2016 AWQR

VILLAGE OF HORSEHEADS
Water Department

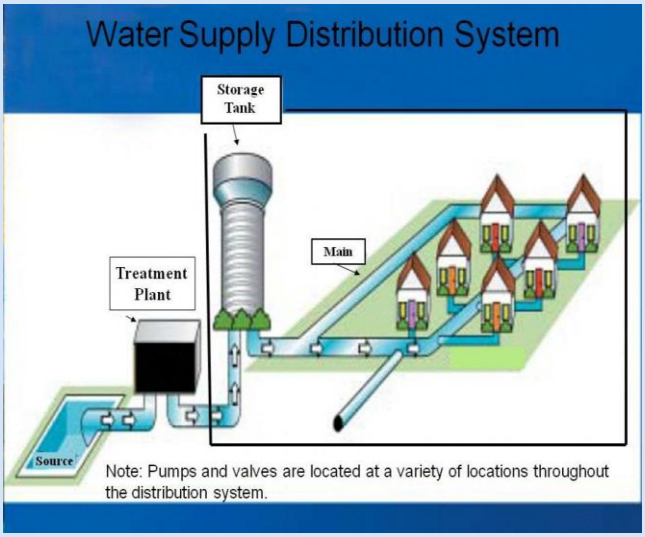
Annual Water Quality Report

Introduction:

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 2016, 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 Chris Lawrick at 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 and fourth Thursdays of each month at 7:00 P.M. at Horseheads Village Hall, 202 South Main Street, or you may call the Chemung County Health Department at 737-2019.

Facts and Figures:

Our water system serves 15,000 people through 3641 service connections. The total water produced in 2016 was 449 million gallons. The amount of water delivered to customers was 345 million gallons. This leaves an unaccounted for total of 104 million gallons. This water is used to flush mains, test hydrants, fight fires, municipal use, and loss to leakage. The daily average of water pumped into our system is 1.3 million gallons. Our highest single day was 1.6 million gallons. In 2016, water customers were charged an average annual fee of $210.00 in the Village of Horseheads and $300.00 outside the Village for 60,000 gallons of water



Where does are 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 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 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 and bones.

The NYS DOH has completed a source water assessment for this 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 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. Water suppliers and county and state health departments will use this information to direct future source water protection activities. These may include water quality monitoring, resource management, planning, and education programs.

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. Well #4 was not in service when the assessments were conducted, but is similar to our other wells. These ratings are due primarily to the close proximity of permitted discharge facilities (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government) to the wells, and low intensity residential activities in the assessment area. In addition, the wells draw from an unconfined aquifer that yields or pumps greater than 100 gpm and doesn't provide adequate protection from potential contamination. 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.

Susceptibility Ratings: Low (L), Medium(M), High(H), Very High (VH)				
Well	Microbials	Nitrates	VOCs	Others
Well #	VH	VH	H	VH

Are there contaminants in our drinking water?

As the 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 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. The state requires that any detected contaminants must be reported for a period of five years.

The Village of Horseheads conducts various tests of your drinking water throughout the year. This includes 180 samples (fifteen per month) in various locations throughout our system for coliform bacteria. We test residual chlorine levels along with fluoride amounts every day of the year additionally we do system wide turbidity tests every day. We test for a variety of possible contaminants at the wellheads, and in the distribution system. This level of testing assures the best possible product for your use. 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 737-2019.

List of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit	MCLG	Regulatory Limit (MCL , AL, MRDL, TT	Likely Source of Contamination
Barium	No	1 samples 2016	Result 0.16	mg/L	2	2 MCL	naturally occurs
Chloride	No	4 samples 2016	Average 56 Range 46-75	mg/L	N/A	250 MCL	naturally occurs; use of road salt
Chlorine Residual	No	Year round daily samples	Average .8 Range .25 to 1.5	mg/L	4.0 MDRLG	4.0 MRDL	disinfectant added to control microbial
Copper	No	7/2015 30 samples	90th %= .2 Range .008 - .4	mg/L	1.3	1.3 AL *note 1*	corrosion of household plumbing
Fluoride	No	Year round daily samples	Average 0.7 Range 0.1-0.88	mg/L	N/A	2.2 MCL	added by provider to prevent tooth
Lead	No	7/2015 30 samples	90th % = 3 Range ND-7.5	ug/L	0	15 AL *note 1*	corrosion of household plumbing

