



2016

# ANNUAL DRINKING WATER QUALITY REPORT

## INTRODUCTION

We are very pleased to provide you with the 2016 Annual Drinking Water Quality Report. In 2016, your drinking water met all State drinking water health standards. This report is a snapshot 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 concerns about your drinking water please contact the City of Schenectady, Department of Water, Room 206, City Hall, Schenectady, NY 12305. Or please call 518 - 382 - 5023. We want you to be informed about your drinking water.

## WHERE DOES OUR WATER COME FROM?

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 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 the EPA prescribe regulations which limit the amount of certain contaminants in water provided by Public Water Systems. The State Health Department's and the FDA's regulations establish limits for contaminant's in bottled water which must provide the same protection for public health.

Our water source is a clean and plentiful groundwater aquifer called the Great Flats Aquifer. The water from the aquifer is pumped into the system through a series of twelve 70 foot drilled wells located at the treatment plant on Rice Road in the Town of Rotterdam. The water produced by the wells is of excellent quality prior to treatment. Chlorination, fluoridation and inorganic phosphates provide the only treatment required. During 2016, our system did not experience any restriction of our water source.

## FACTS AND FIGURES

Our water system serves approximately 61,821 people in the City of Schenectady through 19,000 service connections. We also serve a portion of the Town of Niskayuna and a small number of customers in the Town of Rotterdam. The total water produced in 2016 was 5,048,447,160 gallons of water. The daily average of water treated and pumped into the distribution system is 13,793,571 gallons per day. Our highest single day usage was 23,480,440 gallons. Because the majority of the residential accounts are un-metered, there is no clear record of total water consumed and billed. Un-billed water is used to flush transmission and distribution mains, for fighting fires, or is lost through leaks in the system. The City will be supporting the leak detection and flushing programs in the summer of 2017. In 2016, inside City metered water customers were charged \$1.827 per 100 cubic feet of water. One Hundred cubic feet equal's 748 gallons. A typical household on the flat rate within the City of Schenectady was charged approximately \$230.00 for water.

In accordance with the 1996 New York State Public Health Law, the following annual report has been prepared for your information.

## ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

In accordance with State regulations, the Schenectady Water Department 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 seventy samples for coliform bacteria each month. The **City of Schenectady Table Of Detected Contaminants** is the table that depicts contaminants that 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 the **Table of Compounds Analyzed that were Below Limits of Detection**. 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 at 1-800-426-4791 or the Schenectady County Health Department at 518- 386 - 2818.

## WHAT DOES THIS INFORMATION MEAN?

As you can see by the tables, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State. Additional information is available from the Safe Drinking Water Hotline 1-800-426-4791.

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

During 2016, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

## DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded State and Federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immune-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 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 1-800-426-4791.

## VULNERABILITY ASSESSMENT

The City of Schenectady Water Department vulnerability assessment has been updated in 2016 As a result of the assessment we have taken steps to increase security. For security reasons the assessment is strictly confidential.

## 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 Schenectady 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## INFORMATION ON FLUORIDE ADDITION

Our system is one of many drinking water systems in New York State that provides drinking water with a controlled low level of fluoride for consumer dental health protection. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal range from 0.7 to 1.2 mg/l. To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that the Schenectady Water Department monitor fluoride levels on a daily basis. During 2016 monitoring showed fluoride levels in your water were in optimal range 100% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride.

## WHY SAVE WATER AND HOW TO AVOID WASTING IT

Although our system has an adequate amount of water to meet present demands, there are a number of reasons why it is important to conserve water:

- ★ Saving water saves energy and some of the costs associated with both of these necessities of life
- ★ Saving water reduces the cost of energy required to pump water and the need to construct costly new wells and pumping systems
- ★ Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.
- ★ The Schenectady Water Department encourages water conservation. There are a lot of things you can do to conserve water in your own home. See the following conservation tips.
- ★ 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
- ★ Check faucets and pipes for leaks and repair all leaks promptly
- ★ Take shorter showers
- ★ Check your toilets for leaks, by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save 30,000 gallons a year.
- ★ If you have a meter, use it to detect hidden leaks. Simply turn off all taps and water using appliances, then check the meter after 15 minutes, if it moved, you have a leak.

- ★ Adhere to the lawn sprinkling ordinance.

