

## **2015 Drinking Water Consumer Confidence Report (Supplemental Data)**

CITY OF ROCHESTER

### **Introduction**

The Rochester Water Bureau has prepared the following report to provide information to you, the consumer, on the quality of our drinking water. Included within this report is general health information, water quality test results, and water system contacts.

This year, as in years past, your tap water met all USEPA and state drinking water health standards. Our system vigilantly safeguards its surface water supply, and we are able to report that the department had no violation of a contaminant level or of any other water quality standard in the previous year. This report summarizes the quality of water that we provided last year, including details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. We are committed to providing you with this information because informed customers are our best allies.

### **Source Water Information.**

The City of Rochester Distribution System receives its drinking water from the Hemlock and Shoremont Water Filtration Plants located in Livingston and Monroe Counties.

### **What are sources of contamination to drinking water?**

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:

- (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations
- (B) 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.
- (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- (D) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban Storm water runoff, and septic systems
- (E) 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, USEPA and State of New York prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The presence of some contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

### **About your drinking water and the data in this report.**

The EPA requires regular sampling to ensure drinking water safety. The City of Rochester Water Bureau conducts sampling for bacteriological; inorganic; radiological; synthetic organic and volatile organic contaminants. Samples were collected in 2015 for almost 200 different contaminants most of which were not detected in the City of Rochester water supply. The EPA requires us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, is more than one year old.

*The City of Rochester had no reporting violations in 2015.*

*This summary contains results for both detected and non-detected contaminants. Information on health effects is provided for detected contaminants only.*

### *2015 Lead and Copper Survey.*

The lead and copper rule is one of the many federal and state regulations that exist to ensure the quality and safety of everyone's drinking water. The City of Rochester Public Water Supply is in compliance with these regulations. The City of Rochester is required by the EPA and the State of New York to sample for lead and copper every three years. This involved sampling 58 locations within the distribution system. Samples were collected from locations where the highest levels of these contaminants were likely to be found. The most recent survey was completed in 2015, and the next survey is scheduled for 2018. 3 out of 58 locations exceeded the lead action level of 15 ug/L and 0 out of 58 locations exceeded the copper action level of 1300 ug/L in the most recent survey.

### *Unregulated Contaminant Monitoring Rule 3 (UCMR3).*

The 1996 Safe Drinking Water Act (SDWA) amendments require that once every five years EPA issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems. UCMR3 was published on May 2, 2012 and required public water systems to participate in monitoring between 2013 and 2015. The monitoring results will provide the basis for future regulatory actions to protect public health. The City of Rochester participated in UCMR3 in 2015. The next rule (UCMR4) is scheduled for publication in 2016 and UCMR4 monitoring is expected to begin in January 2018.

### *Laboratory Accreditation.*

The City of Rochester Water Quality Laboratory (New York State Department of Health Lab ID#10239) is approved as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards (NELAC; 2003) for the Category ENVIRONMENTAL ANALYSIS POTABLE WATER. All tests results generated for this report were performed in accordance with approved methods by the City of Rochester Water Quality Laboratory or by a NELAC contract laboratory certified for drinking water analysis. Monroe County Water Authority data was provided courtesy of the MCWA Water Quality Laboratory.

### *Sample Locations.*

Samples analyzed for this report were collected at the Entry Point (Water leaving the filtration plant) or within the Distribution System (Network of pipes and storage facilities downstream of the filtration plant that are used to deliver potable water to the consumer).

*Contact Information.*

For more information on your drinking water contact:

Hemlock Filtration Plant at 585-428-6680 or 585-428-647  
Laboratory Director/Water Quality Chemist at 585-428-6011  
New York State Department of Health at 1-800-458-1158 (within New York State)  
EPA Safe Drinking Water Hotline at 1-800-426-4791

**Definitions of some terms contained within this report.**

- Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. MCLG's are not enforceable.
- Maximum Contaminant level (MCL):** The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. MCLs are enforceable. Permissible contaminant levels identified in this report are either EPA (Federal) or New York State MCLs.
- Secondary MCL:** A secondary standard is a non-enforceable guideline that may cause aesthetic effects such as changes to the taste, odor or color of drinking water.
- Action Level (AL):** The concentrations of a contaminant, which, when exceeded triggers additional treatment, or other requirements, that a water system must follow.
- LRAA:** The annual average contaminant concentration at a monitoring site. A.k.a. Locational Running Annual Average.
- Maximum Residual Disinfectant Level (MRDL):** The highest level of disinfectant that is allowed in drinking water.
- MFL:** Millions of fibers per liter. A units of measure for asbestos fibers longer than 10 micrometers.

