

**Annual Drinking Water Quality Report for 2019**  
Village of Ravena  
15 Mountain Road, Ravena, NY 12143  
(Public Water Supply Identification Number NY0100201)

**INTRODUCTION**

To comply with State regulations, the Village of Ravena, 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. We are very pleased to provide you with this year's Annual Water Quality Report. Last year, we conducted tests for over 80 contaminants. We detected 107 of those contaminants at a level higher than the State allows. As we told you at the time, our water temporarily exceeded a drinking water standard and we modified our treatment process to rectify this problem. 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. Jason T. Leonard, Chief Plant Operator, Village of Ravena Water Department, 42 Skyview Drive, Ravena, NY 12143; Telephone (518) 756-2024.* 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 Village Board meetings. They are held on the 1<sup>st</sup> and 3<sup>rd</sup> Tuesday of each month, 7:00 PM at the *Village Hall, 15 Mountain Road, Ravena, NY 12143; Telephone (518) 756-8233.*

**WHERE DOES OUR WATER COME FROM?**

The Village of Ravena draws its water from a "surface water" supply. Our 15-million-gallon raw water storage reservoir is fed by the Hanacroix Creek. Our supply is supplemented by water from the Alcové Reservoir. Raw water flows into the Ravena Water Treatment Plant (RWTP), a complete treatment facility. The treatment process at the RWTP consists of: chlorination to protect against contamination from harmful bacteria and other organisms; coagulation using poly aluminum chloride (PC 180) 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; post chlorination to prevent bacterial contamination and fluoridation at low levels to protect teeth. Additionally, we add Sweetwater CP-7670 for corrosion control. Finished water is pumped from the Clearwell into the Low Service and High Service Tanks and then into the distribution system. These tanks have a combined capacity of 1.797 million gallons to meet consumer demand and to provide adequate fire protection.

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 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 provides water through 1,200 service connections to a population of approximately 3,500 people. The total water pumped in 2019 was 157,524,000 gallons. Approximately 95 % of the total was billed directly to customers. The balance, or unaccounted for water was used for fire fighting purposes, distribution system leaks and unauthorized use. Our average daily demand is 431,000 gallons. Our single highest day was 547,000 gallons. Residents pay a flat rate for water. All commercial services are metered. The charge for water in 2019 was \$125.00 for unlimited usage billed twice a year for accounts in the Village of Ravena. The rate was \$187.50 for unlimited usage billed twice a year for customers in the Coeymans Water District and \$250.00 for unlimited usage billed twice a year for customers in the New Baltimore Water District.

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

In accordance with State regulations, the Village of Ravena 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 5 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. 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

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 and 5, we had 3 violations. We exceeded the MCL for the Haloacetic Acids in the 1<sup>st</sup> and 2<sup>nd</sup> quarters of 2019 and are required to furnish the following information: Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

**Haloacetic Acids**

Some studies suggest that people who drank chlorinated drinking water containing disinfection by-products (possibly including HAAs) for long periods of time (e.g., 20 to 30 years) have an increased risk for certain health effects. These include an increased risk for cancer. However, how long and how frequently people actually drank the water as well as how much HAAs the water contained is not known for certain. Therefore, the evidence from these studies is not strong enough to conclude that the observed increased risk for cancer is due to HAAs, other disinfection by-products, or some other factor. Studies of laboratory animals show that the individual HAAs, dichloroacetic acid and trichloroacetic acid, can cause cancer following exposure to high levels over their lifetimes. Dichloroacetic acid and trichloroacetic acid are also known to cause other effects in laboratory animals after high levels of exposure, primarily on the liver, kidney, and nervous system and on their ability to bear healthy offspring. The effects reported in studies of laboratory animals at exposures much higher than exposures that could result through normal use of the water. The risks for adverse health effects from HAAs in drinking water are small compared to the risk for illness from drinking inadequately disinfected water.

**Trihalomethanes**

Some studies suggest that people who drink chlorinated water (which contains trihalomethanes) or water containing elevated levels of trihalomethanes for long periods of time may have an increased risk for certain health effects. For example, some studies of people who drank chlorinated drinking water for 20 to 30 years show that long term exposure to disinfection by-products (including trihalomethanes) is associated with an increased risk for certain types of cancer. A few studies of women who drank water containing trihalomethanes during pregnancy show an association between exposure to elevated levels of trihalomethanes and small increased risks for low birth weights, miscarriages and birth defects. However, in each of the studies, how long and how frequently people actually drank the water, as well as how much trihalomethanes the water contained is not known for certain. Therefore, we do not know for sure if the observed increases in risk for cancer and other health effects are due to trihalomethanes or some other factor. The individual trihalomethanes chloroform, bromodichloromethane and dibromochloromethane cause cancer in laboratory animals exposed to high levels over their lifetimes. Chloroform, bromodichloromethane and dibromochloromethane are also known to cause effects in laboratory animals after high levels of exposure, primarily on the liver, kidney, nervous system and on their ability to bear healthy offspring. Chemicals that cause adverse health effects in laboratory animals after high levels of exposure may pose a risk for adverse health effects in humans exposed to lower levels over long periods of time.

