

*Annual Drinking Water Quality Report for 2018*  
*Genoa King-Ferry Water District*  
*Genoa N.Y. 13071*  
*PWS # 0501731*

## **Introduction**

To comply with State regulations, **The Genoa-King Ferry Water District**, will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources.

**Last year, your tap water met all State drinking water health standards. We are proud to report that our system has never violated a maximum contaminant level or any other water quality standards.** This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact **Robert Hunt at (315)497-6081 OR Cayuga County Health Department at (253-1405)**. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled Town board meetings. The meetings are held the second Wednesday of each month at 7:00 pm in the New Town Hall 1000 Bartnick Road.

## **Where does our water come from?**

In general, 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 activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water system serves **approx. 900 people through 290 service connections**. The water system consists of 4-drilled wells located on town property located at the Maple St. Ext. site at a depth of 31' each. From the wells the water goes to a 75,000-gallon reservoir where it is disinfected with sodium hypochlorite as it is transferred into the system with 2 storage tanks that hold 370,000 gallons.

The NYS DOH has completed a source water assessment for this system, based on available information. Possible and actual threats to this drinking water source were evaluated. The state source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the wells. The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is, or will become contaminated. See section "Are there contaminants in our drinking water?" for a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

As mentioned before, our water is derived from 4 drilled wells. The source water assessment has rated these wells as having a high susceptibility to microbial contaminants. These ratings are due primarily to the close proximity of a low intensity residential development in relation to the wells. In addition, all four wells draw from unconfined aquifers. Three of the four wells draw from an aquifer of unknown hydraulic conductivity, while the fourth draws from an aquifer with high hydraulic conductivity. Please note that, while the source water assessment rates our well as being susceptible to microbial, our water is disinfected to ensure that that the finished water delivered into your home meets the New York State drinking water standards for microbial contamination.

County and state health departments will use this information to direct future source water protection activities. These may include water quality monitoring, resource management, planning, and education programs. A copy of the assessment is available for review by calling the Cayuga County Health Department at 253-1405.

### Are there contaminants in our drinking water?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: **total coliform, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds.** The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably 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 (800-426-4791) or the **(Cayuga County) Health Department at (253-1405).**

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the definitions on the following page:

### TEST RESULTS

| Contaminant                   | Date                | Violation Y/N | Level Detected              | Unit Measurement | MCLG | MCL    | Likely Source of Contamination  |
|-------------------------------|---------------------|---------------|-----------------------------|------------------|------|--------|---|
| Barium                        | 9-18                | No            | 70                          | ug/L             | 2000 | 2000   | Discharge or drilling waste; discharge from metal factories; erosion of natural deposits.   |
| Copper <sup>1</sup>           | July-September 2018 | No            | Range 0.065-0.27<br>AL=0.19 | mg/L             | 1.3  | AL=1.3 | Corrosion of household plumbing systems; erosion of natural deposits; Leaching from wood preservatives.   |
| Lead <sup>2</sup>             | July-September 2018 | No            | Range <1-3.2<br>AL=2.0      | ug/L             | 0    | AL=15  | Corrosion of household plumbing systems; erosion of natural deposits.   |
| Nitrate                       | September 2018      | No            | 0.26                        | mg/L             | 10   | 10     | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.  |
| Total Trihalomethanes (TTHMs) | 8-17                | No            | 14                          | ug/L             | 0    | 80     | Byproduct of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter. |

Genoa-King Ferry USGS Sample Results

| Contaminant         | Violation Yes/No | Date of Sample | Level Detected | Unit Measurement | MCLG | Regulatory Limit (MCL) | Likely Source of Contamination  |
|---------------------|------------------|----------------|----------------|------------------|------|------------------------|---|
| Methane             | No               | 12/20/17       | 0.0050         | mg/L             | N/A  | N/A                    | Naturally occurring.  |
| Carbon dioxide      | No               | 12/20/17       | 28.6           | mg/L             | N/A  | N/A                    | Naturally occurring.  |
| Nitrogen gas        | No               | 12/20/17       | 20.69          | mg/L             | N/A  | N/A                    | Naturally occurring.  |
| Dissolved oxygen    | No               | 12/20/17       | 2.8            | mg/L             | N/A  | N/A                    | Naturally occurring.  |
| Argon               | No               | 12/20/17       | 0.7160         | mg/L             | N/A  | N/A                    | Naturally occurring.  |
| Calcium             | No               | 12/20/17       | 90.7           | mg/L             | N/A  | N/A                    | Naturally occurring.  |
| Magnesium           | No               | 12/20/17       | 23.3           | mg/L             | N/A  | N/A                    | Naturally occurring.  |
| Potassium           | No               | 12/20/17       | 1.85           | mg/L             | N/A  | N/A                    | Naturally occurring.  |
| Sodium              | No               | 12/20/17       | 13.3           | mg/L             | N/A  | N/A                    | Naturally occurring; road salt; water softeners; animal waste.  |
| Chloride            | No               | 12/20/17       | 18.6           | mg/L             | N/A  | 250                    | Naturally occurring or indicative of road salt contamination.   |
| Fluoride            | No               | 12/20/17       | 0.11           | mg/L             | N/A  | 2.2                    | Erosion of natural deposits; discharge from fertilizer and aluminum factories.                          |
| Silica              | No               | 12/20/17       | 6.13           | mg/L             | N/A  | N/A                    | Naturally occurring.  |
| Sulfate             | No               | 12/20/17       | 22.1           | mg/L             | N/A  | 250                    | Naturally occurring.  |
| Hardness            | No               | 12/20/17       | 323            | mg/L             | N/A  | N/A                    | Naturally occurring.  |
| Nitrate and Nitrite | No               | 12/20/17       | 1.37           | mg/L             | 10   | 10                     | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.            |
| Orthophosphate      | No               | 12/20/17       | 0.004          | mg/L             | N/A  | N/A                    | Naturally occurring.  |
| Organic carbon      | No               | 12/20/17       | 0.7            | mg/L             | N/A  | N/A                    | Naturally occurring.  |
| Arsenic             | No               | 12/20/17       | 0.1            | ug/L             | N/A  | 10                     | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes. |
| Barium              | No               | 12/20/17       | 53.1           | ug/L             | 2000 | 2000                   | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.             |
| Boron               | No               | 12/20/17       | 24             | ug/L             | N/A  | N/A                    | Naturally occurring.  |
| Cobalt              | No               | 12/20/17       | 0.04           | ug/L             | N/A  | N/A                    | Naturally occurring.  |
| Copper              | No               | 12/20/17       | 4.9            | ug/L             | 1300 | AL=1300                | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives. |
| Lead                | No               | 12/20/17       | 0.09           | ug/L             | 0    | AL=15                  | Corrosion of household plumbing   |

