

## CATSKILL WATER SYSTEM - ANNUAL WATER QUALITY REPORT - PWS ID#1900026

The New York State Department of Health has implemented a source water assessment program for all public water sources in the state. A summary of the assessment for our system is included at the end of this report.

Public Health Law requires that all water supply systems with greater than 1000 service connections provide their customers with annual water quality reports. The purpose of this law is to ensure that private and public water companies throughout New York State provide their customers with information regarding the quality of their water supply as well as the responsibilities, activities, and infrastructure of their water supplier. **This report covers the period from January 1 to December 31, 2022.**

**IMPROVEMENTS for 2022:** replaced 463 meters to 4g. Replaced the pipping to fill tray tank and recirculator. Installed new line for the 9W bridge project including 700ft 10" HDPE IPS, one 10" valve, one 12" valve, one 6" valve, one 6" T for a future fire hydrant, and 80FT 6" HDPE. The Village intends to construct a settling basin to further reduce solid and organic matter in the water. These improvements are intended to reduce the formation potential for THMs

Sources of drinking 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 radioactive material and can pick up substances resulting from human and animal activity.

The Catskill water system's water source is the Potic Reservoir located in the Town of Coxsack on Schoharie Turnpike. Total capacity, including three-foot spillway boards, is approximately 249 million gallons with an estimated fourteen square mile water shed area.

Contaminants that may be present in raw or source water before it is treated are microbial contaminants, inorganic contaminants, pesticides and herbicides, radioactive contaminants, and organic chemical contaminants. **Microbial** contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife. **Inorganic** contaminants, such as salts and metals, can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming. **Pesticides and herbicides** may come from a variety of sources, such as agricultural and residential uses. **Radioactive** contaminants are usually naturally occurring. **Organic chemical** contaminants, including synthetic and volatile organic chemicals, are byproducts of industrial processes and petroleum production and can also come from gas stations, urban water runoff, and septic systems. **Disinfection by-products** such as trihalomethane and haloacetic acid, are a result of the water chlorination process. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The State Health Departments and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The Village of Catskill Water Plant contains three micro floc Trident 420 package filters, each capable of filtering 700 gallons per minute (gpm). Raw water that has been treated with sodium permanganate is pumped into the plant by the raw water pumps through a chemical feed room where caustic soda (for pH adjustment), PCH – 182 (a coagulant), a polymer (a coagulant aid) are injected. Water flows through the up-flow clarifiers of the trident units before passing through the dual media filters and into the clear wells below the plant. As water exits each filter, chlorine is injected for disinfection. Zinc orthophosphate is added to the effluent line for corrosion control. Each filter is equipped with an effluent turbid meter, which allows for the monitoring of the performance of each individual filter. The filter's backwash is based on pressure loss through the filter. Chlorine residual is monitored before the exit of the treatment plant and in the distribution system as well as bacteriological and organic compounds.

The water system lacks sufficient storage capacity near the actual service areas. A break along the main 16" transmission line or a problem at the filter plant would cause a service interruption to the entire system. We continue to look for funding through the current NYS Drinking Water State Revolving Fund and Clean Air/Clean Water Bond Act.

There are approximately 2,200 connections to the system, serving an estimated 8500 people. Total water generated in 2022 at the water plant, amounts to 291,521,800 gallons. **The last water rate increase was July 2019.** The average residential water customer used approximately 24 units per billing quarter. This represents a daily use of 195 gallons per household. Water bills inside the Village average \$450.80 per year and \$895.50 outside the Village. With sewer bills also based on the water use, we urge customers to promptly repair even the smallest intermittent leak and consider other water conservation methods such as:

- **Use low flow shower heads and faucets**
- **Repair all leaks in your plumbing system**
- **Water your lawn sparingly early morning or late evening**
- **Do only full loads of wash and dishes**
- **Wash your car with a bucket and hose with a nozzle**
- **Do not cut the law too short; longer grass saves water**

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. 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 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 NYSDOH Oneonta District Office at 607-432-3911.

Each year the NYS Department of Health mandates a testing program for the Village's source water and finished water. This testing program is performed by NYS certified commercial laboratories with the results reported directly to the State, as well as to the Village. Full documentation of all tests performed, the results, and maximum allowable limits are contained in a supplement available on request and on file at the Village Clerk's Office, 422 Main Street, Catskill, NY 12414 or at 943-3830.

