

Annual Drinking Water Quality Report for 2021

Village of Horseheads

Public Water Supply ID# NY0701009

To comply with State and Federal regulations, the Village of Horseheads 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. Last year, your tap water met all applicable State drinking water standards. In 2021, we conducted tests for over 100 possible contaminants. 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 New York State standards. If you have any questions about this report or concerning your drinking water, please contact Don Gaylord at 607-739-5691. 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. The meetings are held the second Mondays of each month at 7:00 P.M. at Horseheads Village Hall, 202 South Main Street. You may also call the Chemung County Health Department at 607-737-2019.

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 maximum amount of certain contaminants in water provided by public water systems. The State Health Department 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 ground water drawn from two fifty-foot-deep wells on Mill Street. We also operate a 70 foot-deep well and filter plant at Well 5 on Old Ithaca Road and maintain a nearby backup well. Our water is treated prior to distribution with chlorine for disinfection and fluoride to promote healthy teeth. In addition, we filter all water at Well 5 because nearby Newtown Creek can infiltrate the aquifer during extreme high-water events.

Facts and Figures:

Our water system serves ~15,000 people through 3596 service connections. The total water produced in 2021 was 520,600,853 gallons. The amount of water delivered to customers was 232,368,021 gallons. This leaves an un-accounted for total of 288,232,832 gallons. This water is used to flush mains, test hydrants, fight fires, and for municipal use. Loss to leakage within the distribution system is believed to be approximately 15% of the unaccounted-for water. Additionally, the daily average of water pumped into our system is 1.4 million gallons. Our highest single day was 2.2 million gallons. In 2021, water customers were charged an average annual fee of \$262.87 per account, for 66,390 gallons of water.

Are there contaminants in our drinking water?

State regulations require we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds (gasoline and industrial solvents), total trihalomethanes, and synthetic organic compounds.

The Village of Horseheads conducts testing throughout the year. This includes 180 samples (fifteen per month) in various locations throughout our system for coliform bacteria, chlorine and turbidity. We check chlorine residual and fluoride at each operating well every day. We test for a variety of possible contaminants at the wellheads, and in the distribution system. 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. 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 Chemung County Health Department at 607-737-2019.

The table presented below compounds we 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 results are therefore more than a year old.

Table of Detected Contaminants

Well 5							
Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit	MCLG	Regulatory Limit (MCL, AL, MRDL, TT)	Likely Source of Contamination
Barium	No	11/2020	0.2	mg/L	2	MCL = 2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloride	No	11/2020	54	mg/L	N/A	MCL = 250	Naturally occurring or indicative of road salt contamination
Nitrate	No	12/2021	0.31	mg/L	10	MCL = 10	Runoff from fertilizer; leaching from septic tanks, sewers
Sodium	No	11/2020	27	mg/L	N/A	N/A <i>Note 2</i>	Naturally occurs; Use of road salt
Fluoride	No	Sampled Daily	Average: 0.71 Range: 0.1- 1.6	mg/L	N/A	MCL = 2.2	Added by a provider to prevent tooth decay
Well 5 Turbidity Measured every 4 hours at treatment plant	No	Maximum day 11/22/2021	0.12 Max for year Annual Average = 0.03	N/A	N/A	TT Always less than 1.0 NTU <i>Note 4</i>	Soil runoff
Well 5 Turbidity Measured every 4 hours at treatment plant	No	Highest monthly average	100% Less than 0.3	NTU	N/A	TT 95% of Samples less than 0.3 NTU <i>Note 4</i>	Soil Runoff

Wells 1 & 2							
Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit	MCLG	Regulatory Limit (MCL, AL, MRDL, TT)	Likely Source of Contamination
Barium	No	11/2020	Well 1 = 0.13	mg/L	2	MCL = 2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
			Well 2 = 0.11				
Chloride	No	11/2020	Well 1 = 59	mg/L	N/A	MCL = 250	Naturally occurring or indicative of road salt contamination
			Well 2 = 59				
Fluoride	No	Sampled Daily	Average 0.71 Range: 0.1 - 1.5	mg/L	N/A	MCL = 2.2	Added by a provider to prevent tooth decay
Nitrate	No	12/2021	Well 1 = 0.77	mg/L	10	MCL = 10	Runoff from fertilizer; leaching from septic tanks, sewers
			Well 2 = 0.75				
Sodium	No	11/2018	Well 1 = 28	mg/L	N/A	N/A <i>Note 2</i>	Naturally occurs; Use of road salt
			Well 2 = 32				

Well 4 (Emergency Use Only)							
Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit	MCLG	Regulatory Limit (MCL, AL, MRDL, TT)	Likely Source of Contamination
Barium	No	11/2020	0.2	mg/L	2	MCL = 2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloride	No	11/2020	88	mg/L	N/A	MCL = 250	Naturally occurring or indicative of road salt contamination
Nitrate	No	12/2021	0.83	mg/L	10	MCL = 10	Runoff from fertilizer; leaching from septic tanks, sewers
Sodium	No	11/2020	46	mg/L	N/A	N/A <i>Note 2</i>	Naturally occurs; Use of road salt

