

VILLAGE OF OSWEGO 2022 CCR

2021 Calendar Year Annual Water-Quality Report Revised (Missing Disinfection Byproducts)

The Oswego Water Division is pleased to report that your drinking water meets or exceeds all water quality standards and there were no violations issued in 2021. The Illinois Environmental Protection Agency Regional office out of Elgin conducted our three-year engineering evaluation in 2018, and our water system received an exceptional rating. The Oswego community water supply was also commended on the exemplary facility maintenance and updating, and the professionalism and courtesy of its employees.

Your tap water was tested according to USEPA and state drinking water health standards. Our system vigilantly safeguards its groundwater supply, and we are working hard to continue providing the best water possible. This report summarizes the quality of water that we provided last year and informs you of initiatives currently underway to address issues. Included are 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 have any questions about this report or concerning your water system, please contact Timothy Zasada, Assistant Public Works Director - Utilities at 630-554-3242. We want our valued customers to be informed about their water quality. If you would like to learn more, please feel welcome to attend any of our regularly scheduled board meetings the first and third Tuesday of each month at 7:00 p.m. in the Village Hall, 100 Parkers Mill.

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 USEPA's Safe Drinking Water Hotline (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. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Oswego's current drinking water source is groundwater, delivered by eight wells. All wells are considered deep wells and draw water from a sandstone aquifer. While these aquifers provide a high-quality water, they often contain elevated concentrations of naturally occurring Radium-226 and Radium-228. The Village of Oswego utilizes a filtration process for radium removal. The radium level at each well is below the Environmental Protection Agency's (EPA) maximum allowable level of 5 picocuries per liter (pCi/L). Fluoride levels from the deep sandstone aquifer meet EPA and Illinois Department of Public Health standards for drinking water and no additional fluoride is added at any of the well sites. Oswego's Well No. 3 is located on Madison Street by the village center's 500,000-gallon water tower. This well produces 577-gallon per minute. Well No. 4 is located on Chicago Road and produces 589-gallon per minute. Well No. 6 is in the Fox Chase subdivision next to the 300,000-gallon water tower. This well produces 949-gallon per minute. Well No. 7 is in the Ogden Falls subdivision next to the 1.5 million gallon water tower. This well produces 984 gallons per minute. Well No. 8 is located on Grove Road ¼ mile south of Plainfield Road. This well produces 893 gallons per minute. Well #9 is located at 700 Yoakum Boulevard and produces 1,069 gallons per minute. Well No. 10 is located at 700 Cole Avenue and on site is a 1.5 million gallon water tower. This well produces 1133 gallons per minute. Well No. 11 is located at 6701 Tuscany Trail off of Orchard Road and on site is a 1.5 million gallon water tower. This well produces 1158 gallon per minute. All well water is treated to remove high levels of Radium, chlorinated to kill any microbial contaminants that may be present, and treated with polyphosphate for corrosion control and mineral sequestration prior to being delivered into the distribution system.

Due to favorable monitoring history, aquifer characteristics, and inventory of potential sources of contamination, IEPA reissued a vulnerability waiver renewal for the sampling period of January 1, 2020 to December 31, 2022. The special exception permit extends sampling requirements to once every nine years for SOC's and Cyanide and once every six years for VOC's for Wells No. 3, 4, 6, 7, 8, 9 & 10. Well No. 11 has not received waivers from IEPA at this time.

In addition to the informational section of the Water Quality Report, we have included for your review a table. This table will give you a better picture of the contaminants that were detected in your 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 can dissolve naturally occurring minerals and radioactive materials, and pick up substances resulting from the presence of animals or human activity. Possible contaminants consist of:

- *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.*

In order to ensure that tap water is safe to drink, USEPA 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 must provide the same protection for public health.

