Plymouth 2024 Drinking Water Report

This report contains important information about City of Plymouth drinking water. Those who have difficulty understanding the report are encouraged to ask someone to translate it or seek assistance understanding it.

Español – Información importante. Si no la entiende, haga que alguien se la traduzca ahora.

Hmong – Daim ntawv teev num no muaj cov ntaub ntawv tseem ceeb hais txog koj cov dej haus. Nrhiav ib tug neeg pab txhais cov ntaub ntawv no rau koj, lossis tham nrog ib tug neeg uas paub cov lus no.

Somali – Warbixintan waxay wadataa macluumaad muhiim ah ee la xiriira biyaha aad cabtid. Cid ha kuu tarjunto ama la hadl cid fahmaysa.

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 reports aims to provide residents with information on drinking water and how to protect precious water resources.

Contact Water Production Lead Eric Peterson at 763-509-5996 or epeterson@plymouthmn.gov with questions about Plymouth's drinking water or for information about taking part in decisions that may affect water quality.

The U.S. 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 U.S. Food and Drug Administration regulates the amounts 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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Plymouth Monitoring Results

This report contains our monitoring results from Jan. 1 to Dec. 31, 2024.

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 webpage Basics of Monitoring and testing of Drinking Water in Minnesota (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 the 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 between 8 a.m. and 4:30 p.m. Monday-Friday.

Explaining Special Situations for the Highest Result and Average

Some contaminants are monitored regularly throughout the year, and rolling (or moving) annual averages are used to manage compliance. Because of this 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 which 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 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.
- **ppt (parts per trillion)**: One part per trillion is like one drop in one trillion drops of water, or about one drop in an Olympic-sized swimming pool. ppt is the same as nanograms per liter (ng/l).
- **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**	**Range of Detected Test Results**	**Violation**	**Typical Sources**
Lead (10/18/24)	0 ppb	90% of homes less than 15 ppb	2 ppb	0 out of 30	0 - 3.2 ppb	NO	Corrosion of household plumbing.
Copper (10/18/24)	0 ppm	90% of homes less than 1.3 ppm	1.23 ppm	2 out of 30	0.17 - 1.47 ppm	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**
Barium (02/23/21)	2 ppm	2 ppm	0.15 ppm	N/A	NO	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Gross Alpha	0 pCi/l	15 pCi/l	4.8 pCi/l	4.3 - 4.8 pCi/l	NO	Erosion of natural deposits.
Combined Radium	0 pCi/l	5 pCi/l	2.7 pCi/l	2.2 - 2.7 pCi/l	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 Trihalomethanes (TTHMs)	N/A	80 ppb	27.40 ppb	26.60 - 27.40 ppb	NO	Byproduct of drinking water disinfection.
Total Haloacetic Acids (HAA)	N/A	60 ppb	10.30 ppb	8.40 - 10.30 ppb	NO	Byproduct of drinking water disinfection.
Total Chlorine	4.0 ppm	4.0 ppm	0.73 ppm	0.55 - 0.72 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	0.62 ppm	0.60 - 0.65 ppm	NO	Erosion of natural deposits; water additive to promote strong teeth.

Potential Health Effects and Corrective Actions (If Applicable)

A note about fluoride for residents: Those with drinking water fluoride levels below the optimal concentration range of 0.5 to 0.9 parts per million (ppm) should talk with their dentist about how to protect their teeth and their family's teeth from tooth decay and cavities. For more information, visit: MDH Drinking Water Fluoridation (https://www.health.state.mn.us/communities/environment/water/com/fluoride.html).

Fluoride is nature's cavity fighter, with small amounts present naturally in many drinking water sources. There is an overwhelming amount 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 adjust the level of fluoride in the water to an optimal concentration between 0.5 to 0.9 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.

Monitoring Results – Unregulated Substances/Emerging Contaminants

In addition to testing drinking water for contaminants regulated under the Safe Drinking Water Act, Plymouth sometimes also monitors for contaminants that are not regulated. Unregulated contaminants do not have legal limits for drinking water. MDH, EPA and other health agencies may have developed comparison values for some of these compounds. Some of these comparison values are based solely on potential health impacts and do not consider the ability to measure contaminants at very low concentrations nor the cost and technology of prevention and/or treatment. These values may be set at levels that are costly, challenging or impractical for a water system to meet (for example, large-scale treatment technology may not exist for a given contaminant). Sample data are listed along with comparison values in the table below; it is important to note that these comparison values are not enforceable.

Detection alone of a regulated or unregulated contaminant should not cause concern. The significance of a detection should be determined considering current health effects information. Information can change over time, as health effects are still being understood and researched.

A person drinking water with a contaminant at or below the comparison value would be at little to no risk for harmful health effects. If the level of a contaminant is above the comparison value, people of a certain age or with special health conditions – such as fetuses, infants, children, elderly and people with impaired immunity – may need to take extra precautions. This city is notifying residents of the unregulated/emerging contaminants detected as a public education opportunity.

