Annual Drinking Water Quality Report for 2016
Village of Skaneateles
26 Fennell St., Skaneateles, NY 13152
Public Water Supply ID# NY3304331

Prepared By: Shannon Harty, P.E.
Director of Municipal Operations

We are pleased to present a summary of the quality of the water provided to you during the past year. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water source. This report also details where our water comes from, what it contains, and the risk water testing and treatment are designed to prevent. We remain committed to providing you with the safest and most reliable water supply.

If you have any questions about this report concerning your drinking water, please contact Shannon Harty at the Village of Skaneateles Department of Public Works office, phone #315-685-5977.

We encourage public interest and participation in our community's decisions affecting drinking water. Regular Municipal Board Meetings occur on the fourth Wednesday of each month, at 7:00 p.m. at the Village Office located at 26 Fennell Street, Skaneateles, NY. The public is welcome.

More information is available on the World Wide Web at http://waterdata.usgs.gov.

WHERE DOES OUR WATER COME FROM?

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, in some cases, radioactive material, 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.

FACT AND FIGURES

The Village of Skaneateles water system serves the Town as well as the Village residents, a combined population of approximately 5,500. In 2016 our pumping figures showed a total of 203,010,170 gallons. Our daily average of water pumped into the distribution system was 554,673 gallons. Our highest single day, June 23, 2016, was 794,000 gallons. The amount delivered to customers was 194,811,379 gallons. This leaves an unaccounted for total of 8,198,791 gallons, which accounts for 4.0% of the total produced. This water was used to flush hydrant mains, fight fires, unauthorized hydrant use, municipal use, system leakage and water main breaks.

Our billing figures show that 70% of our customers in the Village use 800 Cu. Ft. of water per month at an average cost of $242.52/yr.

VILLAGE OF SKANEATELES WATER SOURCE

Our community water system receives its water from a surface water source, Skaneateles Lake. It is the fourth largest and third deepest of the Finger Lakes. It has a surface area of 13.6 square miles with a maximum depth of 300 feet. The source of water for the lake is its watershed. The watershed acreage calculated by the Geographic Information System (GIS) is 37,724 acres or 58.94 square miles. The water quality of Skaneateles Lake is ranked as one of the top ten lakes in the Country. The village is fortunate to have this lake as our surface water source.

The Village of Skaneateles takes its water directly from wet wells located in the City of Syracuse Gatehouse, Genesee Street in the Village of Skaneateles. It is then pumped from the Village Pump Station through a 12" dedicated water main to our reservoirs located on East Street and directly into the Village system. From the reservoirs, the water is then gravity fed into the distribution system of both the Village and Town water systems.

All the water pumped by the Village Pump Station is treated with chlorine and fluoride by the City of Syracuse prior to entering our water distribution system.

SWAP SUMMARY FOR SKANEATELES LAKE

The NYS DOH has evaluated the Village of Skaneateles' source water susceptibility to contamination under the Source Water Assessment Program (SWAP), and their findings are summarized here. It is important to stress that these assessments were created using available information and only estimate the potential for source water contamination. Elevated susceptibility ratings do not mean that source water contamination has or will occur for the Village of Skaneateles. The City of Syracuse provides treatment and regular monitoring to ensure the water delivered to Village of Skaneateles meets all applicable standards.

This assessment found a moderate susceptibility to contamination for the Skaneateles Lake source of drinking water. The amount of pasture in the assessment area results in a high potential for protozoa contamination. No permitted discharges are found in the assessment area. There are no likely contamination threats associated with other discrete contaminant sources, even though some facilities were found in low densities.