The source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please stop by Village Hall or call our water operator at 630-554-3242. 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, you may access the Illinois EPA website at <http://dataservices.epa.illinois.gov/swap/factsheet.aspx>

Based on information obtained in a Well Site Survey, published in 1989 by the Illinois EPA, six potential sources or possible problem sites were identified within the survey area of Oswego’s wells. Furthermore, information provided by the Leaking Underground Storage Tank Section of the Illinois EPA indicated several additional sites with ongoing remediations which may be of concern. The Illinois EPA has determined that the Oswego Community Water Supply’s source water is not susceptible to contamination. This determination is based on several criteria including monitoring conducted at the wells; monitoring conducted at the entry point to the distribution system; and the available hydrogeologic data on the wells. Furthermore, in anticipation of the U.S. EPA’s proposed Ground Water Rule, the Illinois EPA has determined that the Oswego Community Water Supply is not vulnerable to viral contamination. This determination is based upon the completed evaluation of the following criteria during the Vulnerability Waiver Process: the community’s wells are properly constructed with sound integrity and proper site conditions; a hydrogeologic barrier exists which prevents pathogen movement; all potential routes and sanitary defects have been mitigated such that the source water is adequately protected; monitoring data did not indicate a history of disease outbreak; and the sanitary survey of the water supply did not indicate a viral contamination threat. Because the community’s wells are constructed in a confined aquifer, which should prevent the movement of pathogens into the wells, well hydraulics were not considered to be a significant factor in the susceptibility determination. Hence, well hydraulics were not evaluated for this groundwater supply. A new source water assessment must be complete by July 2023. The Village is currently working on the new source water assessment report.

2021 Regulated Contaminants Detected

The next several tables summarize contaminants detected in your drinking water supply.

Here are a few definitions and scientific terms which will help you understand the information in the contaminant detection tables.

AL	Action Level: 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 is based on running annual average of monthly samples.
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the Maximum Contaminant Level Goal 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.
MRDL	Maximum Residual Disinfectant Level: The highest level of disinfectant allowed in drinking water.
MRDLG	Maximum Residual Disinfectant Level Goal: The level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLGs allow for a margin of safety.
N/A	Not Applicable
NTU	Nephelometric Turbidity Units
pCi/L	picocuries per liter (a measure of radioactivity)
ppb	Parts per billion or micrograms per liter (ug/L) - or one ounce in 7,350,000 gallons of water.
ppm	Parts per million or milligrams per liter (mg/L) - or one ounce in 7,350 gallons of water.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

Coliform Bacteria	MCLG	Total Coliform MCL	Highest Number of Positive Samples	Fecal Coliform or <i>E. coli</i> MCL	Total No. of Positive <i>E. coli</i> or Fecal Coliform Samples	Violation	Likely Source of Contamination
	0	MCL: presence of coliform bacteria in > 5% of monthly samples (for systems that collect 40 or more samples/month). A total of 2.3 positive samples allowed per month.	2.3	Fecal Coliform or <i>E. coli</i> MCL: A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive	0	N	Naturally present in the environment. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

Lead and Copper		Date Sampled	MCLG	Action Level (AL)	90 th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	8/7/2020	1.3	1.3	0.923	0	ppm	N	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor. Samples are taken every 3 years.	
Lead	8/7/2020	0	15	2.04	0	ppb	N	Corrosion of household plumbing systems; erosion of natural deposits. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Samples are taken every 3 years.	

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. The Village of Oswego 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>.

Some contaminants are sampled less frequently than once a year; as a result, not all contaminants were sampled for during the CCR calendar year. 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.

