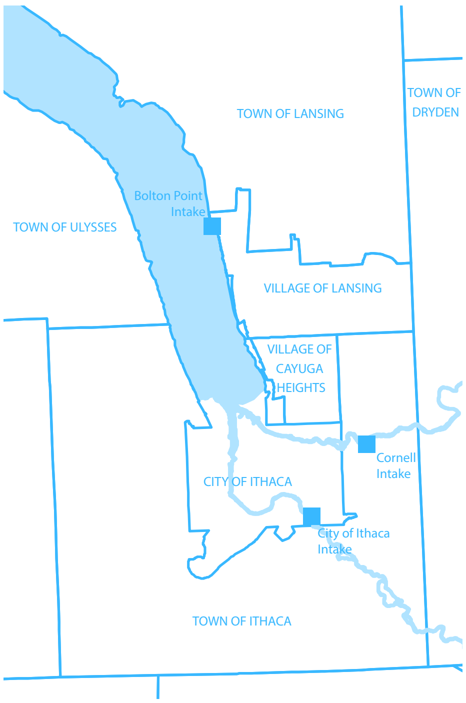
2015 DRINKING WATER QUALITY REPORT

Bolton Point Municipal Water System   City of Ithaca Water System   Cornell University Water System



In the spirit of intermunicipal cooperation, the Bolton Point, City of Ithaca, and Cornell University water systems provide this unified Drinking Water Quality Report. These three interconnected water supply systems are the largest in Tompkins County and we want you to be fully informed about your water's quality and the need to protect its sources. This overview of last year's water quality includes details about where your water comes from, what it contains, and how it compares to State standards. If you have any questions about this report or your drinking water, please contact the appropriate person listed at the right. Or you may attend any of our regularly scheduled public meetings.

LOCATION AND DESCRIPTION OF WATER SERVICES

Bolton Point Municipal Water System (Bolton Point or BP-MWS)

Cayuga Lake is the source of water for the BP-MWS. The water intake is approximately 3 miles north of Stewart Park, 400 feet out from the eastern shore of Cayuga Lake and 65 feet below the surface of the lake. During 2014, the Bolton Point system did not experience any restriction of its water source. The system serves residents of the Towns of Dryden, Ithaca and Lansing, and the Villages of Cayuga Heights and Lansing and provides water to some City of Ithaca customers on Oakwood Lane, Hector Street, Warren Place, Sunrise Road and Richards Place. It provides water to other parts of the City and Cornell during emergencies and planned maintenance periods. Meetings of the Bolton Point Water Commission are held on the first Thursday after the first Tuesday of each month at 4:00 p.m. at the Bolton Point water treatment plant, 1402 East Shore Drive, Ithaca New York, 14850.

City of Ithaca Water System (City or CIWS)

Six Mile Creek is the source of water for the CIWS. Water is drawn from a reservoir in the creek and flows by gravity to the water plant. The forested watershed is 46.4 square miles in size. During 2014, the City system did not experience any restriction of its water source. The system serves most of the residents of the City of Ithaca and supplies Town of Ithaca customers along Taughannock Boulevard. Its treatment plant is located at 202 Water Street, Ithaca, New York, 14850. The Board of Public Works Committee of the Whole meets the first and third Wednesdays of the month. An additional voting meeting is held the second Wednesday of the month. These meetings begin at 4:30 p.m. Common Council meets the first Wednesday of the month at 7:00 p.m. All meetings are held in council chambers on the third floor of City Hall, 108 East Green Street, Ithaca, 14850.

Cornell University Water System (Cornell or CUWS)

Fall Creek is the source of water for the CUWS. The water intake is on Forest Home Drive near the Cornell Plantations Arboretum entrance. Fall Creek originates in Lake Como northeast of Ithaca and flows through a 125 square mile watershed. During 2014, the Cornell system did not experience any restriction of its water source. The system serves residents of the University's campus and supplies water to City customers in the Cornell Heights area and to Bolton Point-Town of Ithaca customers on the south side of Fall Creek in the Forest Home area. Its water treatment plant is located at 101 Caldwell Road, Ithaca, New York, 14850.

Contacts for additional information or to arrange a tour:

BOLTON POINT
Joan Foote, Production Manager, 277-0660, ext. 241, boltonpoint.org

CITY OF ITHACA
Chuck Baker, Chief Operator, 273-4680, cityofithaca.org

CORNELL UNIVERSITY
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A. WATER TREATMENT PROCESSES

The three water systems use the following conventional surface water treatment.