Distribution System							
Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit	MCLG	Regulatory Limit (MCL, AL, MRDL, TT)	Likely Source of Contamination
Chlorine Residual at consumer taps	No	15 samples each month	Average 0.9 Range: 0.3 - 1.6	mg/L	4.0 MRDLG	MRDL = 4.0	Disinfectant added to control microbial contaminants
Copper at consumer taps <i>Note 1</i>	No	8/2021 30 samples	90 th % = 0.12 Range 0.01 - 0.16	mg/L	1.3	AL = 1.3	Corrosion of household plumbing
Lead at consumer taps <i>Note 1</i>	No	8/2021 30 samples	90 th % = 3.9 Range ND – 23	ug/L	0	AL = 15	Corrosion of household plumbing
Total Haloacetic Acids (HAAs) 2 sample sites	No	Quarterly 8 samples in 2021	Highest annual average 2.3 Range: ND - 3.5	ug/L	N/A	MCL = 60 <i>Note 3</i>	By-product of drinking water chlorination
Total Trihalomethanes (THMs) 2 sample sites	No	Quarterly 8 samples in 2021	Highest annual average 11 Range: 6 - 15	ug/L	N/A	MCL = 80 <i>Note 3</i>	By-product of drinking water chlorination
Turbidity at consumer taps sampled daily	No	365 samples in 2021	Average 0.18 Range: 0.01 - 1.19	NTU	N/A	MCL = 5 <i>Note 4</i>	Sediments from old water mains
Total Coliform (15 samples Monthly)	No (TT) <i>Note 5</i>	1 Sample 09/2021	Present	Present or Absent	N/A	TT= 1 or more positive samples	Naturally present in the environment

Note 1 – The level presented represents the 90th percentile results of the 30 sites tested. It means 27 of the 30 samples were less than or equal to value given with 1 sample exceeding the 15 ppb action level (AL) for Lead.

Note 2 – An MCL for Sodium is not established. 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.

Note 3 – The MCL is based on the running annual average at each sample site.

Note 4 – 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. We monitor turbidity in the distribution system because high turbidity can hinder effective disinfection.

Note 5 - Coliforms are harmless bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. Coliforms were detected in a routine monthly sample for September 2021. Three repeat samples and untreated well water samples collected were all negative so the treatment technique was not violated.

Definitions:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.

Maximum Contaminant Level Goal (MCLG): 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.

Action Level (AL): The level of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

Not Detected (ND): Laboratory analysis indicates that the constituent is not present.

Not Applicable (N/A)

Compliance with other sanitary code requirements.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether our drinking water meets health standards or not. We did not complete the required tests for the following contaminants by the 12/31/21 deadline: principal organic chemicals for wells 1, 2, 4 and 5, primary inorganic chemicals for wells 4 and 5, Sodium for wells 1, 2, 4 and 5, and Chloride for wells 1, 2, 4 and 5. We therefore cannot be sure of the quality of your drinking water during that time. The violation was closed when we collected all missed samples by a deadline of March 17, 2022, and all sampling yielded results below the regulatory limit and is safe to drink.

Additionally, the Village of Horseheads Water Department received two violations stemming from an incident at well 5 between October 17-18, 2021. During this time, a computer failure, which did not shut down the well pump when a chlorine tank ran out, resulted in inadequate disinfection for a 12-hour period. The violations address the inadequate disinfection, in addition to Village of Horseheads staff not notifying the Chemung County Health Department in the required timely manner. The water department has since implemented safety features into the computer software to prevent this issue from occurring again.

What does this information mean?

We have also learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State. Additional information can be obtained by calling the safe drinking water hotline at (1-800-426-4791).

Lead Information:

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 Horseheads water department 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>. In addition, the Chemung County Health Department can assist you with lead testing.

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 a properly controlled level. To ensure that the fluoride supplement in your water provides optimal dental protection, we monitor fluoride levels daily to make sure that fluoride is maintained at a target level of 0.7 mg/l (parts per million). None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l NYS limit for fluoride.

Source Water Assessment:

The NYS DOH completed a source water assessment in 2004 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 can move through the subsurface to the wells. 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. 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.

The source water assessment has rated our wells as having a high to very high susceptibility to microbials, nitrates, industrial solvents, and other industrial contaminants. These ratings are due primarily to the proximity of industrial/commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government. There are also low intensity residential activities in the assessment area. While the source water assessment rates our wells 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 full assessment can be obtained by contacting us, as noted above.

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 many reasons why it is important to conserve water:

- Saving water saves energy and some of the costs associated with 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:

- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it up and you can save almost 6000 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.

In 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 office if you have questions 607-739-5691. Copies of our test reports may be viewed at the Horseheads Village Hall or please visit our web site: www.horseheads.org

Sincerely yours,

Don Gaylord
Chief Water Operator