

# 2015 Water Quality Report

## City of Cudahy Water Utility

### Dear Water Utility Customer:

The Water Quality Report for the test year of 2015 describes the City of Cudahy's drinking water source, drinking water quality and programs that are in place to protect the high quality of our water.

This report complies with Federal Regulations included in the 1996 Amendments to the Safe Drinking Water Act which require all utilities to provide this information annually. The Cudahy Water Utility believes that the information included in this report will provide a valuable service to all of its customers. This information is also routinely submitted to the Wisconsin Department of Natural Resources and to the United States Environmental Protection Agency. Both of these agencies monitor the Utility's compliance with all the many regulations that have been established to assure the community that the water is safe.

Sincerely,

Mayor John Hohenfeldt

Frank Miller, Water Utility Superintendent

### Water System Information

The Cudahy Water Utility was established in 1947. It has a 6.0 million-gallon per day conventional water treatment plant that uses Lake Michigan as a water source.

The treatment plant uses a coagulation, flocculation, sedimentation, filtration, UV disinfection and chlorine disinfection to provide clean safe water to the City of Cudahy. If you would like to know more about the information contained in this report or the treatment process, please contact Frank Miller at (414) 769-2234.

### Contact Information

Superintendent Frank Miller..... (414) 769-2234  
email..... [millerf@ci.cudahy.wi.us](mailto:millerf@ci.cudahy.wi.us)  
Treatment plant (water quality issues, emergencies )...(414) 769-2235  
Billing questions.....(414)769-2237

### Utility Governance

The Water Utility budget, capital planning and rates are overseen and approved by the Water Utility Water Commission. The Commission is made up of five members appointed to five year terms by the Mayor. Commission meetings are normally held the 3rd Thursday of each month at Cudahy City Hall 5050 S. Lake Dr. Check <http://www.cudahy-wi.gov/index.php> for schedule updates and agendas.

## Health Information

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 (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 systems 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 Environmental Protection Agency's safe drinking water hotline (800-426-4791).

## Source(s) of Water

Source ID	Source	Depth (in feet)	Waterbody Name	Status
1	Surface Water		Lake Michigan	Active
2	Surface Water		Lake Michigan	Active

To obtain a summary of the source water assessment please contact, Frank Miller at (414) 769-2234.

## Educational Information

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 by-products 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.

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. FDA regulations establish limits for contaminants in bottled water, which shall provide the same protection for public health.

## Definitions

Term	Definition
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
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.
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.
MFL	million fibers per liter
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.
MRDLG	Maximum residual disinfectant 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.
mrem/year	millirems per year (a measure of radiation absorbed by the body)
NTU	Nephelometric Turbidity Units
pCi/l	picocuries per liter (a measure of radioactivity)
ppm	parts per million, or milligrams per liter (mg/l)
ppb	parts per billion, or micrograms per liter (ug/l)
ppt	parts per trillion, or nanograms per liter
ppq	parts per quadrillion, or picograms per liter
TCR	Total Coliform Rule
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

## Detected Contaminants

Your water was tested for many contaminants last year. We are allowed to monitor for some contaminants less frequently than once a year. The following tables list only those contaminants which were detected in your water. If a contaminant was detected last year, it will appear in the following tables without a sample date. If the contaminant was not monitored last year, but was detected within the last 5 years, it will appear in the tables below along with the sample date.

### Microbiological Contaminants

Contaminant	MCL	MCLG	Count of Positives	Violation	Typical Source of Contaminant
Coliform (TCR)	presence of coliform bacteria in $\geq 5\%$ of monthly samples	0	1	No	Naturally present in the environment

### Disinfection Byproducts

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2015)	Violation	Typical Source of Contaminant
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Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2015)	Violation	Typical Source of Contaminant
HAA5 (ppb)	D10	60	60	7	5 - 9		No	By-product of drinking water chlorination
TTHM (ppb)	D10	80	0	20.6	10.7 - 33.2		No	By-product of drinking water chlorination
HAA5 (ppb)	D20	60	60	9	4 - 8		No	By-product of drinking water chlorination
TTHM (ppb)	D20	80	0	21.3	14.3 - 20.0		No	By-product of drinking water chlorination

