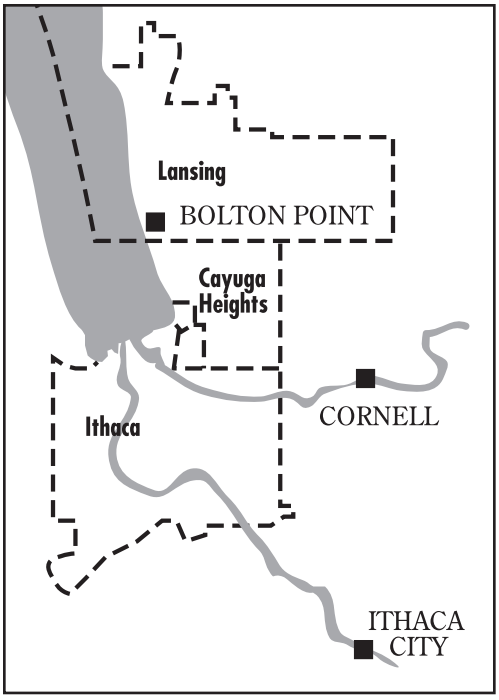
Drinking Water Quality Report 2007

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



Introduction

In the spirit of municipal 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 Sources

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 2006 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 to 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 2006 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 water to Bolton Point-Town of Ithaca customers along East Shore Drive and 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 Wednesday 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 2006 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 14853.

Contacts for additional information or to arrange a tour:

Bolton Point
Ken Butler, Production Manager
277-0660, ext.234
www.boltonpoint.org

City of Ithaca
Chuck Baker, Chief Operator
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www.ci.ithaca.ny.us

Cornell University
Chris Bordlemay,
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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.

A Water Treatment Processes

The three water systems use the following conventional 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 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 cryptosporidium or giardia 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, 401 Harris B. Dates Drive, Ithaca, New York 14850 or by phone at 274-6688.

C Security Concerns

Generally, security threats to the three water systems have been 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 modified 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 will be appreciated.

D General Water Information

Table 1: General Water Data — 2006

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	6,457	5,400	215
Total production in 2006 (MG)	999	1,019	516
Average daily withdrawal (MGD)	2.83	3.90	1.43
Average daily delivered (MGD)	2.74	2.79	1.41
Average daily loss (MGD)[1]	0.09	0.87	0.07
Annual charge per 1000 gal.	$3.30	$3.69	$3.80

MG = million gallons MGD = million gallons per day
[1] The average daily lost includes water used to flush mains, fight fires, and leakage.

Table 2: General Water Quality Data — 2006

Analyte	Units	BP-MWS Annual Average	CIWS Annual Average	CUWS Annual Average
pH (EP)		8.3	7.9	7.56
Turbidity (EP)	NTU	0.04	0.06	0.053
Total hardness	mg/l	150	109	150
Total hlkalinity	mg/l	104	96	104
Total dissolved solids	mg/l	NR	195	NR
Iron (soluble)	mg/l	NR	0.02	NR
Chlorine residual (EP)	mg/l	1.35	1.8	1.13
Chlorine Residual (POU)	mg/l	0.62	1.1	0.87
Turbidity (POU)	NTU	0.08	0.29	0.15
Total organic carbon (EP)	mg/l	2.1	2.0	2.0
Dissolved organic carbon (EP)	mg/l	2.0	2.0	1.4

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

E 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 2007, a summary will be posted on our websites and provided in next year's Annual Drinking Water Quality Report.

F Water Quality Data

INTRODUCTION 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. 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 contaminate level (MCL). Table 6 shows the contaminants that were not detected in your water.

The State allows testing less 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.

PRECAUTIONARY BOIL WATER NOTICE On Nov. 29, 2006, a boil water notice was issued for a portion of West Hill within the City of Ithaca. A large water main leak early in the morning completely drained the Cliff Park Road tank. The loss of pressure in a tank system grid creates conditions where microbiological contamination from the soil is possible. A boil water notice was issued to affected customers as a precautionary measure. After pressure was restored and testing confirmed the safety of the water, the notice was lifted on November 30th.