|   |    |          |                  |       |      |        |  |
|---|----|----------|------------------|-------|------|--------|--|
|   |    |          |                  |       |      |        | systems; Erosion of natural deposits.  |
| Lithium   | No | 12/20/17 | 2.57             | ug/L  | N/A  | N/A    | Naturally occurring.   |
| Manganese   | No | 12/20/17 | 0.32             | ug/L  | N/A  | 300    | Naturally occurring; indicative of landfill contamination.   |
| Molybdenum  | No | 12/20/17 | 0.63             | ug/L  | N/A  | N/A    | Naturally occurring.   |
| Nickel  | No | 12/20/17 | 0.3              | ug/L  | N/A  | 100    | Erosion of natural deposits.   |
| Selenium  | No | 12/20/17 | 0.2              | ug/L  | 50   | 50     | Discharge from petroleum and metal refineries; Erosion of natural deposits; discharge from mines.              |
| Strontium   | No | 12/20/17 | 206              | ug/L  | N/A  | N/A    | Naturally occurring.   |
| Zinc  | No | 12/20/17 | 5                | ug/L  | N/A  | 5000   | Naturally occurring; mining waste.   |
| Uranium   | No | 12/20/17 | 0.698            | ug/L  | 0    | 30     | Erosion of natural deposits.   |
| Beta Radioactivity  | No | 12/20/17 | 2.5              | pCi/L | N/A  | N/A    | Erosion of natural deposits.   |
| Radon-222 <sup>3</sup>  | No | 12/20/17 | 470              | pCi/L | N/A  | N/A    | Erosion of natural deposits.   |
| Atrazine  | No | 12/20/17 | 37.0             | ng/L  | 3000 | 3000   | Runoff from herbicide used on row crops.   |
| Prometon  | No | 12/20/17 | 5.27             | ng/L  | N/A  | 50,000 | Released to the environment by its application as an herbicide used on annual and perennial weeds and grasses. |
| 2-Chloro-4-isopropylamino-6-amino-s-triazine (Deethyl Atrazine) | No | 12/20/17 | 43.1             | ng/L  | N/A  | 50,000 | Degradation byproduct of the herbicide atrazine.   |
| 2-Hydroxy-4-isopropylamino-6-ethylamino-s-triazine              | No | 12/20/17 | 43.0 (Estimated) | ng/L  |      | 50,000 | Degradation byproduct of the herbicide atrazine.   |
| Chlorodiamino-s-triazine  | No | 12/20/17 | 90.5             | ng/L  |      | 50,000 | Degradation byproduct of the herbicide atrazine.   |
| Metolachlor sulfonic acid                                       | No | 12/20/17 | 178              | ng/L  | N/A  | 50,000 | Metolachlor sulfonic acid is a degradation product of pesticides.  |

**Notes:**

1 - The level presented represents the 90th percentile of the 10 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, **ten** samples were collected at your water system and the

90th percentile value was the **2<sup>nd</sup> highest** value (0.19 mg/l). The action level for copper was not exceeded at any of the sites tested.

2- The level presented represents the 90<sup>th</sup> percentile of the 10 samples collected. The action level for lead was not exceeded at any of the sites tested.

3-The USEPA has proposed a two-part standard for radon in drinking water: 300 pCi/L for areas that do not implement a mitigation program to address radon in indoor air, and 4000 pCi/L for areas like ours that do implement a radon mitigation program in indoor air.

### **Definitions:**

**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

**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 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 contamination..

**Action Level (AL)**: The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

**Non-Detects (ND)**: Laboratory analysis indicates that the constituent is not present.

**Picocuries per liter (pCi/L)**: A measure of the radioactivity in water.

**Milligrams per liter (mg/l)**: Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

**Micrograms per liter (ug/l)**: Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

**Nanograms per liter (ng/l)**: Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion - ppt).

### **What does this information mean?**

We constantly monitor for various contaminants in the water supply to meet all regulatory requirements. As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

## **Lead**

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. Genoa-King Ferry water district 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

### **Do I Need to Take Special Precautions?**

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens 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 from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

## Why Save Water and How to Avoid Wasting It?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- Saving water saves energy and some of the costs associated with both of these necessities of life;
- Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it up and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

## Closing

Thank you for allowing us to continue to provide your family with quality drinking water this year. We supplied you with approximately 35 million gallons of drinking water in 2018. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. Please call our office if you have questions. We at **the Genoa-King Ferry Water District** work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.