

**CITY OF SYRACUSE
DEPARTMENT OF WATER**

Water Newsletter May 2011



Annual Drinking Water Quality Report for 2010

City of Syracuse, New York

(Public Water Supply ID#3304334)



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SYRACUSE WATER NEWSLETTER



Stephanie A. Miner, Mayor

Deborah Somers, Commissioner of Water

The Syracuse Water Newsletter is a publication of the City of Syracuse Department of Water.

This publication contains valuable information about your water system and about the water that the Syracuse Water Department supplies. Information on the FEMA National Flood Insurance Program is also included.

If you would like other information about the City of Syracuse or have a question about City services in general, feel free to phone City Line, 448-CITY or 448-2489. You will also find useful information about the City of Syracuse on the worldwide web by logging onto www.syracuse.ny.us.

Stephanie A. Miner, Mayor
City of Syracuse

May 2011

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INTRODUCTION

The Annual Drinking Water Quality Report allows the Syracuse Water Department to provide customers and users of the City of Syracuse water system with useful information about the water system, the quality of the water and about important issues affecting your water supply. This report is prepared pursuant to regulations and guidelines of both the United States Environmental Protection Agency (USEPA) and the NYS Department of Health (DOH).

The City of Syracuse Water Department (SWD) provides retail water service to the entire City of Syracuse. Through wholesale and other service agreements, the SWD also supplies water to portions of the towns of DeWitt, Onondaga, Geddes, Camillus, Skaneateles, Salina, and the villages of Jordan and Elbridge. If you have any questions about the source of your water, check with the water purveyor that sends your water bill and ask for information concerning the source of water that you receive at your home or business.

It should be noted that all 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 EPA's Safe Drinking Water Hotline (1-800-426-4791) or the Health Department at 435-6600.

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 providers. EPA/Center for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming;
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses;
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; and
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA and the NYS DOH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

In this report we describe your water system and what the Syracuse Water Department is doing to meet federal and state water quality regulations and provide the best quality water we possibly can for you, our customers. If you have any comments about this report, or questions about your water system, please do not hesitate to contact the Syracuse Water Department at 473-2609. You may send e-mail to the City of Syracuse through the City's web site, www.Syracuse.ny.us or directly at Waterengineering@ci.syracuse.ny.us. You may send us mail through the U.S. Postal Service at 101 North Beech Street, Syracuse New York 13210.

SYRACUSE WATER SUPPLY AND WATER SYSTEM WATER USE

For over 116 years, the primary water supply for the City of Syracuse has been Skaneateles Lake, a “Finger Lake” located approximately 20 miles southwest of the City. Syracuse has utilized this lake for its water supply since 1894. Skaneateles Lake is approximately 15 miles long and one mile wide with a maximum depth of 300 feet. Skaneateles Lake has a relatively small watershed of 59 square miles and a water surface area of 13.6 square miles. In 2010, an average of 31.08 million gallons per day (MGD) was released at the outlet of Skaneateles Lake to control lake level and maintain Skaneateles Creek flow at or above the minimum required flow.

Skaneateles Lake has exceptionally high water quality. This makes it possible to utilize the lake’s water without filtration. Skaneateles Lake is one of the few large system surface water supplies in the country that is approved as an unfiltered water supply. The high quality of this water is due to: the shape and size characteristics of the lake and watershed, the fact that sewage discharges (including from sewage treatment plants) are not allowed into surface waters in the Skaneateles Lake watershed, the efforts of the City of Syracuse’s watershed protection program, and to the stewardship of residents and landowners of the watershed.

In the 1970’s the Onondaga County agency, known as the Metropolitan Water Board (MWB), constructed a water line between Lake Ontario and Syracuse. As a result, the City is able to supplement its Skaneateles Lake water supply with Lake Ontario water when necessary. The City normally relies upon Lake Ontario water during times when drought conditions limit the available supply from Skaneateles, during emergencies, or during periods of high consumption. Since the MWB system is connected to the City’s system on the north side of the City, this area may receive water from Lake Ontario from time to time.

The Syracuse water system is made up of over 500 miles of pipelines to deliver water from Skaneateles Lake to the City and to distribute the water throughout the City. The water supply system consists of water storage in Woodland and Westcott Reservoirs on the west side of the City. Water is also stored in two standpipes and in the three tanks that comprise Morningside Reservoir.

Water Use

During 2010, the total amount of water entering the City of Syracuse water system was 12,425 million gallons (34,043, MGD). 12,531 million gallons (33,838 MGD) was withdrawn from Skaneateles Lake and 74.65 million gallons (0.205 MGD) came from Lake Ontario (Metropolitan Water Board). Water customers were billed for 6,378 million gallons (17.473 MGD) leaving 6,047 million gallons (16.57 MGD) for firefighting purposes, street sweeping, construction, water main flushing and sewer flushing, water main repairs, and distribution system leaks.

COST OF WATER AND METER READING

The City of Syracuse continues to have some of the lowest water rates in New York State. Under current water rates the basic price of water is \$2.91 per 100 cubic feet. Non-City customers pay a higher rate of \$4.37 per 100 cubic feet. Customers using less than 1,300 cubic feet per quarter (or 9,724 gallons per quarter) will be billed a minimum charge of \$37.83 per quarter per unit for water. The sewer rate is \$0.94 per 100 cubic feet for sewer use. Sewer bills are based upon actual consumption. There is no minimum charge. The water rate schedule is based on a declining block system.

In all cases, water bills are based on consumption, so it is important that your water meter be read. If the Water Department’s meter reader cannot enter your property to read the meter (quarterly for residential customers and monthly for commercial and industrial customers) you may request a remote meter be installed; that way the meter reader does not need to gain access to your home or business to read the meter. You may request a remote installation by calling the Meter Room, at 315-473-2609, Ext. 221. If a bill is based on estimated readings, the owner might be in for a large bill when the meter is eventually read. Regular readings allow you to be alerted to a high bill early so that any leakage can be eliminated at the earliest possible moment. If necessary, read the meter yourself and call the reading in to 315-448-8238. Alternatively, e-mail the reading to us at Waterfinance@ci.syracuse.ny.us, or mail your reading via U. S. mail.

WATER TREATMENT

Skaneateles Lake water is a very high-quality water source requiring minimal treatment.

- Chlorine is applied to the water for disinfection.
- Hydro-fluosilicic acid is added to the water in order to maintain a fluoride level (target level of 1 mg/L) in the water for the purpose of reducing tooth decay.
- Copper sulfate is used to control the growth of algae in reservoirs. These treatments are necessary to prevent foul taste and odor caused by algae. Copper sulfate treatments occur on an as-needed basis from May to October. In 2010 only Woodland Reservoir was treated with copper sulfate.
- Orthophosphate is added to the water to minimize the dissolving of lead from lead service pipes and other plumbing fixtures. This topic is further described in the section "Lead Corrosion Control".

All Lake Ontario water used by the City has been filtered, chlorinated and fluoridated at Onondaga County's Metropolitan Water Board Plant in Oswego, New York.

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 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 an optimal range from 0.8 to 1.2 mg/L (parts per million). To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that the City of Syracuse monitor fluoride levels on a daily basis. During 2010 monitoring showed fluoride levels in your water were in the optimal range 99.3% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/L Maximum Contaminate Level (MCL) for fluoride.

SKANEATELES LAKE FILTRATION WAIVER

The City of Syracuse applied for and received a filtration waiver in June 2004. Unlike the waivers granted before it, this filtration avoidance extension has no expiration date. Our filtration waiver will remain in effect indefinitely as long as the City maintains its excellent watershed protection programs and the lake water continues to be of high quality.

NEW YORK STATE SOURCE WATER ASSESSMENT PROGRAM

The NYSDOH evaluated the City of Syracuse water supply'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 are 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 City of Syracuse. The City of Syracuse provides treatment and regular monitoring to ensure the water delivered to consumers 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 protozoan contamination. No permitted discharges are found in the assessment area. There is no likely contamination threat associated with other discrete contamination sources, even though some facilities were found in low densities.

The Lake Ontario Source (water purchased from the Metropolitan Water Board): The Great Lakes' watershed is exceptionally large and too big for a detailed evaluation in the Source Water Assessment Program. General drinking water concerns for public water supplies that use these sources include: storm generated turbidity, wastewater discharges, 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 public water supply 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 contamination sources and those facility types include: mines.

