Annual Water Quality Report
January 1, 2019 to December 31, 2019

WHAT IS THE WATER QUALITY REPORT?

The Annual Water Quality Report, also known as the Consumer Confidence Report, is an annual report required by the Safe Drinking Water Act (SDWA). This report is intended to provide citizens with important information about the Village's drinking water and the efforts made by the water system to provide safe drinking water. The report provides facts, violations (if applicable) and contaminants identified in the water drinking supply during the calendar year of January 1, 2019 through December 31, 2019.

The Village of Wheeling is committed to providing all consumers with safe and reliable drinking water. For more information regarding this report, please contact Jeff Wolfgram, Utility Superintendent, at (847) 279-6928 or by email at jwolfgram@wheelingil.gov.

Este informe contiene informacion muy importante sobre el agua que usted bebe. Traduzcalo o hable con alguien que lo entienda bien.

SOURCE WATER INFORMATION

The source of drinking water used by the Village of Wheeling is Purchased Surface Water. The Village of Wheeling receives water from Lake Michigan through the Northwest Water Commission (NWWC), which in turn receives water from the City of Evanston that utilizes three water cribs, or intakes, located over a mile offshore in Lake Michigan. The City of Evanston pumps and treats the lake water at their treatment plant. The plant provides the following treatment processes: coagulation/flocculation, sedimentation, filtration, and disinfection. The water is then transported to the NWWC through a 60-inch transmission main to a 25-million-gallon reservoir at the NWWC main pumping station. From there, water is pumped into the Village of Wheeling's three receiving stations.

SOURCE OF DRINKING WATER

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 can come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife;
- Inorganic contaminants, such as salts and metals, which may be naturally occurring or result from urban storm water run-off, 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 run-off 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 run-off and septic systems;
- Radioactive contaminants which can be naturally occurring or be the result of oil and gas production and mining activities.

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

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protections 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/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. We 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.

SOURCE WATER ASSESSMENTS

The Village of Wheeling wants customers to be informed about their water quality. The public is welcome to attend Village Board meetings where decisions that affect drinking water quality are made. The Village Board meets every first and third Monday of the month at 6:30 PM at Village Hall, 2 Community Boulevard, Wheeling, IL 60090. The source water assessment for the Village's supply has been completed by the Illinois Environmental Protection Agency (IEPA). If you would like a copy of this information, please contact the Utility Superintendent at (847) 279-6928. To view a summary version of the completed Source Water Assessments, including Importance of Source Water; Susceptibility to Contamination Determination; and documentation/recommendation of Source Water Protection Efforts, please access the IEPA 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 intakes with no protection only dilution, which is the reason for mandatory treatment for all surface water supplies in Illinois. All three of Evanston's intakes are located far enough offshore that shoreline impacts are not considered a factor on water quality. However, at certain times of the year the potential for contamination exists due to the proximity of the North Shore Channel and wet-weather flows. In addition, the proximity to a major shipping lane adds to the susceptibility of these three intakes.

DEFINITIONS & ABBREVIATIONS:

- *Action Level Goal (ALG)*: The level of a contaminant in drinking water which there is no known or expected risk to health. ALGs allow for a margin of safety.
- *Action Level (AL)*: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- *Avg*: Regulatory compliance with some MCLs are based on running annual average of monthly samples.
- *Level 1 Assessment*: Study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
- *Level 2 Assessment*: A very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
- *Maximum Contaminant Level (MCL)*: 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.
- *Maximum Contaminant Level Goal (MCLG)*: 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.
- *Maximum Residual Disinfectant Level (MRDL)*: 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.
- *Maximum Residual Disinfectant Level Goal (MRDLG):* The level of a drinking water 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).
- *na*: Not applicable.
- *NTU*: nephelometric turbidity units.
- *pCi/L*: picocuries per liter (a measure of radioactivity)
- *ppb*: Micrograms per liter or parts per billion – or one ounce in 7,350,000 gallons of water.
- *ppm*: Milligrams per liter or parts per million – or one ounce in 7,350 gallons of water.
- *Treatment Technique* (TT): A required process intended to reduce the level of a contaminant in drinking water.

2019 Evanston Water Quality Data

INORGANIC CONTAMINANTS	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2019	0.02	0.02 - 0.02	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2019	0.7	0.7 - 0.8	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen)	2019	0.3	0.3 - 0.3	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Sodium*	2019	8	8.2 - 8.2			ppm	N	Erosion from naturally occurring deposits; Used in water softener regeneration.

*There is no a state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician about this level of sodium in the water.

