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## 2012 Annual Water Quality and Water Supply Statement

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## **IMPORTANT INFORMATION ABOUT YOUR WATER SUPPLY**

**April 2013**

The Onondaga County Water Authority is pleased to provide its customers and consumers with the Authority's Annual Water Supply Statement and Consumer Confidence Report for the year ending December 31, 2012. Throughout this report readers will be able to find useful information specifically related to OCWA as well as information related to water in general. In addition to mailing a notice to all customers of record announcing the availability of the report, the Authority continues its practice of providing copies of the report to local libraries. OCWA also advertises the availability of the report in local print media.

2012 was a year that saw the finishing touches being completed on several major projects undertaken over the course of the past four years. The completion of the Otisco Lake Water Treatment Plant and Intake improvement projects lead to the production of the highest quality treated water that OCWA has produced and was the culmination of 15 years compliance with the USEPA' Partnership for Safe Water. In addition to producing high quality water the plant is operating more efficiently than ever resulting in considerable energy savings at both facilities.

By year-end construction of three new covered storage tanks, with a combined capacity of 70 million gallons, were completed at costs significantly below projected estimates resulting in a \$2.1 million reduction in the 2010 bond principal funded through the New York State Environmental Facilities Corporation. In addition to savings generated by very competitive bids by the tank manufacturers, OCWA also received bond principal forgiveness through the American Recovery and Reinvestment Act of 2009 which resulted in an additional \$5.1 million reduction in the 2010 bond principal for the tank projects. Ultimately the \$33 million bond issued in 2010 was reduced to \$24.5 million resulting in considerable interest savings for OCWA customers.

OCWA also completed significant energy savings improvements to its Northern Concourse headquarters. The facility's aging roof was re-engineered to add insulation for the cold months and used reflective roofing material to cut down on cooling demands in the warmer months. The project also involved replacement of the facility's original HVAC system and the installation of LED lighting.

Construction of the new West Hill pump station was completed and placed in service early in 2012. The new pump station allows OCWA to now provide customers of the water district with higher quality treated water from the Otisco Lake Treatment Plant replacing water purchased from the Syracuse Water Department. Also the design of improvements and upgrades for the Southern Branch distribution system were completed and the contracts were let for both pump stations, with completion expected by the middle of 2013. The project involves work on the systems two large pumping stations that supply water to the south of Syracuse. Both stations are being upgraded with more energy efficient pumps, motors, electrical controls and enhanced emergency generating power. Once completed the project will allow for more efficient, reliable, and cost effective service to the customers connected to the Southern Branch system.

OCWA continues its consolidation and cost saving initiative related to water service in and around Onondaga County, and as a result another milestone was achieved, by year-end, when the Authority and the Town of Camillus reached an agreement whereby OCWA assumed the operation and maintenance of the Camillus Consolidated Water System effective January 2, 2013. As a result of this, and many other consolidation agreements, OCWA now serves 100,000 Central New York Customers and we welcome the 6,500 Camillus customers as new readers of this report.

To learn more about the OCWA water system and water supply, you are urged to read the information included in this report. Readers that have questions regarding the report or that may require additional information can contact OCWA's Water Quality Manager, Bob Rusyn by calling 315-673-4304, extension 11.

**Michael E. Hooker**  
Executive Director

**Anthony J. Geiss, Jr., P.E.**  
Deputy Executive Director

**Geoffrey G. Miller, P.E.**  
Executive Engineer

## OCWA 2012 Water Supply Statement:

**PWS ID # NY 3304336**

The Onondaga County Water Authority is a public benefit corporation created in 1951 (and began operating in 1955) in accordance with the Public Authorities Law of the State of New York. The Authority was created to finance, construct, operate and maintain a water supply and distribution system for the benefit of the residents in and around Onondaga County. OCWA is one of the 125 largest publicly owned water suppliers in the United States.

The Distribution System Map (found on Page 4) shows the typical service area for each of the three water sources. Wholesale and retail areas within the county are both included. In retail areas the Authority supplies the water, maintains the distribution system and bills the customer directly. In wholesale areas, a municipality or water district buys some or all of its water from the Authority. Wholesale systems maintain their own distribution and customer billing systems. Some key facts about our operation can be found in the OCWA Statistics Table found below:

### **OCWA Statistics:**

#### **For 2012:**

Daily Average System Delivery	38.22 Million Gallons per Day
Maximum Day System Delivery (07/22/12)	50.46 Million Gallons per Day
Average Daily Unmetered Water Use	5.46 Million Gallons per Day
Total Annual Delivered by OCWA	13.99 Billion Gallons
Total Water Treated by OCWA	6.31 Billion Gallons
Total Annual Purchased Water from MWB	7.25 Billion Gallons
Total Annual Purchased Water from Syracuse	0.42 Billion Gallons

#### **As of December 31, 2012:**

Avg. Cost / Residential & Commercial Consumers	\$ 4.33 per 1,000 Gallons
Population Served	340,000 Retail & Wholesale
Accounts	93,512
Miles of Water Main	1,905
Number of Hydrants	12,123
Storage Facilities	50
Pumping Facilities	38

For a more detailed explanation of water sources and the treatment processes employed by the Onondaga County Water Authority and its two wholesale water providers (the Metropolitan Water Board and the City of Syracuse Water Department) please see pages 6 and 7.

For questions about this report, or questions in general related to your water or water supply, a list of phone numbers and contacts can be found on inside back cover of this report.

## **Water Quality - How do you know your water is safe?**

***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.*** Under the Safe Drinking Water Act (SDWA), the United States Environmental Protection Agency (EPA) sets national limits on contaminant levels to ensure the safety of your drinking water. These limits are known as Maximum Contaminant Levels (MCLs). For some contaminants the monitoring techniques may be unreliable, too expensive or too difficult to perform. In these cases, the EPA establishes treatment technique requirements instead of an MCL: if it can not be determined that a contaminant is not there, systems operate as if it is and provide the treatment necessary to produce safe drinking water. The EPA regulations also specify testing and reporting requirements for each contaminant. Something every regulation has in common is a requirement to notify the public if there is a regulation violation. If a regulation is violated the supplier is required to inform the consumers being served by the system. The EPA also requires water suppliers to monitor for unregulated contaminants to provide occurrence data for future regulations.

Currently the EPA has established regulations for 140 individual contaminants. This includes six microbiological contaminants, 4 radionuclides, 26 inorganic chemicals, and 106 organic chemicals. The SDWA requires the EPA to review and revise each regulation on a regular basis. For example, the MCL for trihalomethanes was lowered from 100 to 80 ug/L (parts per billion) as part of a review completed in 1997. The 1996 reauthorization of the SDWA also requires the EPA to consider at least 5 new contaminants for regulation every 5 years.