Lawn sprinkling with a hose or other use of water will be allowed only from May 1, 2017 to November 1, 2017 every other day. Those residences on the even numbered side of the street will be permitted sprinkling on even numbered days, the odd numbered side of the street on odd numbered days.

Lawn sprinkling shall not exceed four (4) hours per day between the hours of 7:00 AM to 9:00 AM and 7:00 PM to 9:00 PM. Observance of these restrictions will conserve energy resources while maintaining necessary water supplies for fire protection.

## 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, our way of life and our children's future. If you have any questions please call our office at 382-5023, or visit our web site at [www.cityofschenectady.com](http://www.cityofschenectady.com)

## NOTE SECTION FOR CITY OF SCHENECTADY TABLE OF DETECTED CONTAMINANTS

1. The level presented represents the 90<sup>th</sup> percentile of the 30 sites tested. 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 percent of the lead values detected at your water system. In this case 30 samples were collected in your water system, and the 90<sup>th</sup> percentile value was the 4<sup>th</sup> highest value.

The action level for lead was not exceeded at any of the sites tested.

2. During 2016 we collected and analyzed 30 samples for copper. The level included in the table represents the 90<sup>th</sup> percentile, the 4<sup>th</sup> highest levels detected. The action level for copper was not exceeded at any of the sites tested.

3. Water containing more than 20 mg/l should not be consumed by persons on severely restricted sodium diets; Water containing more than 270 mg/l should not be consumed by persons on moderately restricted sodium diets.

4. This result represents one sample only (Single Sample).

## DEFINITIONS

*Milligrams per liter (mg/l)* correspond to one part of liquid in one million parts of liquid (parts per million - ppm).

*Micrograms per liter (ug/l)* correspond to one part of liquid in one billion parts of liquid (parts per billion - ppb).

*90<sup>th</sup> Percentile Value* - The values reported for lead and copper represent the 90<sup>th</sup> percentiles. 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.

*Treatment Technique (TT)*: A required process intended to reduce the level of a contaminant in drinking water.

*Action Level (AL)*: The concentrations of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

*Maximum Contaminant Level* - (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as possible.

*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.

*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 drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.

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

*N/A* - Not applicable

Anyone desiring to paint a fire hydrant this year will be able to Adopt-A-Hydrant . The Water Department will supply you with the proper paint and brush. Anyone interested should contact the Water Department at 382-5023.



**SCENECTADY WATER DEPARTMENT**  
**PUBLIC WATER SUPPLY IDENTIFICATION NUMBER NY4600070**  
**New York State Sanitary Code Compliance Monitoring Requirements**  
**Table of Compounds Analyzed that were Below Limits of Detection**