WATERSHED RULES AND REGULATIONS

The NYSDOH Watershed Rules and Regulations apply to the use of Skaneateles Lake and control activities in the watershed that might affect the water quality. The Watershed Rules and Regulations are comprehensive and provide stringent requirements for repairing failed septic tanks and for protecting Skaneateles Lake from erosion and sediment-laden runoff from construction sites. The City employs watershed inspectors to monitor activities and report violations of the rules. City inspectors check septic systems and also remove and dispose of dead animals that might pollute watercourses. The City works closely with village, town, and state officials to minimize or eliminate the potential for water pollution within the watershed.

Watershed protection and pollution prevention is not a new concept relative to the City's utilization of Skaneateles Lake. Watershed rules and regulations were first adopted in 1909. Since then the City has participated in septic system design and approvals and helped install sewers in the village of Skaneateles. The City's long history with Skaneateles Lake has been marked with a legacy of sound water quality stewardship.

What is a watershed? It's the area of land that drains water into the lake via creeks, brooks, and drainage ways. It can be compared to the shape of an irregular bowl. For Skaneateles Lake, this area totals about 59 square miles. It is largely made up of agricultural and open land, but has smaller areas of residential and commercial development. One key reason why Skaneateles Lake has high quality water is that the ratio of the amount of land that drains to the lake (59 square miles) to the surface area of the lake (13.6 square miles) is relatively small compared to other lakes.

Skaneateles Lake Watershed Agricultural Program (SLWAP)

The SLWAP provides environmental protection plans for qualifying farms in the watershed. Once the plans are made, financial assistance is provided so that farmers/landowners can install improvements intended to protect the lake by keeping runoff water from storms and snow melt clean.

Land Protection Program

In an effort to preserve and protect environmentally sensitive land that may have otherwise become a source of pollution, the City purchased conservation easements on 858 acres in the Skaneateles Lake watershed. Sellers agreed to limit activities that may be detrimental to water quality. A component of this program involves educating property owners about environmental stewardship. The purchase program is now complete, but restrictions on the land are perpetual, and properties are monitored on a schedule to make sure that owners are maintaining the proper stewardship of their land.

LEAD CORROSION CONTROL

The Syracuse Water Department treats the water with orthophosphate so that a sufficient phosphate residual will be maintained in the water and cause a protective coating to form on the interior surfaces of plumbing fixtures and lead water service pipe. The treatment was designated by the DOH after the City conducted studies designed to determine a successful method to reduce the amount of lead that dissolves from lead pipes or plumbing fixtures containing lead.

This treatment may not completely eliminate, but has reduced the amount of lead that dissolves. Lead levels were below the EPA Action Level of 15 micrograms per liter (ug/L) for two consecutive sampling periods: December 2006 and June 2007. As a result, the City was no longer required to conduct full scale monitoring. A reduced sample set of 50 sites annually was established in 2008. The 90th percentile level of the 50 samples collected in June 2008 was 14.0 ug/L. The June result was below the USEPA action level of 15 ug/L. In 2009 the 90th percentile for the 50 samples collected was 10 ug/L. The Water Department is confident that continued treatment the levels of lead will stay below the USEPA action level of 15 ug/L. The next round of sampling is scheduled for 2012. The 90th percentile value has decreased significantly

since the addition of orthophosphate for corrosion control. In the round of sampling conducted before treatment was initiated, the 90th percentile value was 44 ug/L.

Why is lead corrosion such a concern?

Infants and young children are typically more vulnerable to lead in drinking water than the general population. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. Also, if you have a lead service pipe, flush your tap for 30 seconds to 2 minutes before using tap water. Additional information about lead is on pages 19-22 of this newsletter or available from the Syracuse Water Department (473-2609), the Onondaga County Health Department (435-6600), the Lead Poison Control Program (435-3271) and the Safe Drinking Water Hotline (1-800-426-4791).

WATER QUALITY MONITORING

The Water Department conducts numerous tests of the water in order to monitor its quality and to verify compliance with state and federal requirements. The monitoring program includes seven primary components described below. The Syracuse Water Department tests Skaneateles Lake water as well as water in the distribution system, which might be a combination of Skaneateles Lake water and water from Lake Ontario. The Onondaga County Metropolitan Water Board is responsible for testing the Lake Ontario supply since they operate that supply and sell water on a wholesale basis to the City of Syracuse.

Phytoplankton

Skaneateles Lake and City reservoir water samples are collected and microscopically examined for phytoplankton (algae) on a weekly basis between May and October. High algal populations are controlled by administering copper sulfate to the reservoirs. Though not considered a contaminant, these organisms can impact the taste, odor, and aesthetic quality of the drinking water.

Bacteria

Each Skaneateles Lake intake is monitored for total and fecal coliform bacteria five times per week, totaling 1048 samples for the year. Fifty locations in the water distribution system were tested weekly for coliform bacteria; an average of 266 bacteriological samples was collected per month, or 3,198 samples were collected during the year. There were no bacteriological Maximum Contaminant Level (MCL) violations during 2010.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

Turbidity

Incoming Skaneateles Lake water is continually monitored at the water treatment plant in Skaneateles for turbidity (measurement of water quality for clarity). Turbidity is caused by particles in the water and is measured in Nephelometric Turbidity Units (NTU). Skaneateles Lake turbidity is generally the result of the re-suspension of bottom sediments as a result of wind driven wave action or from the introduction of suspended sediment as a result of snow melt and storm water runoff.

Turbidity is regulated for the Skaneateles Lake supply by two standards. One is a treatment technique requirement, which is violated if any turbidity measurement exceeds 5 NTU. The second, more critical, threshold is a turbidity regulatory limit, or Maximum Contaminant Level (MCL) violation, which occurs when two consecutive daily entry point analyses exceed 5 NTU.

No Treatment Technique Violations occurred in 2010.

There was one 2-day MCL violation in 2010. This occurred for Intake #1 over December 1st and 2nd. The high turbidity reading on December 1st was 7.32 NTU at 8:00 P.M. On December 2nd, a high of 8.25 NTU was recorded at 4:00 A.M. At this time, Intake #2 was already closed due to high winds (November 30-December 6). Intake #1 was impacted from a combination of sustained high winds over several days and a 1.46" precipitation event (December 1).

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*.

The NYSDOH sets drinking water standards and has determined that the presence of microbiological contaminants is a health concern at certain levels of exposure. If water is inadequately treated, microbiological contaminants in that water may cause disease. Disease symptoms may include diarrhea, cramps, nausea, and possibly jaundice, and any associated headaches and fatigue. These symptoms, however, are not just associated with disease-causing organisms in drinking water, but also may be caused by a number of factors other than your drinking water. The NYSDOH has set enforceable requirements for treating drinking water to reduce the risk of these adverse health effects. Treatments, such as filtration and disinfection, remove or destroy microbiological contaminants.

Chlorine Residual

The Water Department adds chlorine to the water for disinfection. The amount of chlorine in the water is continuously monitored as the water leaves the City's Skaneateles Lake treatment plant and as it leaves Woodland and Westcott reservoirs. Also, each week, samples are checked at locations throughout the distribution system. NYS regulations require that a free chlorine residual be maintained in the water.

Organic and Inorganic Chemicals

Skaneateles Lake Water is tested for the presence of 23 metals and non-metallic inorganic chemicals, 54 volatile organic compounds, 40 synthetic organic compounds (pesticides) and nine other organic chemicals known as disinfection byproducts. The latter are known as trihalomethanes and haloacetic acids (see section below for detail). The organic and inorganic chemicals and compounds tested for in 2010 are listed in the table of "Undetected Contaminants" which also follows. Trihalomethanes and haloacetic acids were detected (see table below). However, all detections were well below the regulated levels set by the USEPA and DOH.

Other Skaneateles Lake water properties

Total dissolved solids: 160 mg/L (EPA standard of 500 mg/L); Sodium 8.8 mg/L; alkalinity 100 mg/L; pH average 7.69; pH range: 7.45 – 8.18 (EPA standard of 6.5-8.5); and total hardness 137mg/L.

Radionuclides

During 2008 the Skaneateles Lake water was analyzed for 3 radionuclides (gross alpha particles, Radium 226 and Radium 228). All results were below detectable levels. The next scheduled round of sampling for radionuclides is 2017.

