

Annual Drinking Water Quality Report for 2011

Schuylerville-Victory Board of Water Management

PO Box 305, Victory Mills, NY 12884

Public Water Supply Identification Number NY4500169

INTRODUCTION

To comply with State regulations the Schuylerville-Victory Board of Water Management (BOWM), 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 your 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, 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.

The Village of Schuylerville and Village of Victory have an inter-municipal agreement governing the joint village water system. This agreement was created by both Village Boards of Trustees. The BOWM consists of four (4) appointed commissioners, two from each village. The current members of the BOWM are as follows: George Sullivan, Chairman and William Lloyd representing Victory and Michael Hughes and Wendy Lukas representing Schuylerville. The BOWM has the authority to manage and operate the joint water system.

If you have any questions concerning this report or concerning your drinking water please contact the Chief Water Operator, Mark A. Dennison, PO Box 302, Victory Mills, NY 12884 (Telephone) (518) 695-4713 or email waterlab@nycap.rr.com, or the water commissioners for your village: Village of Victory; Telephone (518) 695-3808 or the Village of Schuylerville; Telephone (518) 695-3881; You may send a written request to, Schuylerville /Victory Board of Water Management, 23 Pine Street, PO Box 305, Victory Mills, NY 12884. We want our valued customers to be informed about their water service. If you want to learn more, please attend any of our monthly meetings. They are scheduled by the BOWM at the previous meetings. They are generally held the first Wednesday of the month at 7:00 PM and alternate in location, i.e., one month in Schuylerville Hall and the next at Victory Hall. Dates can be determined by contacting either the Victory Village Clerk at (518) 695-3808 or the Schuylerville Village Clerk at (518) 695-3881.

WHERE DOES OUR WATER COME FROM?

The Schuylerville-Victory BOWM has two water sources. The Fort Hardy Filtration Plant is supplied by two wells rated at 750 gallons per minute (gpm) each. The wells are located at the Filtration Plant site. The new plant consists of two reverse osmosis filtration (R/O) trains and a two stage 5 micron absolute filtration for bypass water. The process is as follows: As water from the wells enters the treatment plant it passes through a UV system that disinfects the water. The water flow is then split into three sections of pipeline, two of which are directed to each R/O unit (only one R/O runs at a time). Prior to the water entering the R/O, anti-scalant is added to the water before it enters the 1 micron prefilter cartridge housing. After prefiltration the water enters the R/O unit. Each unit consists of 18 tubes for a total of 108 membrane filters. The concentrate or reject water containing the contaminants removed by the R/O system is discharged to the river.

The third section of pipe that bypasses the R/O system is directed to two sets of Filter Housing (only one set is in service at a time). The by-pass water first enters a 5 micron filter and then passes through a 1 micron absolute filter. The filters provide turbidity or particulate removal and additionally can filter out any waterborne parasites such as Giardia or Cryptosporidium due to the very small pore size of the filter. The By-pass water is regulated by a flow valve.

The water that leaves the R/O which is called "permeate" flows from the process room to the caustic room where a 50% sodium hydroxide solution is injected. The water then enters another room where a blend of ortho/poly-phosphate is injected. The filtered by-pass water also enters this room and connects to the flow valve and is blended with the R/O water. This one line then re-enters the process room where chlorine is injected for disinfection. The water then flows to the clearwells.

Maximum treatment capacity is 648,000 gallons per day. As previously mentioned, disinfection is provided by ultraviolet light and sodium hypochlorite. Additional treatment includes antiscalant to help prevent fouling of the membrane filters, sodium hydroxide for pH control and a blended ortho/polyphosphate for corrosion control and iron and the sequestering of iron and manganese. All of the chemicals used are NSF/ANSI approved products for potable water. The finished water is stored in two 30,000 gallon enclosed concrete tanks prior to pumping into the distribution system and the enclosed 600,000 gallon storage tank located on Cemetery Road.

The Victory WTP derives its water from two wells. The Victory WTP is a Greensand pressure vessel filtration plant designed for removal of iron and manganese with a maximum flow of 125 gallons/minute. There are 2 GreensandPlus Filter Tanks. Each filter is composed of anthracite, Greensand and 5 layers of graded gravel. The water is pumped from the wells to the treatment plant where chlorine and sodium permanganate are added to enhance the iron and manganese removal processes as it passes through green sand filters. The water is disinfected again as it leaves the plant.

In general, 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 water system provides water to a population of approximately 2,200 people through 850 service connections. Our average daily demand for the Ft. Hardy Plant is 173,446 gallons and 132,110 for the Victory Plant for a total of 305,556 gallons per day. Our highest single day was 399,870 gallons for Ft. Hardy and 180,448 gallons for the Victory Plant. The total water produced by the two water plants in 2011 was 111,527,776 gallons. The average annual charge for water is \$450.00 for residential use per unit. Businesses are charged a commercial rate; outside water rates are charged 1.5 times per residential unit.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

In accordance with State regulations, the Schuylerville-Victory Board of Water Management 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 2 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.

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 New York State Department of Health Glens Falls District Office at (518) 793-3893.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table on pages 4 & 5, our system 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 2011, the Schuylerville-Victory BOWM 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 Schuylerville-Victory BOWM 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>

CAPITAL IMPROVEMENTS

The following capital improvements were initiated in 2011:

- ◆ Developed a Cross Connection Control Program

The following capital improvements are planned for 2012:

- ◆ Seek grants or funding to install a new water tank and water meter. CT Male Engineers was hired by the Board of Water Management to do the design work.