<b>Milligrams per Liter (mg/L):</b>	A unit of measure for concentration of a contaminant that is also referred to as parts per million. Analogy: A part per million corresponds to one second in a little over 11.5 days.
<b>Micrograms per Liter (µg/L):</b>	A unit of measure for concentration of a contaminant that is also referred to as parts per billion. Analogy: A part per billion corresponds to one second in 31.7 years.
<b>Nanograms per Liter (ng/L):</b>	A unit of measure for concentration of a contaminant that is also referred to as parts per trillion. Analogy: A part per trillion corresponds to one second in 32,000 years.
<b>NTU:</b>	Nephelometric turbidity units. A measure of water clarity. Turbidity in excess of 5 NTU is just noticeable to the average person.
<b>Treatment Technique (TT):</b>	A required process intended to reduce the level of a contaminant in drinking water.
<b>The "&lt;"symbol:</b>	A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.
<b>NA</b>	Not applicable.
<b>ND</b>	Not detected.

## Monitoring Results

Radiological Contaminants (Entry Point)												
		Hemlock Water Filtration Plant							Monroe County Water Authority			
Contaminant (units)	Sample Year	No. Tests	Minimum	Avg	Maximum	MCLG	MCL	Violation	No. Tests	Minimum	Avg	Maximum
Alpha emitters (pCi/L)	2009	2		ND		0	15	N	1 (2012)		ND	
Uranium, Total (ug/L)	2009	2		ND		0	30	N	1 (2012)		ND	
Radium 226 & 228 (pCi/L)	2009	2		ND		0	5	N	1 (2012)		ND	

Microbiological Contaminants (Entry Point)												
		Hemlock Water Filtration Plant							Monroe County Water Authority			
Contaminant (units)	Sample Year	No. Tests		Total No. Positive	% Positive	MCLG	MCL	Violation	No. Tests		Total No. Positive	% Positive
Finished Water Coliform, Total (P/A)	2015	361		0	0.0	0	5.0% of Monthly Samples are positive	N	<a href="http://www.mcwa.com/">http://www.mcwa.com/</a>			
E.Coli (P/A)	2015	361		0	0.0		0	N	<a href="http://www.mcwa.com/">http://www.mcwa.com/</a>			

Contaminant (units)	Sample Year	No. Tests	Minimum	Avg	Maximum	MCLG	MCL	Violation	No. Tests	Minimum	Avg	Maximum
Raw Water Cryptosporidium (Oocysts/L)	2015	11	0.0	0.0	0.0	0	TT	N	9	0.0	0.0	0.0
Raw Water Giardia (Oocysts/L)	2015	11	0.0	0.0	0.0	0	TT	N	9	0.0	0.0	0.0
Finished Water Turbidity (NTU)	2015	2,158	0.04	0.07	0.16		TT (mo. avg <0.3NTU for 95% of samples)	N (100%)	2,190	0.03	0.04	0.13
<b>Health Effect:</b>	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 that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Please pay special attention to the additional statement in this document regarding Cryptosporidium.											

<b>Microbiological Contaminants (Distribution System)</b>								
<b>Contaminant (units)</b>	<b>Sample Year</b>	<b>No. Tests</b>	<b>Total No. Positive</b>	<b>Highest Month % Positive</b>	<b>% Positive Annual Avg</b>	<b>MCLG</b>	<b>MCL</b>	<b>Violation</b>
Coliform, Total (P/A)	2015	2,175	18	4.5 (5/2015)	0.8	0	5.0% of Monthly Samples are positive	N
<b>Health Effect:</b>	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems. Coliforms were NOT found in more samples than allowed.							
E. Coli (P/A)	2015	2,175	0	NA	0.0			N

<b>Contaminant (units)</b>	<b>Sample Year</b>	<b>No. Tests</b>	<b>Minimum</b>	<b>Avg</b>	<b>Maximum</b>	<b>MCLG</b>	<b>MCL</b>	<b>Violation</b>
Highland Reservoir Cryptosporidium (Oocysts/L)	2015	21	0.00	0.00	0.00	0	TT	N
Highland Reservoir Giardia (Oocysts/L)	2015	21	0.00	0.00	0.00	0	TT	N
Cobbs Hill Reservoir Cryptosporidium (Oocysts/L)	2015	24	0.00	0.00	0.00	0	TT	N
Cobbs Hill Reservoir Giardia (Oocysts/L)	2015	24	0.00	0.00	0.00	0	TT	N
Turbidity (NTU)	2015	2,062	0.04	0.16	7.88		TT (mo. avg <5NTU)	N

