

Village of Alsip

Water & Sewer Department
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2014 Annual Water Quality Report

For the period of January 1 to December 31, 2014

The Village of Alsip Water Department is pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. We are committed to providing you with this information because informed customers are our best allies. If you would like to learn more, please feel welcome to attend any of our regularly scheduled meetings, held on the first and third Monday of each month at 7:30 PM in the Village Hall. Mandated by the federal and state branches of the Environmental Protection Agency, routine testing has determined that our Lake Michigan drinking water, purchased from the City of Chicago, meets or exceeds all water quality standards set by the SDWA.

The Illinois EPA implemented a Source Water Assessment Program (SWAP) to assist with watershed protection of public drinking water supplies. The SWAP inventories potential sources of contamination and determines the susceptibility of the source water to contamination. The Illinois EPA has completed the SWAP for our supply. Further information on our community water supply's SWAP is available by calling the Village of Alsip Water Department at 708-385-6902. To view a summary version of the completed Source Water Assessment, including: Importance of Source Water; Susceptibility to Contamination Determination; and documentation/recommendation of Source Water Protection Efforts, you may access the Illinois EPA website at <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.

The Illinois EPA considers all surface water sources of community water supply to be susceptible to potential pollution problems. The very nature of surface water allows contaminants to migrate into the intake with no protection only dilution, for which the Illinois EPA has set mandatory treatment of all surface water supplies. Chicago's offshore intakes are located at a distance that shoreline impacts are not usually considered a factor on water quality. At certain times of the year, however, the potential for contamination exists due to wet-weather flows and river reversals. In addition, the placement of the crib structures may serve to attract waterfowl, gulls and terns that frequent the Great Lakes area, thereby concentrating fecal deposits at the intake and thus compromising the source water quality. Conversely, the shore intakes are highly susceptible to storm water runoff, marinas and shoreline point sources due to the influx of groundwater to the lake.

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 (EPA) Safe Drinking Water Hotline (800-426-4791).

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, that 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.

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

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/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 (800-426-4791).

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. Village of Alsip 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>.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested for, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires monitoring for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

Village of Alsip Water Quality Data Table

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfectant By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Chlorine (as Cl ₂) (ppm)	4	4	0.9	0.87	1	2014	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60	13	8.32	17.6	2014	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	24	14.01	28.2	2014	No	By-product of drinking water disinfection

Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Inorganic Contaminants							
Lead - action level at consumer taps (ppb)	0	15	0	2014	1	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper – action level at consumer taps (ppm)	1.3	1.3	0	2014	1	No	Corrosion of household plumbing systems; Erosion of natural deposits

Additional Monitoring

Unregulated Contaminants	Sample Date	Amount Detected	Range of Detections	Typical Source
Chlorate (ppb)	2014	26.4	ND – 33	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide.
Chromium (ppb)	2014	0.36	0.2 – 0.5	Naturally occurring element; used in making steel and other alloys; used for chrome plating, dyes, and pigments, leather tanning, and wood preservation
Chromium 6 (ppb)	2014	0.19	0.14 – 0.23	Naturally occurring element; used in making steel and other alloys; used for chrome plating, dyes, and pigments, leather tanning, and wood preservation.
Molybdenum (ppb)	2014	1.11	1.0 – 1.2	Naturally-occurring element found in ores and present in plants, animals, and bacteria; commonly used form molybdenum trioxide used as a chemical reagent.
Strontium (ppb)	2014	120.96	113.4 – 138.8	Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions.
Vanadium (ppb)	2014	0.26	ND – 0.3	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst.

Data Tabulated by Chicago Department of Water Management

Contaminant (unit of measure) Typical Source of Contaminant	MCLG	MCL	Highest Level Detected	Range of Detection	Violation
Turbidity Data					
Turbidity (NTU/Lowest Monthly % ≤ 0.3 NTU)	N/A	TT	100%	100%-100%	
Soil runoff	(limit 95 % ≤ 0.3 NTU)				
Turbidity (NTU/Highest Single Measurement)	N/A	TT	0.11	N/A	
Soil runoff	(Limit 1 NTU)				

Inorganic Contaminants					
Barium (ppm)	2	2	0.0227	0.0223 - 0.0227	No
Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits					
Nitrate (as Nitrogen) (ppm)	10	10	0.31	0.30 - 0.31	No
Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits					
Total Nitrate & Nitrite (as Nitrogen) (ppm)	10	10	0.31	0.30 - 0.31	No
Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits					
Total Organic Carbon					
TOC (Total Organic Carbon)					
The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all requirements set by IEPA.					
Unregulated Contaminants					
Sulfate (ppm)	N/A	N/A	35.5	20.9 - 35.5	
Erosion of naturally occurring deposits					
Sodium (ppm)	N/A	N/A	10	9.53 - 10.0	
Erosion of naturally occurring deposits; Used as water softener.					
State Regulated Contaminants					
Fluoride (ppm)	4	4	0.98	0.94 - 0.98	No
Water additive which promotes strong teeth					
Radioactive Contaminants					
Combined Radium (226/228) (pCi/L)	0	5	0.84	0.50 - 0.84	No
Decay of natural and man-made deposits.					
Gross Alpha excluding radon and uranium (pCi/L)	0	15	6.6	6.1 - 6.6	No
Decay of natural and man-made deposits.					
UCMR3 Compliance Reporting					
Chromium (ppb)	100	100	0.3	0.2 - 0.3	
Naturally occurring element; used in making steel and other alloys					
Molybdenum (ppb)	N/A	N/A	1.1	1.0 - 1.1	
Naturally occurring element found in ores and present in plants, animals and bacteria; commonly used to form molybdenum trioxide.					
Strontium (ppb)	N/A	N/A	120	110 - 120	
Naturally occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions.					
Vanadium (ppb)	N/A	N/A	0.3	ND - 0.3	
Naturally occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst.					
Chromium 6 (Hexavalent Chromium) (ppb)	N/A	N/A	0.22	0.18 - 0.22	
Naturally occurring element; used in making steel and other alloys; used for chrome plating, dyes, and pigments, leather tanning, and wood preservation.					
4-Androstene-3,17-Dione (ppb)	N/A	N/A	0.0008	0.0006 - 0.0008	
Steroidal hormone naturally produced in the human body; and used as an anabolic steroid and a dietary supplement.					
Testosterone (ppb)	N/A	N/A	0.0001	0.0001 - 0.0001	
Androgenic steroid naturally produced in the human body; and used in pharmaceuticals.					