FILTRATION WAIVER

The Village of Skaneateles along with the City of Syracuse is currently operating under a filtration avoidance extension granted in June of 2004. The waiver has no termination date, and will remain in effect for as long as the City and Village comply with the conditions of the waiver. Since the Village is a filtration avoidance system, it is subject to recent USEPA Long Term 2 Enhanced Surface Water Treatment Rule (LT2) treatment requirements. The Village reviewed LT-2 treatment options and developed plans to meet the requirements of the new rule utilizing Ultraviolet (UV) disinfection technologies. The Village recently completed installation of the UV system and has satisfied all EPA requirements.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. In 2016, the Village was required to test for Total Coliform, Trihalomethanes (THM), and Haloacetic acids (HAA5). We also voluntarily sampled for lead and copper at seven (7) household in response to increase public awareness due to new regulations governing lead testing in schools. Our triannual regulatory lead and copper sampling will be completed in 2017.Total Coliform samples are taken to the City of Syracuse Gatehouse where they are transported to a certified lab to be tested for Total Coliform & E. Coli, as directed by the New York State Department of Health. The results of all tests are available at the Village of Skaneateles Water Department Office, phone #315-685-5628.

For the THM and HAA5 testing, the Village took samples from one site in 2016. These samples were collected and sent to the lab for testing. The results are shown in the table below. You may also obtain copies of the results at the Skaneateles Water Department Office.

In addition, the City of Syracuse tests the water entering the Gatehouse for all contaminants listed in the Federal Safe Drinking Water Act. These contaminants include: inorganic compounds, nitrate, nitrite, volatile organic compounds, synthetic organic compounds and radiological compounds. Refer to Detected Contaminants Table below compiled by the Syracuse Water Department. For more information on the Federal Safe Drinking Water Act, consumers are encouraged to call The Safe Drinking Water Hotline telephone number: 800-426-4791.

Drinking water, including bottled water, may reasonably be 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 Safe Drinking Water Hotline (1-800-426-4791) or the Onondaga County Health Department at 315-435-6600.

The tables presented below depict 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.

To understand the tables below, the following definitions will be helpful.

GLOSSARY OF TERMS

Action Level (AL): The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
n/a: Not applicable.
Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
Maximum Contaminant Lever Goal (MCLG): The level of a contaminant in drinking water below which there is no know health risk. MCLG's allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Goal (MRDLG): The level of 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.
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).
NTU: Nephelometric Turbidity Unit: a measurement of the turbidity, or cloudiness of the water.
Picocuries per liter (pCi/L): A measure of the radioactivity in water.
Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
nd: Laboratory analysis indicates that the constituent is not present.

Table of Detected Contaminants: Village of Skaneateles testing

Contaminant	Violation Yes/No	Date of Sample	Upper Bound Level Detected (Avg) (Range)	Unit Measure-ment	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Chlorine Residual	No	2016 Weekly	0.77 (0.32 – 2.46) (Notes 1,2)	mg/l	(MRDLG) N/A	(MRDL) 4	By-product of drinking water chlorination
Lead	No	Jul-Sept 2014	3.96 (1.0 – 7.99) (Notes 2,3)	ug/l	0	AL= 15	Corrosion of household plumbing systems; erosion of natural deposits
Copper	No	Jul-Sept 2014	1.2 (0.09 – 1.3) (Notes 2,4)	mg/l	1.3	AL= 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (voluntary testing)	No	Sept 2016	1.55 (0.5– 1.91) (Notes 2,5)	ug/l	0	AL= 15	Corrosion of household plumbing systems; erosion of natural deposits
Copper (voluntary testing)	No	Sept 2016	0.786 (0.10 – 0.81) (Notes 2,6)	mg/l	1.3	AL= 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Turbidity	No	2016 Weekly	0.30 (0.07 – 11.52) (Note 7)	NTU	N/A	5	Soil run off in lake water

Notes:
1. Test samples taken at Entry Point of the Skaneateles system.
2. Test samples taken in the Distribution System by Village of Skaneateles.
3. During 2014 we collected and analyzed 20 samples for lead. The upper bound level included in the table represents the 90th percentile containment level. The action level for Lead was not exceeded at any of the 20 sites tested.
4. During 2014 we collected and analyzed 20 samples for copper. The upper bound level included in the table represents the 90th percentile containment level. The action level for copper was not exceeded.
5. During 2016 we voluntarily collected and analyzed 7 samples for lead. The upper bound level included in the table represents the 90th percentile containment level. The action level for Lead was not exceeded at any of the 7 sites tested. We complete tri-annual regulatory lead sampling in 2017.
6. During 2016 we voluntarily collected and analyzed 7 samples for copper. The upper bound level included in the table represents the 90th percentile containment level. The action level for copper was not exceeded. We complete tri-annual regulatory copper sampling in 2017.
7. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants. Our highest single turbidity measurement for the year (11.52 NTU) occurred on 2/4/16. State regulations require that turbidity must always be below 5 NTU.