RADIOACTIVE CONTAMINANTS	Collection Date**	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/228	01/16/2014	0.99	0.99 – 0.99	0	5	pCi/L	N	Erosion of natural deposits.
Gross Alpha excluding Radon and Uranium	01/16/2014	0.16	0.16 – 0.16	0	15	pCi/L	N	Erosion of natural deposits.

**The state requires monitoring of certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though accurate, is more than one years old.

TURBIDITY***	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest Single Measurement	1 NTU	0.15 NTU	N	Soil runoff.
Lowest Monthly % Meeting Limit	0.3 NTU	100%	N	Soil runoff.

****Turbidity is a measurement of the cloudiness of the water caused by suspended particles. It is monitored because it is a good indicator of water quality and the effectiveness of the filtration system and disinfectants.

TOTAL ORGANIC CARBON

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.

2019 Wheeling Water Quality Data

	Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total # of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
COLIFORM BACTERIA	0	5% of monthly samples are positive	4.7	Fecal Coliform or E. Coli MCL: A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive.	1	N	Naturally present in the environment.

LEAD AND COPPER	Date Sampled****	MCLG	AL	90th Percentile	No. of Sites	Units	Violation	Likely Source of Contamination
Copper	2017	0	1.3	0	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2017	0	15	2.18	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

****The state requires monitoring of certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though accurate, is more than one years old.

DISINFECTANTS AND DISINFECTION BY-PRODUCTS	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	2019	1.0	1 - 1	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2019	22	17.2 – 23.3	No goal for the total	60	ppb	N	By-product of drinking water chlorination.

Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

Total Trihalomethanes (TTHM)	2019	38	23.4 - 57.6	No goal for the total	80	ppb	N	By-product of drinking water chlorination.

Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

INORGANIC CONTAMINANTS	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2018	0.0405	0.036-0.0405	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2018	1.11	1.04 – 1.11	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Iron*	2018	0.296	0.243-0.296		1.0	ppm	N	*This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.
Sodium	2018	27.7	23.9 – 27.7			ppm	N	Erosion from naturally occurring deposits; Used in water softener regeneration.

There is no a state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician about this level of sodium in the water.

RADIOACTIVE CONTAMINANTS	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/228	2019	13.03	10.36 – 13.03	0	5	pCi/L	N	Erosion of natural deposits.
Gross Alpha excluding Radon and Uranium	2019	24.8	19.9 – 24.8	0	15	pCi/L	N	Erosion of natural deposits.

Violation Table

REVISED TOTAL COLIFORM RULE (RTCR)			
The Revised Total Coliform Rile (RTCR) seeks to prevent waterborne diseases caused by E. Coli. E. Coli are bacteria whose presence indicates that the water may contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches.			
Violation Type	**Violation Begin**	**Violation End**	**Violation Explanation**
MCL, E. Coli, POS E. Coli (RTCR)	06/01/2019	06/30/2019	E. Coli bacteria were found in our drinking water during the period indicated in violation of a standard. We had an E. coli positive routine or repeat or we failed to test for E. coli when any repeat sample test positive for total coliform.

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, elderly, and people with severely compromised immune systems.

The Village detected E. coli bacteria in a 2019 routine water sample, indicating the need to look for potential problems in water treatment and distribution. When this occurred, the Village was required to conduct an assessment to identify problems and correct them during these assessments. At that time, the Village completed a Level 2 Assessment because E. coli was confirmed in the water system. Additionally, the Village was required to perform two (2) corrective actions that were both completed and approved by the IEPA.

The Illinois EPA acknowledged the receipt of the Village's response and explanation of events. Upon notification of positive samples in the distribution system, the Village initiated an investigation. Chlorine dosage was increased and the water main in the area was flushed. Subsequently, it was discovered that the sample was collected from a property not occupied for two (2) months. The investigation further concluded that the positive samples were a result of a domestic plumbing issue and not indicative of the water quality within the Village's system.

WATERING RESTRICTIONS

For conservation efforts, the Village of Wheeling implements an even-odd address watering system in effect from May 15 to September 15.

- Properties with street addresses that end with an even number (0, 2, 4, 6, and 8) can only water on even-numbered calendar days.
- Properties with street addresses that end with an odd number (1, 3, 5, 7, and 9) can only water on odd-numbered calendar days.
- Watering is prohibited for all properties from 12:00 p.m. to 6:00 p.m. every day.

***Please note*:** The watering of newly laid sod or seed is permitted at any time and on any day *upon* issuance of an appropriate permit and for a time not to exceed two (2) consecutive weeks.

Residents may contact the Department of Community Development with water restriction questions at 847-459-2620.