Nickel	**No**	**11/21/16**	**Result .0066**	**mg/l**	**NA**	**NA**	**Corrosion of plumbing or naturally occurs**
Nitrate	**No**	**4 samples 2016**	**Average .6 Range .31-.88**	**mg/L**	**10**	**10 MCL**	**runoff from fertilizer; leaching from**
Radium 228	**No**	**6/28/13 4 samples**	**Average .37 Range ND -.19**	**pCi/L**	**0**	**5 MCL *Note 2***	**Naturally occurs**
Sodium	**No**	**1 sample 2016**	**Result 21.1**	**mg/L**	**N/A**	**N/A *Note 3***	**Naturally occurs; Use of road salt**
Total Haloacetic Acids (HAAs) 4 sample sites	**No**	**Quarterly 8 samples total**	**highest annual average 8 sample range 2.3-5.8**	**ug/L**	**N/A**	**60 MCL Note 5**	**By-product of drinking water chlorination**
Total Trihalomethanes (THMs) 4 sample	**No**	**Quarterly 8 samples total**	**highest annual average 17.3 sample range 5.3-18**	**ug/L**	**N/A**	**80 MCL Note 5**	**By-product of drinking water chlorination**
Turbidity (Well 5 only)	**No**	**Daily sample**	**.05 highest monthly average**	**NTU**	**N/A**	**1.0 TT Note 4**	**soil runoff**

Special Testing: Every five years the EPA requires national testing for new contaminants to help decide if they should be regulated. The contaminants that were detected can be found in the table below. The samples were collected at various locations throughout the system in 2015. The full list of unregulated contaminants that were tested and the monitoring results are available by calling Chris Lawrick at the Village of Horseheads 739-5691.

Analyte	Level Detected	Units of Measure	Regulatory Limit MCL	Likely Source of Contamination
Strontium	**Range 0.1-0.16 Average 0.12**	**mg/l**	**N/A**	**Naturally Occurs**
Chromium-6 (hexavalent chromium)	**Range ND-0.12 Average 0.08**	**ug/L**	**N/A**	**Naturally Occurs**
Chlorate	**Range ND-0.11 Average 0.035**	**mg/l**	**N/A**	**Chlorination by-product**

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 the level given. No samples exceeded the Action Levels for lead or copper.

Note 2 – The MCL for Radium is the sum of individual measurements of two common isotopes, Radium226 and Radium 228.

Note 3 – 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 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. During 2016, 100 percent of our measurements were less than the required treatment technique of 1 NTU.

Note 5 – The MCL is based on the running annual average at each sample site.

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).

Million Fibers per liter (MFL): A measure of the presence of asbestos fibers that are longer than 10 micrometers.

Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb). *Non-Detects* (ND): Laboratory analysis indicates that the constituent is not present.

Not Applicable (N/A)

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

Compliance with other sanitary code requirements.

For 2016 the Village of Horseheads was in compliance with all state and federal sanitary codes.

What does this information mean?

As you can see by the table, our system had no violations. We have also learned through our testing that other 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)

Do I need to take special precautions.

Although our drinking water generally 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).

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:

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 on a daily basis to make sure that fluoride is maintained at a target level of 0.7 mg/l (parts per million). During 2016 monitoring showed fluoride levels in your water were within 0.1 mg/L of the target level 78% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride.

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 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.

System Improvements:

In 2016 we completed another comprehensive leak detection program for a portion of our system. Additionally, the Village continued to replace water meters with new units, and replace the Village's portion of water service lines in various locations in the system.

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 (739-5691). Copies of our test reports may be viewed at the Horseheads Library or the Horseheads Village Hall