ADDITIONAL WATER SYSTEM DATA FOR CIWS The City has completed the necessary plans and reports to comply with Phase 2 of the Disinfection Byproduct Rule and the Long Term 2 Enhanced Surface Water Treatment Rule before the EPA mandated deadline of 2009-10. This data is available on the City of Ithaca website (www.cityofithaca.org). From the City of Ithaca homepage, click on City Departments, then Department of Public Works, then Water and Sewer Division, then Water Information, and then Stage 2 Disinfection Byproduct Rule, or The Long Term 2 Rule.

LEAD While the three water systems had no violations of State standards, it should be noted that the action level for lead was exceeded in two of the thirty samples collected for the City of Ithaca in 2005. Based on these occurrences, the following information on lead in drinking water is required to be presented:

Infants and young children are typically more vulnerable to lead in drinking water than the general population. 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, you can flush your tap for thirty seconds to two minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791) or website (www.epa.gov/safewater/index/html).

SODIUM People who are on severely restricted sodium diets should not drink water containing more than 20 mg/l of sodium. Since the level of sodium in Bolton Point water was 29 mg/l in 2006, customers on severely restricted sodium diets may 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.

G Tables of Detected Contaminants

Table 3: Detected Contaminants: Bolton Point Municipal Water System

Contaminant	Units	Violation Yes/No	Date of Sample	Maximum Level Detected (Range)	Regulatory Limit	MCLG	Likely Source of Contamination
Microbiological contaminants							
Turbidity	NTU	No	10/21/06	0.06	TT=<1 NTU	N/A	Soil runoff.
Turbidity samples	%	No	Daily	100%	TT=95% of samples<.3NTU	N/A	Soil runoff.
Disinfection by-products							
Total THMs	ug/l	No	2006	58 (11-90)	MCL = 80	N/A	By-product of drinking water chlorination.
Total HAA5	ug/l	No	2006	29 (7-34)	MCL = 60	N/A	By-product of drinking water chlorination.
Chlorine residual	mg/l	No	2006	1.85 (0-1.85)	MRDL=4	N/A	By-product of drinking water chlorination.
Inorganics							
Barium	mg/l	No	11/16/06	0.0025	MCL=2	2	Drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chloride	mg/l	No	2000	45	MCL=250	N/A	Naturally occurring or road salt.
Copper	mg/l	No	2005	0 .065 (0.0046-0.910)	AL=1.3	1.3	Household plumbing corrosion; erosion of natural deposits; wood preservatives.
Lead	ug/l	No	2005	4.9 (ND-11)	AL=15	0	Household plumbing corrosion; erosion of natural deposits.
Nickel	mg/l	No	11/16/06	0.0016	N/A	N/A	Discharge from steel and pulp mills, erosion of natural deposits.
Sodium	mg/l	No	11/16/06	29	See Water Quality, Section F	N/A	Naturally occurring; road salt; animal waste; water softeners; water treatment chemicals.
Sulfate	mg/l	No	12/13/01	29.1	MCL=250	N/A	Naturally occurring.
Radioactive							
Gross alpha	pCi/l	No	12/13/01	<2	MCL=15	0	Erosion of natural deposits.
Gross beta	pCi/l	No	12/13/01	<2	MCL=15	0	Erosion of natural deposits.

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. This means that 90 percent of the individual samples tested for lead and copper were at or below the action level (AL) set by the State. Testing for these metals is only required every three years. The three water systems collected samples in 2005.

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.

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 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): 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/l (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): Bromodichloromethane, bromoform, chloroform, 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).

