

Geneseo Annual Drinking Water Quality Report

**GENESEO
IL0730500**

Annual Water Quality Report for the period of
January 1 to December 31, 2017.

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

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2017 City Council

Mayor Kathy Carroll-Duda

Ald. Simosky Ald. Wachtel
Ald. Roodhouse Ald. Garlick
Ald. Rothschild Ald. Johnson
Ald. Robinson Ald. Anderson

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.

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 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.

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>.

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 EPA's 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 protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population.

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 meetings. 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 City Hall or call our water operator at 944-2605. 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://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.

To determine Geneseo's susceptibility to groundwater contamination, a Well Site Survey, published in 1992, and a Hazard Review Report were reviewed. During the surveys of Geneseo's source water protection area, Illinois EPA staff recorded potential sources, routes, or possible problem sites within the 400 foot minimum setback zones, the 1,000 foot maximum setback zones, and the recharge areas of the wells. Within the minimum setback zones around wells #25, #26, and #27, no sources were recorded. Within the minimum setback zones around wells #12 and #15 there is one site, which is improperly abandoned wells. Within the maximum setback zones, two sites are located in the zones around wells #12 and #15 and one site is located in the zone around well #27. Two additional sites lie within the well field and within 5,200 feet of the wells. The Illinois EPA considers the source water of this facility to be susceptible to contamination. This determination is based on a number of criteria including: monitoring conducted at the wells, monitoring conducted at the entry point to the distribution system, the available hydrogeologic data on the wells, and the land-use activities within the recharge area of the community's wells.

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	1 positive monthly sample	1		0	N	Naturally present in the environment

Lead and Copper

Definitions:
Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.
Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2017	1.3	1.3	1.4	4	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
Lead	2017	0	15	15	3	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits

Water Quality Test Results

Definitions: The following table contains scientific terms and measures, some of which may require explanation.
Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.
Level 1 Assessment: A Level 1 assessment is a 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 Level 2 assessment is 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 or 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 or 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 or 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 or MRDLG: 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.
na: Not applicable.
mrem: Millirems per year (a measure of radiation absorbed by the body)
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 or TT: A required process intended to reduce the level of a contaminant in drinking water

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	12/31/2017	1	0.7 - 1.1	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes
Haloacetic Acids (HAA5) Total	2017	11	9.04 - 10.77	No goal for the total	60	ppb	N	By-product of drinking water disinfection
Trihalomethanes (TTHM)	2017	49	28.7 - 49.4	No goal for the total	80	ppb	N	By-product of drinking water disinfection
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	2017	4.3	4.3 - 4.3	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	2017	0.24	0.24 - 0.24	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Iron	2017	4.4	4.4 - 4.4		1.0	ppm	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.
Manganese	2017	270	270 - 270	150	150	ppb	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.
Nitrate (Measured as Nitrogen)	2017	1	0.05 - 0.61	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Sodium	2017	21	21 - 21			ppm	N	Erosion from naturally occurring deposits. Used in water softener regeneration.
Zinc	2017	0.016	0.016 - 0.016	5	5	ppm	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Naturally occurring; discharge from metal.
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/228	2017	0.86	0.86 - 0.86	0	5	pCi/L	N	Erosion of natural deposits
Gross Alpha Excluding Radon and Uranium	07/01/2014	1.78	1.78 - 1.78	0	15	pCi/L	N	Erosion of natural deposits

Violations Table

Violation Type	Violation Begin	Violation End	Violation Explanation
Lead and Copper Rule			The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.
Lead Consumer Notice (LCR)	12/30/2017	01/12/2018	A completed Lead Consumer Information Notice Certification Form was not received in allotted time by the Illinois Environmental Protection Agency for the June-September Monitoring Period resulting in a violation. Completed form was submitted immediately and violation was returned to compliance.
Water Quality Parameters M/R (LCR)	7/01/2017	12/31/2017	A completed Water Quality Parameter Form was received by the Illinois Environmental Protection Agency beyond the 10th day from the end of monitoring period resulting in a violation. Form was submitted immediately and violation was placed back in to compliance.