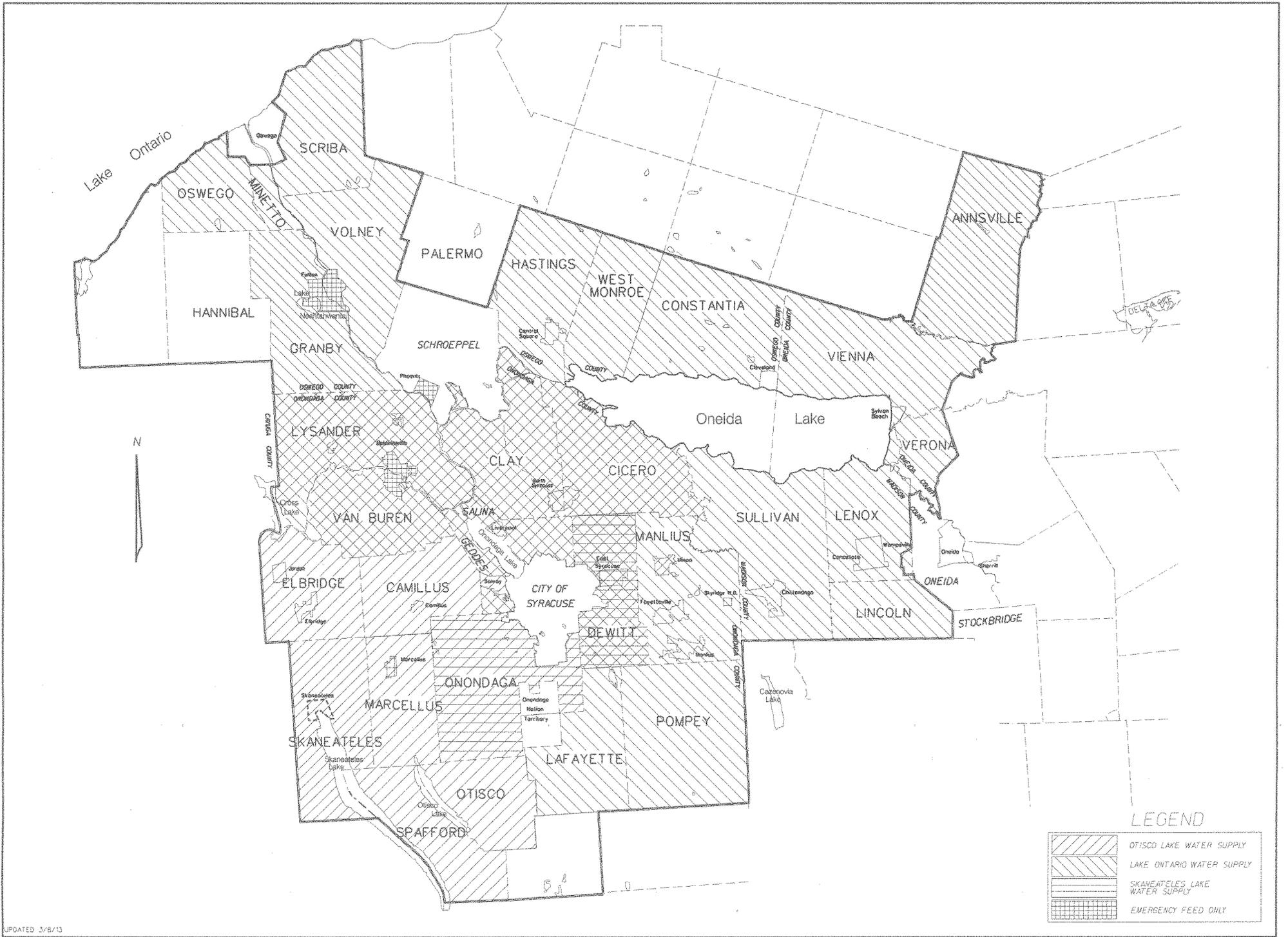
In New York, the State Health Department is responsible for enforcing EPA's regulations. The State has the option to implement alternative regulations when the alternative is equivalent to or more stringent than the EPA's regulation. In Onondaga County, due to the strength of the local unit, the State Health Department has delegated its primary enforcement and surveillance activities to the Onondaga County Health Department. The County Health Department reviews and approves all treatment plant and distribution system modifications as well as new construction. They also review all our operating and monitoring data for compliance on a monthly basis. The Authority takes a similar, cooperative approach with the Health Departments in Oswego, Oneida, and Madison Counties.

The Authority's New York State certified water quality laboratory collects over 4,000-distribution system and 2,000-treatment plant samples each year and performs over 12,000 analyses. We also have about 600 specialized analyses performed by independent laboratories. As part of their surveillance program, the Onondaga County Health Department independently runs additional monthly surveillance monitoring on samples from our distribution system. In 2012, for water delivered to Authority customers, there were two violations to report. The first is a violation for failure to monitor a specific disinfectant (Chlorine Dioxide) on September 23, 2012. This occurred when a technician missed a scheduled daily testing event. The second violation occurred with water purchased from the City of Syracuse. On December 21, 2012 high winds caused the City to experience a Treatment Technique violation when turbidities exceeded 5 NTU's. Other than those exceptions, OCWA, MWB and the City of Syracuse water supply met all New York State Health Department and EPA drinking water standards. In 2012 there were no Maximum Contamination Level violations for any chemical or bacteriological contaminants.

OCWA's and MWB's raw water monitoring programs are specifically designed to address concerns about Otisco Lake and Lake Ontario as main sources of supply. In both instances raw water intakes extend from a mile to a mile and a half out into their respective lakes. This was done by design to minimize the effects of near shore currents and run-off. Lab results consistently confirm that levels of organic compounds and heavy metals do not exceed the MCL. General raw water quality remains high for both Otisco Lake and Lake Ontario. Both sources are monitored more frequently, and for a wider range of compounds than required.

A water quality summary is provided for each of the three supplies in the tables included in the appendix found at the end of this report. More detailed information can be obtained by calling OCWA's Water Quality Manager, Bob Rusyn, at 673-4304 ext. 11.

***Additional information on contaminants and potential health effects can be obtained by calling EPA's "Safe Drinking Water Hotline" at 1-800-426-4791.***



UPDATED 3/8/13

**WATER SOURCES  
FOR  
TOWNS & VILLAGES SERVED**

<u>COUNTY:</u>	<u>TOWNS / CITIES:</u>	<u>WATER SOURCE:</u>	<u>VILLAGES:</u>	<u>WATER SOURCE:</u>
ONONDAGA:	CAMILLUS	OTISCO	BALDWINSVILLE	ONTARIO***
	CICERO	OTISCO / ONTARIO	CAMILLUS	OTISCO
	CLAY	OTISCO / ONTARIO	E. SYRACUSE	OTISCO/ONTARIO
	DEWITT	OTISCO / ONTARIO / SKANEATELES	FAYETTEVILLE	ONTARIO
	ELBRIDGE	OTISCO	LIVERPOOL	OTISCO/ONTARIO
	GEDDES	OTISCO / ONTARIO / SKANEATELES	MANLIUS	ONTARIO
	LAFAYETTE	ONTARIO	MARCELLUS	OTISCO
	LYSANDER	OTISCO / ONTARIO	MINOA	OTISCO/ONTARIO
	MANLIUS	ONTARIO / SKYRIDGE WELLS	N. SYRACUSE	OTISCO/ONTARIO
	MARCELLUS	OTISCO	SOLVAY	OTISCO
	ONONDAGA	OTISCO / SKANEATELES		
	OTISCO	OTISCO		
	POMPEY	ONTARIO		
	SALINA	OTISCO / ONTARIO		
	SKANEATELES	OTISCO		
	SPAFFORD	OTISCO		
	SYRACUSE	OTISCO / ONTARIO***		
TULLY	TULLY VALLEY SPRINGS			
VAN BUREN	OTISCO / ONTARIO			
MADISON:	LENOX	ONTARIO	CANASTOTA	ONTARIO
	SULLIVAN	ONTARIO	CHITTENANGO	ONTARIO
	ONEIDA (City)	ONTARIO ***		
ONEIDA:	VERONA	ONTARIO	SYLVAN BEACH	ONTARIO
	VIENNA	ONTARIO		
	ANNSVILLE	ONTARIO		
OSWEGO:	FULTON	ONTARIO ***	CENTRAL SQUARE	ONTARIO
	GRANBY	ONTARIO	PHOENIX	ONTARIO***
	CONSTANTIA	ONTARIO		
	HASTINGS	ONTARIO		
	OSWEGO (Town)	ONTARIO		
	OSWEGO (City)	ONTARIO***		
	SCHROEPEL	ONTARIO		
	WEST MONROE	ONTARIO		
	VOLNEY	ONTARIO		
	MINETTO	ONTARIO		
	SCRIBA	ONTARIO ***		

