

Annual Drinking Water Quality Report for 2023
Town of Chenango
1529 NY RT 12
Binghamton, N.Y. 13901
Public Water Supply ID# NY0301653

INTRODUCTION

To comply with State regulations, the Town of Chenango will issue an annual 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. 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 the Town of Chenango Water Department at 648-4809 ext #7. 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 every other Wednesday at 5:00 PM. Please call 648-4809 ext #6 ahead of time to reserve a time period to address the board. If the meetings are through zoom please find the information on the Town website.

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 natural-occurring minerals, and in some cases, radioactive material, and also picks 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.

The Town of Chenango has eight groundwater wells throughout the town. Listed below are the well names and locations.

1. Northgate well
2. Route 12A well
3. Maplewood well (Emergency source)
4. Applewood well
5. Chenango Heights
6. Run Acres well
7. Pennview well
8. Cherry Lane well (Emergency source)

Both the Maplewood and Cherry Lane wells are considered emergency sources and cannot be used without Health Department approval. Under normal conditions, the Northgate well pumps water simultaneously to the Hillside Drive (150,000 gal.) and Savitch Road (412,000 gal.) storage tanks, the Route 12A well pumps to the Hospital Hill tank (500,000 gal.) and the Poplar Hill tank (218,600), the Maplewood/Applewood well's pump to the Maplewood tank (212,000 gal.), the Chenango Heights well pumps to the

Chenango Heights tank (86,000 gal.), the Pennview well pumps to a hydro-pneumatic tank (2,000 gal.), and the Run Acres well pumps to a hydro-pneumatic tank (1,000 gal.). The Northgate and 12A wells are interconnected and each is capable of supplying the other water. It's not uncommon that customers in these districts have more than one source of water during the course of a year. Customers in the Maplewood District receive water from the Applewood well.

Water from all source wells meets or exceeds New York State Part 5 standards for drinking water. Raw water from the Pennview well has an elevated iron content which is treated by filtration through Iron Removal Media, and it is also treated with soda ash to reduce lead and copper leaching. Water from the Maplewood and Applewood wells is treated with a polyphosphate compound to reduce lead and copper leaching. Maplewood well had an MCL violation of 1,4-Dioxane, which caused the Town to switch to Applewood well as a primary source for the Maplewood district in 2021. Water from all the Town wells is disinfected using chlorine for microbiological control. During 2023, none of our systems experienced any water restrictions.

FACTS AND FIGURES

Our water system serves 9,550 people through 2683 service accounts. The total water produced in 2023 was 48,161,301 cubic feet (360,246,530 gal.). The daily average of water treated and pumped into the distribution system was 131,949 cubic feet (986,977 gal.) In 2023, water customers were charged \$ 16.38 for the first 750 cubic feet of water used and \$1.68 for each additional 100 cubic feet.

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, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, disinfection by products, 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 Broome County Health Department at (607-778-2887).

TABLE OF DETECTED CONTAMINANTS

Contaminant	Violation Yes/No	Date of Sample	Well Name	Level Detected Avg/Max (Range)	Unit Measurement	MCLG	Regulatory Limit MCL, TTorAL	Likely Source of Contamination
Inorganic Contaminants								
Barium	No	Dec-21 Feb-21 Feb-21 Feb-21 Feb-21 Feb-21	Applewood Chen. Hgts Northgate Pennview Route 12A Run Acres	0.0645 0.0813 0.0621 1.17 0.101 0.0829	mg/l	2 mg/l	2 mg/l	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Nitrate	No	Oct-23 Apr-23 Apr-23 Apr-23 Apr-23 Apr-23	Applewood Chen. Hgts Northgate Pennview Route 12A Run Acres	7.43 0.0794 0.814 ND 1.19 1.84	mg/l	10 mg/l	10 mg/l	Runoff from fertilizer use; Leaching from septic tanks ; sewage; Erosion of natural deposits.
Sodium	No	Mar-23 Mar-23 Mar-23 Mar-23 Mar-23 Mar-23	Applewood Chen Hgts Northgate Pennview Route 12A Run Acre	94.3 12.1 89.5 91.5 95.1 54.6	mg/l	N/A	See Health Effects	Naturally occurring; Road salt; Water softeners; Animal wastes.
Arsenic	No	Feb-21	Pennview	1.20	ug/l	N/A	10 ug/l	Erosion of natural deposits
Chromium	No	Feb-21	Northgate	1.10	ug/l	N/A	100 ug/l	Erosion of natural deposits
Lead	No	Sep-22 Jul-23 Sep-22 Jul-23 Sep-22 Sep-22	Chen. Hgts. DS Maplewood DS Northgate DS Pennview DS Route 12A DS Run Acres DS	*3.0 (ND -5.0) *13.6 (ND – 24.9) *1.9 (ND - 6.8) *6.70 (0.40- 9.30) *2.9 (ND - 4.6) *2.5 (ND - 3.9)	ug/l	0	AL=15 ug/l	Corrosion of household plumbing system; Erosion of natural deposits
Copper	No	Sep-22 Jul-23 Sep-22 Jul-23 Sep-22 Sep-22	Chen. Hgts. DS Maplewood DS Northgate DS Pennview DS Route 12A DS Run Acres DS	*0.138 (0.040-0.152) *0.195 (0.0436-0.209) *0.0945 (0.0220-0.105) *0.115 (0.012 -0.125) *0.119 (0.0015-0.145) *0.118 (0.0394-0.124)	mg/l	1.3 mg/l	AL=1.3 mg/l	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives

Contaminant	Violation Yes/No	Date of Sample	Well Name	Level Detected Avg/Max (Range)	Unit Measurement	MCLG	Regulatory Limit MCL,TTorAL	Likely Source of Contamination
Emerging Organic Contaminants								
PFOS	No	2023	Applewood	2.10	ng/l	N/A	10 ng/l	Used to make materials (e.g. carpet and cookware) that are resistant to water, grease or stains It is also used in firefighting foams at airfields
		Mar-23	Chen. Hgts.	(ND-3.2) ND				
		Mar-23	Northgate	ND				
		Mar-23	Pennview	ND				
		Feb-23	Route 12A	ND				
		Mar-23	Run Acres	2.47				
1,4-Dioxane	No	2023	Applewood	ND	ug/l	N/A	1 ug/l	Primarily used as a stabilizer for trichloroethane. Also used in a variety of applications as a solvent such as in and adhesives
	No	Mar-23	Chen. Hgts.	ND				
	No	Mar-23	Northgate	ND				
	No	Mar-23	Pennview	ND				
	No	Feb-23	Route 12A	ND				
	No	Mar-23	Run Acres	ND				
PFBS	No	2023	Applewood	0.0047	ug/l	N/A	50 ug/l	Used to make materials (e.g. carpet and cookware) that are resistant to water, grease or stains
		Mar-23	Northgate	(0.0041-0.0052) 0.0039				
PFHxS	No	2023	Applewood	0.0024	ug/l	N/A	50 ug/l	
				(0.0021-0.0026)				
PFHxA	No	2023	Applewood	0.0075	ug/l	N/A	50 ug/l	
				(0.0073-0.0078)				
PFHpA	No	2023	Applewood	0.0028	ug/l	N/A	50 ug/l	
				(0.0025-0.0030)				
Radioactive Contaminants								
Gross Alpha	No	Apr 23	Applewood	0.872	pCi/l	0	15 pCi/l	Erosion of natural deposits.
		Oct-17	Chen. Hgts	1.26				
		Oct-17	Northgate	1.54				
		Oct-17	Pennveiw	1.25				
		Oct-17	Route 12A	1.09				
		Oct-17	Run Acres	0.171				
Radium-226	No	Apr-23	Applewood	0.0812	pCi/l	0	5 pCi/l	Erosion of natural deposits.
		Oct-17	Chen. Hgts	0.245				
		Oct-17	Northgate	0.529				

Contaminant	Violation Yes/No	Date of Sample	Well Name	Level Detected Avg/Max	Unit Measurement	MCLG	Regulatory Limit MCL, T or AL	Likely Source of Contamination
		Oct-17	Pennveiw	0.169				
		Oct-17	Route 12A	0.0599				
		Oct-17	Run Acres	0.563				
Radium-228	No	Apr-23	Applewood	0.496	pCi/l	0	5 pCi/l	Erosion of natural deposits.
		Oct-17	Chen. Hgts	0.147				
		Oct-17	Northgate	0.353				
		Oct-17	Pennveiw	0.46				
		Oct-17	Route 12A	0.179				
		Oct-17	Run Acres	ND				

Disinfection Byproducts								
** Total Haloacetic Acids	No	Aug-23	Chen. Hgts. DS	ND	ug/l	N/A	60 ug/l	By-product of drinking water chlorination.
		Aug-23	Maplewood DS	5.63				
		Aug-23	Northgate DS	3.12				
		Aug-23	Pennview DS	6.16				
		Aug-23	Route 12A DS	2.79				
		Aug-23	Run Acres DS	ND				
*** Total Trihalomethanes	No	Aug-23	Chen. Hgts. DS	ND	ug/l	N/A	80 ug/l	By-product of drinking water chlorination.
		Aug-23	Maplewood DS	18.4				
		Aug-23	Northgate DS	27.7				
		Aug-23	Pennview DS	15.7				
		Aug-23	Route 12A DS	11.1				
		Aug-23	Run Acres DS	8.90				

Notes:

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

** - This level represents the total of the following contaminants: Monochloroacetic Acid, Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid, Dibromoacetic Acid.

*** - This level represents the total of the following contaminants: chloroform, bromodichloromethane dibromochloromethane, bromoform.

