Annual Drinking Water Quality Report for 2012
Village of Tupper Lake
Water Department
53 Park Street, Tupper Lake, NY 12986
(Public Water Supply ID#1600012)

INTRODUCTION

To comply with State regulations, the Village of Tupper Lake 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. 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. Mark Robillard, Water/Wastewater Superintendent at (518) 359-3341. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled village board meetings. The meetings are held on the third Monday of each month at 6:00 p.m. at the Village Office at 53 Park Street, Tupper Lake.

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.

Our water source is surface water drawn from Tupper Lake and Little Simon Pond. The water intake for Tupper Lake extends approximately 800 feet from the lakeshore at the water filtration plant. Water from the intake is gravity fed to a holding basin located beneath the treatment plant. The intake is located approximately 40 below the water surface in 60 feet of water. The water intake for Little Simon Pond extends approximately 150 feet into Little Simon Pond from its southern shore. The intake is located approximately 20 feet below the water surface in 30 feet of water. The water from Little Simon Pond flows by gravity approximately two miles to the Little Simon Pond filtration plant located on Lake Simon Road. There were no restrictions placed on our water sources during 2012.

In accordance with State mandates, the Village water system provides treatment for filtration and disinfection for the Tupper Lake and Little Simon Pond sources. All water supplied to the users connected to the Village distribution system must first be treated through diatomaceous earth filters. Additional chlorine contact time is provided on the Little Simon source.

FACTS AND FIGURES

The Village of Tupper Lake supplies water to 1567 accounts in the Village and 627 accounts in the Town of Tupper Lake with a combined population of approximately 5500. During 2012, we withdrew 177-million gallons of water from Little Simon Pond and 109-million gallons from Tupper Lake for a total volume of water supplied to the customers of 286-million gallons. In 2012, water customers inside the Village were charged an average water rate of $17.00 per month while customers outside the Village were charged an average rate of $24.20 per month.

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, 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 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] (Tupper Lake – TL)	No	9/12/12	0.50	NTU	n/a	<5 NTU (TT)	Soil Runoff
Turbidity[2] (Tupper Lake – TL)	No	2012	100% of samples <1.0 NTU	NTU	n/a	95% of samples< 1.0 NTU (TT)	Soil Runoff

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit Measure-ment	MCLG	Regulatory Limit	Likely Source of Contamination
Turbidity[1] (Simon Pond – SP)	No	7/16/12	0.52	NTU	n/a	<5 NTU (TT)	Soil Runoff
Turbidity[2] (Simon Pond – SP)	No	2012	100% of samples <1.0 NTU	NTU	n/a	95% of samples< 1.0 NTU (TT)	Soil Runoff
Total Coliform	No	Six samples per month	All samples negative in 2012	N/A	0	Any positive monitoring sample (MCL)[7]	Naturally present in the environment.
Inorganic Contaminants							
Asbestos	No	12/4/03	ND	MFL	7	7	Decay of asbestos cement water mains; Erosion of natural deposits.
Chloride	No	1/12/10	6.92 (TL) 3.18 (SP)	mg/L	n/a	250 (MCL)	Naturally occurring or indicative of road salt contamination.
Barium	No	12/17/12	0.006(TL) 0.009 (SP)	mg/L	2	2 (MCL)	Erosion of natural deposits.
Copper	No	2012	0.99[3] 0.087-1.5[4]	mg/L	1.3	1.3 (AL)	Corrosion of household plumbing systems.
Lead	No	2012	14.0[3] ND-3.7[4]	ug/L	0	15 (AL)	Corrosion of household plumbing systems.
Iron	No	1/12/10	160 (TL) 52 (SP)	ug/L	n/a	300 (MCL)	Naturally occurring.
Manganese	No	1/12/10	14 (TL) 10 (SP)	ug/L	n/a	300 (MCL)	Naturally occurring.
Nitrate	No	7/12/12	0.18 (TL) 0.17 (SP)	mg/L	10	10 (MCL)	Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits.
Sodium[5]	No	1/12/10	3 (TL) 3 (SP)	mg/L	n/a	n/a	Naturally occurring; road salt.
Zinc	No	1/12/10	0.006 (SP) 0.005 (TL)	mg/L	n/a	5 (MCL)	Erosion of natural deposits.
Sulfate	No	1/12/10	3.46 (TL) 4.30 (SP)	mg/L	n/a	250 (MCL)	Erosion of natural deposits.
Disinfection Byproduct - Stage 1							
Haloacetic Acids (HAA5)	**Yes**	8 samples collected during 2012	66.5[6] Range of Samples (0.0 – 113.0)	ug/L	n/a	60 (MCL)	By-products of drinking water chlorination needed to kill harmful organisms. HAA5 are formed when source water contains measurable amounts of organic matter.
Total Tri-halomethanes (TTHMs)	**Yes**	8 samples collected during 2012	80.8[6] Range of Samples (39 - 125)	ug/L	n/a	80 (MCL)	By-products of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains measurable amounts of organic matter.
Disinfection Byproduct - Stage 2							
Haloacetic Acids (HAA5)	No	12 samples collected during 2010	52 - 300 Range of Samples[8]	ug/L	n/a	60 (MCL)	By-products of drinking water chlorination.
Total Tri-halomethanes (TTHMs)	No	12 samples collected during 2010	77 - 112 Range of Samples[8]	ug/L	n/a	80 (MCL)	By-products of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains measurable amounts of organic matter.

