

**Annual Water Quality Report for 2016**  
City of Cohoes  
97 Mohawk Street, Cohoes, NY 12047  
(Public Water Supply Identification Number NY0100192)

**INTRODUCTION**

To comply with State regulations, the City of Cohoes, will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your drinking water met all State drinking water health standards. This report is an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to New York State standards. Our constant goal is and always has been, to provide to you a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and to protect our water resources. If you have any questions concerning this report or concerning your drinking water please contact: *Mr. Michael Duffey, Chief Water Plant Operator, City of Cohoes, 97 Mohawk Street, Cohoes, NY 12047; Telephone (518) 237-4320.* We want our valued customers to be informed about their water service. If you want to learn more, please attend any of our regularly scheduled City Council meetings. They are held on the 2<sup>nd</sup> and 4<sup>th</sup> Tuesday of each month, 7:00 PM, at the *City Hall, 97 Mohawk Street; Telephone (518) 233-2121.*

**WHERE DOES OUR WATER COME FROM?**

Brookfield Power located on North Mohawk Street up to the 75 million gallon Raw Water Storage Reservoir on Upper Vliet Blvd. The treatment process at Cohoes consists of: potassium permanganate addition for taste and odor control; coagulation and flocculation using aluminum sulfate to cause small particles to stick together when the water is mixed, making larger heavier particles; sedimentation to allow the newly formed larger particles to settle out naturally; filtration to remove smaller particles by trapping them in sand filters; pH adjustment with caustic soda for corrosion control along with a ortho-phosphate corrosion inhibitor for iron and manganese control and post chlorination to prevent bacterial contamination. During the warmer months we also re-chlorinate the water at the two storage tanks (lower reservoir) located on Vliet St. and Simmons Ave. providing additional control against bacterial contamination.

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and Environmental Protection Agency (EPA) prescribe regulations, which limit the amount of certain contaminants in water, provided by public water systems. The State Health Department's and the Food and Drug Administration's (FDA's) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

**FACTS AND FIGURES**

The City of Cohoes provides water through 4,665 residential service connections and 60 industrial services to a population of approximately 16,168 people. We also supply a small section of the Town of Colonie, which includes 6 residential services and 2 industrial services. Our average daily demand is 2.1 million gallons and our single highest day was 3.4 million gallons. During 2016, a total of 791,705,000 gallons was withdrawn from the Mohawk River. Approximately 19 million gallons were used for water plant operations such as filter backwashing and sedimentation tank cleaning. The amount of water treated was 778,727,000 gallons. Additionally, 15 million gallons were used for distribution system flushing. City residents used 449,141,100 gallons through metered sales. Of that total, the Village of Green Island purchased 21,386,000 gallons and the residents in the Town of Colonie purchased 2,775,900 gallons. This leaves an unaccounted for total of 430,492,400 gallons or approximately 49.9% lost from distribution system leaks, water breaks, fighting fires, street sweeper, unmetered use, Lansing Public Pool and unauthorized use.

The rate for Residential, Commercial and Industrial customers is \$3.70 per thousand gallons of water used and \$3.70 per thousand gallons for sewer. There is a minimum charge for infrastructure improvements charged to residential, commercial and industrial customers at a rate of \$15/30/45 per quarter respectively for water and sewer customers. There is no longer a minimum usage charge and billing is done quarterly.

We have had problems over the years with high percentages of water measured as lost. It appears that some of the problems have been with the metering such as using undersized meters or meters not working. Also, the location of the raw water meter needs a longer length of strait pipe with no elbows. We do not have that luxury with the current layout of our Water Treatment Plant which is the cause of many inaccurate meter readings.

#### **ARE THERE CONTAMINANTS IN OUR DRINKING WATER?**

In accordance with State regulations, the City of Cohoes routinely monitors your drinking water for numerous contaminants. We test your drinking water for inorganic contaminants, radiological contaminants, lead and copper, nitrate, volatile organic contaminants, and synthetic organic contaminants. In addition, we test 15 samples for coliform bacteria each month. The attached table presented below depicts which contaminants were detected in your drinking water. The state allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old and is noted. For a listing of all the parameters that we must analyze and the frequency of testing for compliance with the NYS Sanitary Code, see Appendix A.