Inorganic Contaminants (Entry Point)												
Contaminant (units)	Sample Year	Hemlock Water Filtration Plant				MCLG	MCL	Violation	Monroe County Water Authority			
		No. Tests	Minimum	Avg	Maximum				No. Tests	Minimum	Avg	Maximum
Alkalinity (CaCO <sub>3</sub> ) (mg/L)	2015	6	65	69	74	NA	NA		4	84	87	90
<b>Health Effect:</b>	Alkalinity has no health effect. It is a measure of a waters ability to neutralize acid.											
Calcium (mg/L)	2015	8	24	25	26	NA	NA		4	34	33	36
<b>Health Effect:</b>	Multiplying the calcium concentration by 2.5 converts the result to a value expressed as mg/L of calcium hardness (as CaCO <sub>3</sub> ). Calcium hardness can contribute to scale formation on plumbing fixtures.											
Chloride (mg/L)	2015	9	32	34	35	NA	250	N	4	25	26	27
<b>Health Effect:</b>	No health effects. The MCL for chloride is the level above which the taste of water may become objectionable. In addition, to the adverse taste effects, high chloride concentration levels in the water contribute to the deterioration of domestic plumbing and water heaters. Elevated chloride concentrations may also be associated with the presence of sodium in drinking water.											
Sulfate (mg/L)	2015	3	11	12	13	NA	250	N	4	28	29	31
<b>Health Effect:</b>	High concentrations of sulfate in drinking water have three effects: (1) water containing appreciable amounts of sulfate tends to form hard scales in boilers and heat exchangers; (2) sulfates cause taste effects; and (3) sulfates can cause laxative effects with excessive intake. The laxative effect of sulfates is usually noted in transient users of a water supply because people who are accustomed to high sulfate levels in drinking water have no adverse response. Diarrhea can be induced at sulfate levels greater than 500 mg/l but typically near 750 mg/l.											
Color (Apparent) (Color Unit)	2015	5	<5	<5	<5	NA	15	N	4		ND	
Fluoride (mg/L)	2015	1,083	0.50	0.69	0.97	2.2	2.2	N	2,175	0.10	0.80	1.30
<b>Health Effect:</b>	Fluoride occurs naturally and is added as a treatment chemical. The average fluoride concentration within our water supply is 3 times lower than the NYS MCL. The EPA MCL is 4 mg/L. Some people who drink water containing fluoride in excess of 4 mg/L over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at concentrations of 2 mg/L or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.											
Nitrate/Nitrite (mg/L)	2015	5	0.01	0.10	0.17	10	10	N			NA	
<b>Health Effect:</b>	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.											



Inorganic Contaminants (Entry Point)												
Contaminant (units)	Sample Year	Hemlock Water Filtration Plant				MCLG	MCL	Violation	Monroe County Water Authority			
		No. Tests	Minimum	Avg	Maximum				No. Tests	Minimum	Avg	Maximum
Nitrate (mg/L)	2015	1		0.10		10	10	N	4	0.27	0.33	0.36
<b>Health Effect:</b>	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.											
Nitrite (mg/L)	2015	1		ND		1	1	N	4		ND	
pH (SU)	2015	363	7.2	7.8	8.5		6.5-8.5 SU	N	364	7.1	7.5	7.9
<b>Health Effect:</b>	There is no health effect for pH. The EPA Secondary Drinking Water Regulations recommend a range of 6.5-8.5 SU for pH. Low pH can result in a bitter metallic taste and increased corrosivity; High pH can result in a soda taste and contribute to scale formation.											
Total Hardness (mg/L)	2015	1		89		NA	NA	N	4	120	123	130
<b>Health Effect:</b>	No health effect is associated with total hardness. Total hardness is the sum of both calcium and magnesium hardness and is expressed in mg/L. Total hardness is sometimes expressed in grains per gallon (gpg). The grains of hardness in City water is 5 gpg.											
Specific Conductivity (umhos/cm)	2015	1		280		NA	NA	N	38	290	300	310
<b>Health Effect:</b>	Conductivity is a measure of the water's ability to carry an electrical current and is correlated with the amount of total dissolved solids in the water. Conductivity is dependent on source water quality and is used by the water quality laboratory to differentiate between drinking water sourced from Hemlock Lake and Lake Ontario within the distribution system. The conductivity of potable water sourced from Lake Ontario is approximately 20 umhos/cm higher than potable water sourced from Hemlock Lake.											
Total Dissolved Solids (mg/L)	2015	1		140		NA	500	N	4	160	185	200
<b>Health Effect:</b>	Contributes to the hardness, color and taste of the water. The EPA has established a secondary maximum contaminant level concentration of 500 mg/L for TDS.											
Iron (mg/L)	2015	1		ND		NA	0.3	N	4		ND	
Magnesium (mg/L)	2015	1		6.3		NA	NA	N	4	8.9	9.2	9.7
<b>Health Effect:</b>	Multiplying the magnesium concentration by 2.5 converts the result to a value expressed as mg/L of magnesium hardness (as MgCO <sub>3</sub> ). Magnesium hardness can contribute to scale formation on plumbing fixtures.											
Potassium (mg/L)	2015	1		1.5		NA	NA	N	2		1.6	
<b>Health Effect:</b>	Potassium is present in very low levels in drinking water.											

