

2013 City of Plymouth drinking water report

The City of Plymouth is issuing the results of monitoring done on its drinking water for the period from Jan. 1 to Dec. 31, 2013. 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 its residents from a groundwater source: 17 wells ranging from 302 to 473 feet deep that draw water from the Prairie Du Chien-Jordan and Prairie Du Chien Group aquifers.

The Minnesota Department of Health has determined that the source used to supply your drinking water is not particularly susceptible to contamination. If you wish to obtain the entire source water assessment regarding your drinking water, call 651-201-4700 or 1-800-818-9318 during normal business hours. Also, you can view it online 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 that follows 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 2013. 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 2 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 or at epa.gov/safewater/lead.

Monitoring may have been done for additional contaminants that do not have MCLs established for them and are not required to be monitored under the Safe Drinking Water Act. Results may be available by calling 651-201-4700 or 1-800-818-9318 during normal business hours.

Monitoring for unregulated contaminants as required by Environmental Protection Agency rules (40 CFR 141.40) was conducted in 2013. Results of the unregulated contaminant monitoring are available upon request from Cindy Swanson, Minnesota Department of Health, at 651-201-4656.

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, 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, 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.

In order to ensure that tap water is safe to drink, the 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 EPA'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 five 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

Contaminant (units)	MCLG	MCL	Level Found		Typical Source of Contaminant
			Range (2013)	Average/Result*	
Arsenic (ppb) (05/17/2012)	0	10	N/A	1.58	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium (ppm) (05/17/2012)	2	2	N/A	.13	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride (ppm)	4	4	1-1.3	1.15	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	10-17.7	17.7	By product of drinking water disinfection.
TTHM (Total trihalomethanes) (ppb)	0	80	20.9-50.3	42	By product of drinking water disinfection.
Total Coliform Bacteria	0 present	>5% present	N/A	1% ♦	Naturally present in the environment.

* 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. ♦ Follow-up sampling showed no contamination present.

Contaminant (units)	MRDLG	MRDL	****	*****	Typical Source of Contaminant
Chlorine (ppm)	4	4	.6-.8	.64	Water additive used to control microbes.

**** Highest and Lowest Monthly Average. ***** Highest Quarterly Average.

Contaminant (units)	MCLG	AL	90% Level	# sites over AL	Typical Source of Contaminant
Copper (ppm) (06/27/2012)	1.3	1.3	1.17	2 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead (ppb) (06/27/2012)	0	15	3.8	1 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits.

Volume of water use spikes during summer

The graph below shows Plymouth's water use in 2013, illustrated month-by-month. The City of Plymouth pumped an average of 267 million gallons of water monthly. In the summer months, the monthly average jumped to 412 million gallons. This spike was largely due to lawn watering – and it put significant stress on the aquifer.

Plymouth's 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.

Outdoor Water Restrictions



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

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.

Changes

If drought conditions require changes to 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 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 inches, 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 Engineering Technician Greg Cook at 763-509-5997.



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

- **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/waters
- **American Water Works Association**
awwa.org

2013 Gallons Pumped

January	181,995,000
February	162,815,000
March	180,470,000
April	186,475,000
May	241,720,000
June	255,430,000
July	454,380,000
August	525,495,000
September	438,218,000
October	224,480,000
November	172,020,000
December	175,240,000
Total For 2013	3,198,738,000

2013 Water Usage in Plymouth