PRE-TREATMENT: Coagulating agents such as alum or polymers are added to the water to remove impurities and control taste and odor. A disinfectant is added to destroy microorganisms.

MIXING: The water is rapidly mixed to distribute the treatment chemicals evenly.

COAGULATION AND FLOCCULATION: The water flows into large basins where the coagulants react with impurities in the water (coagulation) causing them to form larger, heavier particles called floc (flocculation).

SEDIMENTATION: Flocculated water flows into basins where the floc particles settle to the bottom, thereby removing impurities and chemicals from the water.

FILTRATION: Following the settling process, water flows through layers of anthracite coal, sand, and gravel where further removal of particulate impurities occurs.

POST-TREATMENT: Chlorine is added to inhibit bacterial growth in the distribution system, and the pH is adjusted to inhibit the corrosion of metal pipes and fixtures. The Cornell treatment plant adds an additional corrosion inhibitor.

B. WATER QUALITY DATA

INTRODUCTION: The sources of drinking water (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. It also 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.

To ensure that tap water is safe to drink, the State and the EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Health Department and Federal Drug Administration regulations also establish limits for contaminants in bottled water, which must provide the same protection for public health.

In accordance with State regulations, the three systems routinely monitor your drinking water for numerous contaminants. Tables 3-5 show the analytical test results for contaminants that were detected. These results are compared to the applicable state guideline or maximum contaminant level (MCL). Table 6 shows the contaminants that were not detected in your water.

The State allows testing less frequently than once per year for some contaminants since the concentrations of these contaminants do not change frequently. Therefore some data, though representative, are more than one year old.

TOTAL COLIFORMS: Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

LEAD AND COPPER: The three water systems were required to sample for lead in 2014. There were no violations of State standards.

SODIUM: People who are on severely restricted sodium diets should not drink water containing more than 20 mg/l of sodium. Since the 2014 level of sodium in Bolton Point was 35 mg/l, Cornell water was 24 mg/l and the City of Ithaca's average level was 27 mg/l, customers on severely restricted sodium diets might wish to consult their health care providers. People who are on moderately restricted sodium diets should not drink water containing more than 270 mg/l of sodium. The sodium levels of the water from all three systems are well below this level.

During the course of the year, for maintenance purposes, or for emergency help, potable water is exchanged among the three water systems. If you wish to know if this occurred, the time periods, and the water volumes, please call your water supplier.

Required testing by the EPA for the Unregulated Contaminant Monitoring Rule #3 (UCMR3) was completed by the City and by Cornell in 2013, and by Bolton Point in 2014. Information about the rule and the contaminants can be found on EPA website (epa.gov; search for UCMR3). The results for the City sampling can be found on the City website (www.cityofithaca.org) under the water department and by the AWQR. The results for Cornell sampling can be found on the Cornell Energy and Sustainability website. (http://energyandsustainability.fs.cornell.edu/util/water/drinking/reports.cfm) The results for Bolton Point sampling is included in the AWQR.

HYDRILLA TREATMENT INFORMATION: Cayuga Lake was treated in 2014 with herbicides after the invasive species Hydrilla was located in Cayuga Inlet in 2011. All monitoring results for sampling related to the Hydrilla Eradication Program can be found at www.StopHydrilla.org.

C. GENERAL WATER INFORMATION

Table 1: General Water Data - 2014

WATER SYSTEM PUBLIC WATER SUPPLY ID #	BP-MWS 5404423	CIWS 0066600	CUWS 5417680
Water Source	Cayuga Lake	Six Mile Creek	Fall Creek
Approximate population served	30,000	30,000	31,000
Number of service connections	6,940	5,500	252
Total production in 2014 (MG[1])	981	1131	484
Average daily withdrawal (MGD[2])	2.761	3.10	1.366
Average daily delivered (MGD)	2.688	1.88	1.325
Average daily lost (MGD) [3]	0.073	1.22	0.041
Annual charge per 1000 gal.	$5.45*	$6.83	$7.08

[1]MG = million gallons
[2]MGD = million gallons per day
[3]The average daily loss includes water used to flush mains, fight fires and leakage.
*Average of the rates charged by the five member municipalities of the BP-MWS.