Summary

As stated above, Skaneateles Lake and reservoir water was monitored for many inorganic and organic contaminants. See the tables on succeeding pages.

During 2010, Skaneateles Lake and reservoir water was monitored for certain contaminants classified as Unregulated Contaminants, such as MTBE (gasoline additive), pesticides and herbicides. The lake and reservoirs were sampled for algae (phytoplankton). Though not considered a contaminant, these organisms can impact the aesthetic quality of the drinking water. Thus, treatment to control algae is done to keep the population in check. If you have any questions about the results of these analyses, please call 315-685-6486 or e-mail us at waterquality@ci.syracuse.ny.us

Disinfection Byproducts

The water in the distribution system is checked quarterly for the presence of disinfection byproducts (DBPs). These organic chemical compounds are formed when chlorine combines with algae or other organic material occurring naturally on the water. High concentrations of DBPs in drinking water can pose a cancer risk. Test results indicate these compounds are present at levels significantly below the stringent EPA standard that went into effect in January 2002. The standards or MCL's are listed in the table on page 13.

Monitoring the Lake Ontario Supply

The Onondaga County Metropolitan Water Board monitors the quality of its Lake Ontario water. The monitoring of this source is similar to the monitoring that the City does for the Skaneateles Lake supply. The "Detected Contaminant" tables report contaminants detected by the Metropolitan Water Board in its tests of Lake Ontario water. The MWB also tests their treated water for the presence of volatile organic chemicals, inorganic elements and synthetic organic chemicals, including herbicides and pesticides, all of which have not been detected. For a complete summary of the testing performed by the MWB, contact their office at 652-8656.

Water Quality Monitoring Tables

The "Detected Contaminant" tables, which follow this section, report only on those contaminants that have been detected in the water at levels above mandated minimum detection limits, per federal and state regulations. Results are provided for Skaneateles and Lake Ontario water separately, where noted. Any table that reports "City of Syracuse, Distribution System" results refers to water sampled from the City of Syracuse water pipe network; the water sampled from the distribution system may be Skaneateles water or Lake Ontario water or a combination of the two. The distribution system sample results for the Lake Ontario water are representative of Lake Ontario water just prior to the point that the water enters the City of Syracuse distribution system on the north side of the City. The table of "Undetected Contaminants" is provided to report on tests undertaken by the City of Syracuse of Skaneateles water for contaminants that were not detected above EPA and NYS established detection levels.

GLOSSARY OF TERMS USED IN THE TABLES

- AL:** (Action Level) the concentration of a contaminant which, when exceeded, triggers treatment or other requirements that a water system must follow
- MCL:** (*Maximum Contaminant Level*) the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- MCLG:** (*Maximum Contaminant Level Goal*) the level of a contaminant in drinking water below which there is no known health risk. MCLGs allow for a margin of safety.
- Mg/L:** (*Milligrams per liter*) Parts per million—a concentration equal to 1 milligram of a substance in one liter of water. Equivalent to parts per million (ppm) in water measurement.
- MRDL:** (*Maximum Residual Disinfectant Level*) 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.
- MRDLG:** (*Maximum Residual Disinfectant Level Goal*) 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.
- N/A:** (*Not Applicable*)
- Nd:** (*Not detected*) Not detected above the regulated detection level
- NTU:** (*Nephelometric Turbidity Unit*) A measurement of the turbidity, or cloudiness of the water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- PCi/L:** (*Picocuries per liter*) A measure of the radioactivity in water.
- TT:** (*Treatment Technique*) A required process intended to reduce the level of a contaminant in drinking water.
- Ug/L:** (*Micrograms per liter*) Parts per billion, a concentration equal to 1 microgram of a substance in one liter of water. Equivalent to parts per billion (ppb) in water measurement.

Detected Contaminants - 2010: General

Samples From	Contaminant	Unit	Regulatory Limit (MCL)	MCLG	Level Detected	Range	Sample Date	Violation
Skaneateles Lake	Barium (1)	mg/L	2	2	0.025	N/A	13-May-10	No
	Chloride (2)	mg/L	250	N/A	19	N/A	13-May-10	No
	Fluoride (3)	mg/L	2.2(5)	N/A	0.94 (13)	.07-1.24	Daily	No
	Nitrate (4)	mg/L	10	10	0.61	N/A	13-May-10	No
	Sodium (5)	mg/L	N/A (6)	N/A	8.8	N/A	13-May-10	No
	Sulfate (6)	mg/L	250	N/A	15	N/A	13-May-10	No
Lake Ontario	Aluminum (8)	mg/L	N/A	N/A	0.16	N/A	20-Jul-10	No
	Barium (1)	mg/L	2	2	0.023	N/A	20-Jul-10	No
	Calcium (9)	mg/L	N/A	N/A	34	N/A	20-Jul-10	No
	Chloride (2)	mg/L	250	N/A	28	N/A	20-Jul-10	No
	Copper (10)	mg/l	1.3	1.3	0.0087	N/A	20-Jul-10	No
	Fluoride (3)	mg/L	2.2(5)	4	0.99 (13)	0.12-1.18	Daily	No
	Manganese (11)	ug/L	300	300	0.003	N/A	20-Jul-10	No
	Nickel (12)	mg/L	N/A	N/A	0.00092	N/A	20-Jul-10	No
	Nitrate (4)	mg/L	10	10	0.22	N/A	20-Jul-10	No
	Sodium (5)	mg/L	N/A (6)	N/A	17	N/A	20-Jul-10	No
	Sulfate (7)	mg/L	250	N/A	25	N/A	20-Jul-10	No

Notes:

- Source: Erosion of natural deposits.
- Sources: Natural deposits; road salts.
- The US EPA MCL is 4 mg/l, but NYS has a stricter 2.2 mg/l standard.
- Source: Runoff from land applied fertilizer and septic tanks, sewage; erosion of natural deposits.
- Sources: Natural deposits; road salts; water softeners; animal waste.
- There is no MCL for sodium, but water with more than 20 mg/l should not be used for drinking by people on severely restricted sodium diets; water with more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.
- Source: Naturally occurring.
- Natural deposits, residual from a chemical used in the treatment process.
- Naturally occurring.
- Corrosion of household plumbing components
- Naturally occurring, indicative of landfill waste.
- Source: Erosion of natural deposits.
- Average.
- Discharge from steel and pulp mills; Erosion of natural deposits.

Detected Contaminants - 2010: Distribution System Disinfection Byproducts (1)

Samples From	Contaminant	Unit	Regulatory Limit (MCL)	MCLG	Level Detected (2)	Range	Sample Date	Violation
Syracuse City	Total Trihalomethanes TTHM (1)	ug/L	80	N/A	21.84	8.60-43.0	17-Feb, 13-May, 31-Aug, 18-Nov	No
	Haloacetic Acids (HAA5) (1)	ug/L	60	N/A	19.45	5.10-34.0	17-Feb, 13-May, 31-Aug, 18-Nov	No
	Free Chlorine Residual (Distribution System)	mg/L	4	N/A	1.06	.96-1.23	Daily	No
	Free Chlorine Residual (Leaving Water Plant)	mg/L	4	N/A	1.39	.03-3.66	Every 4 hours	No
MWB-Lake Ontario Distribution System	Total Trihalomethanes TTHM (1)	ug/L	80	N/A	43.81	26-97	17-Feb, 18-May, 23-Aug, 16-Nov	No
	Haloacetic Acids (HAA5) (1)	ug/L	60	N/A	23.80	4.8-56	17-Feb, 18-May, 23-Aug, 16-Nov	No
	Free Chlorine Residual (Distribution System)	mg/L	4 (MRDL)	N/A (MRDLG)	0.74	0.0-2.68	Daily	No
	Free Chlorine Residual (Leaving Water Plant)	mg/L	4 (MRDL)	N/A (MRDLG)	0.92	.8-1.17	Every 4 hours	No

Notes:

1. Source: Byproduct of drinking water chlorination.
2. The result shown is the average of the samples tested.

Detected Contaminants - 2010: Syracuse City Distribution System--Lead and Copper

Samples From	Contaminant	Unit	Regulatory Limit (AL)	MCLG	Level Detected	Detected Range	Sample Date	Violation
Syracuse City	Lead (1)	ug/L	15	0	10 (3)	ND - 40	June, 2009	
	Copper (2)	ug/L	1300	1300	310 (3)	17-380	June, 2009	

Notes:

1. Source: Corrosion of lead service pipe, brass fittings and household plumbing components.
2. Source: Corrosion of household plumbing components.
3. The result represents the 90% value, i.e., the concentration that is equal or greater than 90% of the sample results of the 51 samples checked. The action level for lead was exceeded at 2 of the 51 sites tested. The action level for copper was not exceeded at any of the test sites.