Inorganic Contaminants (Entry Point)												
Contaminant (units)	Sample Year	Hemlock Water Filtration Plant				MCLG	MCL	Violation	Monroe County Water Authority			
		No. Tests	Minimum	Avg	Maximum				No. Tests	Minimum	Avg	Maximum
Sodium (mg/L)	2015	1		20		NA	50	N	4	15		17
<b>Health Effect:</b>	Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.											
Aluminum (ug/L)	2015	1		8.0		NA	200	N	4	ND	47	75
<b>Health Effect:</b>	High levels of aluminum can lead to colored water. The EPA Secondary Drinking Water Regulations recommend a maximum concentration of 0.2 mg/L (=200 ug/L) for aluminum.											
Antimony (ug/L)	2015	1		ND		6	6	N	4		ND	
Arsenic (ug/L)	2015	1		ND		0	10	N	4		ND	
Barium (ug/L)	2015	1		17		2000	2000	N	4	18	20	21
<b>Health Effect:</b>	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.											
Beryllium (ug/L)	2015	1		ND		4	4	N	4		ND	
Cadmium (ug/L)	2015	1		ND		5	5	N	4		ND	
Chromium, Total (ug/L)	2015	1		ND		100	100	N	4	ND	ND	1.4
<b>Health Effect:</b>	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis. Total chromium for entry point was also tested in the UCMR3 survey. Those results for total chromium are reported separately in the UCMR3 table below.											
Copper (ug/L)	2015	1		4		1300	1300	N	4		ND	
<b>Health Effect:</b>	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.											
Cyanide (mg/L)	2015	1		ND		0.2	0.2	N	4		ND	
Lead (ug/L)	2015	1		ND		0	15	N	4		ND	
Manganese (ug/L)	2015	1		ND		NA	50	N	4		ND	
Nickel (ug/L)	2015	1		ND		NA	100	N	4		ND	
Selenium (ug/L)	2015	1		ND		50	50	N	4		ND	
Silver (ug/L)	2015	1		ND		NA	100	N	4		ND	
Thallium (ug/L)	2015	1		ND		0.5	2	N	4		ND	
Zinc (ug/L)	2015	1		ND		NA	5000	N	4		ND	
Mercury (ug/L)	2015	1		ND		2	2	N	4		ND	

<b>Inorganic Contaminants (Distribution System)</b>								
<b>Contaminant (units)</b>	<b>Sample Year</b>	<b>No. Tests</b>	<b>Minimum</b>	<b>Avg</b>	<b>Maximum</b>	<b>MCLG</b>	<b>MCL</b>	<b>Violation</b>
Fluoride (mg/L)	2015	375	0.57	0.69	0.89	NA	2.2	N
1776 Dewey Ave Asbestos (MFL)	2014	1		ND		7	7	N

<b>Lead and Copper Survey (Distribution System)</b>									
<b>Contaminant (units)</b>	<b>Sample Year</b>	<b>No. Locations</b>	<b>Minimum</b>	<b>Avg</b>	<b>Maximum</b>	<b>90th Percentile</b>	<b>MCLG</b>	<b>AL</b>	<b>Violation</b>
Copper (ug/L)	2015	58	3	125	860	206	1300	1300	N
<b>Health Effect:</b>	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.								
Lead (ug/L)	2015	58	<1	3.8	19.0	9.7	0	15	N
<b>Health Effect:</b>	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								

<b>Disinfectants and Disinfection By-Products (Entry Point)</b>								
<b>Contaminant (units)</b>	<b>Sample Year</b>	<b>No. Tests</b>	<b>Minimum</b>	<b>Avg</b>	<b>Maximum</b>	<b>MCLG</b>	<b>MCL (MRDL for Chlorine)</b>	<b>Violation</b>
Total Organic Carbon (TOC) (mg/L)	2015	6	2.17	2.60	3.00	N/A	TT	N
<b>Health Effect:</b>	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver, or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.							
UV254 (abs/cm)	2015	10	0.031	0.034	0.037	NA	NA	N
<b>Health Effect:</b>	There is no health hazard associated with UV-254. There is a relationship UV-254 absorbance and total organic carbon concentrations and UV-254 can be used as a surrogate for TOC measurement.							
Free Chlorine Residual (mg/L)	2015	2,164	0.64	0.93	1.90	4	4	N
<b>Health Effect:</b>	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.							
Bromodichloromethane (ug/L)	2015	1		3.4		NA	NA	N
Bromoform (ug/L)	2015	1		ND		NA	NA	N
Chloroform (ug/L)	2015	1		8.2		NA	NA	N
Dibromochloromethane (ug/L)	2015	1		0.7		NA	NA	N
Total Trihalomethanes (ug/L)	2015	1		12		NA	80	N
<b>Health Effect:</b>	Increased risk of cancer associated with long-term exposure above the MCL.							
Dibromoacetic Acid (ug/L)	2015	1		2.1		NA	NA	N
Dichloroacetic Acid (ug/L)	2015	1		5.3		NA	NA	N
Monobromoacetic Acid (ug/L)	2015	1		ND		NA	NA	N
Monochloroacetic Acid (ug/L)	2015	1		ND		NA	NA	N
Trichloroacetic Acid (ug/L)	2015	1		3.7		NA	NA	N
Haloacetic Acids (5) (ug/L)	2015	1		11		NA	60	N
<b>Health Effect:</b>	Increased risk of cancer associated with long-term exposure above the MCL.							