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 2019, 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 Ravena 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>

**INFORMATION ON FLUORIDE ADDITION**

Our system is one of the 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 0.8 to 1.2 mg/l (parts per million). To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that we monitor fluoride levels on a daily basis. During 2019 monitoring showed fluoride levels in your water were in the optimal range 95% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride

**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 Ravena 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**

There were no major capital improvements in 2019. In 2020 the following projects are planned:

- ◆ New installation of 10-inch HDPE line on a section of Main Street in the Village of Ravena
- ◆ New 12-inch transmission line to be installed from water plant North to Madison Ave.
- ◆ New intake screens at Deans Mills

**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.

VILLAGE OF RAVENA TABLE OF DETECTED CONTAMINANTS Public Water Supply Identification Number NY0100201									
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination			
<b>Microbiological Contaminants</b>									
Turbidity <sup>1</sup> (sample from 2/27/19)	N	0.19	NTU	N/A	TT=1 NTU	Soil runoff			
		100%			TT=95% samples < 0.3				
Total Coliform	N	1	positive sample	N/A	0	Naturally present in the environment	2 or more positive samples when less than 40 samples are collected in a month		
<b>Inorganic Contaminants (sample data from 2/20/19 unless otherwise noted)</b>									
Barium	N	13.1	ppb	2000	2000	Erosion of natural deposits			
Chloride	N	33.8	ppm	N/A	250	Geology; Naturally occurring			
Color	N	2	units	N/A	15	Natural color may be caused by decaying leaves, plants, and soil organic matter.			
Copper (sample data from 9/18/17-9/20/17)	N	0.15 <sup>2</sup>	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives			
Range of copper concentration		ND-0.20							
Fluoride	N	0.494	ppm	N/A	2.2	Naturally occurring			
Iron	N	103	ppb	N/A	300	Geology; Naturally occurring			
Lead (sample data from 9/18/17-9/20/17)	N	1 <sup>3</sup>	ppb	N/A	AL=15	Corrosion of household plumbing systems; erosion of natural deposits			
Range of lead concentration		ND-17							
Nickel	N	0.8	ppb	N/A	100	Naturally occurring			
Nitrate	N	0.304	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits			
Odor	N	1	units	N/A	3	Natural sources			
pH	N	7.32	units	N/A	6.5-8.5				
Sodium <sup>4</sup>	N	18.7	ppm	N/A	N/A	Naturally Occurring, Road salt			
Sulfate	N	12.2	ppm	N/A	250	Geology			
Zinc	N	7.6	ppb	N/A	5000	Naturally Occurring			
<b>Stage 2 Disinfection Byproducts (sample from 3/21/19, 6/18/19, 9/10/19 &amp; 12/12/19)</b>									
Halooacetic Acids (HAA5) <sup>5</sup>	Y	62.9	ppb	N/A	60	By-product of drinking water chlorination			
TTHM (Total Trihalomethanes) <sup>5</sup>	Y	81.55	ppb	0	80	By-product of drinking water chlorination			
Chlorine (based on daily testing)	N	1.48	ppm	MRDL	MRDL	Used in the treatment and disinfection of drinking water			
Range		1.02-1.98							
<b>Total Organic Carbon (monthly samples from 2019)<sup>6</sup></b>									
Treated Water (range)	N	1.7-2.7	ppm	NA	NA	Organic material both natural and man made			

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. We also monitor turbidity in the distribution system 5 days a week with 0.23 NTU being the average turbidity. The level presented represents the 90<sup>th</sup> percentile of 20 test sites. The action level for copper was not exceeded at any of the 20 sites tested.
2. The level presented represents the 90<sup>th</sup> percentile of 20 test sites. The action level for lead was exceeded at 1 of the 20 sites tested.
3. Water containing more than 20 mg/l should not be consumed by persons on severely restricted sodium diets.
4. The average is based on a Locational Running Annual Average. The average shown represents the highest LRAA for the HAA5's and the THM's. The highest LRAA for the THM's was in the 4<sup>th</sup> quarter of 2019 and HAA5 was in the 1<sup>st</sup> quarter of 2019.
5. The Interim Enhanced Surface Water Treatment Rule (EISWTR) 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.

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

Fans 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.