Detected Contaminants - 2010: Organic Chemicals (not including TTHM and HAA5)

Samples From	Contaminant	Unit	Regulatory Limit (MCL)	MCLG	Level Detected	Range	Sample Date	Violation
Syracuse City	None detected							
Samples From	Contaminant	Unit	Regulatory Limit (MCL) (2)	MCLG (2)	Level Detected	Range	Sample Date	Violation
MWB-Lake Ontario	Total Organic Carbon (1)	mg/l	N/A	N/A	1.48	1.2-1.8	17-Feb, 18-May, 23-Aug, 16-Nov	No
	Metolachlor ESA (2)	ng/l	2	2	<.021		19-Oct-10	No

1. Naturally occurring.
2. Degradation product of pesticides.
2. Average.

Detected Contaminants - 2010: Radioactive Contaminants

Samples From	Contaminant	Unit	Regulatory Limit (MCL)	MCLG	Level Detected	Sample Date	Violation
Skaneateles Lake	Gross Alpha Emitters (1)	pCi/L (7)	15	0	Undetected		No
	Radium 226 (2)	pCi/L (7)	5(5)	0	Undetected	11-Mar, 27-May, 28-Sept, 14-Oct 2008	No
	Radium 228 (2)	pCi/L (7)	5(5)	0	Undetected		No
Lake Ontario	Gross Alpha Emitters (1)	pCi/L (7)	15	0	1.3	16-Nov-10	No
	Gross Beta Emitters (3)	pCi/L (7)	50 (6)	0	0.93	16-Nov-10	No
	Radium 226 (2)	pCi/L (7)	5 (5)	0	0.11	16-Nov-10	No
	Radium 228 (2)	pCi/L (7)	5 (5)	0	0.06	16-Nov-10	No
	Uranium 233/234 (4)	pCi/L (7)	30	N/A	0.54	16-Nov-10	No

Notes:

1. Source: Decay of natural deposits.
2. Source: Decay of natural deposits.
3. Source: Decay of natural and man-made emissions.
4. Source: Decay of natural deposits.
5. 5 pCi/L is the regulatory limit for combined Radium 226 and 228.
6. The State considers 50 pCi/L to be the level of concern for beta particles.
7. Picocuries per liter--measure of the radioactivity in water.

Detected Contaminants - 2010: Syracuse Distribution System Coliform

Contaminant	Regulatory Limit (MCL)	Date	# Samples tested	MCLG	# Positive Samples Detected	% of Total samples positive	Violation
Total Coliform Bacteria (1)		Apr-10	256	0	1	0.33%	No
		Oct-10	337	0	8	2.37%	No
		Dec-10	329	0	3	0.91%	No

Notes:

1. Source: Naturally present in the environment. Coliforms are used as an indicator that other, potentially harmful bacteria may be present. As shown above, Total Coliforms were detected in the routine monthly compliance samples collected at our system. Four additional recheck samples were collected for every Total Coliform positive sample. Since Total Coliforms were detected in <5% of all the samples collected during the month, the system did not have an Total Coliform MCL violation. It should be noted that E. Coli is associated with human and animal fecal waste.
2. E. coli violation. See narrative for explanation.

Detected Contaminants - 2010: Source Water Turbidity (1)

Turbidity	Unit Measurement	Regulatory Limit (TT)	MCLG	Level Detected	Sample Date	Violation
Skaneateles	NTU	TT <= 5 NTU for filtration avoidance systems	Yes	7.32 (2)(4) 8.25 (2)(4)	1-Dec-10 2-Dec-10	Yes
Ontario (3)	NTU	TT <= 1.0 NTU	N/A	100% <= 1.0 NTU	Continuous	No
	NTU	TT=95% of monthly samples <= 0.3 NTU	N/A	100% <= 0.3 NTU	Continuous	No

Notes:

1. Source: Re-suspension of bottom sediment or sediment in stream flow runoff from rainfall events. Turbidity is a measure of the cloudiness of water. In the case of unfiltered Skaneateles Lake water, turbidity is an indicator of water quality; high turbidity can interfere with disinfectants. In the case of Lake Ontario, turbidity is monitored as an indicator of the effectiveness of the filtration system.
2. For unfiltered Skaneateles Lake water, an MCL occurs when two consecutive daily entry point analyses for turbidity exceed 5 NTU. Thus, there was one violation during 2010.
3. For the filtered Lake Ontario supply, the treatment technique must maintain turbidity less than or equal to 0.3 NTU in 95% of the samples. The 100% represents the monthly percentage of samples that were below 0.3 NTU.
4. See narrative for explanation of turbidity occurrences.

Undetected Contaminants - 2010: Skaneateles Lake (1)

Volatile Organic Chemicals	Benzene	2-Chlorotoluene	trans- 1,2- Dichloroethene	Methylene Chloride	Trichloroethene	
	Bromobenzene	4-Chlorotoluene	1,2- Dichloropropane	n- Propylbenzene	Trichlorofluoromethane	
	Bromochloromethane	Dibromomethane	1,3- Dichloropropane	Styrene	1,2,3- Trichloropropane	
	Bromomethane	1,2- Dichlorobenzene	2,2- Dichloropropane	1,1,1,2- Tetrachloroethane	1,2,4- Trimethylbenzene	
	n-Butylbenzene	1,3- Dichlorobenzene	1,1- Dichloropropene	1,1,2,2- Tetrachloroethane	1,3,5- Trimethylbenzene	
	sec-Butylbenzene	1,4- Dichlorobenzene	1,3- Dichloropropene (Cis)	Tetrachloroethene	Toluene	
	tert-Butylbenzene	Dichlorodifluoromethane	1,3- Dichloropropene (Trans)	MTBE	m- Xylene	
	Carbon Tetrachloride	1,1- Dichloroethane	Ethylbenzene	1,2,3- Trichlorobenzene	p- Xylene	
	Chlorobenzene	1,2- Dichloroethane	Hexachlorobutadiene	1,2,4- Trichlorobenzene	o- Xylene	
	Chloroethane	1,1- Dichloroethene	Isopropylbenzene	1,1,1- Trichloroethane	Vinyl Chloride	
	Chloromethane	cis- 1,2-Dichloroethene	4- Isopropyltoluene	1,1,2- Trichloroethane		
	Synthetic Organic Chemicals (Including Pesticides, Herbicides, Flame Retardants, Explosives and Related Compounds)	1,2-Dibromo-3-chloropropane	Aldicarb Sulfoxide	Carbofuran	Heptachlor Epoxide	Oxamyl
		1,2-Dibromoethane (EDB)	Aldrin	Dalapon	Hexachlorobenzene	PCB, Total
		2,4,5-TP Silvex	Atrazine	Dicamba	Hexachlorocyclopentadiene	Pentachlorophenol
		2,4-D	Benzo(a)pyrene	Dieldrin	Lindane	Pichloram
		3- Hydroxycarbofuran	Bis(2-ethylhexyl) acipate	Dinoseb	Methomyl	Propachlor
Alachlor		Bis(2-ethylhexyl)phthalate	Endrin	Methoxychlor	Simazine	
Aldicarb		Butachlor	Glyphosate	Metolachlor	Total Chlordane	
Aldicarb Sulfone		Carbaryl	Heptachlor	Metribuzin	Toxaphene	
Dimethoate		Acetochlor	Terbufos Sulfone	PBDE 47	2,2',4,4',5'-Hexabromobiphenyl	
PBDE 99		PBDE 100	PBDE 153	1,3-Dinitrobenzene	2,4,6-Trinitrotoluene	
RDX		Acetochlor ESA	Acetochlor OA	Alachlor ESA	Alachlor OA	
Metolachlor ESA		Metolachlor OA				
Inorganics		Antimony	Arsenic	Beryllium	Cadmium	Chromium
		Cyanide	Iron	Manganese	Mercury	Nickel
		Nitrite	Selenium	Silver	Thallium	Zinc
		Color	Odor			
Nitrosamines	N-Nitrosodimethylamine	N-Nitrosomethylethylamine	N-Nitrosodiethylamine	N-Nitrosodi-n-propylamine	N-Nitrosopyrrolidine	
	N-Nitrosodi-n-butylamine					

GIARDIA AND CRYPTOSPORIDIUM

The Water Department routinely monitors the water for the presence of two parasitic protozoans: *Giardia* and *Cryptosporidium*. These organisms, if ingested, can cause intestinal illness with flu-like symptoms.