Sodium Health Effects: Water containing more than 20 mg/l of sodium should not be used for drinking water by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.

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.

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.

Milligrams per Liter (mg/l) - This measurement is the mass of a chemical or contaminant per unit volume of water (part 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).

pCi/l - Picocuries per liter is a measure of the radioactivity in water

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no violations in 2023. We have learned through our testing that some contaminants have been detected; however, these contaminants were at an acceptable level for consumption.

We are required to present the following information on lead in drinking water:

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 Town of Chenango Water Department is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact Town of Chenango Water at 648-4809 ext #7. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.

Although nitrate was detected below the MCL, it was detected at 7.43 mg/l in the Applewood Well/Maplewood Distribution System which is greater than one-half of the MCL. Therefore, we are required to present the following information on nitrate in drinking water:

Nitrate in drinking water at levels above 10 mg/l is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATION

During 2023, our system was following applicable State drinking water operating, monitoring and reporting requirements.

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;
- ◆ 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 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.
- ◆ Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, then check the meter after 15 minutes, if it moved, you have a leak.

SYSTEM IMPROVEMENTS

The distribution system is periodically surveyed for leaks by town personnel with the use of leak detection equipment. The six water storage tanks were inspected by a diver and cleaned. The Northgate well was rehabilitated.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water in 2020. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office if you have questions (648-4809 ext #7).

Town of Chenango
NY0301653

AWQR Source Water Assessment Summary

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, called the well sensitivity. 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. While nitrate and other inorganic contaminants were detected in our water, 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 from natural sources. The presence of contaminants does not necessarily indicate that the water poses a health risk.

As mentioned before, our water is derived from six drilled wells. The well sensitivities are high because the subsurface soils allow large volumes of water to move through the aquifer. Unknown sensitivities are applied to wells that are developed in fractured bedrock or aquifers with characteristics not clearly defined. Well sensitivities are also based on whether there are historically elevated levels of chemical or microbial contaminants. The following table lists the sensitivities and rationales for each well in the Chenango Water System.

WELL NAME	CHEMICAL SENSITIVITY	MICROBIAL SENSITIVITY
Northgate	High – productive aquifer	High – productive aquifer
Route 12A	High – productive aquifer	High – productive aquifer
Applewood	High – productive aquifer & nitrate elevated	High – productive aquifer
Chenango Heights	High – productive aquifer	High – productive aquifer
Run Acres	High – nitrate elevated	Unknown – bedrock aquifer
Pennview	Unknown – unknown aquifer	Unknown – unknown aquifer

Potential contaminant sources are then evaluated and given a contaminant prevalence rating. Areas without public sewers, such as Maplewood and Run Acres have a higher prevalence rating for microbials and nitrate than areas with public sewers because numerous private sewage disposal systems increase the potential for those types of contaminants. More urban areas are likely to have higher prevalence ratings of commercial and industrial contaminants such as petroleum products because of the increased presence of gasoline stations such as along Upper Front Street.

The source water assessment has rated the Chenango Water System wells as having a low to high susceptibility to microbials, such as enteric bacteria and enteric viruses, and various chemical contaminants as noted in the table below. While significant sources of some types of contamination have not been identified in the assessment area, wells may have been given an elevated susceptibility rating for other chemicals because of higher well sensitivities.

SUSCEPTIBILITY TABLE			
CONTAMINANT	Northgate Well	Route 12A Well	Applewood Well
Cations/Anions (Salts)	High	High	Medium-High
Enteric Bacteria	High	High	High
Enteric Viruses	High	High	High
Halogenated Solvents	High	High	Medium-High
Herbicides/Pesticides	High	Medium-High	Medium-High
Metals	High	High	Medium-High
Nitrate	High	High	High
Other Industrial Organics	High	High	Medium-High
Petroleum Products	High	High	Medium-High
Protozoa	High	High	High

SUSCEPTIBILITY TABLE			
CONTAMINANT	Chenango Hgts	Run Acres Well	Pennview Well
Cations/Anions (Salts)	Medium-High	Medium-High	Low
Enteric Bacteria	Medium-High	Medium-High	Low
Enteric Viruses	Medium-High	Medium-High	Medium High
Halogenated Solvents	Medium-High	Medium-High	Low
Herbicides/Pesticides	Medium-High	Medium-High	Low
Metals	Medium-High	Medium-High	Low
Nitrate	Medium-High	High	Low
Other Industrial Organics	Medium-High	Medium-High	Low
Petroleum Products	Medium-High	Medium-High	Low
Protozoa	Medium-High	Medium-High	Low

While the source water assessment rates our wells as being low to highly susceptible to microbials, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State's drinking water standards for microbial contamination.

The Town of Chenango currently has an active wellhead and watershed protection plan in place to ensure drinking water safety and the source water assessment is another tool that can help direct further refinements to the plan. County and state health departments will also use this information to direct future source water protection activities. These may include water quality monitoring, resource management, planning, and education programs