

Annual Drinking Water Quality Report for 2018

Village of Green Island

20 Clinton Street, Green Island, NY 12183

Public Water Supply Identification Number NY01000195

INTRODUCTION

To comply with State regulations, the Village of Green Island 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. John Heffern, Plant Operator, Village of Green Island Water Department, 20 Clinton Street, Green Island, NY 12183; Telephone (518) 273-4959.* We want our valued customers to be informed about their water service.

WHERE DOES OUR WATER COME FROM?

The Village's source of water is infiltration galleries. Water flows through packed sand and gravel into a collection pipe by gravity flow to a 35 foot deep well. At this point water is pumped from the well to the treatment facility where it is filtered and chlorinated. The pH is adjusted, and iron and manganese are removed with potassium permanganate. The water purchased from the City of Cohoes comes from the Mohawk River, a "surface water" source. Water is pumped from the river into a complete treatment facility. The treatment process at Cohoes employs sodium permanganate for iron and manganese removal; coagulation 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 and an ortho phosphate inhibitor for corrosion control and iron and manganese control, post chlorination to prevent 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 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 contaminants in bottled water which must provide the same protection for public health.

FACTS AND FIGURES

The Village of Green Island operates a ground water filtration plant that serves 1,200 service connections with a population of 4,000. The total water produced in 2018 was 174,656,200 gallons. The daily average of water treated and pumped into the distribution system is 490,607 gallons per day. Our highest single day was 705,400 gallons. The amount of water delivered to customers was 80,988,541 gallons. Water used to flush mains, fight fires and leakage accounts for the remaining 93,667,659 gallons. The ratio of water billed to water produced averages 38.4%. Our reservoir measuring 80 foot across and 14 feet deep stores 480,000 gallons of water and is covered with a polyvinyl floating cover. We routinely flush the hydrants, and repair hydrants and valves and water main breaks as soon as possible. New mains, hydrants and valves are planned for the future. The Village water system has an emergency line connection with the City of Cohoes. Approximately 31,919,158 gallons were purchased during 2018 and used for plant shut downs, water breaks, businesses in the north end of Green Island and supplemental supply. All services are metered. In 2018, residential water customers were charged \$70.25 per 1,000 cubic feet of water or \$93.43/1000 gallons of water. Industrial customers are billed according to the meter size.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

In accordance with State regulations, the Village of Green Island routinely monitors your drinking water for numerous contaminants. We test your drinking water for inorganic contaminants, lead and copper, nitrate, volatile organic contaminants, and synthetic organic contaminants and disinfection byproducts. In addition, we test four samples for coliform bacteria each month. The 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 the parameters we analyzed that were not

detected along with the frequency of testing for compliance with the NYS Sanitary Code, see Appendix A. Data for the purchased water from Cohoes is on pages 4 and 6.

Unregulated Contaminant Monitoring 4 was conducted during 2018. 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 measured for a total of 30 analytes. The breakdown of analytes is as follows: semi volatile organic chemicals (3), pesticides and pesticide manufacturing byproduct (9), metals (2), alcohols (3), cyanotoxin chemical contaminants (10), brominated haloacetic acid groups(3) and indicator compounds (2). We have listed those compounds that were detected in the table of Detected Contaminants for Cohoes. There are no associated MCL's for these compounds at this time with the exception of Manganese.

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?

We have learned through our monitoring and testing that some contaminants have been detected; however, these compounds were detected below New York State requirements. MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, 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 2018, 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. 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 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 Village of Green Island 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>

WHAT IS THE SOURCE WATER ASSESSMENT PROGRAM (SWAP)?

To emphasize the protection of surface and ground water sources used for public drinking water, Congress amended the Safe Drinking Water Act (SDWA) in 1996. The amendments require that New York State Department of Health's Bureau of Public Water Supply Protection is responsible for ensuring that source water assessments are completed for all of New York's public water systems.

A source water assessment provides information on the potential contaminant threats to public drinking water sources:

- ◆ each source water assessment will: determine where water used for public drinking water comes from (delineate the source areas)
- ◆ Inventory potential sources of contamination that may impact public drinking water sources
- ◆ Assess the likelihood of a source water area becoming potential contaminated

A SWAP summary for our water supply is attached to this report.