<b>Disinfectants and Disinfection By-Products (Distribution System)</b>									
<b>Contaminant (units)</b>	<b>Sample Year</b>	<b>No. Tests</b>	<b>Minimum</b>	<b>Avg</b>	<b>Maximum</b>	<b>MCLG</b>	<b>MCL (MRDL for Chlorine)</b>	<b>Violation</b>	<b>Maximum LRAA</b>
UV254 Reservoirs (abs/cm)	2015	27	0.025	0.029	0.035	NA	NA	N	
<b>Health Effect:</b>	There is no health hazard associated with UV-254. There is a relationship UV-254 absorbance and total organic carbon concentrations and UV-254 can be used as a surrogate for TOC measurement.								
Free Chlorine Residual (mg/L)	2015	3,154	0.01	0.72	2.30	4	4	N	
<b>Health Effect:</b>	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.								
Bromodichloromethane (ug/L)	2015	32	2	8	13	NA	NA	N	
Bromoform (ug/L)	2015	32	0	0	1	NA	NA	N	
Chloroform (ug/L)	2015	32	4	29	65	NA	NA	N	
Dibromochloromethane (ug/L)	2015	32	1	2	4	NA	NA	N	
Total Trihalomethanes (ug/L)	2015	32	12	40	80	NA	80	N	50
<b>Health Effect:</b>	Increased risk of cancer associated with long-term exposure above the MCL.								
Dibromoacetic Acid (ug/L)	2015	32	0	0	0	NA	NA	N	
Dichloroacetic Acid (ug/L)	2015	32	3	12	20	NA	NA	N	
Monobromoacetic Acid (ug/L)	2015	32	0	0	0	NA	NA	N	
Monochloroacetic Acid (ug/L)	2015	32	0	0	3	NA	NA	N	
Trichloroacetic Acid (ug/L)	2015	32	3	15	26	NA	NA	N	
Haloacetic Acids (5) (ug/L)	2015	32	6	27	44	NA	60	N	34
<b>Health Effect:</b>	Increased risk of cancer associated with long-term exposure above the MCL								

Semi-Volatile Organic Contaminants (Entry Point)												
Contaminant (units)	Sample Year	Hemlock Water Filtration Plant				MCLG	MCL***	Violation	Monroe County Water Authority			
		No. Tests	Minimum	Avg	Maximum				No. Tests	Minimum	Avg	Maximum
1,2-Dibromo-3-Chloropropane (DBCP) (ug/L)	2015	1		ND		0	0.2	N	1		ND	
1,2-Dibromoethane (EDB) (ug/L)	2015	1		ND		0	0.05	N	1		ND	
Aroclor 1016 (PCB's) (ug/L)	2015	1		ND		NA	NA	N	1		ND	
Aroclor 1221 (PCB's) (ug/L)	2015	1		ND		NA	NA	N	1		ND	
Aroclor 1232 (PCB's) (ug/L)	2015	1		ND		NA	NA	N	1		ND	
Aroclor 1242 (PCB's) (ug/L)	2015	1		ND		NA	NA	N	1		ND	
Aroclor 1248 (PCB's) (ug/L)	2015	1		ND			NA	N	1		ND	
Aroclor 1254 (PCB's) (ug/L)	2015	1		ND			NA	N	1		ND	
Aroclor 1260 (PCB's) (ug/L)	2015	1		ND			NA	N	1		ND	
Total PCB's (ug/L)	2015	1		ND		0	0.5	N	1		ND	
Chlordane (ug/L)	2015	1		ND		0	2	N	1		ND	
Toxaphene (ug/L)	2015	1		ND		0	3	N	1		ND	
2,4-D (ug/L)	2015	1		ND			50	N	1		ND	
Dalapon (ug/L)	2015	1		ND		200	200	N	1		ND	
Dacthal, mono & di acid, DCPA (ug/L)	2015	1		ND			50	N	2	ND	ND	0.13
<b>Health Effect:</b>	Released to the environment through its use and application as an agricultural herbicide used on a wide range of vegetable crops.											
Dicamba (ug/L)	2015	1		ND			50	N	1		ND	
Dinoseb (ug/L)	2015	1		ND		7	7	N	1		ND	
Pentachlorophenol (ug/L)	2015	1		ND		0	1	N	1		ND	
Picloram (ug/L)	2015	1		ND		500	500	N	1		ND	
2,4,5-TP (Silvex) (ug/L)	2015	1		ND		50	50	N	1		ND	
Alachlor (ug/L)	2015	1		ND		0	2	N	1		ND	
Aldrin (ug/L)	2015	1		ND			50	N	1		ND	
Atrazine (ug/L)	2015	1		ND		3	3	N	1		ND	
Benzo(a)pyrene (ug/L)	2015	1		ND		0	0.2	N	1		ND	
gama-BHC (Lindane) (ug/L)	2015	1		ND		0.2	0.2	N	1		ND	
Butachlor (ug/L)	2015	1		ND			50	N	1		ND	