Recent news stories about the safety of water supplies across the country has brought more focus on drinking water. Stories about high lead levels and PFOA seem to show up in the newspaper and television news almost every day. We would like to emphasize that our water supply is safe and regularly tested. Our most recent lead and copper testing is in the Table on page 3. There are some “emerging contaminants” in which a material or chemical is characterized as a potential or real threat to human health. This would be PFOA (Perfluorooctanoic Acid) and PFOS (Perfluorooctane Sulfonate). The City is not required to test for PFOA or PFOS (Code of Federal Regulations/Title10 Subpart 5) but in light of recent regional issues has taken the proactive stance to perform these tests. Samples were collected and analyzed quarterly in 2013 and found to be less than the detection limit of 20 ppt at that time. We collected another sample in March 2016 and analyzed for PFOA and PFOS. PFOS was determined to be less than the method detection limit of 0.67 parts per trillion (ppt) and PFOA was estimated to have a very small concentration of 2.3 ppt. The current EPA advisory standard is 100 ppt with our water being 50 times lower the advisory standard.

Unregulated Contaminant Monitoring 3 was conducted during 2013. This is a requirement of the 1996 Safe Drinking Water Act amendments. This monitoring provides a basis for future regulatory action to protect the public health. The number in parentheses refers to the number of analytes measured for a total of 21 analytes. The breakdown of analytes is as follows: volatile organic chemicals (7), synthetic organic compounds (1), metals (6), oxyhalide anion (1) and perfluorinated compounds (6). We have listed those compounds that were detected in the table of Detected Contaminants for Cohoes. For some parameters there are no associated MCL’s for these compounds at this time.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily pose a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA’s Safe Drinking Water Hotline (800-426-4791) or the Albany County Health Department at (518) 447-4620.

#### **WHAT DOES THIS INFORMATION MEAN?**

As you can see by the table on page 4, our system had no violations. We have learned through our monitoring and testing that some constituents have been detected; however, these compounds were detected below New York State requirements. Maximum Contaminant Levels (MCL’s) are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

#### **IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?**

During, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

#### **DO I NEED TO TAKE SPECIAL PRECAUTIONS?**

Some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water. EPA/CDC (Centers for Disease Control) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbiological pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

#### **INFORMATION ON LEAD**

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Cohoes is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in

drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>

#### **WATER CONSERVATION TIPS**

The City of Cohoes encourages water conservation. There are a lot of things you can do to conserve water in your own home. Conservation tips include:

- ◆ Only run the dishwasher and clothes washer when there is a full load
- ◆ Use water saving showerheads
- ◆ Install faucet aerators in the kitchen and the bathroom to reduce the flow from 4 to 2.5 gallons per minute
- ◆ Water gardens and lawn for only a couple of hours after sunset
- ◆ Check faucets, pipes and toilets for leaks and repair all leaks promptly
- ◆ Take shorter showers

#### **CAPITAL IMPROVEMENTS**

During 2016 there the following projects were completed:

- ◆ New meters were installed for the High & Medium
  - ◆ New Low System meter is being manufactured
- Projects for 2017

- ◆ High Tank replacement planned for 2017
- ◆ Rehabilitation of Filter #6 which is out of service
- ◆ Interconnect line at Edwards and Bacon Avenue
- ◆ Waterline to Waterford under the new bridge

#### **CLOSING**

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit our customers. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office if you have questions.

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**City of Cohoes - Mohawk River  
NY01000192  
Source Water Assessment Summary**

The NYS DOH has completed a Source Water Assessment for the Mohawk River upstream of the Cohoes intake. The assessment is summarized below. The assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how likely contaminants could enter the Mohawk River. The susceptibility rating is an estimate of the potential for contamination. It does not mean that the water delivered to your home is or will become unsafe to drink. See section “Are there contaminants in our drinking water?” of this report, for information concerning low levels of contaminants in your water.

This assessment found the amount of pasture in the Mohawk River assessment area results in a potential for protozoa contamination. While there are many facilities present along the Mohawk that are permitted to discharge, they do not represent an important threat to source water quality. However, it is appears that the total amount of wastewater discharged to surface water in this assessment area is high enough to raise the potential for contamination (particularly for protozoa). Finally, it should be noted that relatively high flow velocities make river drinking water supplies highly sensitive to existing and new sources of microbial contamination.

The Cohoes water treatment plant performs multi-level treatment to insure you receive safe drinking water. Additionally, as this annual report shows your water is routinely monitored for a great number of potential contaminants.

A copy of the full Source Water Assessment, including a map of the assessment area, is available for review by contacting us at the number provided in this report.