Table 2: General Water Quality Data - 2014

ANALYTE	UNITS	BP-MWS ANNUAL AVERAGE	CIWS ANNUAL AVERAGE	CUWS ANNUAL AVERAGE
pH (EP)		8.3	7.7	7.44
Turbidity (EP)	NTU	0.04	0.08	0.057
Total Hardness	mg/l	150	126	150
Total Alkalinity	mg/l	109	111	108
Total Dissolved Solids	mg/l	NR	193	NR
Iron (soluble)	mg/l	NR	0.04	NR
Chlorine Residual (EP)	mg/l	1.40	1.6	1.35
Chlorine Residual (POU)	mg/l	0.61	1.2	0.60
Turbidity (POU)	NTU	0.05	0.3	0.057
Total Organic Carbon (EP)	mg/l	1.9	1.5	1.84
Dissolved Organic Carbon	mg/l	2.1	1.7	1.95

NR = Not Required; EP = Entry Point; POU = Point of Use; Definitions of NTU and mg/l found with Tables 3 – 5.

COMMON WATER QUALITY DEFINITIONS

ALKALINITY is a measure of the capability of water to neutralize acids. Bicarbonates, carbonates and hydroxides are the most common forms of alkalinity.

HARDNESS is a measure of the calcium and magnesium content of natural waters. The harder the water, the greater the tendency to precipitate soap and to form mineral deposits. Alkalinity and hardness occur naturally due to the contact of water with minerals in the earth's crust.

pH indicates how acidic or alkaline a water sample is. A value of 7 is neutral, 0-6 is acidic and 8-14 is alkaline.

TOTAL ORGANIC CARBON (TOC) is a measure of the organic content of water. A high concentration of TOC in water may lead to high levels of disinfection byproducts.

TURBIDITY is a measure of the cloudiness of water. It is an indication of the effectiveness of water treatment. NYS regulations require that treated water turbidity always be below 1 NTU (nephelometric turbidity unit). For filtered systems 95% of the composite effluent samples must be below 0.3 NTU.

D. HEALTH EFFECTS AND INDIVIDUALS AT-RISK

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 the water poses a health risk.

Some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, those with HIV/AIDS or other immune system disorders, some elderly, and some infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water.

Environmental Protection Agency/ Center for Disease Control (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). No trace of either of these pathogens has been detected in previous testing of the treated water of Bolton Point, the City or Cornell. Individuals who think they may have one of these illnesses should contact their health care provider immediately. For additional information please contact the Tompkins County Health Department, 55 Brown Road, Ithaca, New York 14850 or by phone at 274-6688.

E. DETECTED CONTAMINANTS

Notes and Definitions for Tables 3-5:

AL (action level): The concentration of a contaminant that, if exceeded, triggers additional treatment or other requirements that a water system must follow.

Lead and Copper: The maximum level values reported for lead and copper represent the 90th percentile of the samples taken. Testing for these metals is only required every three years. The three water systems collected samples in 2014 and will resample in 2017.

HAA5 (haloacetic acids): These are a group of chemicals that are formed when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic matter in water. The regulated haloacetic acids, known as HAA5, are monochloroacetic, dichloroacetic, trichloroacetic, monobromoacetic, and dibromoacetic acids. The maximum level detected of HAA5 is the highest of the four quarterly running annual averages calculated during the year and is the basis of the MCL for these compounds.

Maximum Level Detected: The highest measurement detected for the contaminant during the year. For total THMs and HAA5 the maximum level detected is the highest of the four quarterly running annual averages during the year.

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.

MCLG (maximum contaminant level goal): 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.

mg/L (milligrams per liter): Corresponds to one part in one million parts of liquid (parts per million, ppm).

MRDL (maximum residual disinfection level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary to control 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): Laboratory analysis indicates that the constituent is not present.

NTU (nephelometric turbidity unit): A measure of the clarity of water. Turbidity of approximately 5 NTU is barely noticeable by the average person.

pCi/I (picocuries per liter): A measure of radioactivity in water.

Range: The range of lowest to highest measurements detected for contaminants measured during the year.

THM (trihalomethanes): These are a group of chemicals that are formed when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic matter in water. The regulated trihalomethanes are bromodichloromethane, bromoform, chloroform, and dibromochloromethane. These compounds result from the disinfection of water with chlorine. The maximum level detected of THMs is the highest of the four quarterly running annual averages calculated during the year and is the basis of the MCL for these compounds.

TT (treatment technique): A required process intended to reduce the level of a contaminant in drinking water.

ug/L (micrograms per liter): Corresponds to one part in one billion parts of liquid (parts per billion, ppb).