WATER CONSERVATION TIPS

The Schuylerville-Victory Board of Water Management 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

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. Please call our office if you have questions.

**Schuylerville-Victory BOWM
PWSID NY4500169
AWQR SWAP Summary**

The NYS DOH has evaluated this Public Water System's (PWS) susceptibility to contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraph below. It is important to stress that these assessments were created using available information and only estimate the potential for source water contamination. Elevated susceptibility ratings do not mean that source water contamination has or will occur for this PWS. This PWS provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards.

The assessment area for this drinking water source contains no discrete potential contaminant sources, but agricultural land in the watershed for this drinking water source poses a variety of risks to drinking water quality. The greatest risks are associated with microbial contaminants, followed by pesticides, phosphorus, and Disinfection-Byproduct (DBP) precursors.

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.

SCHUYLERVILLE-VICTORY BOWM TABLE OF DETECTED CONTAMINANTS
Public Water Supply Identification Number NY4500169

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants F= Ft. Hardy WTP, V= Victory WTP						
Turbidity (sample from 10/2/11) FH	N	0.078 ¹	NTU	N/A	TT=5 NTU	Soil runoff
Turbidity (sample from 5/14/11) V	N	100%			TT= % samples < 0.3 NTU	
		0.202 ¹				
		100%				
Inorganic Contaminants (sample data from 10/26/11 unless otherwise noted) *Quarterly samples collected 1/19/11, 4/20/11, 8/10/11 & 11/16/11; F= Ft. Hardy WTP, V= Victory WTP						
Barium (from 11/17/09) V	N	220	ppb	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Barium FH (from 10/26/11)	N	5.9				
Chloride FH (from 11/18/10)	N	50	ppm	N/A	250	Geology; Naturally occurring
Chloride V		47				
Copper (sample data from 6/15/11-6/16/11)	N	0.51 ²	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Range of copper concentration		0.13-0.54				
Iron* (average) FH Range of 4 samples	N	5.2 ND-9	ppb	N/A	300	Geology; Naturally occurring
Lead (sample data from 6/15/11-6/16/11) Range of lead concentration	N	ND ³ ND-3	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Manganese* (average) FH Range of 4 samples	N	136 110-151	ppb	N/A	300	Geology; Naturally occurring
Nickel (from 11/17/09) V		28	ppb	N/A	100	Discharge from steel/metal factories
Odor FH from 11/18/10)	N	1	units	N/A	3	Natural sources
pH FH (from 11/18/10)	N	7.8	units		6.5-8.5	
pH V (from 10/26/11)		7.3				
Sodium ⁴ FH (sample from 11/18/10)	N	61.2	ppm	N/A	N/A	Geology; Road Salt
Sodium ⁴ V (from 10/26/11)		35.3				
Sulfate FH (from 11/18/10)	N	10	ppm	N/A	250	Geology;
Sulfate V (from 11/18/10)		32				
Zinc FH (sample from 11/18/10)	N	2.77	ppb	N/A	5000	Galvanized pipe; corrosion inhibitor
Zinc V (from 10/26/11)	N	10				
Disinfection Byproducts (samples from 8/10/11 unless otherwise noted) F= Ft. Hardy WTP, V= Victory WTP						
Haloacetic Acids [HAA5] V	N	52.4	ppb	N/A	60	By-product of drinking water chlorination.
TTHM[Total Trihalomethanes] V	N	61.7	ppb	N/A	80	By-product of drinking water chlorination
Chlorine (average) FH	N	0.8	ppm	MRDL	MRDL	Used in the treatment and disinfection of drinking water
Range (based on daily testing)		0.43-2.1		G		
				N/A	4	
Chlorine (average) V Range (based on daily testing)	N	0.9 0.8-1.0	ppm			
Stage 2 Disinfection Byproducts* (samples from 2/10/10)						
Haloacetic Acids [HAA5] range of values	N	ND-13.1	ppb	N/A	60	By-product of drinking water chlorination
TTHM[Total Trihalomethanes] range of values	N	24.7-38.2	ppb	0	80	By-product of drinking water chlorination
Radiological Contaminants						
Radium 228 (samples 2/28/07) FH	N	0.78	pCi/L	0	5	Erosion of natural deposits
Volatile Organic Chemicals						
Toluene V (Well#2 Raw) from 11/16/11	N	0.7	ppb	N/A	5	Leaks from gasoline tanks.

Notes:

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. The level detected represents the highest level detected.
2. The level presented represents the 90th percentile of 10 test sites. 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 copper values detected at your water system. In this case, 10 samples were collected from your water system and the 90th percentile value was the 9th sample with the second highest value (level detected 0.51 mg/l). The action level for copper was not exceeded at any of the sites tested.
3. The level presented represents the 90th percentile of 10 test sites. The action level for copper was not exceeded at any of the 10 sites tested.
4. Water containing more than 20 mg/l should not be consumed by persons on severely restricted sodium diets
5. During of 2010 samples were collected to evaluate our distribution system for the presence of disinfection byproducts. The purpose of this evaluation is to determine future sample locations for routine disinfection byproduct sampling. The levels presented herein are the range of detects from the samples collected in 2010. This was the last round of monitoring from the Stage 2 program.

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.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

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.

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.

N/A-not applicable