Plymouth 2020 Drinking Water Report

Making Safe Drinking Water

City of Plymouth drinking water comes from a groundwater source – 17 wells ranging from 302 to 473 feet deep that draw water from the Prairie Du Chien-Jordan, Prairie Du Chien Group and Jordan aquifers.

Plymouth works hard to provide residents with safe and reliable drinking water that meets federal and state water quality requirements. This report aims to provide residents with information on drinking water and how to protect precious water resources.

Contact Streets & Utilities Manager Joe Paumen at 763-509-5993 or jpaumen@plymouthmn.gov with questions about Plymouth's drinking water or information about taking part in decisions that may affect water quality.

The Environmental Protection Agency 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 Food and Drug Administration regulates the number of specific contaminants in bottled water. Bottled water must provide the same public health protection as public tap water.

Drinking water, including bottled water, may reasonably 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.

Plymouth Monitoring Results

This report contains monitoring results from Jan. 1 through Dec. 31, 2020.

Plymouth works with the Minnesota Department of Health to test drinking water for more than 100 contaminants. It is not unusual to detect contaminants 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.

Learn more by visiting the Minnesota Department of Health's Basics of Monitoring and Testing of Drinking Water in Minnesota webpage
https://www.health.state.mn.us/communities/environment/water/factsheet/sampling.html

How to Read the Water Quality Data Tables

The tables below show the contaminants found last year or the most recent time that contaminant was sampled. They also show the levels of those contaminants and the EPA's limits. Substances that were tested for but not found are not included in the tables.

Some contaminants are sampled for less than once a year because their levels in water are not expected to change from year to year. If these contaminants were found the last time they were sampled, they are included in the tables below with the detection date.

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

Some contaminants are monitored regularly throughout the year, and rolling annual averages are used to manage compliance. Because of averaging, there are times where the range of detected test results for the calendar year is lower than the highest average or highest single test result because it occurred in the previous calendar year.

Definitions

- **AL (Action Level)**: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements a water system must follow.
- **EPA:** Environmental Protection Agency
- **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 health risk. MCLGs allow for a margin of safety.
- **MRDL (Maximum residual disinfectant level):** The highest level of disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for the 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 health risk. 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.
- **ppb (parts per billion)**: One part per billion in water is like one drop in one billion drops of water or about one drop in a swimming pool. ppb is the same as micrograms per liter (µg/l).
- **ppm (parts per million)**: One part per million is like one drop in one million drops of water or about one cup in a swimming pool. ppm is the same as milligrams per liter (mg/l).
- **PWSID**: Public water system identification.

Monitoring Results – Regulated Substances

LEAD AND COPPER – Tested at customer taps.

Contaminant (Date, if sampled in previous year)	**EPA's Ideal Goal** (MCLG)	**EPA's Action Level**	**90% of Results Were Less Than**	**Number of Homes with High Levels**	**Violation**	**Typical Sources**
Lead (12/03/18)	0 ppb	90% of homes less than 15 ppb	2.5 ppb	0 out of 30	No	Corrosion of household plumbing.
Copper (12/03/18)	0 ppm	90% of homes less than 1.3 ppm	1.1 ppm	2 out of 30	No	Corrosion of household plumbing.

INORGANIC & ORGANIC CONTAMINANTS – Tested in drinking water.

Contaminant (Date, if sampled in previous year)	**EPA's Ideal Goal** (MCLG)	**EPA's Limit** (MCL)	**Highest Average or Highest Single Test Result**	**Range of Detected Test Results**	**Violation**	**Typical Sources**
Gross Alpha (2018)	0 pCi/l	15.4 pCi/l	8.3 pCi/l	N/A	No	Erosion of natural deposits.
Combined Radium (2018)	0 pCi/l	5.4 pCi/l	3.1 pCi/l	N/A	No	Erosion of natural deposits.

CONTAMINANTS RELATED TO DISINFECTION – Tested in drinking water.

