

Annual Drinking Water Quality Report for 2021
TOWN OF TICONDEROGA WATER DISTRICT
P.O.BOX 471
TICONDEROGA, NEW YORK 12883
(Public Water Supply ID NY1500293)

INTRODUCTION

To comply with State and Federal regulations, we 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. 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 Mr. Derrick Fleury, Water Operator at (518) 585-6144. 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 on the second Thursday of each month at 6:00 p.m. at the town hall at 132 Montcalm Street, Ticonderoga.

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 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.

The Ticonderoga Water District gets drinking water from three sources - Gooseneck Pond, Lake George, and two new groundwater wells. The Gooseneck Pond supply is not filtered and operates under stringent water filtration avoidance criteria. Gooseneck Pond water is disinfected with sodium hypochlorite at the Gooseneck Pond treatment station and treated with a potable water corrosion control inhibitor (zinc orthophosphate). The Gooseneck Pond system provides water for users in Eagle Lake down to the Chilson Hill area. The 0.5 million-gallon uncovered Chilson Reservoir used to provide storage for the Gooseneck Pond system in the past, but it is now inactive. Excess water from the Gooseneck Pond system is discharged into the uncovered reservoir and leaves the reservoir via an overflow outlet that discharges to a small stream.

A new storage tank (called the Chilson Storage Tank) was put into service during 2019 and receives water directly from two new wells. Well water is treated with sodium hypochlorite at the new water treatment building located on Route 9N, north of Ticonderoga. Both PW#1 and PW #2 are approximately 220 feet deep with safe yields of 1,100 gpm each. A transmission line conveys water from the well water treatment plant to the new 1.3 million-gallon Chilson Storage Tank.

Lake George is the Town's third source of water supply. Lake George water is filtered at the Baldwin Landing diatomaceous earth filtration plant. An intake structure is located at a depth of 30 feet and approximately 1,800 feet from the shore of Lake George at Baldwin Landing, south of the former village. Raw water flows into a wet well below the filtration plant via a 16" diameter intake main. Two variable drive pumps (300 to 1,000gpm) pump the raw water from the wet well through four diatomaceous earth (DE) filter units. Filtered water exits the filter units and is disinfected with sodium hypochlorite before entering a finished water clear well. The clear well is baffled to provide adequate disinfection contact time. Water flows through the clear well to a high-lift pump station located adjacent to the new filter building. The high-lift pump station is equipped with two 75 h.p. pumps. Each pump is capable of producing 750 gpm. Lake George water is pumped from the pump station via a transmission main to a one million-gallon, steel storage tank located on Mt. Defiance. Lake George water is treated with a corrosion control inhibitor (zinc orthophosphate) before it enters the transmission main. A telemetry system at the Abercrombie Street tank and the Lake George filter plant controls the operation of the filter plant and regulates the high-lift pumps.

FACTS AND FIGURES

Facts and figures for the Ticonderoga Water District are provided below:

Population Served	3700
Service Connections	2000
Total Volume of Water Produced	Lake George 258,785,000 Gallons Gooseneck Pond 81,760,000 Gallons Streetroad Well 184,704,965
Daily Average of Water Delivered	Lake George 709,000 GPD Gooseneck Pond 224,000 GPD Streetroad Well 506,041 GPD
Highest Single Day of Use (Include Day and Volume)	Lake George 1,013,000 Gallons on December 13th Gooseneck Pond 380,000 Gallons on August 12th Streetroad Well 800,000 Gallons on June 10th
Volume of Water Lost from System	N/A No Individual Meters
Cost of Water based on EDU Structure	\$432.00 per EDU per Year
Highest Single Turbidity (NTU) and date	0.25 NTU on September 11th
Month with most turbidity readings above 0.3 and how many exceedances	None

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, 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.

During 2021, we started to sample our drinking water for the per- and polyfluorinated compounds PFOA and PFOS and 1,4-dioxane on a quarterly basis. We collected samples during the 4th quarter of 2020 and the first three quarters of 2021 for PFOS, PFOA, and 1,4-dioxane at the Gooseneck Pond and Lake George surface water sources. We collected samples starting during the 4th quarter of 2020 and continuing through the 2nd quarter of 2021 at the two well sources. The results indicated that there was very low level of PFOA detected in Well #2 during one sampling event in 2020, but all results were below detection limits during 2021. At all other sources, the levels of PFOA, PFOS, and 1,4-dioxane were below detection limits. We will collect PFOA, PFOS and 1,4-dioxane samples again in 2022.

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 New York State Department of Health at (518) 891-1800.

Table of Detected Contaminants - Lake George (LG), Gooseneck Pond (GNP), and Wells

Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit Measurement	MCLG	Regulatory Limit	Likely Source of Contamination
Microbiological Contaminants							
Turbidity (Lake George Source)	No	9/11/2021	0.25	NTU	n/a	5 (TT)	Soil runoff
Turbidity (Lake George Source)	No	2021	100% < 1.0 NTU	NTU	n/a	95% of samples must be < 1.0 NTU (TT), no one sample may be > 5 NTU (TT)	Soil runoff
Turbidity (Gooseneck Pond Source)	No	4/16/2021	0.38	NTU	n/a	5 (TT)	Soil runoff
Turbidity (Gooseneck Pond Source)	No	2021	100% < 1.0 NTU	NTU	n/a	95% of samples must be < 1.0 NTU (TT), no one sample may be > 5 NTU (TT)	Soil Runoff
Inorganic Contaminants							
Chloride (LG) Chloride (GNP) Chloride (Wells)	No	2019	19.6 2.63 9.58	mg/L	n/a	250	Naturally occurring or indicative of road salt contamination.
Lead	No	2021	0.004 ⁴ (ND – 0.0467)	mg/L	0	0.015 (AL)	Corrosion of household plumbing systems.
Copper	No	2021	0.517 ⁴ (0.0326 – 0.679)	mg/L	1.3	1.3 (AL)	Corrosion of household plumbing systems.
Nitrate (LG) Nitrate (GNP) Nitrate (Wells)	No	2021	ND ND 0.24	mg/L	10	10 (MCL)	Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits.
Barium (LG) Barium (GNP) Barium (Wells)	No	2021	ND ND ND	mg/L	2	2 (MCL)	Erosion of natural deposits.
Sodium (LG) ³ Sodium (GNP) Sodium (Wells)	No	2019	11.1 2.36 5.59	mg/L	n/a	See Note 3	Naturally occurring; Road salt; Water softeners; Animal waste.
Iron (LG) Iron (GNP) Iron (Wells)	No	2019	ND 0.097 ND	mg/L	n/a	2.2 (MCL)	Erosion of natural deposits.
Manganese (LG) Manganese (GNP) Manganese (Wells)	No	2019	ND 0.006 ND	mg/L	n/a	0.3 (MCL)	Naturally occurring or indicative of landfill leachate
Zinc (LG) Zinc (GNP) Zinc (Wells)	No	2019	ND 0.007 0.008	mg/L	n/a	5 (MCL)	Naturally occurring; mining waste
Odor (LG) Odor (GNP) Odor (Wells)	No	2019	1 1 1	Units	n/a	3 (MCL)	Natural sources; organic and inorganic pollutants originating from municipal and industrial waste discharges.
Color (LG) Color (GNP) Color (Wells)	No	2019	2 1 5	Units	n/a	15 (MCL)	Natural color may be caused by decaying leaves, plants, and soil organic matter
Sulfate (LG) Sulfate (GNP) Sulfate (Wells)	No	2019	ND ND 9.16	mg/L	n/a	250 (MCL)	Erosion of natural deposits.
Disinfection Byproduct - Stage 2							
TTHMs Total Trihalomethanes Firehouse Location	No	2021	2.5 ⁵ (1.4-3.3) ⁶	ug/L	0	80	By-products of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains measurable amounts of organic matter.
HAA5s Haloacetic Acids Firehouse Location	No	2021	1.3 ⁵ (1.0-2.0) ⁶	ug/L	0	60	By-products of drinking water chlorination needed to kill harmful organisms. HAA5 are formed when source water contains measurable amounts of organic matter.
TTHMs Total Trihalomethanes Mack Location	No	2021	2.5 ⁵ (1.4-3.0) ⁶	ug/L	0	80	By-products of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains measurable amounts of organic matter.
HAA5s Haloacetic Acids Mack Location	No	2021	1.3 ⁵ (1.0-2.0) ⁶	ug/L	0	60	By-products of drinking water chlorination needed to kill harmful organisms. HAA5 are formed when source water contains measurable amounts of organic matter.
Radiological Contaminants							
Gross Alpha	No	2017	0	pCi/L	0	15 (MCL)	Erosion of natural deposits
Radium 226	No	2017	0	pCi/L	0	5 (MCL)	Erosion of natural deposits
Radium 228	No	2017	0	pCi/L	0	5 (MCL)	Erosion of natural deposits

Notes for Table on previous page:

- 1 – Turbidity is a measure of the clarity of the water. We test it because it is a good indicator of the effectiveness of our filtration system. State regulations require that turbidity must always be below 5 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 1.0 NTU for diatomaceous earth filtration. Last year, our system was in compliance with our treatment technique for turbidity.
- 3 – Water containing more than 20 mg/l of sodium should not be used for drinking by people on very 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.
- 4 - During 2020, 40 samples were collected and analyzed for lead and copper. The 90th percentile is equal to or greater than 90% of the lead or copper values detected at your water system. In this case, 40 samples were collected from your water system and the 90th percentile value was the fifth highest value for both lead and copper. The action level for copper was not exceeded and any of the sampling locations. The action level for lead was exceeded at one sampling location.
- 5 – The value represents the highest Locational Running Annual Average of the quarterly samples collected.
- 6 – The values represent the range of the quarterly samples collected.

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.

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

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

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

Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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).

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no water quality or monitoring 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. Our lead samples showed that one sample location was above the Action Level and the owners of this residence were notified, as required. We are required to provide the following information regarding lead in drinking water:

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 Ticonderoga 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 or at <http://www.epa.gov/safewater/lead>.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

The Ticonderoga Water District is generally in compliance with all operating, reporting, and monitoring requirements. The Gooseneck Pond Source must be abandoned by June 2025 since it is currently an unfiltered surface water source operating under filtration avoidance regulations. During 2021, we had several water main breaks which required portions of our water district to be placed on a temporary Boil Water Order.

SOURCE WATER ASSESSMENT SUMMARY

The NYS Dept. of Health completed a source water assessment for this system based on available information. This assessment for Lake George found an elevated susceptibility to contamination for this source of drinking water. Land cover and its associated activities within the assessment area does not increase the potential for contamination. While there are some facilities present, permitted discharges do not likely represent an important threat to source water quality. There is noteworthy contamination susceptibility associated with other discrete contaminant sources. The assessment area for Gooseneck Pond contains no discrete PCSs, and none of the land cover contaminant prevalence ratings are greater than low.

The health department 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, including a map of the assessment area, can be obtained by contacting us.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

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).

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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 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.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. 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. 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. Please call our office if you have questions.