Of these two protozoans, *Cryptosporidium* poses the most concern since, unlike *Giardia*, it is not controllable with chlorination at the normal doses utilized in water systems. With the exception of very few service connections to our transmission pipelines between Skaneateles and Syracuse, *Giardia* is routinely oxidized and rendered harmless with the chlorination contact time that the system is able to provide. The NYSDOH has required that water suppliers provide their customers the following notice:

“New York State law requires water suppliers to notify their customers about the risks of cryptosporidiosis and giardiasis. Cryptosporidiosis and giardiasis are intestinal illnesses caused by microscopic parasites. Cryptosporidiosis can be very serious for people with weak immune systems, such as chemotherapy, dialysis or transplant patients, and people with Crohn’s disease or HIV infection. People with weakened immune systems should discuss with their health care providers the need to take extra precautions such as boiling water, using certified bottled water or a specially approved home filter. Individuals who think they may have cryptosporidiosis and giardiasis should contact their health care provider immediately.”

During 2010, water samples were collected monthly from the two lake water intakes and one from a location within the City water distribution system. Two additional locations within the distribution system were sampled four times per year. A total of 44 samples were collected and analyzed for *Giardia* and *Cryptosporidium* during 2010. No confirmed *Cryptosporidium* oocysts or *Giardia* cysts were detected in any sample.

The Metropolitan Water Board collected a total of 4 *Cryptosporidium* and *Giardia* samples during 2010 from the Lake Ontario water supply. Raw water samples were collected quarterly. No *Giardia* was detected in any of MWB’s raw water samples for 2010. *Cryptosporidium* was detected in one MWB raw water sample on December 13, 2010. The sample detected 0.02 *Cryptosporidium* oocysts per liter.

WATER CONSERVATION

Water conservation in the northeastern part of the United States is not something people feel they need be too concerned with. There is usually plenty of rain and snow to replenish most surface and ground water supplies. Occasionally droughts do strike central New York and the level of Skaneateles Lake falls to a point that the withdrawals need to be limited as part of the Water Department’s lake level management plan. This happened during 1999 and to a lesser degree in 2001. In March of 2002 Skaneateles Lake was below average level which prompted the City of Syracuse to issue an advisory that the management plan flow reduction might need to be exercised if the lake level didn’t improve. During 2004, an above average amount of precipitation fell on the watershed and lake level management was not a problem.

Water conservation should not be something that is ignored until a crisis is at hand. By exercising the following water-saving consumption practices all the time, you will be well prepared to deal with the occasional drought; and by not using any more clean water than is necessary, you will be saving money and doing your share toward global environmental protection. Remember: always be conscious of the water you are using; don’t be wasteful, and look for ways to conserve.

The following are some common sense tips plus some water facts to help you become a conscientious water user. If you would like to obtain more information about water conservation, one good web site is www.waterwiser.org. This site is a service of the American Water Works Association and contains links to other sites with information about conserving water.

Leakage and Estimated Water Bills

Customers with bills that are regularly based on estimated water usage may be in for a big surprise if there are plumbing leaks or extraordinary water use at their property.

Since water bills that have been based on estimated water consumption might not account for leakage, a customer will

not be aware that their water consumption has increased when reviewing a water bill based on estimated consumption. Several billing cycles may go by before the Water Department is able to obtain a reading at any given property. In such cases, unknown leakage could be costing money without the owner even realizing it. When a water meter reading is finally obtained, the actual water use recorded by the meter will be charged to the customer even though estimated bills may have assumed a lower consumption. So, be aware and be a water-wise consumer by paying attention to water bills and don't let estimated consumption go for more than one quarter. By paying attention to your water bill and to your plumbing, you will be potentially saving water and a lot of money and grief. No one likes to get a water bill that is hundreds of dollars higher than expected.

The following tips might also help save you money:

Inside Water Use

- *Repair all leaks in faucets, showerheads, toilets, hoses and other fixtures and appliances.*
- *Do not use the toilet as a trash can.*
- *In older toilets, install a weighted plastic jug full of water in the tank to reduce the amount of water used per flush. (Don't put bricks in the tank--they can crumble and cause problems with the operation of the toilet.)*
- *Do not let the faucet run while you wash, brush teeth, or shave.*
- *Use faucet aerators and low flow showerheads.*
- *Take short showers and shallow baths.*
- *Put 10-12 drops of food coloring in your toilet tank. If the color appears in the bowl within an hour, your toilet tank is leaking.*
- *Use sink garbage disposal sparingly.*
- *When washing dishes by hand, fill wash and rinse basins with water and do not run water continuously.*
- *When using a dishwasher, wash only full loads and do not use extra cycles.*
- *Keep a container of cold water in the refrigerator instead of letting the cold water faucet run.*
- *Water plants with leftover drinking water.*
- *In your automatic clothes washer, match the water level with the size of the wash load.*
- *If washer has no load selector, always do full loads.*
- *Do not allow any faucet to run continuously as a way to prevent pipes from freezing; fix the problem that is causing heat loss.*

Outside Water Use:

- *Repair or replace leaky garden hose connections.*
- *Use a hose nozzle that can be shut off.*
- *Wash vehicles using a bucket of water and be sure the hose is off when not needed to rinse.*
- *Lawn watering in the summertime uses significant amounts of water.*

Since grass goes dormant during dry periods, most lawns need very little watering. Lawns with a combination of rye, bluegrass, and a higher percentage of fescue are suited for sunny, dry places and have a good tolerance to droughts. Most lawns can go five (5) weeks without water. If lawn watering is permitted, lawns need to be watered only once a week and only long enough for the water to soak 3 or 4 inches below the ground surface. The best time to water lawns is the early morning, to minimize water loss due to evaporation. Don't allow water to run off onto pavements.

OPPORTUNITIES FOR PUBLIC PARTICIPATION

The Mayor of the City of Syracuse is the chief executive officer for the City. The Mayor appoints a Commissioner of Water who is the head of the City's Department of Water. The Mayor's office can be contacted at 448-8005. Requests for City services or information can be made to the City's help line at 448-CITY (448-2489).

The City of Syracuse Common Council is the legislative body of the City. All matters concerning the Water Department's budget, capital projects, water rates and fees, rules and regulations must be considered by the Common Council. The

Common Council meets on a regular basis every other Monday at 1 p.m. except during July and August when it meets every three weeks. An informal "study session" is held at 12 p.m. on the Wednesday prior to a Monday meeting and at 12 p.m. on Monday prior to the formal 1 p.m. meeting. To check on meeting dates you may contact the City Clerk's office at 448-8216 or the Common Council office directly at 448-8466.

LEAD IN YOUR DRINKING WATER

The USEPA, NYSDOH and City of Syracuse Department of Water are concerned about lead in your drinking water. Although most homes have very low levels of lead in their drinking water, some homes in the community have lead levels above the USEPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). Under Federal law, we are required to have a program in-place to minimize lead in your drinking water. The program includes corrosion control treatment and a public education program. Source water treatment is not necessary with Skaneateles Lake water since lead is not in the source water.

The Department of Water completed construction of corrosion control treatment facilities at Woodland and Westcott reservoirs in 1999. These facilities are the location where orthophosphate is added to the water to reduce the amount of lead, which dissolves into the water from lead service pipes and lead plumbing fixtures. Since the corrosion facilities have been operational the Water Department has conducted analyses on over 1,650 water quality samples collected at 100 locations throughout the City. Findings from this sampling program have led to adjusting the amount of orthophosphate introduced at the facilities as allowed by the Onondaga County Health Department. The current level of orthophosphates is between 1.7 to 1.8 mg/L (milligrams per liter). For testing purposes the 90th percentile sample (90 samples out of a 100 samples) is used. The goal is to have the 90th percentile of the lead testing results below the USEPA action level of 15 ppb. In 1992 the 90th percentile for lead was 45 ppb and as of 2009, the value was at 10.0 ppb.

