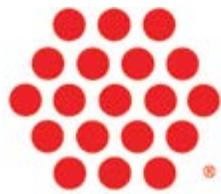


Water

Essential

For Life



Apple
Valley

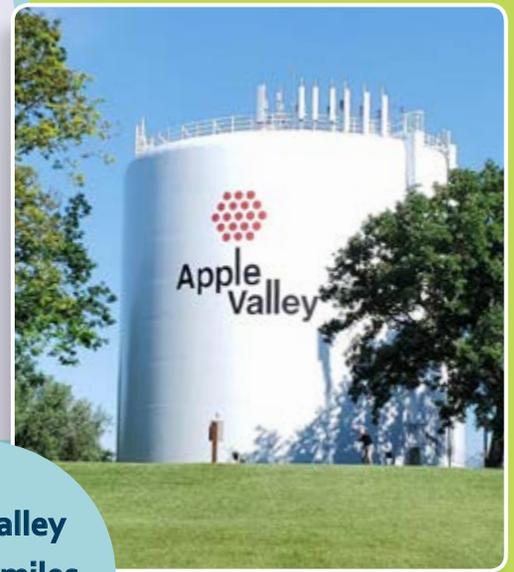
Drinking
Water
Report

2020



Our water supply is truly essential for living. We all need safe, high-quality water to cook, clean and drink. This Drinking Water Report is provided to share information about what is in your water, how it is protected, monitored, treated and regulated. It is our hope that this report will build your confidence in the water that comes from your tap and help you understand what is done to protect it.

After reading the report, you may Contact Brian Skok, Public Works Superintendent-Utilities, at 952-953-2400 if you have questions about Apple Valley's drinking water.

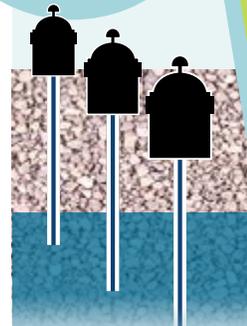


Apple Valley's Water Source

The drinking water in Apple Valley comes from a groundwater source. Apple Valley operates 15 wells which range from 487 to 516 feet deep to draw water from the Prairie Du Chien-Jordan and Jordan aquifers. We have 5 additional wells that serve as an emergency backup supply. The Minnesota Department of Health (MDH) provides information about your drinking water source in a source water assessment, including:

- How Apple Valley is protecting your drinking water source
- Nearby threats to your drinking water
- 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.

Apple Valley has 287 miles of water main



Contact MDH for a copy of your source water assessment. 651-201-4700 or 1-800-818-9318 8:00am-4:30pm, Monday through Friday or visit:

www.health.state.mn.us/communities/environment/water/swp/swa

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 percent 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 percent of Minnesota's drinking water.



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.

By utilizing purposeful treatment techniques, Apple Valley turns quality raw groundwater into excellent-quality drinkingwater. The treatment described below is for all the water that Apple Valley provides to its customers.

Oxidize

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

Filter

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

Disinfect

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

Fluoridate

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

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

Apple Valley Water Statistics

- Over **1.9 billion** gallons of water treated and distributed in 2019- equal to filling the Statue of Liberty **2,903 times!**
 - 2019 Peak Day: July 5, **13.4 million** gallons
 - All-time Peak Day: 2002, **21 million** gallons



Before and After Treatment

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	0.44-0.78
Fluoride <i>ppm</i>	0.19	0.58-067
Hardness <i>grains/gallon</i>	17	17

- Apple Valley has 4 water storage reservoirs ranging in size from 2–4 million gallons
- Apple Valley has only one elevated water tower that holds 1.5 million gallons.

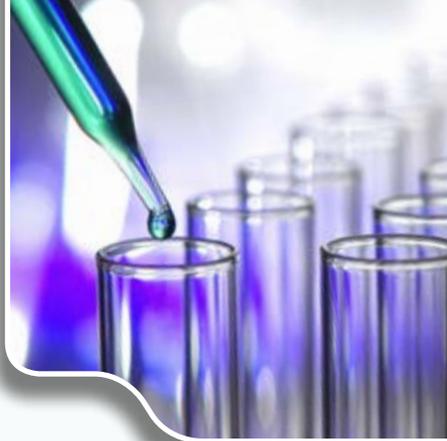


We work with the Minnesota Department of Health (MDH) to test drinking water for more than 100 contaminants. It is expected that contaminants will be detected in small amounts. No water supply is ever completely free of contaminants. Drinking water standards protect Minnesotans from substances that may be harmful to their health.

This report contains the results of all monitoring performed from January 1 to December 31, 2019.

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



Regulations and Standards

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.

Monitoring

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

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)	0.76*	0.44- 0.78**	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	0.65	0.58-0.67	Erosion of natural deposits; Water additive to promote strong teeth.	✓
Total Haloacetic Acids (ppb)	N/A	60	9.9	5.9-9.9	By-product of drinking water disinfection.	✓
Nitrate (ppm)	10	10.4	0.13	0-0.13	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	✓
Total Trihalomethanes (ppb)	N/A	80	39.9	20.5-39.9	By-product of drinking water disinfection.	✓
Substance (units)	MCLG	AL	90% Level	Sites Over AL	Major Source of Contaminant	Meets Standards
Copper (ppm)	0	1.3	0.18	0 of 30 sites	Corrosion of household plumbing systems.	✓
Lead (ppb)	0	15	2.8	0 of 30 sites	Corrosion of household plumbing systems.	✓

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.

*Highest quarterly average

**Highest and lowest monthly average

Lead

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 present in a drinking water source and monitoring consistently finds that lead is not a problem in Apple Valley source water. However, it can get in your drinking water as it passes through lead service lines and your household plumbing system. Apple Valley is responsible for providing high quality drinking water, but it cannot control the plumbing materials used in private buildings. There are no lead service lines in the Apple Valley water system.

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. 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:

<https://eldo.web.health.state.mn.us/public/accreditedlabs/labsearch.seam>

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:

<https://www.health.state.mn.us/communities/environment/water/factsheet/poulead.html>



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RESOURCES TO HELP YOU LEARN MORE

Lead in Drinking Water

<https://www.health.state.mn.us/communities/environment/water/contaminants/lead.html>

Basic Information about Lead in Drinking Water

<http://www.epa.gov/safewater/lead>

The EPA Safe Drinking Water Hotline

1-800-426-4791

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