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 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

VILLAGE OF RAVENA TEST RESULTS

Public Water Supply Identification Number NY0100201

CONTAMINANT MONITORING FREQUENCY		CONTAMINANT MONITORING FREQUENCY		
Asbestos	Every 9 years	Asbestos	Every 9 years	
Antimony	Monitoring requirement is 1 sample annually	Sample from 2/20/19	Non-Detect	
				Beryllium
				Cadmium
				Chromium
				Cyanide
				Mercury
				Selenium
				Silver
				Thallium
				Beryllium
Beryllium				
Cadmium				
Cadmium				
Iron				
Manganese				
Monitoring requirement is at State discretion		Sample from 2/20/19		
Non-Detect		Non-Detect		
E. coli		E. coli		
Monitoring is 5 samples/month		Monitoring is 1 sample every 6-9 years 2/13/18		
Non-Detect		Non-Detect		
Radiological Parameters		Radiological Parameters		
Cross Alpha-Beta Scan		Cross Alpha-Beta Scan		
Radium 226 & 228		Radium 226 & 228		
N/A		N/A		
Synthetic Organic Chemicals (Group I)		Synthetic Organic Chemicals (Group I)		
Aldrich	Aldicarb	Aldicarb	Aldicarb	
Aldicarb Sulfoxide	Aldicarb Sulfoxide	Aldicarb Sulfoxide	Aldicarb Sulfoxide	
Atrazine	Carbofuran	Carbofuran	Atrazine	
Chlordane	Dibromochloropropane	Dibromochloropropane	Chlordane	
2,4-D	Endrin	Endrin	2,4-D	
Ethylene Dibromide	Hepachlor	Hepachlor	Ethylene Dibromide	
Lindane	Methoxychlor	Methoxychlor	Lindane	
PCB's	Toxaphene	Toxaphene	PCB's	
2,4,5-TP (Silvex)			2,4,5-TP (Silvex)	
Synthetic Organic Chemicals (Group II)		Synthetic Organic Chemicals (Group II)		
Aldrin	Benzo(a)pyrene	Benzo(a)pyrene	Aldrin	
Butachlor	Carbaryl	Carbaryl	Butachlor	
Dalapon	Di(2-ethylhexyl) adipate	Di(2-ethylhexyl) adipate	Dalapon	
Di(2-ethylhexyl) phthalate	Dicamba	Dicamba	Di(2-ethylhexyl) phthalate	
Dieldrin	Dinoseb	Dinoseb	Dieldrin	
Diquat	Endosulf	Endosulf	Diquat	
Glyphosate	Hexachlorocyclopentadiene	Hexachlorocyclopentadiene	Glyphosate	
Hexachlorocyclopentadiene	3-Hydroxycarbofuran	3-Hydroxycarbofuran	Hexachlorocyclopentadiene	
Methomyl	Metolachlor	Metolachlor	Methomyl	
Metribuzin	Oxamyl vlydate	Oxamyl vlydate	Metribuzin	
Picloram	Propachlor	Propachlor	Picloram	
Simazine	2,3,7,8-TCDD (Dioxin)	2,3,7,8-TCDD (Dioxin)	Simazine	
Monitoring requirement is 1 sample every 18 months		Monitoring requirement is 1 sample every 18 months		
Sample from 4/9/19		Sample from 4/9/19		
Non-Detect		Non-Detect		
*State waiver does not require monitoring these compounds		*State waiver does not require monitoring these compounds		

Annual Water Quality Report Certification Form

Water System Name: Village of Ravena, 15 Mountain Rd. Ravena, NY 12143

Public Water Supply ID #: NY0100201

The community water system named above hereby confirms that its Annual Water Quality Report (AWQR) has been distributed to customers and appropriate notices of availability have been given. Further, the system certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the health department.

Certified by: Name: Jason T. Leonard

Title: Chief plant operator

Phone #: 518-756-2024 Date: 03/28/2020

Please indicate how your report was distributed to your customers:

- AWQR was distributed to bill-paying customers by mail.
- AWQR was distributed by other direct delivery method(s) (check all that apply)

- Hand delivered.
- Published in local paper (i.e., Penny Saver) that was directly delivered or mailed to all bill-paying customers.
- Published in local municipal newsletter that was directly delivered or mailed.
- Mailed a notification that AWQR is available on a public website via a direct URL
- Emailed with a message containing a direct URL link to the AWQR
- Emailed with AWQR sent as an attachment to the email
- Emailed with AWQR sent as an embedded image in the email
- Additional electronic delivery that meets "otherwise directly deliver" requirement
- Other (please specify) \_\_\_\_\_

- System does not have bill-paying customers.
- For systems serving at least 100,000 persons: in addition to direct delivery to bill-paying customer the AWQR was posted on a publicly-accessible website at www. \_\_\_\_\_

Please indicate what "Good Faith" efforts were used to reach non-bill paying consumers (check all that apply).

- Posting the Annual Water Quality Report on the Internet at www.villageofravena.com
- Mailing the Annual Water Quality Report to postal patrons within the service area
- Advertising the availability of the Annual Water Quality Report in the news media
- Publication of the Annual Water Quality Report in a local newspaper
- Posting the Annual Water Quality Report in public places (attach a list of locations)
- Delivery of multiple copies to single-bill addresses serving several persons such as: apartments, businesses, and large private employers
- Delivery to community organizations
- Other (please specify) Posted availability on our facebook page

Village Municipal Building