WATER CONSERVATION TIPS

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

- ◆ Use water saving showerheads
- ◆ Repair all leaks in your plumbing system
- ◆ Water your lawn sparingly in the early morning or in the late evening
- ◆ Do only full loads of wash and dishes
- ◆ Wash your car with a bucket and hose with a nozzle
- ◆ Don't cut the lawn too short; longer grass saves water

CAPITAL IMPROVEMENTS

There were no major capital improvements made to the system in 2018. The Village evaluated the water system's mains and valves for replacement or repair as part of the Albany Avenue Reconstruction Project. It was determined that total replacement was not necessary and some necessary repairs were made as part of that project.

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. You will be informed of system improvements in future Annual Water Quality Reports. We ask that all our customers help us protect our water sources. Please call our office if you have questions.

VILLAGE OF GREEN ISLAND TABLE OF DETECTED CONTAMINANTS						
Public Water Supply Identification Number NY01000195						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Total Coliform						
Turbidity ¹ (Highest level at various time over the year)	N	0.01 100%	NTU	N/A	TT=1.0 NTU TT= 95% samples < 0.3	Soil runoff
Inorganic Contaminants (samples from 2/19/18 unless otherwise noted)						
Barium	N	148	ppb	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chloride	N	107	ppm	N/A	250	Geology; Naturally occurring
Copper (sample data from 8/15/18-8/19/18) Range of copper concentration	N	118 ² 0.20-1.38	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (sample data from 8/15/18-8/19/18) Range of lead concentration	N	1 ³ ND-10	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Manganese	N	37.2	ppb	N/A	300	Geology; Naturally occurring
Nickel	N	1.07	ppb	N/A	N/A	Naturally occurring
pH	N	7.23	units		6.5-8.5	
Sodium ⁴	N	57.7	ppm	N/A	N/A	Naturally occurring, Road salt
Sulfate	N	21.8	ppm	N/A	250	Naturally occurring
Radiological Contaminants						
Uranium (sample from 3/6/17)	N	0.302	ppb	0	30	Erosion of natural deposits
Disinfection Byproducts (sample from 8/6/18)						
Haloacetic Acids (HAA5)	N	3.5	ppb	N/A	60	By-product of drinking water chlorination
Trihalomethanes (THM)	N	1.02	ppb	0	80	By-product of drinking water chlorination
Chlorine Residual (range) (based on daily samples)	N	0.34 0.03-0.52	ppm	MRDLG N/A	MRDL 4	Used in the treatment and disinfection of drinking water
FOOTNOTES-						
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.						
2. The level presented represents the 90 th percentile of 10 test sites. The action level for copper was exceeded at 1 of the 10 sites tested.						
3. The level presented represents the 90 th percentile of 10 test sites. The action level for lead was not exceeded at any of the 10 sites tested						
4. Water containing more than 20 ppm should not be consumed by persons on severely restricted sodium diets;						

GLOSSARY

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.
90th Percentile Value - The values reported for lead and copper represent the 90th 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 90th 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