\*\*\* Emergency Connection Only

## Water Sources and Treatment

Customers of the Onondaga County Water Authority receive water that originates from Otisco Lake, Lake Ontario, or Skaneateles Lake. Customers located in certain areas may get a mixture of these waters or their source water may vary with changes in seasonal demand. In 2012 OCWA supplied approximately 38.62 million gallons per day to its 340,000 residential customers located in suburban Onondaga County, and parts of Madison, Oneida, and Oswego counties. OCWA also supplies water daily to thirty large industrial customers and three municipal wholesale water customers. OCWA can also supply water on an intermittent or emergency basis to seven additional municipal water systems.

OCWA treats and delivers water from Otisco Lake; the easternmost and smallest finger lake. In 2012, approximately 17.69 million gallons per day or 45.8 % of OCWA's water came from Otisco Lake. The customers receiving water originating from Otisco Lake are mostly located in the southern and western half of Onondaga County.

OCWA buys water wholesale from the Metropolitan Water Board at a number of different supply connections. MWB treats water originating from Lake Ontario near the City of Oswego. In 2012, approximately 19.77 million gallons per day or 51.2% of OCWA's water came from Lake Ontario. The customers receiving water originating from Lake Ontario are mostly located in the northern and eastern half of Onondaga County. OCWA customers in Madison, Oneida, and Oswego counties receive all their water from Lake Ontario.

The City of Syracuse Water Department has the responsibility of treating and delivering water originating from Skaneateles Lake. In 2012, approximately 1.16 million gallons per day or 3.0 % of OCWA's water came from Skaneateles Lake water purchased from the City of Syracuse Water Department through various supply connections. OCWA uses this water to supplement areas close to the city boundary when needed. OCWA customers living in Nedrow, Southwood, and the area west of the Village of Camillus, get water from Skaneateles Lake exclusively.

The first step in water treatment is to protect the source. OCWA and the City of Syracuse have been conducting ongoing watershed inspection, monitoring, and educational programs for a number of years. These programs are in conjunction with the State and Onondaga County Departments of Health. OCWA, MWB, and the City of Syracuse all monitor lake conditions on regular intervals prior to treatment.

The New York State Department of Health has completed a Source Water Assessment Program in order to better recognize potential sources of contaminants in every water source used throughout the State. This assessment can be found in this report under the heading **SWAP Summary for OCWA**.

OCWA has 2 intake pipes located in Otisco Lake. The water entering these pipes is immediately disinfected with either Sodium hypochlorite or Chlorine dioxide to discourage the growth of zebra mussels. The water then travels, by gravity, approximately 5 miles to OCWA's Water Treatment Plant located in Marcellus, NY. Water first enters the Rapid Mix tank where a coagulant (polyaluminum chloride) and a taste and odor control chemical (powdered activated carbon) is added. After 30 seconds of mixing, the water enters the Contact Basins where the calm conditions allow the

coagulant to make the small particles adhere together forming larger particles. Some of these particles settle and are cleaned out later. The contact time in these basins also allows the powdered activated carbon (used about 4 months of the year) to adsorb organic taste and odor causing chemicals. After about 1 hour of contact time the water enters the filters. Particles are removed as the water passes through one of six multimedia filters. These filters consist of granular activated carbon, silica-sand, and high-density sand. The filters are washed periodically and the water used to do this is collected in lagoons and allowed to settle. It is then recycled back to the start of the treatment plant to be treated again. After filtration, the water is again disinfected with Sodium Hypochlorite and fluoride is added. The water is stored in large tanks located at the treatment plant to provide adequate contact time for the chlorine to work. Once the water leaves the tanks orthophosphate is added to provide a coating for the pipes in the distribution system and in your home. This is done in order to prevent the leaching of lead and copper from your pipes and into your water.

The Metropolitan Water Board pumps water from Lake Ontario through an 8 foot diameter intake it shares with the City of Oswego. Upon entering the Raw Water Pumping Station, lake water is treated with carbon dioxide to suppress pH thereby increasing the effectiveness of chemical coagulation. Potassium permanganate is applied seasonally to raw water for taste and odor control and to discourage the growth of zebra mussels. The water is pumped approximately 2 miles to MWB's treatment plant. Water entering the plant is treated with sodium hypochlorite (disinfectant) and polyaluminum chloride (coagulant) and is flash mixed. The water then enters three contact basins where slow mixing allows small particles to accumulate and form larger, more readily filtered particles. After about 2 hours of contact time, the water flows into dual media filters consisting of granular activated carbon and filter sand whereby particulate contaminants are removed. After filtration three treatments are applied: fluoride to reduce tooth decay, sodium hypochlorite to disinfect and sodium hydroxide for corrosion control.

The City of Syracuse does not filter the water that enters their intakes located in Skaneateles Lake. The city has been granted a waiver to provide its customers with unfiltered water subject to strict conditions set by the New York State Department of Health. These conditions include water quality monitoring, backup disinfection, and watershed protection. The City of Syracuse Water Plant is located in the Village of Skaneateles. There they provide disinfection by the addition of chlorine, and fluoridation. Water then flows by gravity into the City's storage reservoirs. Orthophosphate is added to the water (for lead and copper control) as it leaves these reservoirs and it is disinfected again by the addition of sodium hypochlorite.

**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.**

# SWAP Summary for OCWA

The NYS DOH has evaluated OCWA's susceptibility to contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraphs below. 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 OCWA. OCWA provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards.

## **Otisco Lake Source (water produced by OCWA):**

This assessment found a moderate susceptibility to contamination for OCWA's Otisco Lake source of drinking water. The amount of row crops in the assessment area results in a medium susceptibility to pesticides. No permitted discharges are found in the assessment area. There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include: mines. While lakes are not generally considered to have a high natural sensitivity to phosphorus in SWAP, this lake already shows algae problems. Therefore, additional phosphorus contribution would likely result in further water quality degradation.

## **Lake Ontario Source (water purchased from Metropolitan Water Board):**

The Great Lakes' watershed is exceptionally large and too big for a detailed evaluation in the SWAP. General drinking water concerns for public water supplies which use these sources include: storm generated turbidity, wastewater, toxic sediments, shipping related spills, and problems associated with exotic species (e.g. zebra mussels- intake clogging and taste and odor problems). The summary below is based on the analysis of the contaminant inventory compiled for the drainage area deemed most likely to impact drinking water quality at this PWS intake.