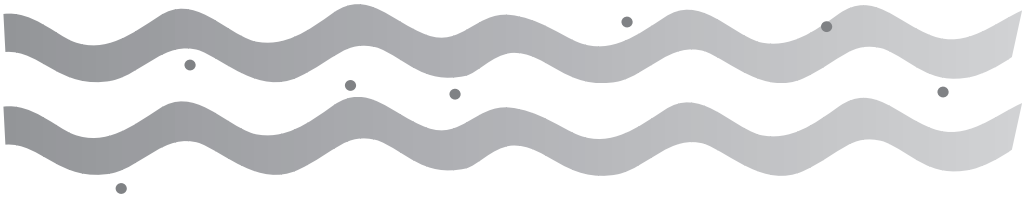


Table 4: Detected Contaminants: City Of Ithaca Water System

Contaminant	Units	Violation Yes/No	Date of Sample	Maximum Level Detected (Range)	Regulatory Limit	MCLG	Likely Source of Contamination
Microbiological contaminants							
Turbidity	NTU	No	11/19/06	0.13	TT=<1 NTU	N/A	Soil runoff.
Turbidity samples	%	No	Daily	100%	TT=95% of samples<.3NTU	N/A	Soil runoff.
Disinfection by-products							
Total THMs	ug/l	No	2006	63 (18-95)	MCL = 80	N/A	By-product of drinking water chlorination.
Total HAA5	ug/l	No	2006	49 (26-68)	MCL = 60	N/A	By-product of drinking water chlorination.
Chlorine residual	mg/l	No	2006	2.3 (1.0-2.3)	MRDL=4	N/A	By-product of drinking water chlorination.
Inorganics							
Barium	mg/l	No	7/5/06	0.027	MCL=2	2	Drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chloride	mg/l	No	7/5/06	20	MCL=250	N/A	Naturally occurring or road salt.
Copper	mg/l	No	7/5/06	0.0063	AL=1.3	1.3	Household plumbing corrosion; erosion of natural deposits; wood preservatives.
Lead	ug/l	No	2006	8(0-52)	AL=15	0	Household plumbing corrosion; erosion of natural deposits.
Nitrate	mg/l	No	7/5/06	0.42	MCL=10	10	Fertilizer runoff; septic tank leaching; sewage; erosion of natural deposits.
Sodium	mg/l	No	2006	14 (12-16)	See Water Quality, Section F	N/A	Naturally occurring; road salt; animal waste; water softeners; water treatment chemicals.
Sulfate	mg/l	No	7/5/06	9.5	MCL=250	N/A	Naturally occurring.
Radioactive							
Gross alpha	pCi/l	No	6/19/02	0.61	MCL=15	0	Erosion of natural deposits.

Table 5: Detected Contaminants: Cornell University Water System

Contaminant	Units	Violation Yes/No	Date of Sample	Maximum Level Detected (Range)	Regulatory Limit	MCLG	Likely Source of Contamination
Microbiological contaminants							
Turbidity	NTU	No	10/21/06	0.19	TT=<1 NTU	N/A	Soil runoff.
Turbidity samples	%	No	Daily	100%	TT=95% of samples<.3NTU	N/A	Soil runoff.
Disinfection by-products							
Total THMs	ug/l	No	2006	47 (18-91)	MCL = 80	N/A	By-product of drinking water chlorination.
Total HAA5	ug/l	No	2006	39 (26-39)	MCL = 60	N/A	By-product of drinking water chlorination.
Chlorine residual	mg/l	No	2006	1.5 (0.81-1.5)	MRDL=4	N/A	By-product of drinking water chlorination.
Inorganics							
Barium	mg/l	No	2006	0.017	MCL=2	2	Drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chloride	mg/l	No	2006	29	MCL=250	N/A	Naturally occurring or road salt.
Copper	mg/l	No	2005	0.103 (0.013-0.75)	AL=1.3	1.3	Household plumbing corrosion; erosion of natural deposits; wood preservatives.
Flouride	mg/l	No	2006	0.15	MCL=2.2	N/A	Erosion of natural deposits; discharge from fertilizer.
Lead	ug/l	No	2005	1.04 (ND-29)	AL=15	0	Household plumbing corrosion; erosion of natural deposits.
Nickel	mg/l	No	2006	0.0017	N/A	N/A	Discharge from steel and pulp mills; erosion of natural deposits.
Nitrate	mg/l	No	2006	2.1	MCL=10	10	Fertilizer runoff; septic tank leaching; sewage; erosion of natural deposits.
Sodium	mg/l	No	2006	15	See Water Quality, Section F	N/A	Naturally occurring; road salt; animal waste; water softeners; water treatment chemicals.
Sulfate	mg/l	No	2006	26	MCL=250	N/A	Naturally occurring.
Zinc	mg/l	No	2006	0.081	MCL=5	N/A	Naturally occurring; mining waste.
Radioactive							
Gross alpha	pCi/l	No	2/2/02	0.174	MCL=15	0	Erosion of natural deposits.

