

City of Plymouth 2011 Water System Report

The City of Plymouth is issuing the results of monitoring done on its drinking water, identified as Public Water Source 1270044, for the period from Jan. 1 to Dec. 31, 2011. The purpose of this report is to advance consumers' understanding of drinking water and heighten awareness of the need to protect precious water resources.

Source of Water

The City of Plymouth provides drinking water to residents from a groundwater source: 16 wells ranging from 302 to 473 feet deep draw water from the Prairie Du Chien-Jordan and Prairie Du Chien Group aquifers.

The Minnesota Department of Health has determined that the sources used to supply your drinking water are not particularly susceptible to contamination. If you wish to obtain the entire source water assessment for your drinking water, please call 651-201-4700 or 1-800-818-9318 (and press 5) during normal business hours. Also, you can view it on line at health.state.mn.us/divs/eh/water/swp/swa.

Call 763-509-5999 or 763-509-5997 if you have questions about the City of Plymouth drinking water, or would like information about opportunities for public participation in decisions that may affect the quality of the water.

Results of Monitoring

No contaminants were detected at levels that violated federal drinking water standards. However, some contaminants were detected in trace amounts that were below legal limits. The table below shows the contaminants that were detected in trace amounts last year. (Some contaminants are sampled less frequently than once a year; as a result, not all contaminants were sampled for in 2011. If any of these contaminants were detected the last time they were sampled for, they are included in the table along with the date that the detection occurred.)

Lead in Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Plymouth is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline, 1-800-426-4791, or at epa.gov/safewater/lead.

Unregulated Contaminants

Some contaminants do not have Maximum Contaminant Levels (MCL) established for them. These unregulated contaminants are assessed using state standards known as health risk limits to determine if they pose a threat to human health. If unacceptable levels of an unregulated contaminant are found, the response is the same as if an MCL has been exceeded; the water system must inform its customers and take other corrective actions.

Compliance with National Primary Drinking Water Regulations

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the U. S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/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.



Key to Abbreviations

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.

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.

MRDL Maximum Residual Disinfectant Level.

MRDLG Maximum Residual Disinfectant Level Goal.

AL Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirement which a water system must follow.

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.) Note: In situations in which only 5 samples are taken, the average of the two with the highest levels is taken to determine the 90th percentile level.

ppm Parts per million, which can also be expressed as milligrams per liter (mg/l).

ppb Parts per billion, which can also be expressed as micrograms per liter (µg/l).

N/A Not Applicable (does not apply).

Contaminant	Unit	MCLG	MCL	Range	Average/Result	Typical Source of Contaminant
Fluoride	ppm	4	4	.92-1.1	1.16	State of Minnesota requires all municipal water systems to add fluoride to the drinking water to promote strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories.
Haloacetic Acids (HAA5)	ppb	0	60	N/A	5	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	ppb	0	80	N/A	3.5	By-product of drinking water disinfection.
Total Coliform Bacteria	N/A	0 present >	5% present	N/A	1%*	Naturally present in the environment.
Chlorine	ppm	MRDLG = 4	MRDLG = 4	.6-8	0.72	Water additive used to control microbes.
Copper	ppm	1.3	AL = 1.3	90% Level: 1.13	# sites over AL: 1 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead	ppb	0	AL = 15	90% Level 2	# sites over AL: 1 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits.
Sodium	ppm	No established EPA Limit		11.4-12.1	12.1	Erosion of natural deposits.
Sulfate	ppm	No established EPA Limit		10-12	12	Erosion of natural deposits.

*Follow-up sampling showed no contamination present.

Volume of water use varies by season

The graph below shows Plymouth's month-by-month water use in 2011. The City of Plymouth pumped an average of 265 million gallons of water monthly; however, during the summer, water demand increased to more than 429 million gallons. This spike puts significant stress on the aquifer. To meet the growing demand for water in Plymouth, the city is adding well number 17 this year.

Our water source is not infinite. Aquifers require time to recharge. They cannot recharge quickly enough during the peak months to meet the demand. Consequently, the City of Plymouth has adopted annual water restrictions.

Why Restrictions?

The Minnesota Department of Natural Resources (DNR) requires cities to address water conservation proactively. This is especially true when a city seeks a permit from the DNR to construct new wells.

Outdoor Water Restrictions

To conserve water and address DNR requirements, Plymouth has annual restrictions on outdoor water use that are in effect from May 1 through Sept. 30.

The Restrictions

Plymouth prohibits outdoor lawn watering from noon to 5 p.m. on all days. At other times, water customers must also follow an odd-even schedule when sprinkling lawns.

Homeowners and businesses with addresses ending in an odd number may water on odd-numbered calendar days. Those with addresses ending in an even number may water on even-numbered days.

The restrictions apply to all city water customers. Property owners with automatic irrigation systems must adjust their systems accordingly.

Exceptions

Hand-Held Watering – City water customers may wash vehicles and do hand-held hose watering of shrubs, flowers and trees on any day and at any time if the hose has a nozzle with automatic shutoff.

New Sod/Landscaping - If you have new sod, seed or landscaping, you do not need to follow the odd/even restrictions for unattended watering during the first 30 days following planting. You must, however, still abide by the midday ban from noon to 5 p.m.

Non-city Water Customers - The restrictions do not apply to people who use sources of water other than the city water system.

Other Exceptions - Businesses and organizations that need to irrigate turf or playfields to prevent unreasonable damage due to frequent use may submit a written request

for an exemption to the public works director. Intermittent sprinkling that is exclusively for recreational use is also exempt from the restrictions.

Enforcement

City employees will enforce the water restrictions when they see violations. The penalty for violating restrictions is \$100 for each day of violation. You will receive one written warning before you are penalized. Please keep in mind that if you have an irrigation system that is not functioning properly or is misaligned and water is spraying in the street, you could receive a notice of violation and penalty.

Changes

If drought conditions require any changes to the restrictions, they will be announced on the city website, plymouthmn.gov, and on the Water Restriction Information Line, 763-509-5512. Area media will also be notified.

Help Us Conserve Water

Over-depletion of our groundwater resources is a real threat in this region. Lawn watering is the single biggest residential use of water. You can have a green lawn and save water by following these tips.

- If your grass springs back when you step on it, it doesn't need watering.
- If it rains an inch or more, wait at least five days to water again.
- Use a sprinkler that delivers large drops, rather than a fine mist.
- Mow your grass to a height of 2" to 3", and leave the clippings on the ground. This shades the soil to prevent evaporation.

Learn More about Tap Water

The City of Plymouth strives to provide safe, quality drinking water and high quality service to residents and businesses. We encourage you to call us with questions or concerns. For more information about the Plymouth water system, such as test results and customer service questions, call Utilities Superintendent Scott Newberger at 763-509-5999 or Utilities Senior Engineer Technician Greg Cook at 763-509-5997.

To learn more about drinking water issues, connect with the resources listed below.

Contact Information and Internet Resources

- Environmental Protection Agency
Safe Drinking Water Hotline, 1-800-426-4791
epa.gov/safewater
- Minnesota Department of Health, 651-201-5000
health.state.mn.us/divs/eh/water
- Minnesota Department of Natural Resources
651-296-6157
dnr.state.mn.us/water
- American Water Works Association
awwa.org

2011 Water Usage in Plymouth



2011 Gallons Pumped

Month	Monthly Total
January-11	175,570,000
February-11	158,860,000
March-11	177,580,000
April-11	178,115,000
May-11	224,320,000
June-11	331,920,000
July-11	432,250,000
August-11	410,840,000
September-11	417,825,000
October-11	322,720,000
November-11	176,840,000
December-11	175,965,000