Table 3: Detected Contaminants: City of Ithaca Water System

Contaminant	Units	Violation Y/N	Date of Sample	Maximum Level Detected (Range)	Regulatory Limit	MCLG	Likely Source of Contamination
Microbiological contaminants							
Turbidity	NTU	No	7/1/14	0.11	TT=<1 NTU	N/A	Soil runoff.
Turbidity samples	%	No	daily	100%	TT=95% of samples <0.3NTU	N/A	Soil runoff.
Disinfection By-Products							
Total THMs Site 1 Site 2 Site 3 Site 4	ug/l	No	2014	 56 (48-56) 47 (34-47) 48 (41-48) 32 (23-32)	MCL = 80	N/A	By-product of drinking water chlorination.
Total HAA5 Site 1 Site 2 Site 3 Site 4	ug/l	No	2014	 43 (37-43) 35 (31-35) 50 (41-50) 24 (22-34)	MCL = 60	N/A	By-product of drinking water chlorination.
Chlorine Residual	mg/l	No	2014	1.15	MRDL=4	N/A	Due to drinking water chlorination.
Inorganics							
Aluminum (distribution system)	mg/l	No	2014	.17 (0-0.17)	N/A	N/A	A secondary contaminant related to aesthetics and technical effects; from water treatment chemicals and aluminum factories
Barium	mg/l	No	1/7/14	0.028	MCL=2	2	Drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chloride	mg/l	No	1/7/14	61	MCL=250	N/A	Naturally occurring or road salt
Copper (distribution system)	mg/l	No	2013	.79 (0-.79)	AL=1.3	1.3	Household plumbing corrosion; erosion of natural deposits; wood preservatives.
Chromium	mu/l	No	1/7/14	1.3	MCL=100	100	Discharge from steel & pulp mills; Erosion of natural deposits.
Lead	ug/l	No	2013	15 (0-15)	AL=15	0	Household plumbing corrosion; erosion of natural deposits.
Nitrate (as N)	mg/l	No	1/7/14	0.41	MCL=10	10	Fertilizer runoff: septic tank leaching: erosion of natural deposits
Sodium	mg/l	No	2014	27 (20-34)	See Water Quality, Section B	N/A	Naturally occurring; road salt; animal waste; water softeners; water treatment chemicals.
Sulfate	mg/l	No	1/7/14	11	MCL=250	N/A	Naturally occurring
Radioactive							
Radium-228	pCi/l	No	10/2/12	2.98	MCL=5	0	Erosion of natural deposits.

Table 4: Detected Contaminants: Bolton Point Municipal Water System

Contaminant	Units	Violation Y/N	Date of Sample	Maximum Level Detected (Range)	Regulatory Limit	MCLG	Likely Source of Contamination
Microbiological contaminants							
Turbidity	NTU	No	4/6/14	0.084	TT=<1 NTU	N/A	Soil runoff.
Turbidity samples	% below MCL	No	daily	100%	TT=95% of samples <0.3NTU	N/A	Soil runoff.
Disinfection By-Products							
Total THMs * Site 1 Site 2 Site 3 Site 4 Site 5	ug/l	No	2014	 69 (57-81) 52 (46-55) 32 (23-37) 39 (23-49) 61 (34-68)**	MCL = 80 Running Annual Average	N/A	By-product of drinking water chlorination.
Total HAA5 * Site 1 Site 2 Site 3 Site 4 Site 5	ug/l	No	2014	 17 (8.4-21) 19 (12-26) 14 (9.7-19) 15 (9-21) 23 (15-27)**	MCL = 60 Running Annual Average	N/A	By-product of drinking water chlorination.
Chlorine Residual	mg/l	No	2014	1.80 (0-1.80)	MRDL=4	N/A	Due to drinking water chlorination.
Chlorite	mg/l	No	2014	0.266 (<0.02-.410)***	MCL = 1.0	0.8	By-product of drinking water chlorination
Inorganics							
Barium	mg/l	No	11/6/14	0.027	MCL=2	2	Drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium	mg/l	No	11/6/14	0.0031	MCL=0.10	N/A	Discharge from steel and pulp mills; erosion of natural deposits.
Copper	mg/l	No	2014	0.080 (0.006-0.440)	AL=1.3	1.3	Household plumbing corrosion; erosion of natural deposits; wood preservatives.
Cyanide	mg/l	No	11/6/14	0.021	MCL=0.2	0.2	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride	mg/l	No	11/6/14	0.10	MCL=4.0	4.0	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Lead	ug/l	No	2014	3.8 (ND-5.6)	AL=15	0	Household plumbing corrosion; erosion of natural deposits.
Nickel	mg/l	No	11/6/14	0.0013	N/A	N/A	Discharge from steel and pulp mills, erosion of natural deposits.
Nitrate	mg/l	No	11/6/14	1.0	MCL=10	10	Fertilizer runoff; septic tank leaching; sewage; erosion of natural deposits.
Sodium	mg/l	No	11/6/14	35	See Water Quality, Section B	N/A	Naturally occurring; road salt; animal waste; water softeners; water treatment chemicals.
Radioactive							
Gross Alpha	pCi/l	No	11/06/08	-0.37	MCL=15	0	Erosion of natural deposits.
Radium-226	pCi/l	No	11/06/08	0.0989	MCL=15	0	Erosion of natural deposits.
Radium-228	pCi/l	No	11/06/08	0.394	MCL=15	0	Erosion of natural deposits.