**Samples in 2022 show that the system again, meets state drinking water standards. New copper-lead sampling are presented for 2021. However, some homes on the Catskill water system still have high levels of lead.** Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that the lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing.

If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush you tap for 30 seconds up to 2 minutes before using tap water. Additional information is available for the Safe Drinking Water Hotline (1-800-426-4791). **LEAD IS NOT FOUND IN THE SOURCE WATER. Those few residences still having lead service pipes are urged to seriously consider their replacement.**

**DO I NEED TO TAKE SPECIAL PRECAUTIONS?**

Some people may be more vulnerable to drinking water contaminants than the general population. Immuno-compromised persons, such as people with cancer who are 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 about drinking water their health care providers. EPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

**For additional information please contact**

NYS Department of Health  
28 Hill St., Suite 201  
Oneonta, NY 13820 607-432-3911

Robert Young, Superintendent, DPW  
101 W. Bridge St.  
Catskill, NY 12414 518-943-5505

Nick Baldwin, Supervisor, Catskill Water Department  
89 Potic Creek Rd.  
Earlton, NY 12058 518-945-1839

**TABLE OF DETECTED CONTAMINANTS FOR  
CATSKILL WATER SYSTEM FOR THE YEAR 2021**

Contaminant	Violati onYes/ No	Date of sample	Level Detected (Maximum) (Range)	Unit Measu- rement	Regulatory Limit (MCL, TT or AL)	MC LG	Likely Source of Contamination
Barium	No	8/18/22	0.01	mg/l	MCL=2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Nitrate	No	2/10/22	0.08	mg/l	MCL=10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Chloride	No	4/18/2019	22.5	mg/l	MCL=250	N/A	Naturally occurring or indicative of road salt contamination.
Manganese	No	4/18/2019	8	ug/l	MCL=300	N/A	Naturally occurring; Indicative of landfill contamination.
Sodium	No	4/18/2019	18.4 <sup>1</sup>	mg/l	(see Health Effects) <sup>1</sup>	N/A	Naturally occurring; Road salt; Water softeners; Animal waste.
Sulfate	No	4/18/2019	5.3	mg/l	MCL=250	N/A	Naturally occurring.
Total Trihalomethanes (TTHMs)	YES	2/24/22 5/19/22 8/18/22 11/22/22	LRAA1 62.10 <sup>2</sup> 41.70 – 92.00 LRAA2 41.7 – 49.0	ug/l	MCL=80		By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains organic matter.
Halo acetic Acids(HAA5s))	No	2/24/22 5/19/22 8/18/22 11/22/22	LRAA 1 39.84 30.00 – 49.00 LRAA2 31.6 – 51.8	ug/l	MCL=60		By-product of drinking water disinfection needed to kill harmful organisms.
Lead	No	7/13/2021	9.6 <sup>3</sup> ND – 14.5	ug/l	AL=15	0	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper	No	7/13/2021	0.078 <sup>4</sup> 0.007 – 0.124	mg/l	AL=1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Nickel	No	2/24/22	0.001	mg/l	N/A	N/A	Naturally occurring
Zinc	No	4/18/2019	0.003	mg/l	MCL=5	N/A	Naturally occurring, mining waste
Hexachloracy Clopentadiene	No	9/9/21	0.07	Ug/l	5	N/A	Discharge from chemical factories
PFOS	NO	8/19/21	1.71	Ng/l	10	N/A	Released in the environment from widespread use in commercial and industrial applications.
PFOA	NO	8/19/21	2.02	Ng/l	10	N/A	Released into the environment from widespread use in commercial and industrial applications.
DIOXANE	NO	8/19/21	0.41	Ug/l	MCL=1	N/A	Released in the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites.