Table of Detected Contaminants: Disinfectant & Disinfection By-products (Village of Skaneateles Testing)							
Contaminant	**Violation Yes/No**	**Dates of Samples**	**Upper Bound Level Detected (Avg) (Range)**	**Unit Measurement**	**MCLG**	**Regulatory Limit (MCL, TT or AL)**	**Likely Source of Contamination**
Total Trihalo Methanes **	No	8/09/16	53	ug/l	N/A	80	By-Products of Drinking water chlorination. TTHM's form when source water contains large amounts of organic matter.
Haloacetic Acids ***	No	8/09/16	14	ug/l	N/A	60	By-Products of drinking water chlorination.

** **Total Trihalomethanes** – the combined concentration of the following four contaminants; Bromodichloromethane, Bromoform, Chloroform, and Dibromochloromethane.
*** **Haloacetic acids** – the combined concentration of the following five contaminants; Dibromo-, Dichloro-, Monobromo-Monochloro-, and Trichloro –, acetic acids.

Table of Detected Contaminants: Skaneateles Lake source water (City of Syracuse testing)							
Contaminant	**Violation Yes/No**	**Date of Sample**	**Upper Level Detected**	**Unit Measure-ment**	**MCLG**	**Regulatory Limit (MCL, TT or AL)**	**Likely Source of Contamination**
Turbidity	Yes Yes	2/4/16 2/25/16	11.38 24.09 (Note 1)	NTU	N/A	5	Soil run off in lake water

Notes:
1 – The City of Syracuse measures the turbidity in its raw water every 4 hours. Turbidity has no health effects. However, Turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites, including Giardia Lamblia and Cryptosporidium. Please pay special attention to the additional statement in this document regarding Cryptosporidium.

Table of Detected Contaminants: Skaneateles Lake source water (City of Syracuse testing)							
Contaminant	**Violation Yes/No**	**Date of Sample**	**Level Detected**	**Unit Measure-ment**	**MCLG**	**Regulatory Limit (MCL, TT or AL)**	**Likely Source of Contamination**
Barium	No	5/10/16	0.025	mg/L	2	2	Erosion of natural deposits
Chloride	No	5/10/16	20	mg/l	N/A	250	Natural deposits; road salts
Chromium 6 (See note 1)	No	1/17/14 & 4/14/14	0.034 (0.03-0.038)	ug/L	N/A	N/A	Erosion of natural deposits; Industrial sources.
Fluoride	No	Daily	0.74 (0.27-1.02)	mg/l	N/A	2.2	Natural deposits; Water additive that promotes strong teeth; discharge from fertilizer
Nitrate	No	5/10/16	0.55	mg/l	10	10	Runoff from land applied fertilizer and septic tanks; sewage; erosion of natural deposits
Sodium (See note 2)	No	5/10/16	10	mg/l	N/A	n/a	Natural deposits; road salts; water softeners; animal waste
Sulfate	No	5/10/16	12	mg/l	N/A	250	Naturally occurring
Nickel	No	5/10/16	0.00082	ug/L	N/A	N/A	Erosion on natural deposits

Notes:
1 – Chromium 6: Although it is not regulated the City of Syracuse took a sample for Chromium 6 from its distribution system in January and April 2014 and had it tested for Chromium 6. This sample was representative of Skaneateles Lake. For more information on Chromium, please see the section title Chromium 6 Health Information.
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.

WHAT DOES THIS INFORMATION MEAN?

On February 4 & 25, 2016, the turbidity levels entering the City of Syracuse's intake exceeded the maxmium allowable standard of 5 Nephelometric Turbidity Units (NTU) due to high winds. Turbidity levels reached 11.38 NTUs on February 4, 2016. A reading of 24.09 NTU was recorded on February 25, 2016. Notification of this event was made to the public and to the Onondaga County Health Department.