Unregulated contaminant monitoring helps the EPA determine where certain contaminants occur and whether the agency should consider regulating those contaminants in the future.

- More information is available on MDH's A-Z List of Contaminants in Water (https://www.health.state.mn.us/communities/environment/water/contaminants/index.html)
- Fourth Unregulated Contaminant Monitoring Rule (UCMR 4) (https://www.health.state.mn.us/communities/environment/water/com/ucmr4.html)
- Fifth Unregulated Contaminant Monitoring Rule (https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule)
- EPA has developed a UCMR5 Program Overview Factsheet (https://www.epa.gov/system/files/documents/2022-02/ucmr5-factsheet.pdf) describing UCMR 5 contaminants and standards.

In the past year, residents' drinking water may have tested for additional unregulated contaminants as part of the Fifth Unregulated Contaminant Monitoring Rule (https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule) and results are still being processed. The Unregulated Contaminant Monitoring Rule 5 (UCMR 5) Data finder allows people to easily search for, summarize and download the available UCMR 5 analytical results (https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule-data-finder).

UNREGULATED/EMERGING CONTAMINANTS – Tested in drinking water.

Contaminant	Comparison Value	Highest Average Result or Highest Single Test Result	Range of Detected Test Results
Sodium*	20 ppm	15.50 ppm	15.20 - 15.50 ppm
Sulfate	500 ppm	19.90 ppm	14.30 - 19.90 ppm
N-ethyl perfluorooctanesulfonaminoacetic acid (2021)	N/A	3.60 ppt	0.00 - 3.60 ppt
Perfluorobutanesulfonate (PFBS) (2023)	100 ppt	0.5 ppt	0.00 - 1.10 ppt
Perfluorobutanoic acid (PFBA) (2023)	7000 ppt	14.33 ppt	6.20 - 19.10 ppt
Perfluoroheptanoic acid (PFHpA) (2023)	N/A	0.07 ppt	0.00 - 0.28 ppt
Perfluorohexanesulfonate (PFHxS) (2023)	47 ppt	1.99 ppt	0.00 - 2.94 ppt
Perfluorohexanoic acid (PFHxA) (2023)	200 ppt	0.4 ppt	0.00 - 0.81 ppt
Perfluoropentanoic acid (PFPeA) (2023)	N/A	0.43 ppt	0.00 - 0.86 ppt
Perfluoropentasulfonate (PFPeS) (2023)	N/A	0.32 ppt	0.00 - 0.70 ppt
Perfluorooctanoic acid (PFOA) (2023)	0.0079 ppt	0.45 ppt	0.0000 - 0.9400 ppt
Perfluorooctanesulfonate (PFOS) (2023)	2.3 ppt	0.44 ppt	0.00 - 1.00 ppt
Lithium (2023)	10 ppb	13.4 ppb	0.00 - 13.60 ppb

*Note that home water softening can increase the level of sodium in water.

In early 2024, MDH released new comparison values for two PFAS compounds, PFOA and PFOS. MDH is still evaluating how to apply these comparison values to drinking water systems. Additionally, EPA released final MCLs for PFOA at 4.0 ppt, PFOS at 4.0 ppt, PFHxS at 10 ppt, HFPO-DA (Gen X) at 10 ppt, PFNA at 10 ppt, and a calculated Hazard Index at 1 (unitless) that will become enforceable April 26, 2029. Additional Information on PFAS system results is available at: Interactive Dashboard for PFAS Testing in Drinking Water - MN Dept. of Health https://www.health.state.mn.us/communities/environment/water/pfasmap.html.

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 (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.

Learn More about Drinking Water

Drinking Water Sources

Groundwater supplies 75% of Minnesota's drinking water, and is found in aquifers beneath the surface of the land. Surface water supplies 25% of Minnesota's drinking water, and is the water in lakes, rivers and streams above the surface of the land.

Contaminants can get in drinking water sources from the natural environment and from people's daily activities. 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.

The Minnesota Department of Health provides information about Plymouth's drinking water source(s) in a source water assessment, including:

- How Plymouth is protecting drinking water source(s);
- Nearby threats to drinking water sources;
- 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 Source Water Assessments (https://www.health.state.mn.us/communities/environment/water/swp/swa) or call 651-201-4700 between 8 a.m. and 4:30 p.m. Monday-Friday.

Lead in Drinking Water

Lead can cause serious health problems – babies, children younger than 6 years old, and pregnant women are at the highest risk. Consumers may be in contact with lead through paint, water, dust, soil, food, hobbies or a job. There is no safe level of lead.

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Plymouth is responsible for proving high-quality drinking water and removing lead pipes from service lines, but cannot control the variety of materials used in plumbing components in private buildings. Residents can take responsibility by identifying and removing lead materials within their home plumbing and taking steps to reduce risk.

The following are ways to protect against lead in drinking water.