Semi-Volatile Organic Contaminants (Entry Point)												
Contaminant (units)	Sample Year	Hemlock Water Filtration Plant				MCLG	MCL***	Violation	Monroe County Water Authority			
		No. Tests	Minimum	Avg	Maximum				No. Tests	Minimum	Avg	Maximum
Dieldrin (ug/L)	2015	1		ND			50	N	1		ND	
Di(2-ethylhexyl) adipate (ug/L)	2015	1		ND		400	400	N	1		ND	
Di(2-ethylhexyl) phthalate (ug/L)	2015	1		ND		0	6	N	1		ND	
Endrin (ug/L)	2015	1		ND		2	2	N	1		ND	
Heptachlor (ug/L)	2015	1		ND		0	0.4	N	1		ND	
Heptachlor epoxide (ug/L)	2015	1		ND		0	0.2	N	1		ND	
Hexachlorobenzene (ug/L)	2015	1		ND		0	1	N	1		ND	
Hexachlorocyclopentadiene (ug/L)	2015	1		ND		50	50	N	1		ND	
Methoxychlor (ug/L)	2015	1		ND		40	40	N	1		ND	
Metolachlor (ug/L)	2015	1		ND			50	N	1		ND	
Metribuzin (ug/L)	2015	1		ND			50	N	1		ND	
Propachlor (ug/L)	2015	1		ND			50	N	1		ND	
Simazine (ug/L)	2015	1		ND		4	4	N	1		ND	
Aldicarb (ug/L)	2015	1		ND			50	N	1		ND	
Aldicarb sulfone (ug/L)	2015	1		ND			50	N	1		ND	
Aldicarb sulfoxide (ug/L)	2015	1		ND			50	N	1		ND	
Carbaryl (ug/L)	2015	1		ND			50	N	1		ND	
Carbofuran (ug/L)	2015	1		ND		40	40	N	1		ND	
3-Hydroxycarbofuran (ug/L)	2015	1		ND			50	N	1		ND	
Methomyl (ug/L)	2015	1		ND			50	N	1		ND	
1-Naphthol (ug/L)	2015	1		ND			50	N	1		ND	
Oxamyl (ug/L)	2015	1		ND		200	200	N	1		ND	
Glyphosate (ug/L)	2015	1		ND		700	700	N	1		ND	
Endothall (ug/L)	2015	1		ND		100	100	N	1		ND	
Diquat (ug/L)	2015	1		ND		20	20	N	1		ND	
2,3,7,8-TCDD (Dioxin) (pg/L)	2014	1		ND		0	30	N	1		ND	

Volatile Organic Contaminants (Entry Point)												
Contaminant (units)	Sample Year	Hemlock Water Filtration Plant				MCLG	MCL***	Violation	Monroe County Water Authority			
		No. Tests	Minimum	Avg	Maximum				No. Tests	Minimum	Avg	Maximum
Benzene (ug/L)	2015	1		ND		0	5	N	1		ND	
Bromobenzene (ug/L)	2015	1		ND			5	N	1		ND	
Bromochloromethane (ug/L)	2015	1		ND			5	N	1		ND	
Bromomethane (ug/L)	2015	1		ND			5	N	1		ND	
n-Butylbenzene (ug/L)	2015	1		ND			5	N	1		ND	
sec-Butylbenzene (ug/L)	2015	1		ND			5	N	1		ND	
tert-Butylbenzene (ug/L)	2015	1		ND			5	N	1		ND	
Carbon tetrachloride (ug/L)	2015	1		ND		0	5	N	1		ND	
Chlorobenzene (ug/L)	2015	1		ND			5	N	1		ND	
Chloroethane (ug/L)	2015	1		ND			5	N	1		ND	
Chloromethane (ug/L)	2015	1		ND			5	N	1		ND	
2-Chlorotoluene (ug/L)	2015	1		ND			5	N	1		ND	
4-Chlorotoluene (ug/L)	2015	1		ND			5	N	1		ND	
Dibromomethane (ug/L)	2015	1		ND			5	N	1		ND	
1,2-Dichlorobenzene (ug/L)	2015	1		ND			5	N	1		ND	
1,3-Dichlorobenzene (ug/L)	2015	1		ND			5	N	1		ND	
1,4-Dichlorobenzene (ug/L)	2015	1		ND			5	N	1		ND	
Dichlorodifluoromethane (ug/L)	2015	1		ND			5	N	1		ND	
1,1-Dichloroethane (ug/L)	2015	1		ND		0	5	N	1		ND	
1,2-Dichloroethane (ug/L)	2015	1		ND		0	5	N	1		ND	
1,1-Dichloroethylene (ug/L)	2015	1		ND		5	5	N	1		ND	
cis-1,2-Dichloroethylene (ug/L)	2015	1		ND		5	5	N	1		ND	
trans-1,2-Dichloroethylene (ug/L)	2015	1		ND		5	5	N	1		ND	
Dichloromethane (ug/L)	2015	1		ND		0	5	N	1		ND	
1,2-Dichloropropane (ug/L)	2015	1		ND		0	5	N	1		ND	
1,3-Dichloropropane (ug/L)	2015	1		ND			5	N	1		ND	
2,2-Dichloropropane (ug/L)	2015	1		ND			5	N	1		ND	