Substance (Date, if sampled in previous year)	**EPA's Ideal Goal** (MCLG or MRDLG)	**EPA's Limit** (MCL or MRDL)	**Highest Average or Highest Single Test Result**	**Range of Detected Test Results**	**Violation**	**Typical Sources**
Total Haloacetic Acids (HAA)	N/A	60 ppb	14.5 ppb	1.60 - 14.50 ppb	No	Byproduct of drinking water disinfection.
Total Trihalomethanes (TTHMs)	N/A	80 ppb	49.5 ppb	30.80 - 49.50 ppb	No	Byproduct of drinking water disinfection.
Total Chlorine	4.0 ppm	4.0 ppm	0.9 ppm	0.71 - 1.03 ppm	No	Water additive used to control microbes.

Total HAA refers to HAA5

OTHER SUBSTANCES – Tested in drinking water.

Substance (Date, if sampled in previous year)	**EPA's Ideal Goal** (MCLG)	**EPA's Limit** (MCL)	**Highest Average or Highest Single Test Result**	**Range of Detected Test Results**	**Violation**	**Typical Sources**
Fluoride	4.0 ppm	4.0 ppm	0.71 ppm	0.63 - 0.71 ppm	No	Erosion of natural deposits; water additive to promote strong teeth.

Potential Health Effects and Corrective Actions (If Applicable)

Fluoride: Fluoride is nature's cavity fighter, with small amounts present naturally in many drinking water sources. There is an overwhelming weight of credible, peer-reviewed, scientific evidence that fluoridation reduces tooth decay and cavities in children and adults, even when fluoride is available from other sources, such as fluoride toothpaste and mouth rinses. Since studies show that optimal fluoride levels in drinking water benefit public health, municipal community water systems are required to adjust the level of fluoride in the water to a concentration between 0.5 to 0.9 parts per million (ppm) to protect teeth. Fluoride levels below 2.0 ppm are not expected to increase the risk of a cosmetic condition known as enamel fluorosis.

Some People Are More Vulnerable to Contaminants in Drinking Water

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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. Developing fetuses and 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 and Prevention 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.

Learn More about Drinking Water

Drinking Water Sources

Minnesota's primary drinking water sources are groundwater and surface water. Groundwater is the water found in aquifers beneath the land's surface, which 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 from the natural environment and people's daily activities can get in drinking water sources. 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 (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, which come from natural sources (radon gas from soils and rock), mining operations, and oil and gas production.

The Minnesota Department of Health provides information about Plymouth's drinking water sources in a source water assessment, including how Plymouth is protecting drinking water sources, nearby threats to drinking water sources, 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.

Find source water assessments at MDH's Source Water Assessments webpage (https://www.health.state.mn.us/communities/environment/water/swp/swa) or call 651-201-4700 or 1-800-818-9318 between 8 a.m. and 4:30 p.m., Monday-Friday.

Lead in Drinking Water

Consumers may contact lead through paint, water, dust, soil, food, hobbies or a job. Coming in contact with lead may cause serious health problems. There is no safe level of lead. Babies, children under 6 years and pregnant women are at the highest risk.

Lead is rarely in a drinking water source, but it can get in drinking water as it passes through lead service lines and household plumbing systems. Plymouth is responsible for providing high-quality drinking water, but cannot control the plumbing materials used in private buildings.

The following are ways to protect against 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 more than six hours. Those with lead service lines should let the water run longer. A service line is an underground pipe that brings water from the main water pipe under the street to a home.
    - Residents may determine whether they have a lead service line by emailing Plymouth's Utilities Division at publicworks@plymouthmn.gov or by visiting https://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 exposure.
2. **Use cold water** for drinking, making food and baby formula. Hot water releases more lead from pipes than cold water.
3. **Test the water.** In most cases, letting the water run and using cold water for drinking and cooking should keep lead levels low in drinking water. Residents concerned about lead should arrange with a laboratory to test their tap water. Testing the water is essential if young children or pregnant women drink tap water.
    - Contact an MDH accredited laboratory to get a sample container and instructions on how to submit a sample: Environmental Laboratory Accreditation Program (https://eldo.web.health.state.mn.us/public/accreditedlabs/labsearch.seam)
      MDH can help residents understand the test results.
4. **Treat the water** if a test shows the water has high lead levels after letting the water run.
    - Read about water treatment units: Point-of-Use Water Treatment Units for Lead Reduction (https://www.health.state.mn.us/communities/environment/water/factsheet/poulead.html)

