2016 Water Quality Report

City of Winona Water Department

The City of Winona is issuing the results of monitoring done on its drinking water for the period from January 1 to December 31, 2015. The purpose of this report is to advance consumers' understanding of drinking water and heighten awareness of the need to protect precious water resources. Call Bob Dunn at the Winona Water Department at 507-457-8270 if you have questions about the City of Winona drinking water or would like information about opportunities for public participation in decisions that may affect the quality of the water.

The Water Department takes great pride in our efforts as we provide our community with a trustworthy supply of high-quality water. Although this report is federally mandated to be delivered along with water bills, we go above and beyond what is mandated to ensure that everyone who uses Winona's water has access to the good news about our water. If you have received this report as a landlord that pays the water bill and desire a number of these reports to distribute to your tenants, please contact us at 507-457-8272 and we will deliver additional copies of the report for your tenants.

Winona's Water Source

The City of Winona provides drinking water to its residents from a groundwater source: eight wells ranging from 489 to 1077 feet deep that draw water from the Mt. Simon and Eau Claire-Mt. Simon aquifers.

The water provided to customers meets drinking water standards, but the Minnesota Department of Health has also made a determination as to how vulnerable the source of water may be to future contamination incidents. If you wish to obtain the entire source water assessment regarding 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 www.health.state.mn.us/divs/eh/water/swp/swa.

City of Winona Water Treatment and Distribution

All of Winona's drinking water is filtered groundwater. Winona began using filtration with the construction of the Westfield Water Plant in the late 1950s. In 1969, the Johnson Street Plant began utilizing modern filters as well. Today, Winona's drinking water is treated and delivered with the help of three treatment plants with an elevated storage capacity of 5.4 million gallons, over 1,400 valves, 1,586 fire hydrants, and 118.5 miles of water mains!

If you would like to learn more about our history, or for a clickable link to this 2016 Water Quality Report, we encourage you to visit: http://www.cityofwinona.com/city-services/public-works/water-plant.

Winona's Water Supply and Lead Testing

Winona's water supply is protected by the efforts of the staff of the Winona Water Department. Through regular testing and appropriate state oversight, the safety of our drinking water is reliably secured for the residents of Winona.

Recent events in Flint, Michigan with reported high levels of lead in drinking water have caused nationwide attention to the condition of municipal drinking water supplies. Safeguards are in place to ensure that a similar event never occurs in Winona.

The responsibility for what occurred in Flint will be debated in legal and engineering discussions for some time. From reliable information sources, it appears that several events took place that allowed the high levels of lead in the drinking water to first occur and then to remain for too long of time. For economic and delayed construction reasons, the water source for Flint was temporarily changed from Lake Huron to the Flint River. This inland source of water caused greater challenges for treatment to make the water safe, but also resulted in water that was more corrosive. Water that is corrosive can allow lead that may be in service lines or soldered joints or old fixtures to absorb into the water that people drink.

If a water system in Minnesota changes its source of water, the plans are first reviewed by the Department of Health. Methods to prevent corrosion are evaluated as determined to be necessary for each situation. Often times, a pilot plan is required to be set up under actual conditions to test processes for water treatment to ensure the water is safe for the public. A new source of water in Minnesota also brings about changes in the frequency of monitoring for lead in the water supply. In addition to the regular testing of water supplies, the Department of Health has a statewide system of reporting abnormal lead levels in blood tests of all medical patients. The highest threat of lead in Minnesota comes from the nearly one million homes containing lead based paint.

Because of the stability of the Winona water supply and the long term testing results showing lead and copper to be far below levels requiring actions, the Winona system is required to be tested for lead at three year intervals. Samples are taken at 30 sites spread throughout the community. We will be doing lead testing in June of 2016.

Even with passing tests, residents are encouraged to not use warm water for a source of drinking water and to run water for 30 seconds to a minute before filling up a drinking container. This will remove water that may have been sitting in the house pipes overnight. Warm water is more corrosive than cold water.

City of Winona Utility News

In 2015, the U.S. Health and Human Services Department recommended a lower level of fluoride be added to the water at 0.7 parts per million, whereas the previous recommended range, issued in 1962, was 0.9 to 1.5 parts per million. The change was recommended because Americans now get more fluoride, which prevents tooth decay, in toothpaste and mouth rinses. We obtained a variance from the MDH to lower our level to the new standard in June of 2015 and have maintained that lower level since that time. We have a natural fluoride level in our water of 0.35 to 0.45 parts per million and add enough to our well water to maintain the recommended levels.

"Community water fluoridation is effective, inexpensive and does not depend on access or availability of professional services. It has been the basis for the primary prevention of tooth decay for nearly 70 years," stated U.S. Deputy Surgeon General Rear Admiral Boris D. Lushniak. Winona will follow any recommended level mandated by the Minnesota Department of Health in the future.

Winona is continuing its efforts to implement the City's Wellhead Protection Plan. This plan identifies goals and objectives for the City to undertake to protect the aquifers that supply the municipal drinking water wells. This Wellhead Protection Plan is currently in the process of being amended, with the draft plan due to be completed by the end of 2016. The public will have an opportunity to review and comment on the plan at a public hearing later in the year.

One way that property owners can help the City to protect the drinking water aquifers is to seal any unused wells that may exist on their property. Old wells can corrode and provide a pathway for contaminants near the ground surface to reach the deeper aquifers. Minnesota Well Code requires that any unused wells be sealed by a licensed well contractor, unless the owner obtains a maintenance permit. With the Wellhead Protection Plan in place, grant money is available to the City to assist property owners in sealing wells. If you suspect there is an old well on your property, contact Bob Dunn at the Water Department at 507-457-8270 for more information.

The Water Department and the Finance Department are asking Winona citizens to help us in our efforts to update our records. We try to maintain a current emergency contact phone number for each property. The trend of people using cell phones as their primary phone is making it more difficult as cell phone numbers are not listed whereas "land line" numbers would be. Please help us in our efforts by calling the Water Department at 457-8272 or the Finance Department at 457-8262 with a current contact phone number for your property.

Results of Monitoring:

As seen in the table below, no contaminants were detected at levels that violate 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 2015. 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.)

Contaminant (units)	MCLG	MCL	Level Found		Typical Source of Contaminant
			Range 2015	Average/ Result*	
Alpha Emitters (pCi/l)	0	15.4	nd-6.4	6.4	Erosion of natural deposits.
Barium (ppm) (05/06/2014)	2	2	N/A	.06	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Combined Radium (pCi/l)	0	5.4	3-9.7	9.7✓	Erosion of natural deposits.
Fluoride (ppm)	4	4	.53-1.4	1.4	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	nd-1.2	1.2	By-product of drinking water disinfection.
Nitrate (as Nitrogen) (ppm)	10.4	10.4	nd-.09	.09	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
TTHM (Total trihalomethanes) (ppb)	0	80	N/A	4.1	By-product of drinking water disinfection.
Total Coliform Bacteria	0 present	>1 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.
✓ Four quarterly samples are required to determine an average compliance value for this contaminant. At the end of 2015, less than four samples had been collected, therefore violation criteria could not be determined.

Contaminant (units)	MRDLG	MRDL	****	*****	Typical Source of Contaminant
Chlorine (ppm)	4	4	.4-.86	.53	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) (07/17/2013)	1.3	1.3	.11	0 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead (ppb) (07/17/2013)	0	15	2	0 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits.

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.
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 (does not apply).

Lead in Drinking 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 Winona 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 http://www.epa.gov/safewater/lead.

Water Monitoring Assures Safety

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 U.S. 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.

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.