### Inorganic Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2015)	Violation	Typical Source of Contaminant
ANTIMONY TOTAL (ppb)		6	6	0.2	0.2		No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
ARSENIC (ppb)		10	n/a	1	1		No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
BARIUM (ppm)		2	2	0.020	0.020		No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE (ppm)		4	4	0.7	0.7		No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NICKEL (ppb)		100		0.7200	0.7200		No	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products.
NITRATE (N03-N) (ppm)		10	10	0.35	0.35		No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SODIUM (ppm)		n/a	n/a	7.50	7.50		No	n/a

Contaminant (units)	Action Level	MCLG	90th Percentile Level Found	# of Results	Sample Date (if prior to 2015)	Violation	Typical Source of Contaminant
COPPER (ppm)	AL=1.3	1.3	0.1400	0 of 30 results were above the action level.	9/19/2014	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD (ppb)	AL=15	0	12.00	0 of 30 results were above the action level.	6/11/2014	No	Corrosion of household plumbing systems; Erosion of natural deposits

### Radioactive Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2015)	Violation	Typical Source of Contaminant
RADIUM, (226 + 228) (pCi/l)		5	0	1.5	1.5	5/27/2014	No	Erosion of natural deposits

### Unregulated Contaminants

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. EPA required us to participate in this monitoring.

Contaminant (units)	Site	Average Level Found	Range	Sample Date (if prior to 2015)
Vanadium (ppb)	Filter Plant	0.275	.222 - .339	2013
Strontium (ppb)	Filter Plant	134.4	128.3-142.6	2013
Molybdenum (ppb)	Filter Plant	1.067	1.003-1.133	2013
Chromium-6 (ppb)	Filter Plant	0.193	.187-.198	2013
Chromium total (ppb)	Filter Plant	0.246	.2235-.28	2013
Vanadium (ppb)	Distribution System	0.288	.236-.365	2013
Strontium (ppb)	Distribution System	133.8	125.9-141.9	2013
Molybdenum (ppb)	Distribution System	1.054	1.028-1.073	2013
Chromium-6 (ppb)	Distribution System	0.2055	.203-.211	2013
Chromium total (ppb)	Distribution System	0.248	.213-.293	2013
SULFATE (ppm)	Distribution System	24	24	

## Volatile Organic Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2015)	Violation	Typical Source of Contaminant
P-DICHLOROBENZENE (ppb)		75	75	0.2	0.2		No	Discharge from industrial chemical factories

## Cryptosporidium

Cryptosporidium (crypto) is a microscopic protozoan that when ingested can cause diarrhea, fever and other gastrointestinal symptoms. Studies have shown that crypto is naturally present in surface waters throughout the world. Surface water supplies are especially vulnerable if they receive runoff or pollution from human or animal waste. The Cudahy Water Utility has been testing Lake Michigan Water since 1994 using current test methods. In 2015 the monthly samples detected in evidence of crypto in the Lake Michigan water the supplies the treatment plant.

## Other Compliance

### Turbidity Monitoring

In accordance with s. NR 810.29, Wisconsin Administrative Code, the treated surface water is monitored for turbidity to confirm that the filtered water is less than 0.1 NTU/0.3NTU. Turbidity is a measure of the cloudiness of water. We monitor for it because it is a good indicator of the effectiveness of our filtration system. During the year, the highest single entry point turbidity measurement was .156 NTU. The lowest monthly percentage of samples meeting the turbidity limits was 100 percent.

### Lead Awareness and Drinking Water Safety

Lead is not found in Cudahy's source water or public water system. However, lead can enter water as the result of the wearing away of materials containing lead in building fixtures, internal plumbing, or in the service line that brings water to your home. When water stands for several hours or more in fixtures or pipes that contain lead, the lead may leach into the water. It is also possible that physical disturbance of the piping may release lead into the water.

Since 1994, the Cudahy Water Utility has safely treated its water with ortho-phosphate to reduce the risk of lead leaching from plumbing materials into water. This compound forms a protective coating inside pipes and is considered to be the best practice for the control of lead in drinking water. However, some homes are more at risk for lead in drinking water due to characteristics of the plumbing at the individual residence.

For more information on Lead please go to [http://www.cudahy-wi.gov/departments/water\\_utility/index.php](http://www.cudahy-wi.gov/departments/water_utility/index.php)