Learn more:

- Visit Lead in Drinking Water (https://www.health.state.mn.us/communities/environment/water/contaminants/lead.html)
- Visit Basic Information about Lead in Drinking Water (http://www.epa.gov/safewater/lead)
- Call the EPA Safe Drinking Water Hotline at 1-800-426-4791. To learn about reducing contact with lead from sources other than drinking water, visit Lead Poisoning Prevention: Common Sources (https://www.health.state.mn.us/communities/environment/lead/sources.html).

Help Protect The Most Precious Resource – Water

The Value of Water

Drinking water is a precious resource, yet it is often taken for granted.

Throughout history, civilizations have risen and fallen based on access to a plentiful, safe water supply. That's still the case today – water is key to healthy people and healthy communities.

Water is also vital to the economy. It's necessary for manufacturing, agriculture, energy production and more. One-fifth of the United States economy would come to a stop without a reliable and clean source of water.

Systems are in place to provide residents with safe drinking water. The State of Minnesota and local water systems work to protect drinking water sources (i.e. sealing an unused well helps prevent contamination of the groundwater), treat water to remove harmful contaminants and do extensive testing to ensure drinking water safety.

If a problem is detected, corrective action is taken and the public is notified. Like the City of Plymouth's water system, water from a public water system is tested more thoroughly and regulated more closely than water from any other source, including bottled water.

Conservation

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, affecting crop yields and municipal water supplies.

Water must be used wisely. Below are some tips to help families 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 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
- Water the yard slowly, deeply and less frequently. Water early in the morning and close to the ground.

Learn more:

- Minnesota Pollution Control Agency's Conserving Water webpage (https://www.pca.state.mn.us/living-green/conserving-water)
- U.S. Environmental Protection Agency's WaterSense webpage (https://www.epa.gov/watersense)

Help Prevent Pollution

Many daily activities contribute to the pollution of Minnesota's surface water and groundwater. Help protect these drinking water sources by taking the following actions:

- **Lawn and property:**
  - Limit the use of herbicides, pesticides and fertilizers
  - Keep the soil in place with plants, grass or rocks
  - Cover temporary piles of dirt with a tarp or burlap sack to prevent erosion
  - Keep leaves and grass off of streets and sidewalks
  - Maintain septic systems, private wells and storage tanks to prevent leaks, and seal unused wells
- **Medications:** Never flush unwanted or out-of-date medications down the toilet or sink. Always take them to a waste disposal or medication drop-off site. View drop-off locations at the Hennepin County Medicine disposal webpage (https://www.hennepin.us/medicine). More information is available at Managing unwanted medications (www.pca.state.mn.us/living-green/managing-unwanted-medications).
- **Hazardous materials:** Safely store hazardous materials such as paint, batteries, herbicides, pesticides and pool chemicals. Dispose of them at a proper waste disposal facility. Do not dump down storm drains, the sink or onto the ground. Learn more at: Keep hazardous waste out of the garbage (http://www.pca.state.mn.us/featured/keep-hazardous-waste-out-garbage).
- **Pet waste:** Pick up after pets and put waste in the trash.
- **Trash:** Seal trash bags and keep litter out of the street.
- **Winter ice removal:** Salts and deicing or anti-icing chemicals can be harmful to the environment, corrosive to driveways and sidewalks, and harmful to plants, pets and humans. Shovel first and only apply deicers/anti-icers lightly, if needed. Learn more at 10 smart salting tips to protect Minnesota waters (https://www.pca.state.mn.us/featured/10-smart-salting-tips-protect-minnesota-waters).
- **Keep an eye out for car and motor fluids:** Seal or repair any fluid leaks that could run off onto streets and into storm drains. Take used motor oil or other fluids to a drop-off site. City of Plymouth Used Oil Drop-Off (https://www.plymouthmn.gov/departments/public-works/recycling-disposal/hazardous-waste-electronics-disposal/household-hazardous-waste).
- **Be a water advocate:** Spread the word; get involved. Many groups and individuals are working to protect water across Minnesota.