CITY OF COHOES TABLE OF DETECTED CONTAMINANTS Public Water Supply Identification Number NY01000192						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
<b>Microbiological Contaminants</b>						
Turbidity (Highest turbidity sample from 10/11/16)	N	0.29 <sup>1</sup>	NTU	N/A	TT=1.0 NTU	Soil runoff
Turbidity		100%			TT= 95% samples < 0.3	
<b>Inorganic Contaminants</b> (Sample data from 10/22/16 unless otherwise noted)						
Barium	N	27	ppb	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chloride	N	33.6	ppm	N/A	250	Geology; Naturally occurring
Copper (sample data from 5/12/15-6/25/15) Range of copper concentration	N	0.21 <sup>2</sup> 0.02-0.31	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits;
Lead (sample data from 5/12/15-6/25/15) Range of lead concentration	N	ND <sup>3</sup> ND- 3	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Manganese (biweekly samples) average range	N	45 ND-820	ppb	N/A	300	Erosion of natural deposits
Nickel	N	1.4	ppb	N/A	100	Discharge from steel/metal factories
Nitrate (as Nitrogen)	N	0.805	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Odor	N	1	units	N/A	3	Organic or inorganic pollutants originating from municipal and industrial waste discharges: natural sources
pH	N	6.99	units	N/A	6.5-8.5	
Sodium <sup>4</sup>	N	22.9	ppm	N/A	N/A	Naturally Occurring, Road salt
Sulfate	N	41.1	ppm	N/A	250	Naturally Occurring
<b>Radiological Contaminants</b>						
Gross Alpha	N	2.79	pCi/L	0	15	Erosion of natural deposits
Radium 228	N	0.54	pCi/L	0	5	Erosion of natural deposits
<b>Stage 2 Disinfection Byproducts (DBPs), (THM &amp; HAA5 Sample data based on 4 samples/ qtr. from 2/11/15, 5/14/15, 8/27/15, &amp; 11/12/15)</b>						
Haloacetic Acids (HAA5) [(Average) <sup>5</sup> Range of Values for HAA5	N	32.8 18-41	ppb	N/A	60	By-product of drinking water disinfection
Total Trihalomethanes] TTHM (Average) <sup>5</sup> Range of values for Total Trihalomethanes	N	61.4 29-70	ppb	N/A	80	By-product of drinking water chlorination
Chlorine (average) Range of chlorine residual	N	1.1695	ppm	MRDLG N/A	MRDL 4	Used in the treatment and disinfection of drinking water
Total Organic Carbon Compliance Ratio	N	1.0-2.15	-	Compliance ratio >=1	TT <sup>6</sup>	Organic material both natural and manmade; Organic pollutants, decaying vegetation,
<b>Unregulated Contaminant Monitoring 3 ( Quarterly samples collected 1/14/13, 4/2/13, 7/15/13 10/1/13)</b>						
Chromium (Total) range all 4 quarters	N	0.3-0.7	ppb	100	100	Erosion of natural deposits
Chromium Hexavalent range all 4 quarters)	N	0.17-0.33	ppb	N/A	N/A	Oxidation of naturally occurring chromium deposits or industrial discharges
Strontium range of values all 4 quarters	N	244-327	ppb	N/A	N/A	Erosion of natural deposits
Vanadium range of values all 4 quarters	N	0.3-1.6	ppb			Erosion of natural deposits
Chlorate range of values all 4 quarters	N	63.8-227	ppb	N/A	1000	By-product of drinking water disinfection at treatment plants using Hypochlorite Solutions.
<b>FOOTNOTES-</b>						
1. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Level detected represents the highest level detected. The regulations require 95% of the turbidity samples collected have measurements below 0.3 NTU. We met the standard 100% of the time. We also collect a distribution turbidity sample 5 times a week. Our average distribution turbidity for 2016 was 0.15 NTU.						
2. The level presented represents the 90 <sup>th</sup> percentile of 30 test sites. The action level for copper was not exceeded at any of the 30 sites tested						
3. The level presented represents the 90 <sup>th</sup> percentile of 30 test sites. The action level for lead was not exceeded at any of the 30 sites tested						
4. Water containing more than 20 ppm should not be consumed by persons on severely restricted sodium diets.						
5. The average shown is based on a Locational Running Annual Average (LRAA). The LRAA shown is the highest of the 4 sample sites. The Highest THM LRAA was in the 4 <sup>th</sup> quarter while the highest HAA5 LRAA was in the 1 <sup>st</sup> quarter of 2016.						
6. The Interim Enhanced Surface Water Treatment Rule (IESWTR) requires monitoring of raw and finished water Total Organic Carbon (TOC). Depending on the raw water alkalinity value, proper water treatment should remove between 15% to 35% of the raw water TOC thus reducing the amount of disinfection byproducts produced. The removal or compliance ratio should be 1 or greater for each quarter.						