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
Microbiological Contaminants						
Turbidity (Highest turbidity sample from 12/29/18)	N	0.28 ¹	NTU	N/A	TT=1.0 NTU	Soil runoff
Turbidity		100%			TT= 95% samples < 0.3	
Inorganic Contaminants (Sample data from 10/22/18 unless otherwise noted)						
Barium	N	23.9	ppb	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chloride	N	38.4	ppm	N/A	250	Geology; Naturally occurring
Copper (sample data from 7/18/18-7/26/18) Range of copper concentration	N	0.13 ² 0.03-0.18	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits;
Lead (sample data from 7/18/18-7/26/18) Range of lead concentration	N	ND ³ ND- 12	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Manganese	N	19.8	ppb	N/A	300	Erosion of natural deposits
Nickel	N	0.9	ppb	N/A	N/A	Naturally occurring
Nitrate (as Nitrogen)	N	0.496	ppm	10	10	Erosion of natural deposits
pH	N	7.38	units	N/A	6.5-8.5	
Sodium ⁴	N	23.4	ppm	N/A	N/A	Naturally occurring, Road salt
Sulfate	N	14.6	ppm	N/A	250	Naturally occurring
Zinc	N	51.7	ppb	N/A	5000	Naturally occurring
Radiological Contaminants (samples from 3/24/15)						
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
Stage 2 Disinfection Byproducts (DBPs), (THM & HAA5 Sample data based on 4 samples/ qtr. from 2/14/18, 5/9/18, 8/8/18, &11/7/18)						
Haloacetic Acids (HAA5) [(Average) ⁵ Range of Values for HAA5	N	36 18-46.3	ppb	N/A	60	By-product of drinking water disinfection
Total Trihalomethanes] TTHM (Average) ⁵ Range of values for Total Trihalomethanes	N	61 18.2-71	ppb	N/A	80	By-product of drinking water chlorination
Chlorine (average) Range of chlorine residual	N	1.3 0.41-2.19	ppm	MRDLG N/A	MRDL 4	Used in the treatment and disinfection of drinking water
Total Organic Carbon Compliance Ratio	N	1.33-1.98	-	Compliance ratio >=1	TT ⁶	Organic material both natural and manmade; Organic pollutants, decaying vegetation,
Unregulated Contaminant Monitoring 4 (Quarterly samples collected 1/14/18, 4/2/18, 7/15/18 10/1/18)						
Manganese	N	3.25-791	ppb	N/A	300	Naturally occurring
HAA9	N/A	22.3-54.9	ppb	N/A	N/A	
HAA6	N/A	3.85-9.5	ppb	N/A	N/A	
Bromide (Raw Water)	N/A	ND-23.2	ppb	N/A	N/A	
Total Organic Carbon (Raw Water)	N/A	3.2-4.8	ppm	N/A	N/A	

FOOTNOTES-

- 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 2018 was 0.15 NTU.
- The level presented represents the 90th percentile of 30 test sites. The action level for copper was not exceeded at any of the 30 sites tested
- The level presented represents the 90th percentile of 30 test sites. The action level for lead was not exceeded at any of the 30 sites tested
- Water containing more than 20 ppm should not be consumed by persons on severely restricted sodium diets.
- 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 4th quarter of 2018 and the highest HAA5 LRAA was in the 3rd quarter of 2018, was in the 4th quarter of 2017.
- 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.

CITY OF COHOES TEST RESULTS TABLE OF COMPOUNDS ANALYZED BUT BELOW DETECTION LIMITS
Public Water Supply Identification Number NY01000192

CONTAMINANT	MONITORING FREQUENCY	CONTAMINANT	CONTAMINANT	MONITORING FREQUENCY	
Asbestos	Every 9 years Sample from 5/3/11	POC's (Volatile Organic Compounds)		Monitoring requirement is one sample annually. Sample results from 10/22/18 NON DETECT	
		Benzene	Trans-1,3-Dichloropropene		
Antimony	NON DETECT	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			
	1,2-Dichloroethane	Trichlorofluoromethane			
	1,1 Dichloroethene	1,2,3-Trichloropropane			
	cis-1,2 Dichloroethene	1,2,4-Trimethylbenzene			
Iron	Monitoring requirement is at State discretion Sample results from 10/22/18 NON DETECT	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				
Microbiological Contaminants		Radiological Parameters		Requirement is one sample every six-nine years. 1 Samples from 3 NON DETECT	
Total Coliform/ E. coli	15 samples monthly	Beta particle activity			
		Radium 226			
		Uranium			
Synthetic Organic Chemicals (Group I)				Synthetic Organic Chemicals (Group II)	
Alachlor	Aldicarb	Aldrin	Benzo(a)pyrene	Monitoring requirement is every 18 months NON DETECT Sample results from 10/10/17 *State waiver does not require monitoring these compounds	
Aldicarb Sulfoxide	Aldicarb Sulfone	Butachlor	Carbaryl		
Atrazine	Carbofuran	Dalapon	Di(2-ethylhexyl)adipate		
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)*		

Village of Green Island-Hudson River
NY01000195
Source Water Assessment Summary

The NYS DOH has completed a Source Water Assessment for the Hudson River in the region around Green Island's Infiltration Gallery. 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 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 assessment area results in a potential for protozoa contamination. There is also a high density of sanitary wastewater discharges, which result in susceptibility to other contaminant categories. Non-sanitary wastewater discharges may also contribute to contamination.

Green Island's 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 - 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 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.