The City was required by Federal Law to reduce the amount lead in its drinking water by replacing 7% of existing lead water services in the public right-of-way each year until two consecutive 6-month water quality sampling events resulted in the 90th percentile at a concentration below the USEPA action level of 15 ppb. The December 2006 and the June 2007 sampling events satisfied the requirement of two consecutive sampling events having the 90th percentile less than the USEPA action limit. In 2008, the City was on a reduced monitoring schedule as discussed above. No lead services have been replaced since 2008.*

Another source of lead in the drinking water can be from the residential service connection piping (that is the pipe that brings water from the water main in the street to your home). If this line is made of lead, it can contribute high concentrations of lead to the household drinking water. Remember, not every home has a lead contamination problem. Most people have low levels of lead in their drinking water. But because you cannot see, taste or smell lead, testing the water is the only way to know for sure whether or not you have a problem.

If you have any questions about how we are carrying out the requirements of the lead regulation, or want more information about what you can do, please call us at 473-2609. In this article we also explain the simple steps you can take to protect yourself and your family by reducing your exposure to lead from drinking water.

Health Effects of Lead

Lead is a common metal found throughout the environment in lead-based paint, air, soil, household dust, food, and certain types of pottery, porcelain, pewter and water. Lead can pose a significant risk to your health if too much of it enters your body.

Lead builds up in the body over many years and can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children (especially under age 6), pregnant women, and their fetuses. Amounts of lead that won't hurt adults can slow down normal mental and physical development in the growing bodies of children. In addition, a child

**Individual lead services have been replaced in the public right-of-way as homeowners have replaced the private portion of the lead water service.*

at play often comes into contact with sources of lead contamination -- like dirt and dust -- that rarely affect an adult. If a child puts dirty fingers into his mouth (as most children do), some lead may be absorbed into the child's system. It is important, therefore, to wash children's hands and toys often and to try to make sure they only put food in their mouths.

Lead in Drinking Water

Lead in drinking water, although rarely the sole cause of lead poisoning, can increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. It is estimated that drinking water can make up to 20 percent or more of a person's total exposure to lead.

How Lead Enters Our Water

Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome plated brass faucets, and in some cases, pipes made of lead that connect your house to the water main (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2 percent lead, and restricted the lead content of faucets, pipes, and other plumbing materials to 8.0 percent.

When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon after you return from work or school, can contain high levels of lead.

Steps to Reduce Exposure to Lead in Drinking Water

Despite our best efforts mentioned earlier to control water corrosivity and remove lead from the water supply, lead levels in some homes or buildings can be high. To find out whether you need to take action in your own home, have your drinking water tested to determine if it contains excessive concentrations of lead. Testing the water is essential because you cannot see, taste, or smell lead in drinking water. Some local laboratories can provide this service. For more information on having your water tested, please call 473-2609.

If a water test indicates that the drinking water drawn from a tap in your home contains lead above 15 ppb or 0.015 mg/L, then you should take the following precautions:

1. ***Flush Your System.*** Flushing tap water is a simple and inexpensive measure you can take to protect your family's health. Flushing usually uses less than one or two gallons of water and costs less than 50 cents per month. To flush, let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer water resides in your home's plumbing, the more lead it may contain. Flushing the tap means running the cold water faucet until the water gets noticeably colder, usually about 30 to 60 seconds. If your house has a lead service line to the water main, you may have to flush the water for a longer time, perhaps two to five minutes, before drinking. Although toilet flushing or showering flushes water through a portion of your home's plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. (NOTE: While flushing of lead services for 2 to 5 minutes usually results in a lowering of the lead level, in some cases the reduction will not reach the action level.) To conserve water, fill a bottle with water after flushing the tap, and whenever possible use the first flush water to wash dishes or water plants.

If you live in a high-rise building, letting the water flow before using it may not lessen your risk from lead. This is because high-rise plumbing systems have more and sometimes larger pipes than smaller buildings. Ask your landlord for help in locating the source of the lead and for advice on reducing the lead level. Even if the lead service to your house has been replaced with copper, it's still recommended that the water be flushed 30 seconds before using, since lead can leach out of the new brass fittings after installation.

2. ***Use only cold water for cooking and drinking.*** Do not cook with, or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water for cooking or drinking, draw water from the cold tap and heat it on the stove.

3. *Remove loose solder and debris* from the plumbing materials installed in newly constructed homes, or homes in which the plumbing has recently been replaced. To do this, remove the faucet strainers from all taps and run the water from 3 to 5 minutes. Thereafter, periodically remove the strainers and flush out any debris that has accumulated over time.
4. *Identify and replace lead materials with lead-free ones.* If your copper pipes are joined with lead solder that has been installed illegally since it was banned in 1986, notify the plumber who did the work and request that he or she replace the lead soldered with lead-free solder. Lead solder looks dull gray, and when scratched with a key looks shiny. In addition, notify your Health Department Plumbing Control Section (435-6614) about the violation.
5. *Determine whether or not the service line that connects your home or apartment building to the water main is made of lead.* The best way to determine if your service line is made of lead is by either hiring a licensed plumber to inspect the line or by inspecting the line yourself where it enters the basement. If the pipe material is soft and malleable when scratched with a knife, it is likely to be composed of lead. A licensed plumber can check to see if your home's plumbing contains lead solder, lead pipes, or pipe fittings that contain lead.

The City of Syracuse Water Department maintains records of the materials used in the distribution system. The Water Department may be able to tell if you have a lead service line. Call 473-2609 and we will be able to check if any information is available for your property. If the service line that connects your dwelling to the water main contributes more than 15 ppb to drinking water after our corrosion control treatment program is in place, we are required to provide you with information on how to replace your portion of the service line, and offer to replace that portion of the line at your expense.

6. *Have an electrician check your wiring.* If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electrical code to determine if your wiring can be grounded elsewhere. DO NOT attempt to change the wiring yourself because improper grounding can cause electrical shock and fire hazards.

Additional Steps

The steps described above will reduce the lead concentrations in your drinking water. However, if a water test indicates that the drinking water coming from your tap contains lead concentrations in excess of 15 ppb after flushing, or after we have completed our actions to minimize lead levels, then you may want to take the following additional measures.

7. *Purchase or lease a home treatment device.* Home treatment devices are limited in that each unit treats only the water that flows from the faucet to which it is connected, and all of the devices require periodic maintenance and replacement. Devices such as reverse osmosis systems or distillers can effectively remove lead from your drinking water. Some activated carbon filters may reduce lead levels at the tap; however, all lead reduction claims should be investigated. Be sure to check the actual performance of a specific home treatment device before and after installing the unit.
8. Purchase, for drinking and cooking, bottled water that is certified by the DOH.

RESIDENTIAL LEAD SERVICE REPLACEMENT PROGRAM

If you need assistance in identifying whether you have a lead service, you may call the Water Department at 473-2609.

If you want to replace your lead service pipe, the following options are available to you:

- A. Contract with your own licensed plumber who will obtain the necessary permits and perform the work;
- B. For residential properties, utilize the City Water Department's Residential Lead Service Replacement Program whereby we will hire a plumber for you with the cost of the work being assessed to you on your property tax bill in a lump sum, or over a ten year period at seven percent (7%) interest per year.

Option A allows you to negotiate on your own with various licensed plumbers. You may be able to get a lower price for the work, and the time frame to have the work completed may be less. Option B allows you to spread the payments over a ten-year period on your City Tax bill, however this may cost more than if you negotiated the work on your own. Please remember that your \$50 Application Fee cannot be refunded should you choose not to enter into the contract.

To arrive at a quick preliminary cost range for the work, measure the distance between your meter (usually just inside the basement wall) to the curb box (usually between the sidewalk and the curb) and multiply this by \$30 per foot to \$60 per foot. Please remember, the cost of your project will vary and may be significantly influenced by the amount of sidewalk, driveway, or other structures that must be crossed. Final restoration of surfaces, including lawns, plantings and pavements is the homeowner's responsibility and will not be done as part of the contract we arrange for your project. The restoration expenses may cause your project to exceed your preliminary cost estimate.

