

# ***Annual Drinking Water Quality Report for 2017***

## **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 2 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 Alcove 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; 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 provides water through 1,200 service connections to a population of approximately 3,500 people. The total water pumped in 2017 was 157,665,000 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 534,000 gallons. Our single highest day was 431,000 gallons. Residents pay a flat rate for water. All commercial services are metered. The charge for water in 2017 was \$112.50 for unlimited usage billed twice a year for accounts in the Village of Ravena. The rate was \$168.75 for unlimited usage billed twice a year for customers in the Coeymans Water District and \$225.00 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, we had 3 violations. We exceeded the MCL for the Haloacetic Acids in the 1<sup>st</sup>, quarter of 2017 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.*

Additionally, we exceeded the color standard and would like to furnish the following information: *Color has no health effects. In some instances, color may be objectionable to some people at as low as 5 units. Its presence is aesthetically objectionable and suggests that the water may need additional treatment.*

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 2017, 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 2017 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 Ravenna 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**

- ◆ Future plans call for upgrades of the sedimentation basins with tube settlers and the upgrade of Deens Mills intake

#### **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 1/13/17)	N	0.287 100%	NTU	N/A	TT=1 NTU TT= 95% samples < 0.3	Soil runoff
<b>Inorganic Contaminants (sample data from 11/14/17 unless otherwise noted)</b>						
Barium	N	19.9	ppb	2000	2000	Erosion of natural deposits
Chloride	N	36.6	ppm	N/A	250	Geology; Naturally occurring
Color	Y	20	units	N/A	15	Large quantities of organic chemicals, inadequate 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				
Iron	N	52.2				
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				
pH	N	7.88	units		6.5-8.5	
Sodium <sup>4</sup>	N	23.5	ppm	N/A	N/A	Naturally Occurring, Road salt
Sulfate	N	16.6	ppm	N/A	250	Geology
Zinc	N	115	ppb	N/A	5000	Naturally Occurring
<b>Stage 2 Disinfection Byproducts (sample from 3/28/17, 6/21/17, 9/20/17 &amp; 12/19/17)</b>						
Haloacetic Acids (HAA5) <sup>5</sup>	N	62.65 1-80.6	ppb	N/A	60	By-product of drinking water chlorination
TTHM[Total Trihalomethanes] <sup>5</sup>	N	74.2 43-97.5	ppb	0	80	By-product of drinking water chlorination
Chlorine (based on daily testing)	N	1.39	ppm	MRDL	MRDL	Used in the treatment and disinfection of drinking water
Range		1.07-1.99		G N/A	4	
<b>Total Organic Carbon (monthly samples from 2017)<sup>7</sup></b>						
Treated Water (range)	N	1.8-2.4	ppm	NA	TT	Organic material both natural and man made
<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. We also monitor turbidity in the distribution system 5 days a week with 0.218 NTU being the average turbidity.						
2. 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						
4. 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						
5. Water containing more than 20 mg/l should not be consumed by persons on severely restricted sodium diets						
6. 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 3 <sup>rd</sup> quarter of 2017 and the highest LRAA for the HAA5's was in the 1 <sup>st</sup> quarter of 2017. The HAA5 LRAA was also exceeded in the 1 <sup>st</sup> quarter.						
7. 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.						
<i>Non-Detects (ND)</i> - laboratory analysis indicates that the constituent is not present.						
<i>Parts per million (ppm) or Milligrams per liter (mg/l)</i> - one part per million corresponds to one minute in two years or a single penny in \$10,000.						
<i>Parts per billion (ppb) or Micrograms per liter</i> - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.						
<i>Nephelometric Turbidity Unit (NTU)</i> - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.						
<i>90<sup>th</sup> Percentile Value</i> - 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						
<i>Action Level</i> - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.						
<i>Treatment Technique (TT)</i> -A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.						
<i>Maximum Contaminant Level</i> - 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.						
<i>Maximum Contaminant Level Goal</i> - 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.						
<i>Maximum Residual Disinfectant Level (MRDL)</i> : 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.						
<i>Maximum Residual Disinfectant Level Goal (MRDLG)</i> : 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						
<i>Locational Running Annual Average (LRAA)</i> : The LRA is calculated by taking the average of the four most recent samples collected at each individual site.						
N/A-not applicable						