Notes:

1 – Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of our Tupper Lake and Little Simon Pond filtration systems. Our highest single turbidity measurement at the Tupper Lake plant for the year occurred on 9/12/12 (0.50 NTU). Our highest single turbidity measurement at the Little Simon Pond plant for the year occurred on 7/16/12 (0.52 NTU).

2 – State regulations require that turbidity must always be below 5 NTU and 95% of the turbidity samples collected must measure below 1.0 NTU. During 2012, our system was in compliance with our treatment technique for turbidity at both of our filtration plants.

3 – The level presented represents the 90th percentile of the 20 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 lead and copper values detected at your water system. In this case, 20 samples were collected at your water system and the 90th percentile value was the third highest value. The action level for lead was exceeded at two of the sites tested during 2012. The action level for copper was exceeded at one of the sites tested during 2012.

4 - The level presented represents the range of the 20 samples.

5 – 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.

6 - The level presented represents the average of the 8 samples collected in 2011.

7 - A violation occurs when a total coliform sample and/or an E. Coli sample are positive and a repeat total coliform sample and/or an E. Coli sample is positive.

8- We collected samples during the 1st, 2nd, and 3rd quarters of 2010 to evaluate our distribution system for the presence of disinfection byproducts. The purpose of this evaluation is to determine future sample locations for routine disinfection byproduct sampling. The study consists of the collection of four disinfection byproduct samples once every 90 days. Data from samples collected in 2010 is included in herein. We also collected samples during the 2nd, 3rd and 4th quarters of 2009.

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).

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

Million Fibers per Liter (MFL): million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers

What does this information mean?

The Village of Tupper Lake received violations for exceeding the MCLs for Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5). The violations are a result of water samples collected in 2012. The average concentration of those samples exceeded the MCL for TTHM and HAA5 in the 4th quarter of 2012. The standard for Total TTHM is 80 mcg/l (micrograms per liter). The average concentration of the TTHM taken through the 4th quarter of 2012 was 80.8 mcg/l. The standard for HAA5 is 60 ug/l (micrograms per liter). The average concentration of those samples exceeded the MCL for HAA5 in the 4th quarter of 2012. The standard for Total HAA5 is 60 mcg/l. The average concentration of the HAA5 taken through the 4th quarter of 2012 was 66.5 mcg/l..

TTHM and HAA5 are formed in drinking water during treatment by chlorine, which reacts with certain acids that are in naturally-occurring organic material (e.g., decomposing vegetation such as tree leaves, algae or other aquatic plants) in surface water sources such as rivers and lakes. The amount of TTHM and HAA5 in drinking water can change from day to day, depending on the temperature, the amount of organic material in the water, the amount of chlorine added, and a variety of other factors. Drinking water is disinfected by public water suppliers to kill bacteria and viruses that could cause serious illnesses. Chlorine is the most commonly used disinfectant in New York State. For this reason, disinfection of drinking water by chlorination is beneficial to public health. Some studies of people who drank chlorinated drinking water for 20 to 30 years show that long term exposure to disinfection by-products (possibly including TTHM and HAA5) is associated with an increased risk for certain types of cancer. However, how long and how frequently people actually drank the water as well as how much TTHM and HAA5 the water contained is not known for certain. Therefore, we do not know for sure if the observed increased risk for cancer is due to TTHM and HAA5, other disinfection by-products, or some other factor. The individual disinfection byproducts cause cancer in laboratory animals exposed to high levels over their lifetimes. Some disinfection byproducts are also known to cause other effects in laboratory animals after high levels of exposure, primarily on the liver, kidney and nervous system and on their ability to bear healthy offspring. Chemicals that cause effects in animals after high levels of exposure may pose a risk to humans exposed to similar or lower levels over long periods of time.

Lead 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 Village of Tupper Lake 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.

We have learned through our other testing that some contaminants have also 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 Tupper Lake filter plant was constructed during the 1960s. The filter plant is old and in poor condition. A broken filter unit at the Tupper Lake plant resulted in unfiltered water entering the distribution system during 2009. This problem may have existed for several months without alerting the water operators. The broken filter unit was identified and fixed by the water operators during November 2009.

The NYSDOH initiated an enforcement action against the Village during April 2010 as a result of violating the filtration requirement and the general condition of the Tupper Lake filter plant. The Village accepted a Stipulation Agreement with the NYSDOH as part of the enforcement action that requires the Village to develop a new groundwater supply. We are working with the NYSDOH, our engineer and hydrogeologist to address this situation. We anticipate that the new wells will be placed in service sometime during 2015.

During 2012, our system was in compliance with all other applicable State drinking water operating, monitoring and reporting requirements.

Source Water Assessment Summary

The NYS Dept. of Health completed a source water assessment for this system based on available information.
Based on the analysis of available information, Little Simon Pond does not have an elevated susceptibility to contamination. There are no regulated facilities within this watershed and the corresponding land cover does not pose any substantial risks to the source water quality. This assessment for the Tupper Lake source found no noteworthy risks to source water quality.

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 as noted below.

Do I Need to Take Special Precautions?

Although our drinking water generally 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 firefighting 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.
- 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. Please call our office if you have questions. Copies of all of our test results are also available at our office.