This assessment found a moderate susceptibility to contamination for this source of drinking water. The amount of agricultural lands in the assessment area results in elevated potential for pesticides contamination. Non-sanitary wastes may increase contamination potential. There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include: mines.

## **Skaneateles Lake Source (water purchased from the City of Syracuse):**

This assessment found a moderate susceptibility to contamination for this 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.

## Frequently Asked Questions

### **What is the pH of my water?**

OCWA's pH is 7.2 to 8.4, slightly basic.

### **Is my water Hard or Soft?**

The hardness of OCWA's water ranges from 100 to 190 ppm. That is equal to about 6 to 11 grains per gallon. It is considered moderately hard. Hardness is a measurement of calcium carbonate in the water and is not a health concern.

### **Will having a water softener installed improve the water quality in my home?**

No, softening does not improve the sanitary quality of water. Softeners mostly remove calcium carbonate. They will stop 'spotting' or 'scaling' which may occur on certain surfaces, and under certain conditions, when water puddles or droplets are allowed to evaporate. Water softeners may increase water usage because it takes more soft water to rinse away soap. It is ultimately a matter of personal preference.

### **What can I do about dirty or rusty water?**

Water that is dirty or rusty can be caused by changes in flow inside the pipes. Usually, this is due to a sudden increase in flow, but sometimes, also by a change of direction. Leaks, hydrant usage or, changes in valve positioning can rile things up and cause these problems. If the problem doesn't clear up in a short period of time call us and we will try to help. OCWA will investigate and correct the cause of the problem and flush its piping if necessary. You may then be instructed to flush the piping in your own home. The water should clear up after running it a bit.

### **What about Taste or Odor Problems?**

Algae most commonly cause tastes and odors, which are; earthy, musty, grassy, or fishy. At the Otisco Lake and Lake Ontario plants water is filtered through granular activated carbon. At times, powdered activated carbon can also be added to adsorb the offensive tastes and odors and then the carbon and the algae both are filtered out. Algae blooms are common in the warm and sunny months and the carbon dosage is always being monitored and adjusted. Occasionally, some tastes and odors do get through. Customer complaints about taste and odor are taken very serious. Tastes and odors originating with algae have no adverse health effects.

### **What about chlorine taste and odor?**

Chlorine dissipates as it travels through a pipeline. In order to ensure that customers living far from the treatment plant get water that is adequately disinfected, the dosage of chlorine received by customers living close to the plant is higher. OCWA tries to accommodate everyone, but in the case of a person very sensitive to chlorine living very close to the plant, this may not be possible. In order to remove the chlorine yourself, here are a few things you can do:

- Fill a pitcher and let it stand in the refrigerator overnight.
- Fill a glass or jar with water and let it stand in sunlight for 30 minutes.
- Pour water between containers about 10 times.
- Heat the water to about 100 degrees Fahrenheit.
- Chlorine kills organisms that may cause disease. If you remove the chlorine, be sure to refrigerate the water to limit re-growth.

## **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.

In 2012, the presence of Cryptosporidium and Giardia was tested for in Otisco, Ontario, and Skaneateles lakes as part of the routine plans of OCWA, MWB, and the City of Syracuse Water Department. Both the raw lake waters and the treated waters were tested. Additionally, OCWA also tested its recycled wash water, which is water that is reclaimed after filter backwashing and returned to the treatment plant influent stream for retreatment.

OCWA took a total of 36 Cryptosporidium and Giardia samples in 2012 representing water originating from Otisco Lake. Monthly samples were taken from the Raw (untreated) water and the Finished (treated) water. The Recycled water was also sampled monthly. Cryptosporidium was not detected in any sample in 2012. Giardia was detected in February, March and September's Recycled Water Sample. No other samples of the monthly Raw water, Finished water, or Recycle water had any Cryptosporidium or Giardia detected.

MWB took a total of 4 Cryptosporidium and Giardia samples in 2012 representing water originating from Lake Ontario. Raw water samples were taken in the months of March, June, September, and December. No Cryptosporidium or Giardia was detected in any of MWB's Raw water samples.

The City of Syracuse Water Dept. took a total of 44 Cryptosporidium and Giardia samples in 2012 representing water originating from Skaneateles Lake. Two Raw water samples (one from each intake) and, one finished water sample were taken each month. Two additional sites in the distribution system were sampled quarterly (Feb, May, Aug, and Nov). No Cryptosporidium or Giardia were detected in any of the City of Syracuse's Raw water or Finished water samples.

During 2012, No Cryptosporidium or Giardia were found in the Finished of Otisco Lake, Lake Ontario, or Skaneateles Lake.

***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).***

Individuals who think they may have Cryptosporidiosis or Giardiasis should contact their health care provider immediately. For additional information on Cryptosporidiosis or Giardiasis you may contact the Onondaga County Health Department, in writing at 421 Montgomery St., 12<sup>th</sup> Floor, Syracuse, NY 13202 or by calling 435-6600.

Bottled water may be a viable alternative, however the same degree of caution applied to your tap water should be used in selecting a bottled water supplier. To that end, a list of certified bottled waters for sale in New York (along with their sources) can be obtained from the New York State Department of Health by calling 1-800-458-1158.

The EPA's Surface Water Treatment Rule (SWTR) established water treatment standards specifically designed to ensure the removal or deactivation of Giardia and other microbial contaminants. The EPA is currently working on enhancing these standards to further ensure protection against exposure to Cryptosporidium from drinking water. The OCWA and MWB treatment plants are in full compliance with all current operational, monitoring, and reporting requirements. OCWA's internal performance standards are actually tougher than the law currently requires.

For example, the SWTR requires a treatment plant's finished water turbidity (a measure of clarity used to check filtration particulate removal) to be less than 0.30 NTUs 95% of the time. For 2012 the OCWA filtration plant finished water turbidity was less than 0.08 NTUs 95% of the time based on continuous four-hour sampling intervals. MWB's filtration plant finished water turbidity, for 2012, averaged less than 0.07 NTUs 95% of the time, again based on four-hour sampling intervals. Cryptosporidium regulations contain improved filtration performance requirements to ensure removal of any protozoans that may be present. Part of the enhanced filtration requirements involved lowering the turbidity criteria from the 0.50 to the 0.30 NTU range. Both the OCWA and MWB treatment plants are doing better than the regulated levels.

## Pharmaceuticals and Personal Care Products in Drinking Water

In 2008 the Associated Press released a three-piece story on pharmaceuticals and personal care products in drinking water sources. While the Onondaga County Water Authority was not one of the systems covered by the story, the article did stir interest of the Boards and Management of both OCWA and the Metropolitan Water Board (MWB). Accordingly, starting in 2008 the Authority implemented an annual testing program to learn more about potential pharmaceutical and personal care product contaminants that might be found in the Otisco Lake and Lake Ontario water supplies.