City of Chicago 2014 Voluntary Monitoring	
Cryptosporidium, Giardia and E. coli	The City of Chicago has continued monitoring for Cryptosporidium, Giardia and E. coli in its source water as part of its water quality program. To date, Cryptosporidium has not been detected in these samples, but Giardia was detected in 2010 in one raw lake water sample collected in September 2010. Treatment processes have been optimized to provide effective barriers for removal of Cryptosporidium oocysts and Giardia cysts in the source water, effectively removing these organisms in the treatment process. By maintaining low turbidity through the removal of particles from the water, the possibility of Cryptosporidium and Giardia organisms getting into the drinking water system is greatly reduced.
Chromium - 6	In 2014, CDWM has also continued monitoring for hexavalent chromium, also known as chromium-6. USEPA has not yet established a standard for chromium-6, a contaminant of concern which has both natural and industrial sources. Please address any questions or concerns to CDWM's Water Quality Division at 312-742-7499. Data reports on the monitoring program for chromium-6 are posted on the City's website which can be accessed at the following web address: http://www.cityofchicago.org/city/en/depts/water/supp_info/water_quality_resultsandreports/city_of_chicago_emergincontaminantstudy.html

Water Quality Data Table Footnotes	
Turbidity	Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.
Unregulated Contaminants	Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose for monitoring these contaminants is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water, and whether future regulation is warranted. A maximum contaminant level (MCL) for this contaminant has not been established by either state or federal regulations, nor has mandatory health effects language.
Fluoride	Fluoride is added to the water supply to help promote strong teeth. The Illinois Department of Public Health recommends an optimal fluoride range of 0.9 mg/l to 1.2 mg/l.
Sodium	There is no state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials who have concerns about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician about the level of sodium in the water.
UCMR3	In compliance with the Unregulated Contaminant Monitoring Rule 3 (UCMR3) as required by the EPA, the City of Chicago has monitored for 28 contaminants suspected to be present in drinking water, but that do not have health-based standards set under the Safe Drinking Water Act. The monitoring results were reported to the EPA. The list of UCMR3 contaminants that we have monitored included volatile organic chemicals, metals, perfluorinated compounds, hormones, 1,4-dioxane and chlorate. The contaminants that were detected in this monitoring program are listed above.

Important Drinking Water Definitions	
Term	Definition
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.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	Maximum residual disinfection 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.
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.
MNR	Monitored Not Regulated
MPL	State Assigned Maximum Permissible Level

Unit Descriptions	
Term	Definition
ppm	parts per million, or milligrams per liter (mg/L)
ppb	parts per billion, or micrograms per liter (µg/L)
NA	not applicable
ND	Not detected at testing limits
NR	Monitoring not required, but recommended.
NTU	Nephelometric Turbidity Unit, used to measure cloudiness in drinking water
%<0.5 NTU	Percent samples less than 0.5 NTU
pCi/L	Picocuries per liter, used to measure radioactivity

2014 Violation Summary Table
We are pleased to announce that no monitoring, reporting, treatment technique, maximum residual disinfectant level, or maximum contaminant level violations were recorded during 2014.

For more information please contact:

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Water Conservation

Lawn Watering Restrictions

In an effort to conserve water for fire protection, health and environmental reasons, water conservation measures are in effect from May 15 through September 15.

During this time, lawn sprinkling and outdoor water usage is not permitted from 9 a.m. to 6 p.m. daily, including those homes and businesses with lawn irrigation systems. Please adjust your lawn irrigation schedule to reflect these restrictions.

Conserve Water and Have a Healthy Lawn

Watering your lawn frequently not only wastes water, but also promotes shallower root systems, weeds and crabgrass. Here are some tips for conserving water and having a healthy lawn:

- Water deeply, not frequently. Your lawn will be healthier if it receives about one inch of water every three to four days. Providing more will over-saturate the soil, causing water to run off.
- Make sure you are watering your lawn, not the street or sidewalk. Water that falls on pavement goes into our sewer systems, increases your water bill and wastes water.
- Use a rain gauge. Rain gauges will tell you how much rain has fallen and how much more water, if any, you should add by sprinkling the lawn.
- Sprinklers are available with dials that can be set to water specific amounts at specific times. You can purchase them at your local hardware store or garden center.
- If you have an automatic system, make sure it has a rain meter installed. This will prevent the system from running during rainstorms, which are critical times for our water system to recharge.
- Place a layer of mulch around trees and plants to retain water.
- If you are able, water your lawn in the early morning to avoid evaporation.
- You can limit the need for sprinkling by setting your mower to cut the grass higher, protecting the soil from excess evaporation.