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) or Nanograms per liter (nanograms/l) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

*Picocuries per liter (pCi/L)* - picocuries per liter is a measure of the radioactivity in water.  
*Nephelometric Turbidity Unit (NTU)* - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.  
*90<sup>th</sup> Percentile Value* - The values reported for lead and copper represent the 90<sup>th</sup> percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90<sup>th</sup> percentile is equal to or greater than 90% of the lead and copper values detected at your water system  
*Action Level* - the concentration of a contaminant, which, if exceeded, triggers treatment, or other requirements, which a water system must follow.  
*Treatment Technique (TT)* - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.  
*Maximum Contaminant Level* - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.  
*Maximum Contaminant Level Goal* The "Goal" (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.  
*Maximum Residual Disinfectant Level (MRDL)*: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.  
*Maximum Residual Disinfectant Level Goal (MRDLG)*: The level of a 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.  
*Locational Running Annual Average (LRAA)*: The LRAA is calculated by taking the average of the four most recent samples collected at each individual site.  
*N/A-Not applicable*

CITY OF COHOES TEST RESULTS					
Public Water Supply Identification Number NY01000192					
CONTAMINANT	MONITORING FREQUENCY		CONTAMINANT	CONTAMINANT	MONITORING FREQUENCY
Asbestos	Every 9 years Sample from 5/3/11		<b>POC's (Volatile Organic Compounds)</b>		
			Benzene	Trans-1,3-Dichloropropene	Monitoring requirement is one sample annually.  Sample results from 10/12/16  <b>NON DETECT</b>
Antimony	Sample results from 10/12/16  <b>NON DETECT</b>		Bromobenzene	Ethylbenzene	
Arsenic			Bromochloromethane	Hexachlorobutadiene	
			Bromomethane	Isopropylbenzene	
Beryllium			N-Butylbenzene	p-Isopropyltoluene	
Cadmium			sec-Butylbenzene	Methylene Chloride	
Chromium			Tert-Butylbenzene	n-Propylbenzene	
Mercury			Carbon Tetrachloride	Styrene	
Silver			Chlorobenzene	1,1,1,2-Tetrachloroethane	
Selenium			2-Chlorotoluene	1,1,2,2-Tetrachloroethane	
Thallium			4-Chlorotoluene	Tetrachloroethene	
Fluoride			Dibromomethane	Toluene	
Cyanide			1,2-Dichlorobenzene	1,2,3-Trichlorobenzene	
			1,3-Dichlorobenzene	1,2,4-Trichlorobenzene	
			1,4-Dichlorobenzene	1,1,1-Trichloroethane	
			Dichlorodifluoromethane	1,1,2-Trichloroethane	
		1,1-Dichloroethane	Trichloroethene		
Color	Monitoring requirement is at State discretion  Sample results from 10/12/16  <b>NON DETECT</b>		1,2-Dichloroethane	Trichlorofluoromethane	
			1,1 Dichloroethene	1,2,3-Trichloropropane	
			cis-1,2 Dichloroethene	1,2,4-Trimethylbenzene	
Iron			Trans-1,2-Dichloroethene	1,3,5-Trimethylbenzene	
			1,2 Dichloropropane	o- Xylene	
			1,3 Dichloropropane	m- Xylene	
			2,2 Dichloropropane	p-Xylene	
			1,1 Dichloropropene	Vinyl Chloride	
			Cis-1,3-Dichloropropene	MTBE	
Propylene Glycol	Monthly samples				
<b>Microbiological Contaminants</b>			<b>Radiological Parameters</b>		
Total Coliform/ E. coli	15 samples monthly		Beta particle activity		Requirement is one sample every six-nine years. 1 Samples from 3 <b>NON DETECT</b>
			Radium 226		
			Uranium		
<b>Synthetic Organic Chemicals</b>					
Synthetic Organic Chemicals (Group I)			Synthetic Organic Chemicals (Group II)		
Alachlor	Aldicarb		Aldrin	Benzo(a)pyrene	Monitoring requirement is
Aldicarb Sulfoxide	Aldicarb Sulfone		Butachlor	Carbaryl	

Atrazine	Carbofuran		Dalapon	Di(2-ethylhexyl)adipate	every 18 months <b>NON DETECT</b> Sample results from 5/3/16 *State waiver <b>does not require</b> <b>monitoring</b> <b>these</b> <b>compounds</b>
Chlordane	Dibromochloropropane		Di(2-ethylhexyl)phthalate	Dicamba	
2,4-D	Endrin		Dieldrin	Dinoseb	
Ethylene Dibromide	Heptachlor		Diquat*	Endothall*	
Lindane	Methoxychlor		Glyphosate*	Hexachlorobenzene	
PCB's	Toxaphene		Hexachlorocyclopentadiene	3-Hydroxycarbofuran	
2,4,5-TP (Silvex)			Methomyl	Metolachlor	
			Metribuzin	Oxamyl vydate	
			Pichloram	Propachlor	
			Simazine	2,3,7,8-TCDD (Dioxin)*	