Disinfectants & Disinfection Byproducts	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloramines / Chlorine	12/31/2021	2.0	1.7-2.0	4	4	ppm	N	Water additive used to control microbes. Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia. Testing for Chloramines is done daily.
Total Haloacetic Acids HAA5	1/12/2021	6	5.76-5.83	No goal for the total	60	ppb	N	Byproduct of drinking water disinfection, some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Total Trihalomethanes (TTHM)	1-12-2021	7	0-7.27	No goal for the total	80	ppb	N	By-product of drinking water disinfection. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased
Inorganic Contaminants								
Barium	2021	0.0374	0.0118 - 0.0374	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure. This contaminant is tested every 3 years.
Chromium	2021	5.4	0-5.4	100	100	ppb	N	Discharge from steel and pulp mills; Erosion of natural deposits.
Fluoride	2021	1.1	0.86-1.1	4	4	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums. This contaminant is tested every 3 years.
Iron	2021	0.341	0.174-0.341		1	ppm	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits. Excessive iron in water may cause staining of laundry & plumbing fixtures & may accumulate as deposits in the distribution system. This contaminant is tested every 3 years.
Manganese	2021	15.1	0-15.1	150	150	ppb	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits. Excessive manganese in the water may cause staining of plumbing fixtures and laundry. It may also produce an unpleasant taste in beverages, including coffee & tea. *

Nitrite (measured as Nitrogen)	2018	0.067	0 – 0.067	1	1	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits. Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome. This contaminant is tested yearly.
Sodium	2021	47.6	18.7-47.6		N/A (There is no state or federal MCL for sodium)	ppm	N	Erosion from naturally occurring deposits; Used in water softener regeneration. 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. This contaminant is tested every 3 years.
Volatile Organic Contaminants								
Xylenes	2015	0.00202	0 – 0.00202	10	10	ppm	N	Discharge from petroleum factories; Discharge from chemical factories The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, is more than one year old. Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system. This contaminant is tested every 6 years.
Radiological Contaminants								
Combined Radium 226/228	2021	4	0.0-3.7	0	5	pCi/L	N	Erosion of natural deposits. Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Gross alpha excluding radon and uranium	2021	11	1.31-11.04	0	15	pCi/L	N	Erosion of natural deposits. This contaminant is tested yearly.

Unregulated Contaminants: The USEPA required water systems to monitor for new unregulated contaminants in 2018 and a second set of samples were analyzed in 2019. Water systems are required to publish the analytical results of all detections of contaminants. The Village only had three contaminants detected and are in the following table. If you would like to view the entire report for the 2018/2019 data, please contact Public Works at 630-544-3242

Unregulated Contaminants UCMR4	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Bromide	5/14/2019	0.120	0.020-0.120	N/A	N/A	ppm	N	Bromide is commonly found in nature. Mandatory health effects language has not been established. *
Germanium	5/14/2019	0.00040	0.000323 – 0.00040	N/A	N/A	ppm	N	Naturally occurring element; commercially available in combination with other elements and minerals; a byproduct of zinc ore processing; used in infrared optics, fiber-optic systems, electronics and solar applications. Mandatory health effects language has not been established,

								Possible health concerns; Kidney or liver function, anemia, muscle weakness, harm to the peripheral nervous system. *
Manganese	5/14/2019	0.0140	0.0030 - 0.0140	N/A	N/A	ppm	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits. Excessive manganese in the water may cause staining of plumbing fixtures and laundry. It may also produce an unpleasant taste in beverages, including coffee & tea. *

* Unregulated Contaminants – A maximum contaminant level (MCL) for these contaminants has not been established by either state or federal regulations, nor has mandatory health effects language been set. The purpose for monitoring these contaminants is to assist USEPA (United States Environmental Protection Agency) in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

In 2020, our water system was sampled as part of the State of Illinois PFAS statewide investigation. Eighteen PFAS compounds were sampled, and none were detected in our finished drinking water. For more information about PFAS health advisories go to; <https://www2.illinois.gov/epa/topics/water-quality/pfas/Pages/pfas-healthadvisory.aspx>

Water Hardness: *Oswego wells have high a concentration of hardness minerals. For the settings on water softeners the wells have total GRAINS of 15 or 256 Mg/L.*

Total Dissolved Solids: *Oswego wells have a range of 266 – 299 Mg/L.*

Total Alkalinity: *Oswego wells have a range of 278 – 448 Mg/L.*

Low Water Pressure: *If you have a water softener and you notice that your water pressure has been declining over time, try putting your water softener into bypass and see if your pressure returns to normal.*

Violation Summary Table

No Violations were issued in 2021.