Reduce Backflow at Cross Connections

Bacteria and chemicals can enter the drinking water supply from polluted water sources in a process called backflow. Backflow occurs at connection points between drinking water and non-drinking water supplies (cross-connections) due to water pressure differences.

For example, if a person sprays an herbicide with a garden hose, the herbicide could enter the home's plumbing and then enter the drinking water supply. This could happen if the water pressure in the hose is greater than the water pressure in the home's pipes.

Property owners can help prevent backflow. Pay attention to cross-connections, such as garden hoses.

The Minnesota Department of Health and American Water Works Association recommends the following:

- Do not submerge hoses in buckets, pools, tubs or sinks.
- Keep the end of hoses clear of possible contaminants.
- Do not use spray attachments without a backflow prevention device. Attach these devices to threaded faucets. Such devices are inexpensive and available at hardware stores.
- Use a licensed plumber to install backflow prevention devices.
- Maintain air gaps between hose outlets and liquids. An air gap is a vertical space between the water outlet and the flood level of a fixture (i.e., the space between a wall-mounted faucet and the sink rim). It must be at least twice the diameter of the water supply outlet and at least one inch.
- Commercial property owners should develop a plan for flushing or cleaning water systems to minimize the risk of drawing contaminants into uncontaminated areas.

Home Water Treatment

Overview

Whether they drink from a public water supply or a private well, most Minnesotans have drinking water that does not need treatment for health protection. Water treatment units are best for improving the physical qualities of water – the taste, color or odor.

No single treatment process can remove all substances in water. Residents who decide to install a home water treatment unit should choose a unit certified and labeled to reduce or remove the substance of concern. Several treatment processes may need to be combined in a system to remove more than one substance from water.

Even well-designed treatment systems can fail. Continue to test drinking water after a treatment unit has been installed. All home water treatment units need regular maintenance to work correctly. Regular maintenance may include changing filters, disinfecting the unit, or cleaning scale buildup. Always install, clean and maintain a treatment unit according to the manufacturer's recommendations.

Learn more at Home Water Treatment (https://www.health.state.mn.us/communities/environment/water/factsheet/hometreatment.html).

Beware of Water Treatment Scams

Some water treatment companies have used false claims, deceptive sales pitches or scare tactics. Consumers have a right to decide what is best for themselves and their families and may choose to install additional water treatment devices to further lower the levels of contaminants, chlorine and other chemicals in the water. However, residents should be cautious when purchasing a water treatment system. Before purchasing a home water treatment system, please read the Minnesota Department of Health's recommendations online at Warning: Beware of Water Treatment Scams (https://www.health.state.mn.us/communities/environment/water/factsheet/beware.html).

The Pros and Cons of Home Water Softening

When considering whether to use a water softener, contact the public water system to find out if the water is hard. Many systems treat hardness, making water softeners unnecessary.

Water softeners are water treatment devices. They remove water hardness (dissolved calcium and magnesium). Water softeners must be installed and maintained correctly to be safe and effective. Learn more at Home Water Softening (https://www.health.state.mn.us/communities/environment/water/factsheet/softening.html).

The benefits of soft water include:

- Increased efficiency for soaps and detergents.
- Reduction in mineral staining on fixtures and in pipes.
- A potential increase in the lifespan of water heaters.

The drawbacks of soft water include:

- Operation and maintenance costs.
- More sodium. People on low-sodium diets should consult a doctor if they plan to consume softened water regularly.
- The production of salt brine as a byproduct. This can have adverse effects at wastewater treatment plants and on ecosystems. Reduce the amount of salt brine used or install a salt-free system.