CHROMIUM	NO	2/24/22	0.00.	Ug /l	100	100	Discharge from steel & pulp mills, erosion of natural deposits.
Chloromethane	No	2/2020	0.98	Ug/l	MCL=5	N/A N/A N/A	Used in organic chemistry; used as an extractant for greases, oils, and resins; as a solvent in the rubber industry; as a refrigerant, blowing agent and propellant in polystyrene foam production; as an anesthetic; as an intermediate in drug manufacturing; as a food additive, a fumigant and a fire extinguisher.
Turbidity	No	12/2021	0.84	NTU	TT=<1.0 NTU		Soil Runoff
Turbidity	No	10/2021	99.4%<0.3 <sup>5</sup>	NTU	TT=95%of samples < 0.3 NTU		

1. Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.
2. This level represents the highest locational running annual average calculated from the data collected.
3. The level presented represents the 90th percentile of the 20 sites tested. 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 values detected at your water system. In this case, 20 samples were collected at your water system and the 90th percentile value was the third highest value 9.6 ug/l. The action level for lead was not exceeded at any of the sites tested.
4. The level presented represents the 90th percentile of the 20 samples collected. The action level for copper was not exceeded at any of the sites tested
5. This number represents the weighted average filter effluent turbidity less than 0.3 NTU

Turbidity is a measure of the cloudiness of the water. Our highest single turbidity measurement for the year occurred on 12/2022 (0.84 NTU). State regulations require that turbidity must always be less than or equal to 1.0 NTU. The regulations require 95% of the turbidity samples collected have measurements below 0.3 NTU. NOV was the month when we had the fewest measurements meeting the treatment technique for turbidity, the levels recorded were within the acceptable range allowed and did not constitute a treatment technique violation.

#### What does this mean?

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

#### DEFINITIONS

- a) **Maximum Contaminant Level (MCL)** - Highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- b) **Maximum Contaminant Level Goal** - Level of a contaminant in drinking water below which there is no known or expected risk of health. MCLGs allow for a margin of safety.
- c) **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.
- d) **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.
- e) **Action Level (AL)** - Concentration of a contaminant, which if exceeded, triggers treatment, or other requirements, which a water system must follow.
- f) **Treatment Technique (TT)** - Required process intended to reduce the level of a contaminant in drinking water.
- g) **Non-Detects (ND)** - Laboratory analysis indicates that the constituent is not present.
- h) **NTU** - Nephelometric Turbidity Units (a measure of turbidity)
- i) **Milligrams per liter (mg/l)**: Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm)
- j) **Micrograms per liter (ug/l)**: Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb)

#### MATHEMATICAL CONVERSIONS

1000 ug/l = 1 mg/l  
1 mg/l = 1 ppm  
1ug/l = 1 ppb  
1 ppm = 1000 ppb

The amounts of a contaminant allowed in drinking water are so small they are measured in ppm – equivalent to one penny in \$10,000: or ppb – equivalent to one penny in \$10,000,000.

**NOTICE OF HIGH TRIHALOMETHANE LEVELS**  
Catskill Village Water System  
August 2022

From the 2nd quarter of 2021 through the 1st quarter of 2022 (04/01/2021 – 03/31/2022) and from the 3rd quarter of 2021 through the 2nd quarter of 2022 (07/01/2021 – 06/30/2022) the Catskill Village water system was found to have an average concentration of total trihalomethanes that exceed the maximum contaminant level (MCL) of 80 parts per billion (ppb). Compliance with the MCL is based on the average of the four most recent quarterly sample results collected from each sampling location (called the locational running annual average or LRAA). The THM LRAA for 2nd quarter of 2021 through the 1st quarter of 2022 is 93.8 ppb. The THM LRAA for 3rd quarter of 2021 through the 2nd quarter of 2022 is 85 ppb. Water suppliers are required to provide written public notification to consumers when an MCL is exceeded.

**What are trihalomethanes (THMs)?**

Trihalomethanes are a group of chemicals that are formed in drinking water during disinfection when chlorine reacts with naturally occurring organic material (e.g., decomposing vegetation such as tree leaves, algae or other aquatic plants) in surface water sources such as rivers and lakes. They are disinfection byproducts and include the individual chemicals chloroform, bromoform, bromodichloromethane, and chlorodibromomethane. The amount of trihalomethanes formed in drinking water during disinfection can change from day to day, depending on the temperature, the amount of organic material in the water, the amount of chlorine added, and a variety of other factors.

Disinfection of drinking water by chlorination is beneficial to public health. Drinking water is disinfected by public water suppliers to kill bacteria and viruses that could cause serious illnesses, and chlorine is the most used disinfectant in New York State. All public water systems that use chlorine as a disinfectant contain trihalomethanes to some degree.

