

Annual Drinking Water Quality Report for 2023

Machias Water District

P.O. Box 87, 3483 Roszyk Hill Road, Machias, N.Y. 14101

Public Water Supply ID# NY0400344

INTRODUCTION

To comply with State and Federal regulations, the Town of Machias will be issuing a report annually 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 resources. 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 **Randy Jansen, Water Operator at (716) 560-7575**. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled meetings. They are held the **third Monday of each month at 7:00 P.M. in the Town Hall**.

WHERE DOES OUR WATER COME FROM?

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, 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, radiological 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 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 sources are two wells, #1 and #3, which are used on a daily basis. Both wells are located just off Route 16, in front of the nursing home. The only treatment provided is disinfection using sodium hypochlorite. Our system serves approximately 700 customers through 275 service connections.

In 2003, the NYS DOH completed a source water assessment for our water system, based on available information. Possible and actual threats to the drinking waters sources were evaluated. The 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 wells and springs. The susceptibility rating is an estimate of the potential contamination of the source water. It does not mean that the water delivered to consumers is, or will become contaminated. See section "ARE CONTAMINANTS IN MY 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.

As was mentioned before, our water is derived from two wells. The source water assessment was done for well #1. Well #3 is newer and was not evaluated. For the source evaluated, the combined susceptibility to contamination was rated as; very high from enteric bacteria, enteric viruses and nitrates; medium-high from herbicides/pesticides; and high from cations/anions (salts, sulfates), halogenated solvents, metals, other industrial organics, petroleum products and protozoa. These ratings for our sources are due to their proximity to local septic systems, agricultural activities, sand and gravel mines, underground storage tanks, transportation routes and permitted discharge facilities (industrial/ commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government). While the assessment rates our sources as being susceptible to enteric bacteria, 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. A copy of this assessment, including a map of the assessment area, can be obtained by contacting us, as noted above.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: coliform bacteria, inorganic compounds, volatile compounds, lead and copper, nitrate, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. In addition, we test for chlorine daily. The table presented below depicts the contaminants that were most recently 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.

It should be noted that all drinking water, including bottled 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 Cattaraugus County Health Department at (716) 701-3386. Information is also available from the EPA website: <https://www.epa.gov/dwreginfo/drinking-water-regulations>.

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Disinfectant							
Chlorine Residual	No	2023	Avg. = 1.22 (.06 – 2.2)	mg/l	N/A	MRDL = 4	Water additive used to control microbes.
Inorganic Contaminants							
Barium	No	9/11/23	Avg. = 122 (111 – 132)	ug/l	2,000	MCL = 2,000	Erosion of natural deposits.
Copper ¹	No	9/21/21	140 (9 - 170)	ug/l	1,300	AL = 1,300	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead ²	No	9/21/21	1.8 (ND – 2.7)	ug/l	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Nitrate	No	2023	Avg. = 7.16 (5.8 – 9.2)	mg/l	10	MCL = 10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Disinfection By-products							
Haloacetic Acids	No	8/29/23	12	ug/l	N/A	MCL = 60	By-product of drinking water disinfection needed to kill harmful organisms.
Total Trihalomethanes	No	8/29/23	32	ug/l	N/A	MCL = 80	By-product of drinking water chlorination needed to kill harmful organisms.
Volatile Organic Contaminants							
Trichloroethene	No	10/3/23	High = 1.1 (<0.5 – 1.1)	ug/l	N/A	MCL = 5	Discharge from metal degreasing sites and other factories.

- Notes**
- 1 - The level presented represents the 90th percentile of the 10 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 copper values detected at your water system. In this case, ten samples were collected at your water system and the 90th percentile value was the second highest value, 140 ug/l. The action level for copper was not exceeded at any of the sites tested.
 - 2 - The 90th percentile level for lead was 1.8 ug/l. None of the ten sites exceeded the action level of 15 ug/l.

Definitions:

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

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.

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

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

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

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no violations, but we have learned through years of testing that some contaminants have been detected. However, these contaminants were found at concentrations below New York State requirements. Although nitrate was detected below the MCL, the average of the samples collected in 2023 was 7.16 mg/l, which is greater than one-half of the MCL. Therefore, we are required to present the following information on nitrate in drinking water:

“Nitrate in drinking water at levels above 10 mg/l is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.”

Also, we are required to provide the following information on lead in drinking water. 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 Town of Machias is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and take steps to reduce your family’s risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact the Town at 716-353-8207. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

On February 16, 2022, the Cattaugus County Health Department (CCHD) conducted a sanitary survey of the Town water system. The significant violations noted are listed below.

Significant Deficiencies	
1	Severe corrosion in treatment plants, especially treatment plant for Well #3. Water mains and many other surfaces need paint to stop further corrosion.
2	Floor drain is inoperable in Well House #1. Water runs right out the front door or stays in continuous contact with structural walls and leaves the floor completely flooded inside. This situation creates a potential slip and electric shock hazard.
3	No floor drain is present in Well House #3. Water runs right out the front door or stays in continuous contact with structural walls and leaves the floor completely flooded inside. This situation creates a potential slip and electric shock hazard.
4	Well packer on Well #1 is leaking severely.
5	Several doors and door frames need complete replacement due to corrosion.
6	Numerous leaks in both treatment plants.

We are working with MDA Engineers to evaluate the deficiencies, and finalize an engineer’s report which will be submitted to the CCHD for review. The preferred option would be to secure funding and completely rehabilitate or replace the well houses which would address all of the significant deficiencies. If we are unable to secure the necessary funding to complete the preferred large capital improvement project, we will need to begin to use local funds or small loans to address the issues in order of their severity. MDA Engineers has submitted a Corrective Action Plan to the CCHD on behalf of the Town of Machias that outlines this plan, and is working with the CCHD to correct the issues.

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), or at <http://www.cdc.gov/parasites/water.html>.

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, and helps 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, 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.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this past year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. Please call our office if you have questions.