How it works: To participate in the program, fill out an application form and submit it with a non-refundable check of \$50. (For eligible Senior Citizens the application fee is waived.) Once you have applied to participate in the program, the Water Department will investigate your situation and provide you with an estimated cost of the work. We will then obtain quotations from at least three plumbers, select a plumber for the work, and notify you about entering into a contract for the work. If you decide not to proceed and fail to enter into a contract, your \$50 application fee will not be refunded unless the price quotation exceeds the cost estimate provided to you by more than 10 percent.

If you have any questions about the program or need an application, please contact the City of Syracuse Department of Water at 473-2609 ext 238.

FOR MORE INFORMATION ABOUT LEAD

1. **Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead.**
2. The **CITY OF SYRACUSE WATER DEPARTMENT (473-2609)** can provide you with information about our City's water supply and a list of local laboratories that have been certified by the State for testing water quality. Laboratories in your area that you can call to have your water tested for lead can be found in your telephone directory.
3. The **ONONDAGA COUNTY DEPARTMENT OF HEALTH (435-6600)** can provide you with information on lead in drinking water and the drinking water regulation.
4. The **ONONDAGA COUNTY LEAD POISON CONTROL (435-3271)** can provide you with information about the health effects of lead and can tell you how and where you can have your child's blood tested.

FOR MORE INFORMATION OR QUESTIONS:

SYRACUSE DEPARTMENT OF WATER

Emergencies, Maintenance and Operations:	473-2860	
Engineering:	473-2609	Fax: 473-2608
Meter Reading & Water Billing:	448-8238	Fax: 448-8262
Water Quality & Treatment:	685-6486	Fax: 685-8160

Other important sources of information concerning water-related issues are as follows:

ONONDAGA COUNTY DEPARTMENT OF HEALTH 435-6600
ONONDAGA COUNTY LEAD POISON CONTROL 435-3271

US EPA's *SAFE DRINKING WATER HOTLINE* 1-800-426-4791
(This hotline is available to provide you with information on drinking water contaminants and health effects.)

If you have any questions or comments about the material contained in the Drinking Water Newsletter please contact the Commissioner's office in writing (101 N Beech St, Syracuse, NY 13210), by calling 473-2609, or e-mail at waterengineering@ci.syracuse.ny.us

NEW FLOOD HAZARD MAPS FOR THE CITY OF SYRACUSE – CITY SUBMITS APPEAL TO FEMA

The City of Syracuse continues in its efforts to minimize the effects of the Federal Emergency Management Agency's (FEMA) proposed new flood zones. The City's Administration and Engineering Department along with their consultant are working closely with FEMA and its consultants, to review the hydrologic data and parameters used to determine the flood zones. The City and its consultant have submitted to FEMA technical data for review. Several meetings both public and private have been held, and the final submission is due to FEMA by April first. FEMA will then review the data and publish their final determination.

The data submitted to FEMA included the City's own hydrologic model of Onondaga Creek, along with a comparison of elevations furnished by FEMA and as determined by the Engineering Department. Pictures documenting the overgrowth along the creek from Adams Street to Plum Street were also submitted. The City hopes that this will lower the baseflood elevations as determined by FEMA, but how much this will affect the size of the flood zone remains to be determined.

Syracuse Applies for WRDA Grant

In its continuing effort to improve and maintain the creek channels the City of Syracuse has applied for a Water Resource Development Act (WRDA) grant. This is a Federal Grant with 20% local participation to improve waterways and minimize flood hazards. Specifically, the city has applied for funds to remove three abandoned bridges behind the old Armory on West Jefferson Street. The application also includes the removal of trees and brush within the Onondaga Creek right-of-way from West Colvin Street to Onondaga Lake. Both projects would greatly improve the hydrology of the creek and thereby lessen the impact on the upstream flooding potential.

When Maps Become Official

The following are excerpts from the National Flood Insurance Program's website www.floodsmart.gov, and are helpful in understanding how the new Flood Hazard Maps may or may not affect you.

When new flood maps are issued, your flood risk may become higher or lower-which can affect what you pay for flood insurance. However, there is approximately a six month period between the time the new "preliminary" maps are issued and the time that they are implemented. This gives you adequate time to protect your property and, possibly, save on flood insurance.

This chart explains different map-change scenarios:

IF MAPS SHOW...

THESE REQUIREMENTS, OPTIONS AND SAVINGS APPLY

Change from low or moderate flood risk to high risk (flood zone B, C, or X to zone A, AE, AR, A99, AH or AO)

Flood insurance is mandatory. Flood insurance will be federally required for most mortgage holders. Insurance costs may rise to reflect the true (high) risk.

"Grandfathering" can offer savings. The National Flood Insurance Program has "grandfathering" rules to recognize policyholders who built in compliance with the flood map in effect at the time of construction or who maintain continuous coverage. Sometimes, though, using the new flood maps can actually result in a lower premium, especially if the home is high enough above the Base Flood Elevation (BFE).

Change from high flood risk to low or moderate risk (flood zone A, AE, AR, A99, AH, AO to X or shaded X)

Flood insurance is optional but recommended. The risk has only been reduced, not removed. Flood insurance can still be obtained, and at lower rates. About 25 percent of all flood insurance claims come from moderate-to-low-risk areas.

Conversion offers savings. An existing policy can be easily converted to a lower-cost Preferred Risk Policy, if the building qualifies. Note that lenders always have the option to require flood insurance in these areas.

Increase in the Base Flood Elevation (BFE)

An increase in BFE can result in higher premiums; however, "grandfathering" can offer savings. The National Flood Insurance Program grandfathering rules allow policyholders who have built in compliance with the flood map in effect at the time of construction to keep the earlier base flood elevation to calculate their insurance rate. This could result in significant savings.

No change in risk level

No change in insurance rates. However, this is a good time to review your coverage and ensure that your building and contents are adequately protected.

How to save money with the Grandfather Rule.

If your property changes from low-risk to high-risk, you will likely be required to protect your building and its contents with flood insurance—even if you don't have a mortgage. Flood insurance rates for high-risk areas are higher, but there are ways to save money with the NFIP Grandfather Rule.

You can take advantage of grandfathering by obtaining a policy before the new maps take effect. You'll likely qualify for the NFIP Preferred Risk Policy (PRP), which covers buildings and their contents for as little as \$119 for the first year. On renewal, you will qualify for the standard rates associated with moderate-to-low risk zones, rather than high-risk zones, and this could add up to significant savings. To lock in the lower rate, you must purchase flood insurance before the new maps become effective—otherwise, the property will be rated using the high-risk flood zone on the new map.

To lock in the lower rate, you must purchase flood insurance before the new maps become effective—otherwise, the property will be rated using the high-risk flood zone on the new map.

For older structures built before the community's first flood map was issued, this is the only grandfathering option. Structures built after the community's first flood map was issued have two opportunities to lock in the flood zone (or Base Flood Elevation, BFE):

1. You can purchase a policy before the new maps take effect, or
2. You can use the grandfather rule if you have proof that your home was built in compliance with the flood map that was in effect at the time of construction. Your insurance agent can help produce the necessary documentation.

Note that in some cases, the new flood map may actually result in a lower premium than what grandfathering applies, so have your insurance agent check all options.

Understand which insurance policy you should purchase during a map change:

If your home or business is currently in a moderate-to-low risk zone...	Do This Before The New Maps Go Into Effect	Do This Once The New Maps Become Effective
Has a mortgage and is not protected by flood insurance...	Purchase a Preferred Risk Policy now and be eligible for "grandfathering."	Keep coverage in force and you will be "grandfathered in," avoiding high-risk rates.
Does (not) have a mortgage and is protected by flood insurance...	Renew your policy. You can save by having a policy in force.	Continue to renew your policy and you will be "grandfathered in," avoiding high-risk rates.
Does not have a mortgage and is not protected by flood insurance...	Purchase a Preferred Risk Policy now and be eligible for "grandfathering."	Continue to renew your policy and you'll stay eligible for the standard rate, based on your earlier flood zone, and avoid high-risk rate.
Is leased or rented...	Protect the contents of your home or business by purchasing Preferred Risk contents coverage.	Talk with your insurance agent about other insurance options that may be available.