**Appendix A**  
 New York State Sanitary Code Compliance Monitoring Requirements- Compounds Analyzed that were Below Limits of Detection

<b>VILLAGE OF RAVENA TEST RESULTS</b>				
<b>Public Water Supply Identification Number NY0100201</b>				
CONTAMINANT	MONITORING FREQUENCY		CONTAMINANT	MONITORING FREQUENCY
Asbestos	Every 9 years Sample from 5/24/11		<b>POC's (Volatile Organic Compounds)</b>	
			Benzene	Trans-1,3-Dichloropropene
Antimony	Monitoring requirement is 1 sample annually  Sample from 11/14/17  <b>Non-Detect</b>		Bromobenzene	Ethylbenzene
Arsenic		Bromochloromethane	Hexachlorobutadiene	Monitoring requirement is one sample annually.  Sample from 11/14/17  <b>Non-Detect</b>
		Bromomethane	Isopropylbenzene	
Beryllium		N-Butylbenzene	p-Isopropyltoluene	
Cadmium		sec-Butylbenzene	Methylene Chloride	
Chromium		Tert-Butylbenzene	n-Propylbenzene	
Cyanide		Carbon Tetrachloride	Styrene	
Mercury		Chlorobenzene	1,1,1,2-Tetrachloroethane	
Selenium		2-Chlorotoluene	1,1,2,2-Tetrachloroethane	
Silver		4-Chlorotoluene	Tetrachloroethene	
Thallium		Dibromomethane		
Beryllium		1,2-Dichlorobenzene	1,2,3-Trichlorobenzene	
Cadmium		1,3-Dichlorobenzene	1,2,4-Trichlorobenzene	
Nickel		1,4-Dichlorobenzene	1,1,1-Trichloroethane	
	Dichlorodifluoromethane	1,1,2-Trichloroethane		
	1,1-Dichloroethane	Trichloroethene		
	1,2-Dichloroethane	Trichlorofluoromethane		
Color	Monitoring requirement is at State discretion  Sample from 11/14/17  <b>Non-Detect</b>	1,1 Dichloroethene	1,2,3-Trichloropropane	
Iron		cis-1,2 Dichloroethene	1,2,4-Trimethylbenzene	
Manganese		Trans-1,2-Dichloroethene	1,3,5-Trimethylbenzene	
		1,2 Dichloropropane	m-Xylene	
Nitrate		1,3 Dichloropropane	o- Xylene	
		2,2 Dichloropropane	p-Xylene	
		1,1 Dichloropropene	Vinyl Chloride	
		Cis-1,3-Dichloropropene	MTBE	
			Total Coliform / E. coli	Monitoring is 5 samples/ month <b>Non-Detect</b>
			<b>Radiological Parameters</b>	
			Gross Alpha-Beta Scan	N/A
			Radium 226 & 228	
<b>Synthetic Organic Chemicals</b>				
<b>Synthetic Organic Chemicals (Group I)</b>		<b>Synthetic Organic Chemicals (Group II)</b>		
Alachlor	Aldicarb	Aldrin	Benzo(a)pyrene	Monitoring requirement is 1 sample every 18 months Sample from 11/14/17  <b>Non-Detect</b>  <b>*State waiver does not require monitoring these compounds</b>
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	Methoxyhlor	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)*	

**Hannacroix Creek**  
**PWSID NY0100201**  
**Source Water Assessment Summary**

The NYS DOH has completed a Source Water Assessment for the Hannacroix Creek. 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 creek. 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.

The assessment found the amount of pasture in the assessment area results in a potential for protozoa contamination. There is also possible contamination susceptibility associated with facilities such as landfills and a golf course. It should be noted that relatively high flow velocities make large stream drinking water supplies highly sensitive to existing and new sources of microbial contamination.

Ravena’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 Assessments, including a map of the assessment area, is available for review by contacting us at the number provided in this report.