

Annual Drinking Water Quality Report for the Year 2021
Village of Saugerties
43 Partition Street
Saugerties, New York 12477
Public Water Supply Identification Number NY5503386

INTRODUCTION

To comply with State and Federal regulations, the Village of Saugerties, will be issuing an annual 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 tap water met all State drinking water health standards. We are proud to report that our system has never violated a maximum contaminant level. This report provides 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 State standards.

If you have any questions about this report or concerning your drinking water, please contact: Mr. Michael Hopf Water Superintendent Village of Saugerties Water Department, 43 Partition Street, Saugerties, NY 12477; Telephone (845) 246-8958. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled village board meetings held the 1st and 3rd Mondays of every month at 5:30pm. The meetings are held at the Village Hall located on 43 Partition Street in the Village of Saugerties.

WHERE DOES OUR WATER COME FROM?

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 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 the 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.

Our water source is surface water drawn from the Blue Mountain Reservoir, which is located along Reservoir Road, off County Route 36, in the Town of Saugerties. We have 18.5 miles of watershed. Blue Mountain Reservoir is stream fed and has a 6-million-gallon storage capacity by damming the stream. There are approximately 250 acres surrounding the reservoir. During 2021, our system did not experience any restriction of our water source. The water is gravity fed from the reservoir to the Water Filtration Plant. The filtration plant can treat 1.8 million gallons per day. As the water enters the water filtration plant the pH is adjusted with soda ash to optimize floc production, we then add poly aluminum chloride to cause small particles to stick together when the water is mixed, making larger heavier particles. In June 2021 a new pre-filter high rate tube settler was added to the treatment plant. This allows the treatment plant to remain on-line and process water during periods of high turbidity. The project was funded by the Governor's Office of Storm Recovery. The water is then pumped through any of three upflow clarifiers to remove the larger heavier particles. In the next stage of treatment water flows to the three mixed media filter units at which point we add a filter aid which improves filtration and reduces filter effluent turbidity. This is the final polishing step in which the fine particulate mater that was not removed in the clarifier is filtered out. Each filter unit can process 850,000 gallons per day. The final treatment step is disinfection with chlorine to prevent bacterial contamination. Additionally, we add an orthophosphate inhibitor for corrosion control. The treated water flows to a 78,000-gallon clearwell and then gravity fed into the Village's water distribution system, which includes a three-million-gallon water storage tank.

FACTS AND FIGURES

Our water system serves approximately 5,500 people served through 1,800 service connections in the Village of Saugerties to a population of 4,500 people and 2,072 people in the Town of Saugerties. The total amount of water produced in 2021 by the Village of Saugerties Water Treatment Plant was 324,330,243 gallons. The daily average of water treated and pumped into the distribution system was 888,000 gallons. Our single highest day was 1,460,000 gallons. The amount of water delivered to Village and Town of Saugerties customers was 276,644,707 gallons. This leaves an unaccounted-for total of 47,685,536 gallons or 14.7%. This water was used to flush mains, fight fires, municipal use, recreation fields and ballparks, theft of service and leakage. In 2021, the Village of Saugerties water customers were charged \$4.35 per 1,000 gallons delivered. The average residential charge is \$600.00.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, the Village of Saugerties routinely tests your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds. The table presented below depicts which compounds 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 our data, though representative of water quality, is more than one year old.

It should be noted that all drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses 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 Ulster County Health Department at (845) 340-3150.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table on page 3, our system had no violations of the water that was tested. 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.

New York State has adopted the first in the nation drinking water standard for 1,4-Dioxane along with one of the lowest maximum contaminant levels for PFOA and PFOS. Public Water Supplies in NYS are required to test for PFOA, PFOS and 1,4-Dioxane. PFOA and PFOS have Maximum Contaminant Levels (MCL) of 10 parts per trillion each while 1,4-Dioxane has an MCL of 1.0 parts per billion. The Village of Saugerties has completed its 2nd, 3rd and 4th quarter monitoring for PFOA, PFOS & 1,4-Dioxane and the contaminants were not detected.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2021, 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 microbial 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 Saugerties 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.

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- ◆ Saving water saves energy and some of the costs associated with both of these necessities of life;
- ◆ Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- ◆ Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- ◆ Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So, get a run for your money and load it to capacity.
- ◆ Turn off the tap when brushing your teeth.
- ◆ Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- ◆ Check your toilets for leaks by putting a few drops of food coloring in the tank, don't flush and wait to see if the color shows up in the bowl. It is not uncommon to lose more than 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you can save more than 30,000 gallons a year.
- ◆ Use your water meter to detect hidden leaks. Record your meter reading just before you go to bed and again the next morning before you use any water, if the water meter has recorded any usage you have a leak.

System Improvements

During 2021 the following improvements were made to the water system:

- ◆ A project was awarded in the amount of \$600,000.00 to remove the silt buildup in the reservoir during the summer of 2021.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community and our way of life. Please call our water department office at (845) 246-8958 or the water treatment plant at (845) 246-5516 if you have questions.