Flood Insurance Rate Map Information

Before a person can receive a loan or other financial assistance from one of the affected agencies or lenders, there must be a check to see if the building is in the Special Flood Hazard Area (SFHA). The SFHA is the base (100-year) floodplain mapped on a Flood Insurance Rate Map (FIRM). A map that displays the FEMA-designated flood hazard areas is available for your inspection at the Onondaga County Public Library's main office during their normal business hours. Maps are also available at the City of Syracuse Department of Engineering, Office of the City Engineer, Mapping Division, Room 401 in City Hall from 8:00 A.M. to 4:00 P.M. weekdays (phone 448-8207). Employees in the Mapping Division are available to provide technical assistance with reading the maps. For additional Flood Zone Information, please call the Office of the City Engineer, Mapping Division at 448-8207. Elevation Certificate (EC) forms may also be available. Flood maps are also available on www.fema.gov under "What are you looking for?" select "Flood Maps".

Appeals Process (Letter of Map Amendment LOMA)

FEMA has established administrative procedures to change the designation for properties incorrectly included in the Special Flood Hazard Area (SFHA) map. These processes are referred to as the Letter of Map Amendment, or LOMA, process and the Letter of Map Revision Based on Fill, or LOMR-F, process. Through these processes, an individual who owns, rents, or leases property may submit certain mapping and survey information to FEMA and request that FEMA issue a document that officially removes a property and/or structure from the SFHA. In most cases, the applicant will need to hire, **at his or her own expense**, a Licensed Land Surveyor or Registered Professional Engineer to prepare an Elevation Certificate for the property. Upon receiving a complete application forms package, FEMA will normally complete its review and issue its determination in 4 to 6 weeks.

Community Rating System

The City of Syracuse also participates in the Community Rating System. This system rewards communities that actively participate in reducing flood hazards with discounted flood insurance rates. The City, through its efforts, has recently increased the insurance discount given to its residents to ten percent. If you currently have flood insurance, or purchase new flood insurance, make sure you are receiving this discount from your insurance provider.

Some of the things that the City does to receive its insurance discount are: cleaning and monitoring of creek channels and overbanks to maintain water flow, controlling building and development in designated flood hazard zones, maintaining benchmarks and providing information to the public in regard to special flood hazard zones.

Keep Channels Clear of Debris

The potential for flooding is greatly alleviated when creeks are clear of obstructions. It is a violation of a city ordinance to dispose of any solid waste (trees, garbage, etc.) in any creek or channel throughout the city. The City's Public Works Department, Bureau of Sewers, assigns personnel to check the main creeks at least twice per year. In the event that branches or other miscellaneous debris accumulate in a creek, you too may contact the City DPW, who will clear them out, free of charge. Their phone number is: 448-2489. For no-cost clearing in the Meadowbrook creek and Harbor Brook area please call the County Department of Water Environment Protection at 435-2260.

Substantial Improvement Requirements

The National Flood Insurance Program (NFIP) requires that if the cost of reconstruction, rehabilitation, addition or other improvements to a building equals or exceeds 50% of the building's market value, then the building must meet the same construction requirements as a new building. Substantially damaged buildings where the cost of repairs equals or exceeds 50% of the building's value before it was damaged must be brought up to the same standards. Residential structures in the SFHA shall have the lowest floor, including basement or cellar, elevated to or above base flood elevation plus 2 feet freeboard. Commercial, industrial or other nonresidential structures in the SFHA shall either have the lowest floor, including basement or cellar, elevated to or above the base flood elevation, or be flood-proofed so that the structure is watertight below the base flood level with walls substantially impermeable to the passage of water. Additional regulations regarding development in the SFHA can be obtained from the Department of Neighborhood and Business Development, Division of Code Enforcement (488-8600).

Property Protection Measures

Measures to protect a property from flood damage include retrofitting, elevating building above flood levels, constructing small protective barriers, and waterproofing walls, grading a yard, correcting local drainage problems, and such emergency measures as moving furniture and sandbagging. Any alteration or addition to your building or land requires a permit from Community Development, Division of Code Enforcement (448-8600). Regrading or filling requires a permit.

*FOR MORE INFORMATION OR QUESTIONS ABOUT FLOOD PROTECTION CONTACT
Syracuse Department of Engineering, Office of the City Engineer, 448-8200*

REDUCING THE IMPACTS OF STORM WATER POLLUTION

What is Storm water?

Storm water is rain that falls on roofs, lawns, or paved areas like driveways and roads, and is carried away by a system of storm water pipes or culverts and ditches. As it flows over the land surface, storm water picks up or is contaminated by debris, chemicals, dirt and other pollutants. This *untreated* water is discharged into the water bodies we use for swimming, fishing and drinking water.

Ten Ways Homeowners Can Improve the Quality of Storm water Runoff

1. Cover piles of soil, sand or mulch to stop them from being transported in storm water. Plant grass where soil is exposed.
2. Sweep your sidewalks and driveways rather than hosing them down.
3. Put leaves and grass clippings in the compost, on the garden as mulch, or mow back into the lawn to recycle nutrients.
4. Divert roof water to lawns or gardens where it can safely soak in.
5. Keep pesticides, oil, leaves and other pollutants off streets and out of storm drains.
6. Keep cars tuned up and repair leaks – better yet, walk, bike or utilize public transportation.
7. Wash your vehicle on grass or over gravel. Use as little detergent as you can and pour any leftover soapy water onto the lawn.

8. Dispose of household hazardous waste according to the label directions. Reuse turpentine once the paint has settled.
9. Clean up pet waste and dispose of in an appropriate manner.
10. Have your septic system inspected by a professional every 3 to 5 years and have the septic system pumped as necessary (usually every 3 to 5 years).

Why Should You Care?

- Sediment clouds the water making it difficult for aquatic plants to grow.
- Sediment deposits fill in fish spawning beds and deep pools. Fish eggs are buried and food supplies are reduced.
- Excess nutrients cause algae blooms and deplete oxygen supplies.
- Bacteria and other pathogens discharged in swimming areas create health hazards.
- Debris washed into the water can choke, suffocate or disable aquatic life.
- Household hazardous wastes can poison aquatic life.
- Boating, swimming and other recreational activities are impaired due to sediment-filled navigation channels and decreased water clarity.
- Polluted storm water often affects drinking water sources – human health is at risk and water treatment costs rise.

Storm water Pollutants of Concern

- **Coliform** – Pathogens or bacteria, possibly from illicit discharges or pet waste, that are responsible for periodic beach closings.
- **Floatables** – Street litter or debris that floats on or near the water surface and can be harmful or fatal to aquatic organisms.
- **Oil / Grease** – A pollutant that often enters the water via storm drains and road runoff, which damages animal's skins and can cause poisonings, blindness and liver damage.
- **Phosphorus** – An element that is easily transported via sediment into the water. Excess phosphorus causes algal blooms, decreases water clarity and reduces dissolved oxygen.
- **Settling Solids** – Soil or other particles that settle on the lake or stream bottom and destroy aquatic habitats, spawning areas and may contaminate bottom feeding organisms.
- **Suspended Solids** – Smaller soil particles transported via runoff and erosion that decrease water clarity and food supplies.

Illicit Discharge Detection and Elimination (IDDE) Program

Under a State Pollution Discharge Elimination System (SPDES) General Permit the City of Syracuse is required to develop a program to detect and eliminate illicit discharges to storm water sewer systems. Illicit discharges are defined as drainage into a storm water sewer that is not runoff from precipitation. This could be improperly connected sanitary sewers, or used motor oil or other contaminants deposited into catch basins.

To facilitate this program, the City is developing a computer map of the storm water sewer systems within the City, including the outlets into the various streams passing through the City. When completed, the maps will also show storm water sewer lines and manholes plus the geographic limits of the individual sewer lines (known as "sewer sheds"). The completed maps will be used by investigators in the field to isolate sources of illicit discharges so that they can be eliminated by the responsible party from the storm water system.

CITY OF SYRACUSE
DEPARTMENT OF WATER
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SYRACUSE, NY 13210

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A special note to residents and property owners about proposed changes to flood maps:

If you live in or near a flood zone you should pay particular attention to how proposed changes to the Syracuse flood hazard map could affect you. A significant number of parcels have been added to the proposed flood zones, while others have been removed. Actions that some property owners could take now may reduce flood insurance premiums later. See pages 23-25 for information.



Skaneateles Lake View