

Annual Drinking Water Quality Report for 2015

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. 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, 15 Mountain Road, 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 1st and 3rd 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 2015 was 150,654,000 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 413,000 gallons. Our single highest day was 617,000 gallons. Residents pay a flat rate for water. All commercial services are metered. The charge for water in 2015 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 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

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 no violations

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 2015, 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 2015 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

During 2015 there were no major improvements made to the water system but work has started on upgrading new high lift pumps.

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
Microbiological Contaminants						
Turbidity ¹ (sample from 1/30/15)	N	0.18	NTU	N/A	TT=1 NTU	Soil runoff
		100%			TT= 95% samples < 0.3	
Inorganic Contaminants (sample data from 6/24 2015 & 11/5/2015 unless otherwise noted)						
Barium	N	20-26	ppb	2000	2000	Erosion of natural deposits
Chloride	N	39.3-46.3	ppm	N/A	250	Geology; Naturally occurring
Copper (sample data from 8/13/14-8/20/14)	N	0.24 ²	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Range of copper concentration		ND-0.40				
Fluoride	N	0.27-0.41	ppm			Naturally occurring
Lead (sample data from 8/13/14-8/20/14)	N	3 ³	ppb	N/A	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Range of lead concentration		ND-4				
Manganese	N	15-45	ppb	N/A	300	Geology; Naturally occurring
pH	N	6.3-7.54	units		6.5-8.5	
Sodium ⁴	N	26-28	ppm	N/A	N/A	Naturally Occurring, Road salt
Sulfate	N	11-14.3	ppm	N/A	250	Geology
Zinc	N	ND-37	ppb	N/A	5000	Naturally Occurring
Stage 2 Disinfection Byproducts (sample from 3/11/15, 6/12/15, 9/11/15 & 12/15/15)						
Haloacetic Acids (HAA5) ⁵	N	45.4 13-69	ppb	N/A	60	By-product of drinking water chlorination
TTHM[Total Trihalomethanes] ⁵	N	71.6 31-90	ppb	0	80	By-product of drinking water chlorination
Chlorine (based on daily testing) Range	N	1.36 0.67-2.02	ppm	MRDL	MRDL	Used in the treatment and disinfection of drinking water
				G	4	
Total Organic Carbon (monthly samples from 2015)⁷						
Treated Water (range)	N	1.18-2.3	ppm	NA	TT	Organic material both natural and man made
Principal Organic Compounds						
Toluene (sample from 11/5/15) Resample on 12/3/15 was not detected. Sample from 6/24/15 also not detected Range of values	N	0.9 ND-9	ppb	N/A	5	Leaching of lining from potable water tanks
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 0.17 NTU being the average turbidity.						
2. The level presented represents the 90 th 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 th percentile of 20 test sites. The action level for lead was not exceeded at any 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 1 st quarter of 2015 and the highest LRAA for the HAA5's was in the 4 th quarter of 2015.						
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>90th Percentile Value</i> - The values reported for lead and copper represent the 90 th 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 th 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.						
<i>N/A-not applicable</i>						

Appendix A

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

VILLAGE OF RAVENA TEST RESULTS					
Public Water Supply Identification Number NY0100201					
CONTAMINANT	MONITORING FREQUENCY		CONTAMINANT	MONITORING FREQUENCY	
Asbestos	Every 9 years Sample from 5/24/11		POC's (Volatile Organic Compounds)		
			Benzene	Trans-1,3-Dichloropropene	
			Bromobenzene	Ethylbenzene	
Antimony	Monitoring requirement is 1 sample annually Sample from 6/24/15 &11/5/15 Non-Detect		Bromochloromethane	Hexachlorobutadiene	
Arsenic			Bromomethane	Isopropylbenzene	
			N-Butylbenzene	p-Isopropyltoluene	
Beryllium			sec-Butylbenzene	Methylene Chloride	
Cadmium			Tert-Butylbenzene	n-Propylbenzene	
Chromium			Carbon Tetrachloride	Styrene	
Cyanide			Chlorobenzene	1,1,1,2-Tetrachloroethane	
Mercury			2-Chlorotoluene	1,1,2,2-Tetrachloroethane	
Selenium			4-Chlorotoluene	Tetrachloroethene	
Silver			Dibromomethane		
Thallium			1,2-Dichlorobenzene	1,2,3-Trichlorobenzene	
Beryllium			1,3-Dichlorobenzene	1,2,4-Trichlorobenzene	
Cadmium			1,4-Dichlorobenzene	1,1,1-Trichloroethane	
Nickel			Dichlorodifluoromethane	1,1,2-Trichloroethane	
			1,1-Dichloroethane	Trichloroethene	
		1,2-Dichloroethane	Trichlorofluoromethane		
		1,1 Dichloroethene	1,2,3-Trichloropropane		
Color	Monitoring requirement is at State discretion Sample from 6/24/15 &11/5/15 Non-Detect		cis-1,2 Dichloroethene	1,2,4-Trimethylbenzene	
Iron			Trans-1,2-Dichloroethene	1,3,5-Trimethylbenzene	
			1,2 Dichloropropane	m-Xylene	
Odor			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 Non-Detect
		Radiological Parameters			
		Gross Alpha-Beta Scan		Monitoring is 1 sample every 6- 9 years 2/15/05 & 11/18/08 Non-Detect	
		Radium 226 & 228	N/A		
Synthetic Organic Chemicals					
Synthetic Organic Chemicals (Group I)		Synthetic Organic Chemicals (Group II)			
Alachlor	Aldicarb	Aldrin	Benzo(a)pyrene	Monitoring requirement is 1 sample every 18 months Sample from 11/14/14 Non-Detect	
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)*		
				*State waiver does not require monitoring these compounds	

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.