Volatile Organic Contaminants (Entry Point)												
Contaminant (units)	Sample Year	Hemlock Water Filtration Plant				MCLG	MCL***	Violation	Monroe County Water Authority			
		No. Tests	Minimum	Avg	Maximum				No. Tests	Minimum	Avg	Maximum
1,1-Dichloropropylene (ug/L)	2015	1		ND			5	N	1		ND	
cis-1,3-Dichloropropylene (ug/L)	2015	1		ND			5	N	1		ND	
trans-1,3-Dichloropropylene (ug/L)	2015	1		ND			5	N	1		ND	
1,3-Dichloropropylene, cis & trans (ug/L)	2015	1		ND			5	N	1		ND	
Ethyl benzene (ug/L)	2015	1		ND		5	5	N	1		ND	
Hexachlorobutadiene (ug/L)	2015	1		ND			5	N	1		ND	
Isopropylbenzene (ug/L)	2015	1		ND			5	N	1		ND	
4-Isopropyltoluene (ug/L)	2015	1		ND			5	N	1		ND	
Methyl-t-butyl ether (MTBE) (ug/L)	2015	1		ND			10	N	1		ND	
Naphthalene (ug/L)	2015	1		ND			5	N	1		ND	
n-Propylbenzene (ug/L)	2015	1		ND			5	N	1		ND	
Styrene (ug/L)	2015	1		ND			5	N	1		ND	
1,1,1,2-Tetrachloroethane (ug/L)	2015	1		ND			5	N	1		ND	
1,1,2,2-Tetrachloroethane (ug/L)	2015	1		ND			5	N	1		ND	
Tetrachloroethylene (ug/L)	2015	1		ND		0	5	N	1		ND	
Toluene (ug/L)	2015	1		ND			5	N	1		ND	
1,2,3-Trichlorobenzene (ug/L)	2015	1		ND			5	N	1		ND	
1,2,4-Trichlorobenzene (ug/L)	2015	1		ND		5	5	N	1		ND	
1,1,1-Trichloroethane (ug/L)	2015	1		ND		5	5	N	1		ND	
1,1,2-Trichloroethane (ug/L)	2015	1		ND		3	3	N	1		ND	
Trichloroethylene (ug/L)	2015	1		ND		0	5	N	1		ND	
Trichlorofluoromethane (ug/L)	2015	1		ND			5	N	1		ND	
1,2,3-Trichloropropane (ug/L)	2015	1		ND			5	N	1		ND	
1,2,4-Trimethylbenzene (ug/L)	2015	1		ND			5	N	1		ND	

Volatile Organic Contaminants (Entry Point)												
Contaminant (units)	Sample Year	Hemlock Water Filtration Plant				MCLG	MCL***	Violation	Monroe County Water Authority			
		No. Tests	Minimum	Avg	Maximum				No. Tests	Minimum	Avg	Maximum
1,3,5-Trimethylbenzene (ug/L)	2015	1		ND			5	N	1		ND	
Vinyl chloride (ug/L)	2015	1		ND		0	2	N	1		ND	
1,2-Xylene (ug/L)	2015	1		ND			5	N	1		ND	
1,3 + 1,4-Xylene (ug/L)	2015	1		ND			5	N	1		ND	
Xylenes, Total (ug/L)	2015	1		ND			15	N	1		ND	

Taste and Odor Causing Chemicals (Entry Point)									
Contaminant (units)	Sample Year	No. Tests	Minimum	Avg	Maximum	MCLG	MCL	Violation	
Geosmin (ng/L)	2015	1		2.4			NA	N	
<b>Health Effect:</b>	Geosmin is a chemical produced by certain types of bacteria and algae within the source water (Hemlock Lake). At concentrations higher than 5 to 10 parts per trillion geosmin may impart an earthy taste and odor to the water.								
IBMP (ng/L)	2015	1		ND				N	
IPMP (ng/L)	2015	1		ND				N	
MIB (ng/L)	2015	1		ND			NA	N	
2,4,6-Trichloroanisole (TCA) (ng/L)	2015	1		ND				N	