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Please pay special attention to the additional statements in this document regarding Cryptosporidium.

We have learned through our testing that some other 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?

We are required to provide a Water Systems Operation Report each month to the Onondaga County Health Department. They are due on the 10th of the following month. The Onondaga County Health Department received the report for November 2016 on December 11, 2016. This does not pose a threat to the quality of our water.

INFORMATION ON CRYPTOSPORIDIUM AND GIARDIA

New York State law requires water suppliers to notify their customers about the risks of Cryptosporidium and Giardia. These pathogens are of concern because they are found in surface water and ground water under the influence of surface water throughout the United States. Filtration and disinfection are the best methods for use against them, but 100% removal or inactivation cannot be guaranteed. Cryptosporidiosis and Giardiasis are intestinal illnesses caused by these microscopic parasites. Symptoms of infection include nausea, diarrhea, and cramps. Most healthy people can overcome the disease within a few weeks.

During 2016, the City of Syracuse Water Dept. took two raw water samples (one from each intake) each month. No Cryptosporidium or Giardia were detected in any of the City of Syracuse's Raw water samples in 2016.

There have been no reports of health effects caused by *Cryptosporidium* or *Giardia* in Village potable water, and no analytical data to suggest that Village water customers are exposed to these microorganisms. However, the Village is subject to recent USEPA LT2 treatment requirements, which are expected to provide additional disinfection and protection from potential exposure to *Cryptosporidium* and *Giardia*. The Village has met the requirements of the new rule by installing a UV system that was placed into service on March 30, 2012.

FOR ADDITIONAL INFORMATION ON CRYPTOSPORIDIOSIS OR GIARDIASIS PLEASE CONTACT THE ONONDAGA COUNTY HEALTH DEPARTMENT AT 435-6600.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded state and federal requirements, 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 lambia* and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

CHROMIUM 6 HEALTH INFORMATION

Chromium is a common element in rocks, soil, water, plants, and animals. It gets into surface or groundwater after dissolving from rocks and soil. Chromium is used to manufacture steel, to electroplate metal, and in the textile, tanning, and leather industries. Contamination of drinking water may occur if chromium gets into surface or groundwater after improper waste disposal in landfills or by industrial or manufacturing facilities using chromium.

Chromium is found in the environment in two principal forms: chromium (III) and chromium (VI). Chromium (III) compounds are the most common chromium compounds in the environment. Chromium (VI) compounds are less common in the environment and are typically associated with an industrial source. Depending on the conditions, each form of chromium can be converted into the other form in the environment.

Chromium (VI) is the more toxic form of chromium. There is strong evidence from human studies in many countries that occupational exposures to chromium (VI) in air can cause lung cancer. There is weaker evidence from studies in China that long-term exposure to chromium (VI) in drinking water can cause stomach cancer. Chromium (VI) causes cancer in laboratory animals exposed almost daily to high levels in air (lung cancer) or drinking water (mouth and intestinal cancers) over their lifetimes. Adverse gastrointestinal-tract effects (oral ulcers, stomach or abdominal pain, diarrhea) other than cancer also are associated with long-term human exposures to oral doses of chromium (VI). In laboratory animals, repeated exposures to high oral doses of chromium (VI) has caused blood, liver, and kidney damage in adult animals, and can adversely affect the developing fetus and the male and female *reproductive organs. Chemicals that cause cancer or other adverse health effects in people or laboratory animals exposed to high levels also may increase the risk of such effects in people exposed to lower levels over long periods. Prepared by New York State Department of Health – Bureau of Toxic Substance Assessment, March 14, 2011.*

INFORMATION ON FLUORIDE ADDITION

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. Fluoride is added to your water by the City of Syracuse Water Department before it is delivered to us. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at a target level of 0.7 mg/l (parts per million). To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires the City of Syracuse monitor fluoride levels on a daily basis. During 2016 monitoring showed that fluoride levels in your water were within 0.1 mg/L of the 0.7 mg/L target level 87% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/L MCL for fluoride.

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.

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.
- 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.

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. Please call our office if you have questions.