1. **Let the water run** before drinking tap water – flush pipes for several minutes by running the tap. Those with lead service lines should let the water run longer. A service line is the underground pipe that brings water from the main water pipe under the street to a home.
    - Activities such as taking a shower, and doing laundry or dishes help keep water moving in the home system, but are not a replacement for running the tap before drinking if it has not been used for a long period of time.
    - 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. **Know service line materials by** contacting the public water system, or search by address online at the Minnesota Lead Inventory Tracking Tool (https://maps.umn.edu/LSL/).
    - Protect Your Tap: A quick check for lead (https://www.epa.gov/ground-water-and-drinking-water/protect-your-tap-quick-check-lead) is EPA's step by step guide to learn how to find lead pipes in the home.
3. **Use cold water** for drinking, making food and making baby formula. Hot water releases more lead from pipes than cold water.
4. **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 important if young children or pregnant women drink tap water.

- Contact a Minnesota Department of Health accredited laboratory to purchase 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)
  The Minnesota Department of Health can help residents understand test results.

5. **Treat the water** if a test shows the water has high levels of lead after letting the water run. Residents can use a filter certified with ANSI/NSF standards 53 and 42 for lead reduction.

   - 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)

Information on lead in drinking water, testing methods and other steps residents can take to minimize exposure are available at:

- Visit EPA Basic Information about Lead in Drinking Water (http://www.epa.gov/safewater/lead)
- Visit the Minnesota department of Health Lead in Drinking Water
  (https://www.health.state.mn.us/communities/environment/water/contaminants/lead.html)
- To learn about how to reduce contact with lead from sources other than drinking water, visit Lead Poisoning Prevention: Common Sources
  (https://www.health.state.mn.us/communities/environment/lead/fs/common.html)

6. **Be Aware:** Head start programs, child care centers, public and charter schools all have requirements to test for lead in drinking water. These programs can learn more about requirements and resources for testing and remediation at MDH Drinking Water in Schools and Child Cares
   (https://www.web.health.state.mn.us/communities/environment/water/schools/index.html)

Service Line Material Inventory

Plymouth has completed and submitted its service line materials inventory to the Minnesota Department of Health. The service line inventory is publicly available, and residents can check the materials for service lines by visiting the Lead Inventory Tracking Tool (LITT) (https://maps.umn.edu/LSL/). Residents may also contact the Utilities Division at 763-509-5950. To complete the service line inventory, Plymouth reviewed existing records and requested information through an online survey to determine the status of service lines. As of 09/24/2024, Plymouth's inventory contains 0 lead, 0 galvanized requiring replacement, 4,887 unknown material, and 20,172 non-lead service lines. A link to inventory and additional information is also available at plymouthmn.gov/serviceline.

Help Protect Our 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. According to MDH, one-fifth of the U.S. 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. Water from a public water system, such as the City of Plymouth's 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, which can affect crop yields and municipal water supplies.

Water must be used wisely. Below are 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 yards slowly, deeply and less frequently – water early in the morning and close to the ground

To conserve water, Plymouth has outdoor water use restrictions in effect from May through September for all city water customers. Plymouth prohibits outdoor lawn watering from noon to 5 p.m. on all days. Residents and businesses must also follow an odd-even schedule when sprinkling lawns – addresses ending in an odd number may water on odd-numbered calendar days, while addresses ending in an even number may water on even-numbered days. Automatic irrigation systems should be adjusted accordingly. For details and exceptions, call the hotline at 763-509-5512 or visit plymouthmn.gov/watering.

Learn more

- 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 use of herbicides, pesticides and fertilizers
  - Keep soil in place with plants, grass or rocks
  - Cover temporary piles of dirt with a tarp or burlap sack
  - Keep leaves and grass off of streets and sidewalks
  - Maintain any septic systems, private wells and storage tanks to prevent leaks, and seal any unused wells
- **Out-of-date medications:** Never flush unwanted or out-of-date medications down the toilet or sink. Always take them to a waste disposal or prescription medication drop-off site. 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 or drop-off event. Do not dump down storm drains, the sink or onto land. Learn more at: Keep hazardous waste out of the garbage (https://www.pca.state.mn.us/news-and-stories/safely-dispose-of-household-hazardous-waste).
- **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:** Chemicals used to break up the ice are called deicers or anti-icers. They can be harmful to the environment, corrosive to driveways and sidewalks, and harmful to plants, pets and humans. Always shovel first, and then 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/news-and-stories/help-save-minnesota-waters-your-pets-and-your-wallet-from-too-much-salt-this-winter).
- **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 neighborhood drop-off site.
- **Be a water advocate:** Spread the word; get involved. There are many groups and individuals 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 recommend 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 (e.g. 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 1 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

Most Minnesotans, whether they drink from a public water supply or a private well, 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 of emerging concern, chlorine and other chemicals in 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 for hardness, making water softeners unnecessary.

Water softeners are a water treatment device. They remove water hardness (dissolved calcium and magnesium). Water softeners must be installed and maintained properly 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 regularly consume softened water.
- The production of salt brine as a byproduct. This can have negative effects at wastewater treatment plants and on ecosystems. Reduce the amount of salt brine used or install a salt-free system.