*Annual Drinking Water Quality Report for 2015*
**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 7:00 p.m. at the town hall at 117 East 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 Town of Ticonderoga water system has two interconnected sources of water, Gooseneck Pond and Lake George. The Gooseneck Pond source is located approximately nine miles west of the former Village of Ticonderoga. Water flows by gravity via a 14" transmission main from Gooseneck Pond to the Chilson Reservoir storage facility. Chilson Reservoir is a one million-gallon, uncovered concrete reservoir. Gooseneck Pond water is treated by redundant hypochlorination and a potable water corrosion control inhibitor (zinc orthophosphate). The treatment building is located below Gooseneck Pond adjacent to NYS Route 74. Gooseneck Pond water is again disinfected by hypochlorination as it leaves Chilson Reservoir. The Gooseneck Pond system is presently operating under filtration avoidance and meets all the required operating and monitoring criteria.

The second source of water is Lake George. 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. Lake George water is filtered at the treatment plant at Baldwin Landing. 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.

## FACTS AND FIGURES

The Ticonderoga Water District serves approximately 5,000 individuals through 1,500 service connections. The total water produced in 2015 was 295 million-gallons. The Lake George source supplied 165 million-gallons, with an average daily flow of 452,000 gallons per day with the highest single day (11/18/15) production was 640,000 gallons. The Gooseneck Pond Source supplied 130 million-gallons, with an average daily flow of 357,000 gallons per day with the highest single day (8/16/15) production was 393,000. Last year, water customers were charged $322.00 per unit per year.

## 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.

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**

| Contaminant | Violation Yes/No | Date of Sample | Level Detected | Unit Measure-ment | MCLG | Regulatory Limit | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| **Microbiological Contaminants** | | | | | | | |
| Turbidity[1] (Lake George Source–LG, diatomaceous earth filtration) | No | 2015 | 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[1] (Gooseneck Pond Source–GP, unfiltered-filtration avoidance) | No | 2015 | 100% < 1.0 NTU | NTU | n/a | No one sample may be >5 NTU (TT) | Soil runoff |
| **Inorganic Contaminants** | | | | | | | |
| Chloride | No | 2015 | 14.6 (LG) 2.1 (GP) | mg/L | n/a | 250 | Naturally occurring or indicative of road salt contamination. |
| Lead[2] | No | 9/14 | 4[4] | ug/L | 0 | 15 (AL) | Corrosion of household plumbing systems. |
| Copper[2] | No | 9/14 | 0.26[4] | mg/L | 1.3 | 1.3 (AL) | Corrosion of household plumbing systems. |
| Manganese | No | 2015 | 0 (LG) 0.009 (GP) | mg/L | n/a | 0.3 (MCL) | Naturally occurring. |
| Iron | No | 2015 | 0 (LG) 0.028 (GP) | mg/L | n/a | 0.3 (MCL) | Naturally occurring. |
| Nitrate | No | 2015 | ND (LG) ND (GP) | mg/L | 10 | 10 (MCL) | Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Barium | No | 2015 | ND (LG)<br>ND (GP) | mg/L | 2 | 2 (MCL) | Erosion of natural deposits. |
| Sodium[3] | No | 2015 | 9.5 (LG)<br>2.4 (GP) | mg/L | n/a | n/a | Naturally occurring; road salt. |
| Fluoride | No | 2015 | ND (LG)<br>ND (GP) | mg/L | n/a | 2.2 (MCL) | Erosion of natural deposits. |
| Sulfate | No | 2015 | 5.25 (LG)<br>3.17 (GP) | mg/L | n/a | 250 (MCL) | Erosion of natural deposits. |
| **Disinfection Byproduct - Stage 2** | | | | | | | |
| TTHMs<br>Total<br>Trihalomethanes | No | 2015 | | ug/L | 0 | 80 | By-products of drinking water chlorination needed to kill harmful organisms. HAA5 are formed when source water contains measurable amounts of organic matter. |
| HAA5s<br>Haloacetic Acids | No | 2015 | | ug/L | 0 | 60 | By-products of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains measurable amounts of organic matter. |

**LG = Lake George Source**

**GP = Gooseneck Pond Source**

## Notes:

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. Our highest single turbidity measurement last year at the Baldwin Landing filtration plant occurred on 11/24/15 (0.21 NTU). All turbidity measurements taken last year at our Baldwin Landing filtration plant were below 1.0 NTU. Our highest single turbidity measurement last year from our Gooseneck Pond source occurred on 12/4/15 (0.33 NTU). 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 2014, 20 samples were collected and analyzed for lead and copper. The 90$^{th}$ percentile is equal to or greater than 90% of the lead or copper values detected at your water system. In this case, 20 samples were collected from your water system and the 90$^{th}$ percentile value was the third highest value for both lead and copper. The action level for lead was exceeded at two of the sites tested. The action level for copper was not exceeded at any of the sites tested. The range of lead samples taken was between ND to 69.0 ug/l. The range of copper samples taken was between 0.03 to 0.29 mg/l.

**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.

## IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

The Ticonderoga Water District was required to provide treatment for the Gooseneck Reservoir source to inactivate Cryptosporidium before October 1, 2014. The Town is in violation of the Cryptosporidium inactivation requirement of the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) and is required to cover or treat its uncovered finished water reservoir. The US EPA has issued an Administrative Order which requires the Ticonderoga WD to comply with the regulations. In addition, the NYSDOH issued violations and took enforcement action for inadequate filtration treatment at the Lake George filer plant. We are required to include the following statement in this report: "Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches."

The Town is are working diligently with our engineering firm, the US EPA and the NYSDOH to achieve compliance with the enforcement actions. We have drilled a production well in the Street Road hamlet area and anticipate that this groundwater source should be available in 2018.

## 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).

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.

## 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.