*THM and HAA5 samples for third quarter were taken on 7/23/14. This is outside of the sampling period of the first two weeks of the quarter (7/1/14 to 7/14/14). This is a Health Department monitoring violation.
**See "maximum level detected" on page 4. Range of all individual sites in parenthesis.
*** Chlorite is the average of 3 distribution samples taken monthly. Range of all samples in parenthesis.

Unregulated Contaminants							
Chlorate	ug/L	No	2014	217 (79.8-217)	Unregulated	N/A	Chlorate ion is a known byproduct of the drinking water disinfection process, forming when sodium hypochlorite or chlorine dioxide are used in the disinfection process.
Hexavalent Chromium	ug/L	No	2014	0.051 (ND-0.051)	Unregulated	N/A	Hexavalent chromium can enter waterways through the erosion of natural deposits or from industrial discharges.
Chromium, Total	ug/L	No	2014	0.34 (ND-0.34)	Unregulated	N/A	Chromium is a metallic element found in rocks, soils, plants, and animals. It is used in steel making, metal plating, leather tanning, corrosion inhibitors, paints, dyes, and wood preservatives.
Strontium, Total	ug/L	No	2014	207 (178-207)	Unregulated	N/A	Strontium occurs nearly everywhere in small amounts. Air, dust, soil, foods and drinking water all contain traces of strontium. Ingestion of small amounts of strontium is not harmful. However, high levels of strontium can occur in water drawn from bedrock aquifers that are rich in strontium minerals.
Vanadium	ug/l	No	2014	0.29 (ND to 0.29)	Unregulated	N/A	Vanadium is a naturally occurring elemental metal. It is used as vanadium pentoxide which is a chemical intermediate and a catalyst.

Table 5: Detected Contaminants: Cornell University Water System

Contaminant	Units	Violation Y/N	Date of Sample	Maximum Level Detected (Range)	Regulatory Limit	MCLG	Likely Source of Contamination
Microbiological contaminants							
Turbidity	NTU	No	2014	0.025-0.119	TT=<1 NTU	N/A	Soil runoff.
Turbidity samples	%	No	daily	100%	TT=95% of samples <0.3NTU	N/A	Soil runoff.
Disinfection By-Products							
Total THMs	ug/l	No	8/14	79 (44-79)	MCL = 80	N/A	By-product of drinking water chlorination.
Total HAA5	ug/l	No	8/14	47 (38-47)	MCL = 60	N/A	By-product of drinking water chlorination.
Chlorine Residual	mg/l	No	2014	1.9 (0.9-1.9)	MRDL=4	N/A	By-product of drinking water chlorination
Inorganics							
Barium	mg/l	No	11/20/14	0.021	MCL=2	2	Drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	mg/l	No	11/20/14	0.0029	MCL=0.01	0.01	Discharge from steel and pulp mills; erosion of natural deposits.
Copper	mg/l	No	2014	0.10 (0.001-0.58)	AL=1.3	1.3	Household plumbing corrosion; erosion of natural deposits; wood preservatives.
Lead	ug/l	No*	2014	0.001 (ND-4.2)	AL=15	0	Household plumbing corrosion; erosion of natural deposits.
Nickel	mg/l	No	11/20/14	0.001	N/A	N/A	Discharge from steel and pulp mills, erosion of natural deposits.
Nitrate	mg/l	No	11/20/14	0.79	MCL=10	10	Fertilizer runoff; septic tank leaching; sewage; erosion of natural deposits.
Sodium	mg/l	No	11/20/14	24	See Water Quality, Section B	N/A	Naturally occurring; road salt; animal waste; water softeners; water treatment chemicals.
Radioactive							
Gross Alpha	pCi/l	No	3/19/08	0.21	MCL=5	0	Erosion of natural deposits.