Surfactants (Entry Point)									
Contaminant (units)	Sample Year	No. Tests	Minimum	Avg	Maximum	MCLG	MCL	Violation	
Foaming Agents (MBAS) (mg/L)	2015	1		ND				N	

UCMR3 (Entry Point)									
Contaminant (units)	Sample Year	Hemlock Water Filtration Plant				Monroe County Water Authority (2014)			
		No. Tests	Minimum	Avg	Maximum	No. Tests	Minimum	Avg	Maximum
1,1-dichloroethane (ug/L)	2015	4		ND		4		ND	
1,2,3-trichloropropane (ug/L)	2015	4		ND		4		ND	
1,3-butadiene (ug/L)	2015	4		ND		4		ND	
1,4-dioxane (ug/L)	2015	4		ND		4		ND	
bromochloromethane (Halon 1011) (ug/L)	2015	4		ND		4		ND	
bromomethane (ug/L)	2015	4		ND		4		ND	
chlorodifluoromethane (HCFC-22) (ug/L)	2015	4		ND		4		ND	
chloromethane (ug/L)	2015	4		ND		4		ND	
chlorate (ug/L)	2015	4	ND	28	43	4	ND		130
chromium, total (ug/L)	2015	4		ND		4	ND		0.23
chromium-6 (ug/L)	2015	4	ND	0.02	0.04	4	0.07		0.09
cobalt (ug/L)	2015	4		ND		4		ND	
molybdenum (ug/L)	2015	4		ND		4	1.2		1.3
strontium (ug/L)	2015	4	50	53	57	4	160		190
vanadium (ug/L)	2015	4		ND		4	ND		0.2
perfluorobutanesulfonic acid (PFBS) (ug/L)	2015	4		ND		4		ND	
perfluoroheptanoic acid (PFHpA) (ug/L)	2015	4		ND		4		ND	
perfluorohexanesulfonic acid (PFHxS) (ug/L)	2015	4		ND		4		ND	
perfluorononanoic acid (PFNA) (ug/L)	2015	4		ND		4		ND	
perfluorooctanesulfonic acid (PFOS) (ug/L)	2015	4		ND		4		ND	
perfluorooctanoic acid (PFOA) (ug/L)	2015	4		ND		4		ND	
ethynylestradiol (ug/L)	2015	4		ND		4		ND	
estradiol (ug/L)	2015	4		ND		4		ND	
4-androstene-3,17-dione (ug/L)	2015	4		ND		4		ND	
equilin (ug/L)	2015	4		ND		4		ND	
estriol (ug/L)	2015	4		ND		4		ND	

UCMR3 (Entry Point)									
Contaminant (units)	Sample Year	Hemlock Water Filtration Plant				Monroe County Water Authority (2014)			
		No. Tests	Minimum	Avg	Maximum	No. Tests	Minimum	Avg	Maximum
estrone (ug/L)	2015	4		ND		4		ND	
testosterone (ug/L)	2015	4		ND		4		ND	

UCMR3 (Distribution System)					
Contaminant (units)	Sample Year	No. Tests	Minimum	Avg	Maximum
chlorate (ug/L)	2015	4	21	61	120
chromium, total (ug/L)	2015	4		ND	
chromium-6 (ug/L)	2015	4	ND	0.05	0.10
cobalt (ug/L)	2015	4		ND	
molybdenum (ug/L)	2015	4		ND	
strontium (ug/L)	2015	4	56	78	140
vanadium (ug/L)	2015	4		ND	

**Footnotes:**

\*\*\* In Part 5, Subpart 5-1 of the New York State Sanitary Code general organic chemicals are categorized as Principle Organic Contaminants (POCs) or Unspecified Organic Contaminants (UOCs). A POC is defined as any organic compound belonging to the following classes, except for chloroform, dibromochloromethane, bromodichloromethane, bromoform and any other chemical contaminant with a specific MCL listed in Subpart 5-1.52:

- (1) Halogenated Alkane.
- (2) Halogenated Ether.
- (3) Halobenzenes and Substituted Halobenzenes.
- (4) Benzene and Alkyl- or Nitrogen-Substituted Benzenes.
- (5) Substituted, Unsaturated Hydrocarbons.
- (6) Halogenated Nonaromatic Cyclic Hydrocarbons.

A UOC is defined as any organic compound not otherwise specified in this Subpart.

Per Table 3 of Subpart 5-1.52 a POC is assigned an MCL of 0.005 mg/L (5 ug/L) and a UOC has an MCL of 0.05 mg/L (50 ug/L). The Total POCs+UOCs MCL is 0.1 mg/L (100 ug/L).