http://www.epa.gov/watersense)



## A Career in the Water Industry is waiting for YOU!

St. Cloud Technical & Community College's Water Environment Technologies (WETT) program provides you with the skills you need to land a great job in this rapidly growing industry. There are many benefits to this program:

- ▶ Hands-on learning
- ▶ Metro and St. Cloud locations
- ▶ 12 month program
- ▶ 100% placement rate (2016)

Call St. Cloud Technical & Community College at 1-320-308-5952 for more information on this career program or e-mail Bill Spain,

Instructor: [bspain@sctcc.edu](mailto:bspain@sctcc.edu)

Or Gregg Kropp, Instructor: [Gregg.Kropp@sctcc.edu](mailto:Gregg.Kropp@sctcc.edu)