

*Annual Drinking Water Quality Report for 2010  
Village of Lake George, Ottawa Street, Lake George, NY 12845  
(Public Water Supply ID# 5600106 )*

## **INTRODUCTION**

To comply with State and Federal regulations, the Village Of Lake George, 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 statement. 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 **David Harrington, Water Superintendent**, at 518-668-5771. 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 every third Monday of every month at 7:00 pm at the Village Hall.

## **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 that 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 Lake George drawn from an intake that extends approximately 1300 feet from the shore at a depth of 35 feet. The water is pumped from the lake to the filter plant. The filter plant has three package treatment units, installed in parallel. Water entering the building, is injected with a minimal amount of chlorine to prevent algae growth on the filters, a polymer coagulant is injected, then water flows into the first chamber of each treatment unit. A mixing paddle in the first chamber enhances coagulation/flocculation. The water flows under a baffle wall to the second chamber for settling. The water then flows over a weir, through tube settlers, and subsequently through a channel to flow on to the multimedia filters. The filtered water is injected with liquid sodium hypochlorite prior to storage and distribution.

The Department of Health 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 of 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 customers is, or will become contaminated. See section "**Are there contaminants in our drinking water?**" for a list of the contaminants that have been detected, if any. The source water assessments provide resource managers with additional information for protecting source water into the future.

This assessment found a moderate 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 discharge do not likely represent an important threat to source water quality based on the type of discharge (ground water). There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and the facility types include: Mines and landfills. Additional sources of potential contamination include heavy boat traffic near the intake.

The State 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 map of the area, can be obtained by contacting us.

## FACTS AND FIGURES

Our water system serves 933 (this population number does not appear to be correct since you are reporting 1,306 service connections and only 933 people?) people through 604 service connections within the Village and 702 customers within the Town of Lake George. The daily average of water treated and pumped into the distribution system is 658,000 gallons per day. Our highest single day was 1,300,000 gallons. A total of 252 million gallons of water were produced through Village pump stations, 189 million gallons were delivered to Village and Town customers. Customer water usage accounts for 75% of total water produced. This leaves an unaccounted for total of 60 million gallons. This water was used to flush mains, fight fires and leakage. In 2010, Village water customers were charged \$5.16 per 1,000 gallons of water with a quarterly bill of \$57.32 and \$5.92 per 1,000 gallons for outside Village customers with a quarterly bill of \$64.62.

## 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, radiologicals, 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 New York State Health Department at 518-793-3893.

Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
<b>Microbiological</b>							
Turbidity <sup>1</sup>	No	06/10/10	.15	NTU	N/A	< 5.0 = TT	Soil Run-off
Turbidity <sup>1</sup>	No	09/16/10	.17	NTU	N/A	95% of samples < 1.0 = TT	Soil Run-off
<b>Inorganics</b>							
Chloride	No	11/11/10	22	mg/l	N/A	250 = MCL	Naturally occurring or indicative of road salt contamination.
Sodium	No	11/01/10	13	mg/l	N/A	N/A <sup>2</sup>	Naturally occurring; Road salt; Water softeners; Animal waste.
Total Dissolved Solids	No	11/01/10	77	mg/l	N/A	N/A	Naturally occurring
Calcium Hardness	No	11/01/10	31	mg/l	N/A	N/A	Naturally occurring
Zinc	No	11/1/10	0.1	mg/l	N/A	5 = MCL	Naturally occurring; Mining waste.
Sulfate	No	11/01/10	8	mg/l	N/A	250 = MCL	Naturally occurring
Lead	No	July 2010	1 <sup>3</sup> ND-1 <sup>4</sup>	ug/l	0	15 = AL	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper	No	July 2010	0.18 <sup>3</sup> ND-0.2 <sup>4</sup>	mg/l	1.3	1.3 = AL	Corrosion of household plumbing systems; Erosion of natural deposits; leaching

Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
							from wood preservatives.
<b>Stage 1 Disinfection Byproducts</b>							
Total Haloacetic Acids	No	Quarterly in 2010	49.88 <sup>5</sup> 35.1-58 <sup>6</sup>	ug/l	N/A	60 = MCL	By-product of drinking water disinfection needed to kill harmful organisms.
Total Trihalomethanes	No	Quarterly in 2010	52.43 <sup>5</sup> 29.8- 56.1 <sup>6</sup>	ug/l	N/A	80 = MCL	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Chlorine Residual	No	Daily	0.7-1.2	mg/l	N/A	4.0 = MRDL	Used in the treatment and disinfection of drinking water
<b>Stage 2 Disinfection Byproducts<sup>7</sup></b>							
Total Haloacetic Acids	No	2/1/10	22.8-34.8	ug/l	N/A	60 = MCL	(see above)
Total Trihalomethanes	No	2/1/10	29.5-39.4	ug/l	N/A	80 = MCL	(see above)
<b>Principal Organic Compounds (Samples Collected after Middle Road Storage Tank)<sup>8</sup></b>							
p-Xylene	No	11/1/10 8/2/10	0.5 ND	ug/l	0	5 = MCL	Leaks from gasoline tanks; Discharge from petroleum factories. Leaching of solvent from lining of potable water tanks.
Ethylbenzene	No	11/1/10 8/2/10 7/6/10	0.4 1.0 1.0	ug/l	0	5 = MCL	Discharge from petroleum refineries; Leaks from gasoline tanks.
m-Xylene	No	11/1/10 8/2/10 7/6/10	0.5 ND	ug/l	0	5 = MCL	Leaks from gasoline tanks; Discharge from petroleum factories. Leaching of solvent from lining of potable water tanks.
1,2,4-Trimethylbenzene	No	11/1/10 8/2/10 7/6/10	ND 0.8 0.6	ug/l	0	5 = MCL	Naturally occurring in coal tar and crude oil; by-product of oil refinery process and added to gasoline.
Total Xylenes	No	11/1/10 8/2/10 7/6/10	4.9	ug/l	0	5 = MCL	Leaks from gasoline tanks; Discharge from petroleum factories. Leaching of solvent from lining of potable water tanks.
m&p-Xylene	No	7/6/10	3.2	ug/l	0	5 = MCL	Leaks from gasoline tanks; Discharge from petroleum factories. Leaching of solvent from lining of potable water tanks.
o-Xylene	No	7/6/10	0.8	ug/l	0	5 = MCL	Leaks from gasoline tanks; Discharge from petroleum factories. Leaching of solvent from lining of potable water tanks.
<b>Radiologicals</b>							
Radium 228	No	8/6/07	0.59	pCi/L	0	5 = MCL	Erosion of natural deposits.

**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 filtration system. Our highest single turbidity measurement for the year occurred on May 14, 2010. State regulations require that turbidity must

always be less than or equal to 5.0 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 1.0 NTU. Our water system met this standard during 2010.

2. Water containing more than 20 mg/l of sodium should not be used for drinking 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.
3. During 2010, ten samples were collected and analyzed for lead and copper. The level presented represents the 90<sup>th</sup> 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 90<sup>th</sup> percentile is equal to or greater than 90% of the lead and copper values detected at your water system. In this case, 10 samples were collected at your water system and the 90<sup>th</sup> percentile value was the second highest value (1 ug/l for lead and 0.18 mg/l for Copper). The Action Level was not exceeded at any of the sites tested.
4. The levels presented represent the range of lead and copper results from the 10 sample sites.
5. Compliance for TTHM and HAA5 MCLs is based on a running annual arithmetic average, computed quarterly, of quarterly averages of all samples. For example, the 1st Quarter 2010 Running Annual Average was calculated using data collected during the 1st Quarter 2010, the 4th Quarter 2009, the 3rd Quarter 2009 and the 2nd Quarter 2009. During 2010, the highest running annual average for HAA5s occurred during the 4<sup>th</sup> Quarter of 2010 and the highest running annual average for TTHMs occurred during the 2<sup>nd</sup> Quarter of 2010 (49.88 ug/l for HAA5s and 52.43 ug/l for TTHMs). The running annual average for TTHMs and HAA5s did not exceed the MCL during 2010.
6. The levels presented are the range of State 1 TTHM and HAA5 sample results from 2010.
7. During the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> Quarters of 2009 and the 1<sup>st</sup> Quarter of 2010, we evaluated our distribution system for the presence of disinfection byproducts. The purpose of this evaluation was to determine future sample locations for routine disinfection byproduct sampling. The study consisted of the collection of 2 disinfection byproduct samples once every 90 days. The range of detects for the 2 samples collected in February 2010 is included in herein.
8. In 2008, we repainted the interior of the Middle Road storage tank. NYSDOH requires that samples for Principal Organic Compounds be collected after a storage tank is painted. Since low levels of Principal Organic Compounds have been detected we are required to conduct quarterly sampling. The levels detected during 2010 have decreased since the initial sampling in 2008.

**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.

**Definitions continued:**

**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.

**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.

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

**N/A:** Not applicable

## **WHAT DOES THIS INFORMATION MEAN?**

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 New York State requirements.

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

During 2010, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

## **INFORMATION ON 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. We are 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>.”

### **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. Immune-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.
- ◆ 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**

In 2010, we completed our tenth year with a filter plant building on Ottawa St. This improvement has increased water quality. This building now houses three filters that are used to enhance the quality of finished water. In 2010, we have been making a major upgrade to the water mains on Beach Road and Route 9. This will enhance fire flow and reduce maintenance cost. In our continuing efforts to maintain a safe and dependable water supply, it may be necessary to make improvements in your water system. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements.

### **CLOSING**

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community and our way of life. Please call our office if you have questions.