H Table 6: Non-Detected Contaminates: All Systems

CONTAMINANT	BP-MWS 2006	CIWS 2006	CUWS 2006
Microbiological			
Total Coliform	X	D	X
E. Coli	X	X	X
Inorganics			
Antimony	X	X	X
Arsenic	X	X	X
Asbestos	NR	NR	X
Beryillium	X	X	X
Cadmium	X	X	X
Chromium	X	X	X
Color	NR	X	NR
Cyanide	X	X	X
Mercury	X	X	X
Nickel	D	X	X
Nitrate	X	D	D
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	X
Hexachlorobenzene	X	X	X
Hexachlorooxyclopentadiene	X	X	X
3-Hydroxycarbofuran	X	X	X
Methomyl	X	X	X
Metolachlor	X	X	X
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

CONTAMINANT	BP-MWS 2006	CIWS 2006	CUWS 2006
2-Chlorotoluene	X	X	X
4-Chlorotoluene	X	X	X
1,2-Dibromo-3-chloropropane	X	NR	NR
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
p-Xylene	X	X	X
Vinyl chloride	X	X	X
MBTE	X	X	X
UCMR List 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 List 2			
1,2-Diphenylbrazine	NR	X	X
Diazinon	NR	X	X
Disulfoton	NR	X	X
Fonofos	NR	X	X
Nitrobenzine	NR	X	X
Prometon	NR	X	X
Terbufos	NR	X	X
2-Methylphenol	NR	X	X
2,4-Dichlorophenol	NR	X	X
2,4-Dinitrophenol	NR	X	X
2,4,6-Trichlorophenol	NR	X	X
Diuron	NR	X	X
Linuron	NR	X	X
Other			
Giardia	NR	NR	X
Cryptosporidium	NR	NR	X

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

I Major Modifications Completed in 2006

Bolton Point (BP-MWS):

- A three million gallon concrete tank was built on East Hill to increase storage and fire protection.
- The developing computer control and radio telemetry system now monitors and controls thirty of the thirty-four remote stations in the Bolton Point distribution system.
- One of the 300 hp, seven stage finished water pumps was rebuilt.
- A variable speed drive was installed on backwash pump #1 to save energy.
- Major maintenance work was performed on the Trumansburg Road tank, including exterior painting, interior coating, enlarging of the overflow, and rebuilding of the inlet and drain plumbing.
- A new valve station was built near the Trumansburg Road tank to supply higher pressure to some customers on West Hill.
- A new isolation valve was installed on finished water pump #2.
- New cathodic protection anodes were installed at the Christopher Circle tank.
- A variable speed drive was installed on the south flocculator.
- The chlorine dioxide trial was continued to assess its effectiveness in reducing the levels of disinfection byproducts.
- About half of the valves, piping and tubing of the chlorine distribution system was replaced.

City (CIWS):

- The City's water plant needs to be replaced or rebuilt. The City has reduced its options to either rebuild at the existing location and rehabilitate the reservoir, or obtain water from the Bolton Point water plant.
- Older on-line water quality analyzers were replaced at the water plant and at the Vinegar Hill pump station.
- The effluent valve and actuator were replaced on filter #10.

- The soft start on the East Ithaca pump #3 was replaced.
- A flush hydrant was installed by the City on the line that connects the City clearwells to the Bolton Point transmission main.
- A sampling shelter was installed at the Cornell Street water tank.
- The #2 flocculator in the 1951 slow mix area was repaired.
- A 1903 flocculation baffle that collapsed was rebuilt.

Cornell (CUWS):

- The primary coagulant system was modified to feed polyaluminum chloride instead of aluminum sulfate. This change provided increased efficiencies in the sedimentation and filtration processes, decreased production of disinfection byproducts, and eliminated the need to feed a second coagulant.
- The computer system (SCADA) at the water filtration plant was modified to improve the efficiency of operational monitoring and alarming.
- Distribution system was extended to serve the new East Campus Research Facility and the new Life Sciences Building.
- Four buildings were removed in the West Campus area including the water services.
- Engineering studies were initiated on the future of Cornell's water storage needs.