F. NON-DETECTED CONTAMINANTS

Table 6: Non-Detected Contaminants: All Systems

CONTAMINANT	BP-MWS 2014	CIWS 2014	CUWS 2014
Microbiological			
Total Coliform	X	X	X
E. Coli	X	X	X
Inorganics			
Antimony	X	X	X
Arsenic	X	X	X
Asbestos	NR	NR	X
Beryllium	X	X	X
Cadmium	X	X	X
Color	NR	X	NR
Cyanide	D	X	X
Fluoride	D	X	X
Mercury	X	X	X
Nitrite	X	X	X
Selenium	X	X	X
Silver	NR	X	NR
Thallium	X	X	X
Synthetic Organics & Pesticides; Groups 1 & 2			
Alachlor	X	X	X
Aldicarb	X	X	X
Aldicarb sulfoxide	X	X	X
Aldicarb sulfone	X	X	X
Atrazine	X	X	X
Carbofuran	X	X	X
Chlordane	X	X	X
Dibromochloropropane	X	X	X
2,4-D	X	X	X
Endrin	X	X	X
Ethylene dibromide	NR	X	X
Heptachlor	X	X	X
Heptachlor epoxide	X	X	X
Lindane	X	X	X
Methoxychlor	X	X	X
PCB - aroclor 1016	X	X	X
PCB - aroclor 1221	X	X	X
PCB - aroclor 1232	X	X	X
PCB - aroclor 1242	X	X	X
PCB - aroclor 1248	X	X	X
PCB - aroclor 1254	X	X	X
PCB - aroclor 1260	X	X	X
Pentachlorophenol	X	X	X
Toxaphene	X	X	X
2,4,5-TP (Silvex)	X	X	X
Aldrin	X	X	X
Benzo(a)pyrene	X	X	X
Butachlor	X	X	X
Carbaryl	X	X	X
Dalapon	X	X	X
Bis (2-ethylhexyl) adipate	X	X	X
Bis (2-ethylhexyl) phthalate	X	X	X
Dicamba	X	X	X
Dieldrin	X	X	X
Dinoseb	X	X	X
Glyphosphate	NR	X	NR
Hexachlorobenzene	X	X	X
Hexachlorooxyclopentadiene	X	X	X
3-Hydroxycarbofuran	X	X	X
Methomyl	X	X	X
Metolachlor	X	X	X

CONTAMINANT	BP-MWS 2014	CIWS 2014	CUWS 2014
Metribuzin	X	X	X
Oxamyl vydate	X	X	X
Picloram	X	X	X
Propachlor	X	X	X
Simazine	X	X	X
Principal Organics *			
Benzene	X	X	X
Bromobenzene	X	X	X
Bromochloromethane	X	X	X
Bromomethane	X	X	X
N-Butylbenzene	X	X	X
sec-Butylbenzene	X	X	X
tert-Butylbenzene	X	X	X
Carbon tetrachloride	X	X	X
Chlorobenzene	X	X	X
Chloroethane	X	X	X
Chloromethane	X	X	X
2-Chlorotoluene	X	X	X
4-Chlorotoluene	X	X	X
1,2-Dibromo-3-chloropropane	X	NR	X
1,2- Dibromoethane	X	NR	NR
Dibromomethane	X	X	X
1,2-Dichlorobenzene	X	X	X
1,3-Dichlorobenzene	X	X	X
1,4-Dichlorobenzene	X	X	X
Dichlorodifluoromethane	X	X	X
1,1-Dichloroethane	X	X	X
1,2-Dichloroethane	X	X	X
1,1-Dichloroethene	X	X	X
cis-1,2-Dichloroethene	X	X	X
trans-1,2-Dichloroethene	X	X	X
1,2-Dichloropropane	X	X	X
1,3-Dichloropropane	X	X	X
2,2-Dichloropropane	X	X	X
1,1-Dichloropropene	X	X	X
cis-1,3-Dichloropropene	X	X	X
trans-1,3-Dichloropropene	X	X	X
Ethylbenzene	X	X	X
Hexachlorobutadiene	X	X	X
Isopropylbenzene	X	X	X
p-Isopropyltoluene	X	X	X
Methylene chloride	X	X	X
n-Propylbenzene	X	X	X
Styrene	X	X	X
1,1,1,2-Tetrachloroethane	X	X	X
1,1,2,2-Tetrachloroethane	X	X	X
Tetrachloroethene	X	X	X
Toluene	X	X	X
1,2,3-Trichlorobenzene	X	X	X
1,2,4-Trichlorobenzene	X	X	X
1,1,1-Trichloroethane	X	X	X
1,1,2-Trichloroethane	X	X	X
Trichloroethene	X	X	X
Trichlorofluoromethane	X	X	X
1,2,3-Trichloropropane	X	X	X
1,2,4-Trimethylbenzene	X	X	X
1,3,5-Trimethylbenzene	X	X	X
m-Xylene	X	X	X
o-Xylene	X	X	X