While none of us want to find any contaminants in our drinking water, as zero is the desirable level, it is important to begin the process of gathering occurrence data to allow for researchers to target the most commonly found contaminants. As such the Authority intends to continue to collect data related to pharmaceuticals and personal care products in water and will also continue its process of sharing the data with both the researchers and OCWA's consumers

The 2008 round of samples involved testing for 34 potential contaminants, and with the exception of two items, the results were found to be non-detectable. For 2009, based on the recommendation of researchers studying the occurrence of pharmaceuticals and personal care products, testing was expanded to 112 potential contaminants and positive results were obtained for 17 of the items. This testing was repeated in 2010 with 12 positive results. For 2011, 13 positive results were found and in 2012 there were 11 positive results.

To learn more about the test results and related information for the 2008 through 2012 you are encouraged to visit the OCWA web site ([www.ocwa.org](http://www.ocwa.org)). Anyone that has questions about results, or any of the other water quality reports posted on the Authority web site are encouraged to contact OCWA's Water Quality Manager, Bob Rusyn, Bob can be reached at 315-455-7061, extension 3344.

### General Information related to Pharmaceuticals and Other Emerging Contaminants

Pharmaceuticals and personal care products, known in the water industry as PPCPs, are a group of compounds consisting of human and veterinary drugs (prescription or over-the-counter) and consumer products, such as fragrances, lotions, sunscreens and housecleaning products.

These compounds have been detected in trace amounts in surface water, drinking water and wastewater effluent sampling because water professionals have the technology today to detect more substances, at lower levels, than ever before.

Many PPCP compounds are being found at extremely low levels, typically single digit parts per trillion (ppt). Drinking-water standards are typically set in the parts per-billion range, which is 1,000 times higher. The fact that the substance is detectable in drinking water does not mean the substance is harmful to humans. To date, research throughout the world has not demonstrated an impact on human health from trace amounts of PPCPs found in drinking water.

The water community is committed to protecting the public health. Water professional are examining the occurrence of PPCPs in drinking-water supplies and the effectiveness of current treatment techniques on removal, and are paying close attention to health-effects research in this area, including research being conducted by the Water Research Foundation.

In addition, the U.S. Environmental Protection Agency (EPA) maintains an active program called the Contaminant Candidate List to identify contaminants in public drinking water that warrant detailed study. While the 2009 list does not currently include any PPCPs, EPA is considering testing for PPCP compounds in the very near future.

**Safer medication disposal:** To help safeguard water quality, discard your unwanted or expired medications in the trash, rather than dumping them down the sink or toilet. Keep prescriptions in their original container, remove or black out personal information on labels, then hide them in an empty, sealable container before placing in your garbage bag. For detailed tips on responsible medication disposal and protecting our water supply visit [www.PainInTheDrain.com](http://www.PainInTheDrain.com) and then see the Rx Disposal section.

## 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 Onondaga County Water Authority 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>.”**

### Additional Facts on Lead

Lead is a naturally-occurring metal that for most of the 20<sup>th</sup> century was used regularly as a component of paint, piping (including water service lines), solder, brass, and until the 1980s, as a gasoline additive. We no longer use lead in many of these products, but older products – such as paints and plumbing fixtures in older houses – that contain lead remain. EPA and the U.S. Centers for Disease Control (CDC) report that lead paint (and the contaminated dust and soil it generates) is the leading source of lead exposure in older housing.

While lead is rarely present in water coming from a treatment plant, it can enter tap water through corrosion of some plumbing materials. A number of aggressive and successful steps have been taken in recent years to reduce the occurrence of lead in drinking water.

In 1986, Congress amended the national Safe Drinking Water Act to prohibit the use of pipe, solder or flux containing high lead levels. The Lead Contamination Control Act of 1988 led schools and day-care centers to repair or remove water coolers with lead-lined tanks. EPA provided guidance to inform and facilitate their action.

Since the implementation of the Lead and Copper Rule (1991), many community drinking water systems are required to actively manage the corrosivity of water distributed to customers. In addition, community water systems conduct routine monitoring at selected houses where lead service lines and lead solder. If more than 10 percent of the homes tested have elevated lead levels (defined as more than 15 parts per billion), water providers must notify their consumers via several means. They must also take steps to reduce the problem, including improving corrosion control and possibly replacing lead service lines that contribute to lead contamination.

You can't see, smell or taste lead in your water. ***Testing at the tap is the only way to measure the lead levels in your home or workplace.*** If you choose to have your tap water tested, be sure to use a properly certified laboratory. Testing usually costs between \$20 and \$100.

## Table of Detected Contaminants

### Lead & Copper in the distribution System

Contaminant	Violation Yes / No	Date(s) of Sampling	Average Level found (Range)	90th Percentile Value	Units Measured	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Copper	No	Jun-11	0.1 (nd -1.2)	0.21	mg/l	0	AL = 1.3*	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Lead	No	Jun-11	1.8 (nd - 19)	2.8	ug/l	0	AL = 15*	Corrosion of household plumbing systems; Erosion of natural deposits;

\*AL (Action Level) – Only 10% of samples can exceed this level.

#### About Lead and Copper:

In order to deter the leaching of lead and/ or copper from our customers' pipes, OCWA has been mandated to implement corrosion control. Lead & Copper Sampling is required every 3 years. OCWA will sample again in 2014.

The method of corrosion control used on waters originating from Otisco and Skaneateles lakes is the addition of orthophosphate. The adjustment of pH is the method used for Ontario water. OCWA's latest sampling period was in June of 2011 when OCWA sampled and tested customers' taps to make sure the corrosion controls were effective.

**90<sup>th</sup> Percentile Values for LEAD & COPPER:** The values reported for lead and copper represent the 90<sup>th</sup> percentile. The 90<sup>th</sup> percentile value is the concentration that 90% of the taps sampled were at or below. Since the Action Level for Lead is 15 ug/l, 90% of the taps tested had to be at or below this value. As you can see from the above chart 90% of the taps tested were at or below 2.8 ug/l in June of 2011. The Action Level for Copper is 1.3 mg/l. The observed 90<sup>th</sup> percentile for Copper was 0.21 mg/l. Of the 124 samples that OCWA tested in June of 2011, Only one sample exceeded the action level for lead. No sample exceeded the action level for copper.

The testing showed that our methods of corrosion control are working.

## Table of Detected Contaminants

### Turbidity at Entry Point

Contaminant	Water Source	Violation Yes / No	Sampling frequency (highest reading)	Average Level found (Range)	Units Measured	MCLG	Regulatory Limit (MCL, TT, or AL)	Lowest % of Monthly tests meeting limit	Likely Source of Contamination
Turbidity	Otisco	No	Every 4 hrs (Aug-12)	0.06 (.03 -.12)	NTU	N/A	TT = 0.3 NTU for systems that filter	100%	Soil run off
	Ontario	No	Every 4 hrs (Jul-12)	0.06 (.03 -.11)	NTU	N/A	TT = 0.3 NTU for systems that filter	100%	
	Skaneateles	Yes*	Every 4 hrs (Dec-11)	0.52 (.11-18.49)	NTU	N/A	MCL = 5.0 NTU for systems that don't filter	N/A	

#### About Turbidity:

Customers of the Onondaga County Water Authority (OCWA) get their water from one of three sources. Water may originate from Otisco Lake, which is treated by OCWA itself, Lake Ontario which is treated by the Metropolitan Water Board (MWB) and sold to OCWA, or Skaneateles Lake which is treated by the Syracuse Water Department and also sold to OCWA. Customers may also get a mixture of these waters.