J Future Capital Improvements (Planned for 2007)

Bolton Point (BP-MWS)

- Install two 200 hp pumps and variable speed drives at the Oakcrest pump station.
- Rebuild one of the 250 hp, five stage raw water pumps.
- Replace the last of the four filter effluent control valves and two filter backwash inflow valves.
- Complete Phase III of the SCADA system for the control and monitoring of the remote pump stations, tanks and control valve stations.
- Complete the chlorine dioxide trial and make a determination on its use as the initial disinfectant to reduce the production of disinfection byproducts.
- Perform major maintenance on the Sheldon Road tank including painting of the interior and exterior surfaces, replacement of influent, effluent, drain, and overflow piping, and improving landscaping and drainage.
- Upgrade two of the turbidimeters monitoring filter effluents.
- Install surveillance cameras at critical locations in the distribution system.
- Trial new coagulants to increase the effectiveness of the treatment process and decrease the concentrations of organic precursors of disinfection byproducts.

City (CIWS):

- Preparation of environmental impact statements for the two selected options for the replacement of the existing water treatment facility.
- Water mains at the south end of the City will be connected to create a more reliable looped system.
- The steel water tanks will be inspected and cathode protection upgrades will be performed as necessary.
- Installation of a new pump control valve for Mitchell St. pump #6.
- Finish the generator hook up for the main control panel.

Cornell (CUWS)

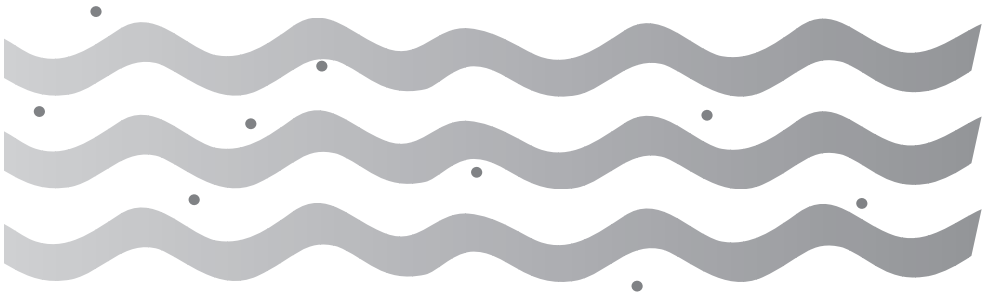
- Construct new pre-stressed concrete tank to serve the future needs of the campus and surrounding communities.
- Install water mains related to growth and development of campus.
- Construct a new transmission main to the storage facilities serving campus.
- Replace the roofs over the water filtration plant and flocculation area.

K Water Conservation

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 moves, you have a leak.
- Store drinking water in the refrigerator rather than letting the tap run every time you want a glass of cool water.
- 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.
- 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, 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.
- Conserve water because it is the right thing to do. Don't waste water just because someone else is paying for it, such as when you are staying at a hotel or you have a lease where the landlord pays for water usage.

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.



Water Trivia

- There are approximately one million miles of pipeline and aqueducts in the United States and Canada, or enough to circle the earth 40 times.
- It takes 2,072 gallons of water to make four automobile tires.
- The average residence uses 107,000 gallons of water per year.
- It would take 209 million gallons of water to cover one square mile with one foot of water. That much water would weigh more than 1.7 billion pounds.
- It takes 1,500 gallons of water to process one barrel of beer.
- The first water pipes in the U.S. were made from charred, bored logs.
- The average 1/4 acre lawn can use over 3,000 gallons of water a week.
- Water acts as a natural insulator to regulate the earth's temperature.
- There are over 58,900 community public water systems in the United States processing more than 34 billion gallons per day.

Web sites with more water information and activities for children:
www.epa.gov/safewater/index.html
www.epa.gov/safewater/kids/index.html

High Quality Drinking Water for Tompkins County Residents

Current Resident