CONTAMINANT	BP-MWS 2014	CIWS 2014	CUWS 2014
p-Xylene	X	X	X
Vinyl chloride	X	X	X
MTBE	X	X	X
UCMR 1	**2003**	**2003**	**2003**
2,4-Dinitrotoluene	X	X	X
2,6-Dinitrotoluene	X	X	X
Acetochlor	X	X	X
DCPA mono-acid degradate	X	X	X
DCPA di-acid degradate	X	X	X
4,4'-DDE	X	X	X
EPTC	X	X	X
Molinate	X	X	X
Nitrobenzene	X	X	X
Perchlorate	X	X	X
Terbacil	X	X	X
UCMR 2	**2009/10**	**2008**	**2008**
1,2-Diphenylbrazine	X	X	X
Diazinon	X	X	X
Disulfoton	X	X	X
Fonofos	X	X	X
Nitrobenzine	X	X	X
Prometon	X	X	X
Terbufos	X	X	X
2-Methylphenol	X	X	X
2,4-Dichlorophenol	X	X	X
2,4-Dinitrophenol	X	X	X
2,4,6-Trichlorophenol	X	X	X
Diuron	X	X	X
Linuron	X	X	X
UCMR 3	**2014**	**2013**	**2013**
1,2,3-trichloropropane	X	X	X
Methyl bromide	X	X	X
Methyl chloride	X	X	X
HALON 1011	X	X	X
HCFC-22	X	X	X
1,3-butadiene	X	X	X
1,1-dichloroethane	X	X	X
1,4-dioxane	X	X	X
Vanadium	D	X	X
Molybdenum	X	X	X
Cobalt	X	X	X
Strontium	D	D	D
Chromium1	D	D	D
Chromium6	D	D	D
Chlorate	D	D	D
PFOS	X	X	X
PFOA	X	X	X
PFBS	X	X	X
PFHxS	X	X	X
PFHpA	X	X	X
PFNA	X	X	X
Other PFQA			
Gross alpha	D	X	D
Gross beta	NR	X	X
Radium	D	D	X

X = Monitored, but not detected
D = Refer to detected list
NR = Not required and not monitored in the past five years
UCMR = Unregulated Contaminant Monitoring Requirements

*Bolton Point Principal Organic samples taken 2/18/15. Principal Organic samples taken in distribution system on 10/20/14 were all non-detected results.

G. MAJOR MODIFICATIONS COMPLETED IN 2014

Bolton Point (BP-MWS):

Tank Replacements

- Christopher Circle tank (0.5 MG – Town of Ithaca)

Water Main Replacements

- Coddington Road water main (Town of Ithaca)
- Route 13/North Triphammer Road water main (Village of Lansing)

Water Main Extensions

- Cayuga Way water main - Phase II (Town of Lansing)
- Route 13 transmission main reinforcement main (Bolton Point)

City (CIWS):

Water Project:

- Contracts 2 and 3 substantially complete and include:
  - Intake Building and road
  - Elm Street tank modifications
  - Mixer and new pump station
  - Interconnection building
  - Giles Street Press building and thickeners
- Contract 4 (WTP rebuild) awarded and phase 1 work started
- Replacement of Mitchell Street Pump #6

Distribution System:

- Cathodic System Controls and Array Warranty replacements
- On Woodcrest Terrace and Woodcrest Avenue – Pressure cleaning of 1,058 linear feet of 8" cast iron water main.
- On Woodcrest Avenue and Homestead Terrace – Pressure cleaning of 491 linear feet of 6" cast iron water main.

Cornell (CUWS):

- Completed the replacement of all finished water pumps, associated piping and controls in the Water Filtration Plant. Simultaneous to the pump replacement, we upgraded the electrical service to the plant. One of our raw water pumps was replaced. The driveway and delivery entrances were repaved.
- Our 500,000 gallon elevated water storage tank was demolished. It had been out of service since 2010. All fire hydrants inspected and repairs made if required.

