

2012 City of Plymouth Drinking Water 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, 2012. 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: 16 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 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 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 2012. 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. 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 or at epa.gov/safewater/lead.

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

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 storm water 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 storm water runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water 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 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 five samples are taken, the average of the two with the highest levels is taken to determine the 90th percentile level.

pCi/l – PicoCuries per liter (a measure of radioactivity)

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)

nd – No detection

N/A – Not applicable

Contaminant (units)	MCLG	MCL	Level Found		Typical Source of Contaminant
			Range(2012)	Average/Result*	
Alpha Emitters (pCi/l)	0	15.4	nd-7.4	7.4	Erosion of natural deposits
Arsenic (ppb) electronics	0	10	1.17-1.58	1.58	Erosion of natural deposits; Runoff from orchards; Runoff from glass and production wastes
Barium (ppm)	2	2	.102-.131	.13	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Combined Radium (pCi/l)	0	5.4	nd-2.2	2.2	Erosion of natural deposits
Fluoride (ppm)	4	4	1-1.1	1.09	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	8.1-16.6	14.3	By-product of drinking water disinfection
TTHM (Total trihalomethanes) (ppb)	0	80	17.3-52.3	34.85	By-product of drinking water disinfection

*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.

Contaminant (units)	MRDLG	MRDL	****	*****	Typical Source of Contaminant
Chlorine (ppm)	4	4	.4-.7	.68	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)	1.3	1.3	1.17	2 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	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 2012, illustrated month-by-month. The City of Plymouth pumped an average of 302 million gallons of water monthly. In the summer months, the monthly average jumps to 474 million gallons. This spike is largely due to lawn watering – and it puts significant stress on the aquifer.

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.

Outdoor Water Restrictions

To conserve water and address Department of Natural Resource 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.

2012 Gallons Pumped	
Month	Monthly Total
January-2012	175,190,000
February-2012	166,420,000
March-2012	177,165,000
April-2012	210,300,000
May-2012	299,535,000
June-2012	399,705,000
July-2012	518,860,000
August-2012	504,410,000
September-2012	517,920,000
October-2012	310,830,000
November-2012	170,490,000
December-2012	178,790,000

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 Manager 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.

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



2012 Water Usage in Plymouth