**What are the health effects of trihalomethanes?**

Some studies suggest that people who drank water containing trihalomethanes for long periods of time (e.g., 20 to 30 years) have an increased risk of certain health effects. These include an increased risk for cancer and for low birth weights, miscarriages, and birth defects. The methods used by these studies could not rule out the role of other factors that could have resulted in the observed increased risks. In addition, other similar studies do not show an increased risk for these health effects. Therefore, the evidence from these studies is not strong enough to conclude that trihalomethanes were a major factor contributing to the observed increased risks for these health effects. Studies of laboratory animals show that some trihalomethanes can cause cancer and adverse reproductive and developmental effects, but at exposures much higher than exposures that could result through normal use of the water. The United States Environmental Protection Agency reviewed the information from the human and animal studies and concluded that while there is no causal link between disinfection byproducts (including trihalomethanes) and human health effects, the balance of the information warranted stronger regulations that limit the amount of trihalomethanes in drinking water, while still allowing for adequate disinfection. The risks for adverse health effects from trihalomethanes in drinking water are small compared to the risks for illness from drinking inadequately disinfected water.

The Village has recently secured a \$3 million grant together with an additional \$2 million loan that will assist in addressing the conditions that result in the creation of THMs. Specifically, the Village has installed an aerator in the reservoir aimed at reducing the amount organic material in the water, and the Village intends to construct a settling basin in advance of the existing treatment plant to further reduce solid and organic matter in the water that is treated through the filtration plant. These improvements are intended to reduce the formation potential for THMs. A further step may be taken to introduce activated carbon filters at the water plant, if necessary

Consumers having questions on any of the above can contact Robert Young, Water/Wastewater Superintendent at 518-943-5505 at the water plant, or the EPA’s Safe Drinking Water Hotline at 800-426-4791

**WHAT DOES THIS INFORMATION MEAN?**

The table show that our system uncovered some problems this year. From the 2nd quarter of 2021 through the 1st quarter of 2022 (04/01/2021 – 03/31/2022) and from the 3rd quarter of 2021 through the 2nd quarter of 2022 (07/01/2021 – 06/30/2022) the Catskill Village water system was found to have an average concentration of total trihalomethanes that exceed the maximum contaminant level (MCL) of 80 parts per billion (ppb). Compliance with the MCL is based on the average of the four most recent quarterly sample results collected from each sampling location (called the locational running annual average or LRAA). The THM LRAA for 2nd quarter of 2021 through the 1st quarter of 2022 is 93.8 ppb. The THM LRAA for 3rd quarter of 2021 through the 2nd quarter of 2022 is 85 ppb. Water suppliers are required to provide written public notification to consumers when an MCL is exceeded. The current THM LRAA is 85 ppb. We are correcting this by installing all new water main lines on Main St. to alleviate this problem from happening.

**IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?**

During 2022 our system followed applicable state drinking water operation, monitoring, and reporting requirements.

**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 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 firefighting 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, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, then check the meter after 15 minutes. If it moved, you have a leak.

**Village of Catskill - NY1900026 - Source Water Assessment Summary**

The NYS Department of Health has completed a source water assessment for this system, based on the available information. Possible and actual threats to the drinking water sources 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 can move through the subsurface to the drinking water sources.

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 (and other inorganic contaminants) were detected in our water, it should be noted that all drinking water, including bottled drinking water, may be reasonable 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. The nitrate levels in our sources are not considered high in comparison with other sources in this area.

As mentioned before, our water is derived from a reservoir. The source water assessment has found substantial potential risks to drinking water quality. The amount of pasture in the assessment area results in high susceptibility for microbials. There is also a medium density of sanitary wastewater discharges, which results in medium risks for contamination, for the finding is not fully associated with other discrete contaminants sources. Finally, it should be noted that reservoirs in general are highly sensitive to phosphorus and microbial contaminants. While the source water assessment rates our reservoir as being susceptible to microbials, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State’s drinking water standards for microbial contamination. A copy of the assessment, including a map of the assessment area, can be obtained by contacting the Village of Catskill at 422 Main Street, Catskill, NY 12414, 518-943-3830. The Village of Catskill has public board meetings every second and fourth Wednesday of the Month.

**THIS 2022 REPORT HAS BEEN REVIEWED FOR ACCURACY AND COMPLETENESS BY THE DEPARTMENT OF HEALTH.**