VILLAGE OF SAUGERTIES TABLE OF DETECTED CONTAMINANTS						
Public Water Supply Identification Number NY5503386						
	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Turbidity ¹ (Highest turbidity (sample from 6/6/21))	N	0.276	NTU	N/A	TT=1 NTU	Soil runoff
		100%			TT= 95% samples < 0.3	
Total Coliform Bacteria	N	1 positive sample	N/A	0	TT=2	Naturally present in the environment.
Inorganic Contaminants (data 11/10/21 unless otherwise noted)						
Barium	N	9.5	ppb	2000	2000	Erosion of natural deposits
Chloride	N	11.4	ppm	N/A	250	Naturally occurring or indicative of road salt contamination
Copper (samples from 8/4/20) Range of copper concentrations	N	0.13 ² 0.055-0429	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (samples from 8/4/20) Range of lead concentrations	N	1.0 ³ ND-1.3	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Manganese	N	16.2	ppb	N/A	300	Erosion of natural deposits
Nitrate	N	0.277	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Odor	N	2	units	N/A	3	Natural sources
pH	N	7.06	units	N/A	6.5-8.5	
Sodium ⁴	N	9.57	ppm	N/A	N/A	Naturally occurring; Road salt; Water softeners; Animal waste
Zinc	N	6.4	ppb	N/A	5000	Naturally occurring, Corrosion inhibitors
Stage 2 Disinfection Byproducts (Quarterly samples from 2/17/21, 5/20/21, 8/18/21 & 11/10/21)						
HAA5 [Haloacetic Acids] average ⁵ range of values	N	10.9 3.2-14.2	ppb	N/A	60	By-product of drinking water disinfection
TTHM[Total Trihalomethanes] average ⁵ range of values	N	15 5.2-23.3	ppb	0	80	By-product of drinking water chlorination
Chlorine Residual, Free (average) Range (daily monitoring)	N	1.2 0.2-1.7	ppm	MRDLG N/A	MRDL 4	Used in the treatment and disinfection of drinking water
Total Organic Carbon⁶ (quarterly samples from January, May, August &-November 2021)						
Total Organic Carbon Compliance Ratio	N	>1.00	N/A	Compliance Ratio >1	TT	Organic material both natural and man made; Organic pollutants, decaying vegetation,
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. Level detected represents the highest level detected. State regulations require that entry point turbidity must always be below 1.0NTU. The regulations also require that 95% of the turbidity samples collected have measurements below 0.3 NTU. We met the performance standard 100% of the time. We also monitor distribution system 5 times a week with 0.14 NTU being the average and 0.23 NTU being the highest.						
2. The level presented represents the 90 th 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 at your water system and the 90th percentile value was the 9 th sample with the second highest value (level detected 0.13 mg/l). The action level for copper was not exceeded at any of the sites tested.						
3. The level presented represents the 90 th 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.						
4. The 90th percentile is equal to or greater than 90% of the lead values detected at your water system. In this case, 10 samples were collected at your water system and the 90th percentile value was the 9 th sample with the second highest value (level detected at 1 ppb). The action level for lead was not exceeded at any of the sites tested.						
4 Water containing more than 20 ppm should not be consumed by persons on severely restricted sodium diets.						
5. The average shown represents the highest Locational Running Annual Average (LRAA) for 2021 for the 2 sites sampled. The highest LRAAs for the TTHMs was in the 3 rd quarter and the HAA5s were in the 2 nd quarter of 2021.						
6. 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. Our annual compliance ratio was greater than 1.0						
<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>Action Level</i> - the concentration of a contaminant, which, if exceeded, triggers treatment, or other requirements, which a water system must follow.						
<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 LRAA is calculated by taking the average of the four most recent samples collected at each individual site						
<i>N/A-Not applicable</i>						

As the State regulations require, we routinely test your drinking water for numerous contaminants. These groups of contaminants followed by the number of contaminants in each group exist at levels that were NOT DETECTABLE in your drinking water: volatile organic compounds (52) + MTBE, synthetic organic compounds (41), asbestos and radiological chemicals (3). The inorganic contaminants tested for and not detected were: arsenic, cadmium, chromium, iron, mercury, nickel, silver, selenium, sulfate, antimony, beryllium, thallium, and cyanide. Microbiological Contaminants (2) Total Coliform and E. coli.

**Saugerties Village Water District
Blue Mountain Reservoir
NY5503386
SWAP Summary**

The NYS DOH has completed a source water assessment for this water system, based on available information. Possible and actual threats to this drinking water source were evaluated. The state source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants could affect the source. The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is, or will become contaminated. *While nitrates were detected in our water, it should be noted that all drinking water, including bottled drinking water, might be reasonably expected to contain at least small amounts of some contaminants from natural sources. The presence of contaminants does not necessarily indicate that the water poses a health risk.* See section "Are there contaminants in our drinking water?" for a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

This assessment found a moderate susceptibility to contamination for this source of drinking water. Land cover and its associated activities within the assessment area does not increase the potential for contamination. The sole non-sanitary wastewater discharge in the assessment area is associated with the drinking water treatment plant and is downstream from the water plant intake. Consequently, it does not contribute to source water contamination. There is also noteworthy contamination susceptibility associated with other discrete contaminant sources such as mines. Finally, it should be noted that the high mobility of microbial contaminants in reservoirs results in this drinking water system's raw water intake as having medium-high susceptibility ratings for protozoa and enteric bacteria and viruses.

Our water is filtered and disinfected to ensure that the finished water delivered into your home meets the New York State's drinking water standards for microbial contamination.

County and state health departments may use this information to direct future source water protection activities. This may include water quality monitoring, resource management, planning, and education programs.

A copy of this assessment, including a map of the assessment area, can be obtained by contacting us, as noted below:

Village of Saugerties
Village Hall
43 Partition Street
Saugerties, New York 12477
(845) 246-2321