SYNTHETIC ORGANIC CHEMICALS		VOLATILE ORGANIC CHEMICALS		
CONTAMINANT	MONITORING	CONTAMINANT	MONITORING	
Alachlor	Monitoring requirement is one sample every eighteen months. Sample results from 05/31/16  IN COMPLIANCE	Benzene	Monitoring requirement is one sample per year Sample results from Well #2 7-20-16 Well #12 IN COMPLIANCE	
Aldrin		Bromobenzene		
Atrazine		Bromomethane		
Chlordane		N-Butylbenzene		
Dieldrin		sec-Butylbenzene		
Endrin		Tert-Butylbenzene		
Heptachlor		Carbon Tetrachloride		
Heptachlor epoxide		Chlorobenzene		
Lindane		2-Chlorotoluene		
Methoxyhlor		4-Chlorotoluene		
Metolachlor		Dibromomethane		
Metribuzin		1,2-Dichlorobenzene		
Simazine		1,3-Dichlorobenzene		
Toxaphene		1,4-Dichlorobenzene		
Aldicarb		Dichlorodifluoromethane		
Aldicarb Sulfone		1,1-Dichloroethane		
Aldicarb Sulfoxide		1,2-Dichloroethane		
Carbaryl		1,1 Dichloroethene		
Carbofuran		cis-1,2 Dichloroethene		
1,2-dibromoethane		Trans-1,2-Dichloroethene		
1,2-dibro-3-chloropropane		1,2 Dichloropropane		
2,4-D		1,3 Dichloropropane		
Dalapon		2,2 Dichloropropane		
Dicamba		1,1 Dichloropropene		
Dinoseb		1,3-Dichloropropene		
Pentachlorophenol		Ethylbenzene		
Pichloram		Isopropylbenzene		
2,4,5-TP		p-Isopropyltoluene		
Benzo(a)pyrene		Methylene Chloride		
Butachlor		n-Propylbenzene		
Di (2-ethylhexy) adipate		Styrene		
Di (2-ethylhexy) pthalate		1,1,1,2-Tetrachloroethane		
Glyphosate		1,1,2,2-Tetrachloroethane		
Hexachlorobenzene		Tetrachloroethene		
Hexachlorocyclopentadiene		Toluene		
PCB		1,2,3-Trichlorobenzene		
Propachlor		1,2,4-Trichlorobenzene		
<b>INORGANIC CHEMICALS - PRIMARY</b>		1,1,1-Trichloroethane		
CONTAMINANT	MONITORING	<b>BACTERIOLOGICAL PARAMETERS</b>		
Antimony	Monitoring Requirement is one sample every 3 years. Sample results from 11/03/14  IN COMPLIANCE	1,1,2-Trichloroethane	<b>CONTAMINANT</b>	
Arsenic		Trichloroethene		<b>MONITORING</b>
Barium		Trichlorofluoromethane	Total Coliform E-Coli	
Beryllium		1,2,3-Trichloropropane	Monitoring requirement is 70 samples per month IN COMPLIANCE	
Cadmium		1,2,4-Trimethylbenzene	<b>RADIOLOGICAL PARAMETERS</b>	
Cesium		1,3,5-Trimethylbenzene	<b>CONTAMINANT</b>	<b>MONITORING</b>
Chromium		Vinyl Chloride	Gross Alpha Particle Activity	Monitoring requirement is one sample every nine years. Sample results from 12/18/13  IN COMPLIANCE
Cyanide		m-Xylene	Radium 226 & 228	
Mercury		o-Xylene		
Nickel		p-Xylene		
Selenium				
Thalium				
<b>INORGANIC CHEMICALS - SECONDARY</b>				
CONTAMINANT		MONITORING		
Color		Monitoring is at State discretion. Sample results from 02/25/02  IN COMPLIANCE		
Odor				
Turbidity				
Iron				
Zinc				
Asbestos				

**CITY OF SCHENECTADY TABLE OF DETECTED CONTAMINANTS**

(See Note Section on for an explanation of levels detected)

Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit Measurement	MCLG	Regulatory Limit MCL,TT, or AL	Likely Source
Chloride	No	2/25/02	42 <sup>4</sup>	mg/l	N/A	MCL250	Natural occurring and indicative of road salt contamination
Manganese	No	2/25/02	20 <sup>4</sup>	ug/l	N/A	MCL 300	Natural occurring and indicative of Landfill Contamination
Hardness	No	2/25/02	161 <sup>4</sup>	mg/l	N/A	N/A	Natural Occurring
pH	No	2/25/02	7.1 <sup>4</sup>	mg/l	N/A	6.5 - 8.5	Natural Occurring
Alkalinity	No	2/25/02	165 <sup>4</sup>	mg/l	N/A	N/A	Natural Occurring
Calcium	No	2/25/02	53.6 <sup>4</sup>	mg/l	N/A	N/A	Natural Occurring
Fluoride	No	12/27/16	.7 <sup>4</sup>	mg/l	N/A	MCL=2.2	Natural Occurring; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Sulfate	No	2/25/02	28 <sup>4</sup>	mg/l	N/A	250	Natural Occurring
Dissolved Solids	No	2/25/02	285 <sup>4</sup>	mg/l	N/A	500	Natural Occurring
Sodium	No	2/25/02	21.5 <sup>3</sup>	mg/l	N/A	See Note #3	Natural occurring: road salt: water softeners, animal waste.
Copper	No	June 2016	0.39 <sup>2</sup>	mg/l	1.3	AL=1.3	Corrosion of galvanized pipes, erosion of natural deposits.
Lead	No	June 2016	0.0035	mg/l	0.015	AL=15	Corrosion of household plumbing systems, erosion of natural deposits.
Total Trihalomethanes	No	7/15/16	16.8 <sup>4</sup>	ug/l	N/A	MCL 80	By product of drinking water disinfection
HAA5	No	7/15/16	8.38 <sup>4</sup>	ug/l	N/A	MCL 60	By product of drinking water disinfection
Nitrate	No	6/20/16	0.25 <sup>4</sup>	mg/l	N/A	10	Fertilizer runoff
Barium	No	3/14/05	.021 <sup>4</sup>	mg/l	N/A	2.0	Natural Occurring