Water purveyors are required to measure **turbidity** as water leaves their plants. Turbidity is a measure of the cloudiness of water. Turbidity is monitored because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants. Treatment plants that filter also measure it because it is a good indicator of filter efficiency. Otisco Lake and Lake Ontario waters are filtered. Skaneateles Lake water is not.

**\*Treatment Technique Violation for Turbidity;** On December 21, 2012, because of high winds, the turbidity levels entering the City of Syracuse's intake exceeded the maximum allowable standard of 5 Nephelometric Turbidity Units (NTU). Turbidity levels reached 18.49 NTU's on this date. Notification of this event was made to the public and to the Onondaga County Health Department .

**Health Effects of Turbidity:** 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.

## Table of Detected Contaminants

### Bacteria Found in the Distribution System

Contaminant	Sample Source	Violation Yes / No	Date(s) of Sampling in 2012	Month with Highest % positive samples	Units Measured	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Total Coliform Bacteria*	OCWA Distribution System	No	approx 79 per week	August 0.56% (2 out of 357)	N/A	0	> 5 % Positive samples in any month	Naturally present in the environment

\* Whenever a positive sample for Total Coliform is found, the sample is further tested for the presence of E.coli., plus 4 additional check samples are taken. No Samples were found to be E.Coli positive in 2012. OCWA regularly samples about 79 sites per week located throughout our distribution system. We test these sites for both bacteria and disinfectant residual to make sure that our water is of a safe and sanitary quality.

### Disinfectant & Disinfection By-products Found in the Distribution System

Contaminant	Sample Source	Violation Yes / No	Date(s) of Sampling in 2012	Level found (Range)	Units Measured	MCLG	Regulatory Limit MCL, TT, AL or MRDL	Likely Source of Contamination
Chlorine Residual	OCWA Distribution System	No	approx 79 per week	0.52 (nd - 1.35)	mg/l	N/A (MRDLG)	4 (MRDL)	Added to water to kill harmful bacteria and to prevent the regrowth of bacteria.
Chlorite	Otisco	No	Monthly; May to Nov. '2012	0.22 (0.15 - 0.30)	mg/l	N/A	1	By-product of drinking water disinfection at plants using Chlorine Dioxide
Total Trihalo Methanes**	OCWA Distribution System	No	Feb Stage 1 Sampling	53.47 (31 - 83)	ug/l	N/A	80	By-product of drinking water chlorination. TTHM's form when source water contains large amounts of organic matter.
Total Trihalo Methanes**	OCWA Distribution System	No	May, Aug, Nov. Stage 2 Sampling	77.3 (27 - 93)	ug/l	N/A	80	
Haloacetic acids***	OCWA Distribution System	No	Feb Stage 1 Sampling	26.58 (25 - 43)	ug/l	N/A	60	By-product of drinking water chlorination.
Haloacetic acids***	OCWA Distribution System	No	May, Aug, Nov. Stage 2 Sampling	35.7 (4 - 39)	ug/l	N/A	60	

**Disinfection by-products;** During disinfection, certain by-products form as a result of chlorine reacting with naturally occurring organic matter. The disinfection process is carefully monitored so that disinfection is effective, while levels of disinfection by-products are kept low. Trihalomethanes (THM's) and Haloacetic acids (HAA's) are classes of chemicals that OCWA is required to monitor for in its distribution system.

**Stage 1 and Stage 2 Disinfection by-product results;** THM and HAA results are recorded twice in the above table because the EPA changed the Disinfection by-product Rule after the first Quarter of 2012. The level found for Stage 1 results is the running annual average for all sample sites over a period of 4 consecutive quarters. The level found for Stage 2 results is the running annual average of our highest recorded sampling site.

\*\* See 'Terms & Abbreviations' for the listing of Trihalomethanes contaminants

\*\*\* See 'Terms & Abbreviations' for the list of Haloacetic acids contaminants

## Table of Detected Contaminants

### Inorganic Contaminants Found at Entry Point

Contaminant	Water Source	Violation Yes / No	Date(s) of Sampling	Average Level found (Range)	Units Measured	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Aluminum	Otisco	No	Apr-12 Oct-12	0.074 (nd - .048)	mg/l	N/A	N/A	Erosion of natural deposits; Residual Aluminum may be from a chemical used in the treatment process.
Barium	Otisco	No	Apr-12 Oct-12	0.037 (.035 - .038)	mg/l	2	2	
	Ontario	No	Jul-12	0.024	mg/l	2	2	
	Skaneateles	No	May-12	0.025	mg/l	2	2	Erosion of natural deposits.
Calcium	Otisco	No	Apr-12 Oct-12	43 (40 - 46)	mg/l	N/A	N/A	Naturally occurring.
	Ontario	No	Jul-12	33.4	mg/l	N/A	N/A	
Chloride	Otisco	No	Apr-12 Oct-12	40 (39 - 40)	mg/l	N/A	250	Naturally occurring; Road salts.
	Ontario	No	Jul-12	30.8	mg/l	N/A	250	
	Skaneateles	No	May-12	19	mg/l	N/A	250	
Chlorite	Otisco	No	Daily	0.26 (nd - 0.49)	mg/l	N/A	1	By-product of drinking water disinfection at plants using Chlorine Dioxide
Chlorine Dioxide Residual (1)	Otisco	Yes*	Daily	70 (nd - 380)	ug/l	N/A	800 (MRDL)	By-product of drinking water disinfection at plants using Chlorine Dioxide

**(1) Chlorine Dioxide and Chorite** were tested for daily for 210 out of 211 days in 2012. For 211 days in 2012 OCWA was adding Chlorine Dioxide as a preoxidant in order to control Zebra Mussels at the intake, provide adequate disinfection, and control the formation of undesirable disinfection by-products such as Trihalomethanes and Haloacetic acids. OCWA intends to add Chlorine Dioxide again during warm water conditions in 2013.

\* **Violation for Chlorine Dioxide;** On September 23, 2012, due to a Techicians error we did not sample for chlorine dioxide. Records indicate that normal amounts of chlorine dioxide were added to the water on that date but actual laboratory testing was not preformed. Notification of this event was made to the Onondaga County Health Department. Because of this we are require to included the following statement in this report;

We are required to monitor your drinking water for specific disinfectants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. On September 23, 2012, we did not monitor or test for chlorine dioxide at the entrance to the distribution system and therefore cannot be sure of the chlorine dioxide level at that time.