H. FUTURE PROJECTS AND CAPITAL IMPROVEMENTS (Planned for 2015)

Bolton Point (BP-MWS)

Tank Replacements

- Sapsucker Woods Road tank (0.5 MG – Town of Ithaca)
- Bone Plain Road tank (0.26 MG - Town of Lansing)

Water Main Replacements

- Route 13 transmission main reinforcement main (Bolton Point)
- Coddington Road water main (Town of Ithaca)
- Bush Lane water main (Village of Lansing)

Water Main Extensions

- Bone Plain Road water main (Town of Lansing)

City (CIWS):

Water Project:

- Contract 4 work, phases 1, 2 and start of phase 3 (final).
- Contract 1 (Intake structure and intakes) awarded and work to start
- Complete items for Contract 3 (City):
  - Change of dechlorination chemical
  - Clean and inspect thickener #1 (possible warranty work)

Distribution System

- On Willard Way; replacement of 550 linear feet of 4" cast iron water main to 6" ductile iron main
- Loop water mains from Mitchell to Worth Street with 455 linear feet of 6" main (to relieve dead ends)
- On Homestead Road from Cornell Street to Homestead Terrace - Pressure cleaning of water main.
- Line work related to contract 4

Cornell (CUWS)

- A new project to replace the aging piping in North Campus will begin in 2015. A phased, five year project, will begin with design in 2015-6, and construction beginning in 2016 surrounding Clara Dickson Hall.

I. WATER CONSERVATION MEASURES

You can play a role in conserving water by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. The following are some ideas that you can apply directly in your own home.

Use your water meter to detect hidden leaks. Turn off all taps and water using appliances, then record the meter reading and check the meter after 15 minutes. If it registers, you have a leak.

Restaurants in the U.S. serve approximately 70 million meals a day. Every glass of water brought to your table requires another two glasses of water to wash and rinse the glass.

The bathroom accounts for 75 percent of the water used inside the home.

Water your lawn only when it needs it. If you step on the grass and it springs back up when you move, it doesn't need water. If it stays flat, it does.

Put 10 drops of food coloring in your toilet tank. If the color shows up in the bowl without flushing, you have a leak to repair. It is common to lose up to 100 gallons a day from a toilet leak. Fix it, and you save more than 30,000 gallons a year.

Do not hose down your driveway or sidewalk. Use a broom to clean leaves and other debris from these areas. Using a hose to clean a driveway can waste hundreds of gallons of water.

If every American home installed low-flow faucet aerators, the United States would save 250 million gallons of water a day.

Fix leaks as soon as they are found. A dripping faucet with a 1/16 inch stream wastes 100 gallons of water per day.

Saving water can lower your power bills by reducing your demand for hot or pumped water. These few simple steps will preserve the resource for future generations and also save up to 30% on your bill.

J. SECURITY CONCERNS

Generally, security threats to the three water systems have consisted of primarily minor vandalism and property damage. However, our security efforts focus to a high degree on the much less likely, but more serious, threat of intentional contamination of the water supply. All three water systems have performed security assessments of their entire systems and updated their Emergency Response Plans to cover the possibility of terrorism. Weaknesses in procedures have been corrected and improvements to increase the security of the infrastructure have been undertaken. Local police are aware of the security needs of the water systems and have maintained increased patrolling of the facilities. Your awareness and reporting of suspicious activity throughout the systems is appreciated.

K. SOURCE WATER PROTECTION

The New York State Health Department is in the process of developing a Source Water Assessment Report for every surface drinking water source in the state. When the reports for our three sources are completed, the systems will review them and provide a summary. If these reports become available in 2015, a summary will be posted on our websites and provided in next year's Annual Drinking Water Quality Report.

HIGH QUALITY DRINKING WATER FOR TOMPKINS COUNTY RESIDENTS

CURRENT RESIDENT

Water Trivia

- There are over 58,900 community water systems in the United States processing more than 34 billion gallons per day.
- The average residence in the United States uses 107,000 gallons of water a year.
- It takes 62,600 gallons of water to produce one ton of steel.
- Eighty percent of the earth's surface is covered by water, but only one percent of the earth's water is suitable for drinking.
- It takes 101 gallons of water to make one pound of wool or cotton.
- Water acts as a natural buffer against extreme or rapid changes in the earth's temperature.
- It would take 219 million gallons of water to cover one square mile with one foot of water.
- One gallon of water weighs 8.34 pounds.
- When the weather is very cold outside, let the cold water drip from the faucet served by exposed pipes. Running water through the pipe - even at a trickle - helps prevent pipes from freezing.

Resources

Web sites with more water information and activities for children:

- water.epa.gov/drink/
- water.epa.gov/learn/kids/drinkingwater/