## Table of Detected Contaminants

### Inorganic Contaminants Found at Entry Point

Contaminant	Water Source	Violation Yes / No	Date(s) of Sampling	Average Level found (Range)	Units Measured	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Chromium	Otisco	No	Apr-12 Oct-12	2.5 (2.0 -2.9)	ug/l	100	100	Erosion of natural deposits.
Chromium 6 (2)	Ontario	No	Sep-12	0.09	ug/l	N/A	N/A	Erosion of natural deposits; Industrial sources.
	Skaneateles	No	Sep-12	0.022	ug/l	N/A	N/A	
Copper	Otisco	No	Apr-12 Oct-12	0.0058 (.0048-.0068)	mg/l	N/A	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Fluoride (3)	Otisco	No	Daily	0.86 (.18- 1.00)	mg/l	N/A	2.2	Erosion of natural deposits; Water additive that promotes strong teeth; discharge from fertilizer.
	Ontario	No	Daily	0.82 (.10 - 1.00)	mg/l	N/A	2.2	
	Skaneateles	No	Daily	0.84 (.64 - 1.05)	mg/l	N/A	2.2	
Free Chlorine Residual	Otisco	No	Every 4 hrs	0.99 (.74 - 1.30)	mg/l	N/A	4 (MRDL)	Added to water to kill harmful bacteria and to prevent the re-growth of bacteria.
	Ontario	No	Every 4 hrs	0.95 (.68 - 1.38)	mg/l	N/A	4 (MRDL)	
	Skaneateles	No	Every 4 hrs	1.34 (.63 - 2.90)	mg/l	N/A	4 (MRDL)	

**(2) Chromium 6;** Although it is not regulated OCWA, MWB, and the City of Syracuse took 3 samples from the entrance point of their distribution systems in Sept 2012 and had them tested for Chromium 6 at low detection levels. These samples were representative of all 3 of our source waters. For more information on Chromium 6 see page 12.

**(3) Information on Fluoride Addition;** OCWA is one of many drinking water systems that provide drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the United States Center for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal range from 0.8 to 1.2 mg/l. To ensure that the fluoride supplement in your water provides optimal dental protection, the NYS Health Department requires that we monitor fluoride levels on a daily basis. During 2012 monitoring showed fluoride levels in your water were in the optimal range 96.2% of the time for Otisco Lake water, 95% of the time for Lake Ontario water, and 84.2% for Skaneateles water.

## Table of Detected Contaminants

### Inorganic Contaminants Found at Entry Point

Contaminant	Water Source	Violation Yes / No	Date(s) of Sampling	Average Level found (Range)	Units Measured	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Lead	Otisco	No	Apr-12 Oct-12	1.05 (nd - 1.1)	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits;
Magnesium	Otisco	No	Apr-12 Oct-12	12 (11 - 12)	mg/l	N/A	N/A	Naturally occurring.
	Ontario	No	Jul-12	8.68	mg/l	N/A	N/A	
Nickel	Otisco	No	Apr-12 Oct-12	1.3 (1.1 - 1.5)	ug/l	N/A	N/A	Erosion of natural deposits.
Nitrate	Otisco	No	Apr-12 Oct-12	0.33 (0.13 - 0.53)	mg/l	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; Erosion of natural deposits.
	Ontario	No	Jul-12	0.26	mg/l	10	10	
	Skaneateles	No	May-12	0.52	mg/l	10	10	
Sodium (4)	Otisco	No	Apr-12 Oct-12	21 (20 - 22)	mg/l	N/A	See Health Effects*	Naturally occurring; Road salts; water softeners; animal wastes.
	Ontario	No	Jul-12	16.2	mg/l	N/A	See Health Effects*	
	Skaneateles	No	May-12	9.5	mg/l	N/A	See Health Effects*	
Sulfate	Otisco	No	Apr-12 Oct-12	15 (14 - 15)	mg/l	N/A	250	Naturally occurring.
	Ontario	No	Jul-12	24.3	mg/l	N/A	250	
	Skaneateles	No	May-12	14	mg/l	N/A	250	

**(4) Health Effects of Sodium;**

There is no MCL for Sodium. However, 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 diets.

**Table of Detected Contaminants**  
**Organic Contaminants Found at Entry Point**

Contaminant	Water Source	Violation Yes / No	Date(s) of Sampling	Average Level found (Range)	Units Measured	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Di(2-ethylhexyl) phthalate (DEHP)	Skaneateles	No	May-12	0.77	ug/l	0	6	Used plastic products such as polyvinyl chloride, plastic toys, vinyl upholstery, adhesives and coatings. Compound likely to be released to the environment during production and waste disposal of these products. Also used in inks, pesticides, cosmetics, and vacuum pump oil.
Dissolved Organic Carbon	Otisco	No	Monthly 2012	2.9 (1.7 -7.5)	mg/l	N/A	N/A	Naturally occurring.
	Ontario	No	Feb, Jun, Aug, Nov. 2012	2 (nd -3.8)	mg/l	N/A	N/A	
Total Organic Carbon	Otisco	No	Monthly 2012	2.3 (1.5 - 5.0)	mg/l	N/A	N/A	Naturally occurring.
	Ontario	No	Feb, May, Jun ,Aug, Nov. '2012	1.9 (1.5 -2.5)	mg/l	N/A	N/A	

**Radionuclides Found at Entry Point**

Contaminant	Water Source	Violation Yes / No	Composite of quarterly samples	Level found	Units Measured	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Gross Beta	Ontario	No	Feb, May, Aug, Nov. 2012	3.96	pCi/l	0	50*	Decay of natural deposits and man-made emissions.
Radium 226	Ontario	No	Feb, May, Aug, Nov. 2012	0.303	pCi/l	0	5**	Erosion of natural deposits.
Radium228	Ontario	No	Feb, May, Aug, Nov. 2012	0.968	pCi/l	0	5**	Erosion of natural deposits.
Total Uranium	Ontario	No	Feb, May, Aug, Nov. 2012	0.379	ug/l	N/A	30	Erosion of natural deposits.

\* The State considers 50 pCi/l to be the level of concern for beta particles

\*\* 5 pCi/L is the regulatory limit for Combined Radium 226 & 228

**Physical Characteristics Found at Entry Point**

Contaminant	Water Source	Violation Yes / No	Date(s) of Sampling	Average Level found (Range)	Units Measured	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Color	Ontario	No	Jul-12	5	Units	N/A	15	Natural color may be caused by decaying leaves, plants ,and soil organic matter.

## 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.*

# Contaminants Tested for but Not Detected

(Non-Detects Arranged By Source)

Principal Organic Contaminants (Otisco, Ontario, Skaneateles)	Synthetic Organic Contaminants (Otisco, Ontario, Skaneateles)	Inorganic Contaminants (Otisco, Ontario, Skaneateles)
Benezene	Alachlor	Antimony
Bromobenzene	Aldicarb	Arsenic
Bromochloromethane	Aldicarb sulfone	Beryllium
Bromomethane	Aldicarb sulfoxide	Cadmium
N-Butylbenzene	Aldrin	Cyanide
sec-Butylbenzene	Atrazine	Iron
tert-Butylbenzene	Benzo(a)pyrene	Manganese
Carbon Tetrachloride	Butachlor	Mercury
Chlorobenzene	Carbaryl	Nitrite
Chloroethane	Carbofuran	Selenium
Chloromethane	Chlorodane	Silver
2-Chlorotoluene	Dalapon	Thallium
4-Chlorotoluene	Di(2-ethylhexyl)adipate	Zinc
Dibromomethane	Dibromochloropropane	
1,2-Dichlorobenzene	Dicamba	(Ontario, Skaneateles)
1,3-Dichlorobenzene	Dieldrin	
1,4-Dichlorobenzene	Dinoseb	Chromium
Dichlorofluoromethane	Endrin	Nickel
1,1-Dichloroethane	Ethylene Dibromide	
1,2-Dichloroethane	Glyphosate	(Ontario)
1,1-Dichloroethene	Heptachlor	
cis-1,2-Dichloroethene	Heptachlor epoxide	Copper
trans-1,2-Dichloroethene	Hexachlorobenzene	Lead
1,2-Dichloropropane	Hexachlorocyclopentadiene	
1,3-Dichloropropane	Lindane	(Otisco)
2,2-Dichloropropane	Methomyl	
1,1-Dichloropropene	Methoxychlor	Chromium 6
cis-1,3-Dichloropropene	Metolachlor	
trans-1,3-Dichloropropene	Metribuzan	
Ethylbenzene	Oxamyl vydate	<b>Physical Characteristics</b> (Otisco, Ontario, Skaneateles)
Hexachlorobutadiene	Pentachlorophenol	
Isopropylbenzene	Pichloram	
p-Isopropyltoluene	Polychlorinatedbiphenyls	Odor
Methylene Chloride	Propachlor	
MTBE	Simazine	(Otisco, Skaneateles)
n-Propylbenzene	Toxaphene	
Styrene	2,4 -D	Color
1,1,1,2-Tetrachloroethane	2,4,5-TP (Silvex)	
1,1,1,2,-Tetrachloroethane	3-Hydroxycarbofuran	<b>Radiological Contaminants</b> (Ontario)
Tetrachloroethene		
Toluene	(Otisco, Ontario)	
1,2,3-Trichlorobenzene		Cesium-137
1,2,4-Trichlorobenzene	Diquat	
1,1,1,-Trichloroethane	Di(2-ethylhexyl)phthalate	(Skaneateles)
1,1,2,-Trichloroethane	Endopthall	
Trichloroethene	2,3,7,8-TCDD (Dioxin)	Radium-226
Trichlorofluoromethane		Radium-228
1,2,3,-Trichloropropane		
1,2,4-Trimethylbenzene		(Ontario, Skaneateles)
1,3,5-Trimethylbenzene		
Vinyl Chloride		Gross Alpha
o-Xylene		
m-Xylene		
p-Xylene		

The frequency that various contaminants are tested for is regulated by the State and can vary from source to source. The State allows for some contaminants to be tested for less than once a year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, is more than one year old. Some contaminants are monitored at the various sources more often than required.

## Terms & Abbreviations

**Action Level (AL)** – the concentration of a contaminant, which if exceeded, triggers treatment or other requirements that a water system must follow.

**Chlorine Residual** – the amount of chlorine in water available for disinfection.

**Disinfection By-product (DBP)** – Chemical compounds that result from the addition of chlorine to water containing organic substances.

**HAA (Haloacetic acids)** – the combined concentration of the following five contaminants; Dibromo-, Dichloro-, Monobromo-, Monochloro-, and Trichloro-, acetic acids.

**Inorganic Contaminant** – chemical substances of mineral origin, such as iron or manganese.

**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 possible.

**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.

**Maximum Residual Disinfectant Level Goal (MRDLG)** – the level of a disinfectant in drinking water 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 contaminants.

**mg/l** – (milligrams per liter) corresponds to one part of liquid in one million parts of liquid (parts per million or **ppm**).

**Microbiological Contaminant** – Very small organisms, such as bacteria.

**N/A** – not applicable.

**nd** – not detected at testing limits.

**ng/l** – (nanograms per liter) corresponds to one part of liquid in one trillion parts of liquid (parts per trillion or **ppt**).

**NTU** – Nephelometric Turbidity Unit - a measurement of particles in water.

**Organics** – substances containing the element carbon. These can be naturally occurring or man-made, and can include pesticides, solvents, and by-products of disinfection.

**pCi/L** – Pico curies per liter; units of concentration of radioactive substances.

**Radionuclides** – Contaminants giving off ionizing radiation.

**TTHM – (Total Trihalomethanes)** – the combined concentration of the following four contaminants; Bromodichloromethane, Bromoform, Chloroform, and Dibromochloromethane.

**TON (Threshold Odor Number)** – The greatest number dilutions of a sample with “odor-free” water yielding a definitely perceptible odor.

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

**ug/l** – (micrograms per liter) corresponds to one part of liquid in one billion parts of liquid (parts per billion or **ppb**).

## Conservation:

Unlike many areas in the country, OCWA has access to adequate amounts of water that should meet both current and future needs. Otisco Lake can safely yield 25 million gallons of water per day. Lake Ontario is a direct connection to the Great Lakes and the Great Lakes contain 20% of the world's fresh water. However, even with this abundance, water must be used wisely. It takes energy and resources to treat and deliver the water to the consumer. On hot summer days demand can increase by as much as 67% over an average days production. In an effort to promote the wise use of water, to avoid waste and reduce energy demands, please note the following conservation tips:

- Fix any leaky faucets. A leak streaming at 1/16<sup>th</sup> at 60 psi can amount to more than 24,000 gallons in one month.
- Water lawns only when necessary. When walking on the grass, does it spring back up? If it does, the lawn does not need watering.
- When watering lawns or gardens, give them a thorough soaking during the most effective time to water. This is after sunset and before 10:00 a.m., this allows more time for water to soak into the ground. Watering during daylight hours results in water loss due to evaporation. Timely watering also helps minimize energy and production peaks during the driest parts of the year.
- When washing a car, use a bucket for washing and turn on the hose only for rinsing. Do not let water run continuously from a hose when not in use.
- By placing a layer of mulch around trees and shrubs the moisture level is maintained for plants. Mulch will also discourage weed growth.
- If you have a swimming pool, fill it during the night when demands on power and production systems are less.

***If you're interested in additional water savings tips call our Customer Service Department at 455-7061 ext. 3335.***

## Water Pressure:

**Water Pressure:** The New York State Department of Health standard indicates that normal water pressure in the distribution system should be approximately 60 to 80 psi and not less than 35 psi while maintaining a minimum pressure of 20 psi under all conditions of flow. OCWA attempts to operate and maintain the system within these parameters as much as possible, however, due to the significantly varying topography in Central New York it is not possible to do so in all areas of the system. In areas that the pressures exceed 80 psi, the New York State Uniform Building Code requires that homes have pressure-reducing valves (PRVs). Customers are responsible for installing the PRVs, and to periodically check/maintain this device; failure to do so may result in water damage and/or damaged water fixtures. When required for meter installation, the PRVs are to be installed either in a meter pit or within the house just before the meter. Customers should check the requirements within their municipality, but some require that a licensed plumber complete the installation.

### ***Other Important Phone Numbers:***

<b><u>Nature of Call:</u></b>	<b><u>Contact:</u></b>	<b><u>Phone Number:</u></b>
Inquiries about This Report	Bob Rusyn, Water Quality Manager	673-4304 ext. 11
<b>After Hours/ Weekend Emergency</b>	<b>Answering Service</b>	<b>1-315-475-7601</b>
Water Quality Questions	Steve Berson, Water Systems Chemist	455-7061 ext. 3141
Billing Inquiries	Customer Service Dept.	455-7061 ext. 3335
Low Pressure / Discolored Water	Operations Dept.	455-7061 ext. 3120
Report a Leak	Distribution Maintenance Dept.	455-7061 ext. 3127
OCWA Board Meeting Information	Board of Directors Office	455-7061 ext. 3112
Onondaga County Dept. of Health		435-6600
Oswego County Dept. of Health		349-3557
Madison County Dept. of Health		366-2526
Oneida County Dept. of Health		798-5064
New York State Dept. of Health		1 (800) 458-1158
USEPA	Safe Drinking Water Hotline	1 (800) 426-4791