

Annual Drinking Water Quality Report for 2021

Town of Amsterdam

283 Manny Corners Road

Amsterdam, NY 12010

(Public Water Supply Identification Number NY2811730)

INTRODUCTION

To comply with State regulations, the Town of Amsterdam 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. We are very pleased to provide you with this year's Annual Water Quality Report. Last year, we conducted tests for over 80 contaminants. We detected 3 of those contaminants at a level higher than the State allows. As we told you at the time, our water temporarily exceeded a drinking water standard and we modified our treatment process to rectify this problem. This report is 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. Our constant goal is and always has been, to provide to you a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and to protect our water resources. If you have any questions concerning this report or concerning your drinking water please contact: *Mr. Carl J. Rust, Water Superintendent, Town of Amsterdam, 283 Manny Corners Road, Amsterdam, NY 12010; Telephone # (518) 842-7961.* We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the 3rd Wednesday of each month, 7:00 PM at the *Town Office Building, Telephone (518) 842-7961.*

WHERE DOES OUR WATER COME FROM?

The Town of Amsterdam purchases its water from the City of Amsterdam. The City of Amsterdam's water sources are the Steele Reservoir, Ireland Vly Reservoir and Round Lake Reservoir which are located in Saratoga County, New York. Each of the 3 Reservoirs has its own characteristics of water quality. This requires different chemical treatment at their Water Treatment Plant depending on which source is being used. Reservoirs are alternated mainly based on weather conditions or raw water quality. The treatment plant enhances the water quality by removing any solids, metals (primarily iron and manganese), color producing compounds or other organic and inorganic compounds. Chemical treatment consists of coagulation with a cationic polymer blended coagulant aid, an inorganic coagulant and flocculating agent, sodium hydroxide, and a cationic filter aid all prior to filtration. Post filtration consists of ultraviolet disinfection, pH adjustment, phosphoric acid for corrosion control and chlorine for disinfection. There are also five Carbon Contactors to aid in removing precursors that for THMs & HAA5s when chlorine is added for disinfection. The Town of Amsterdam also adds chlorine at the Pump Station interconnect with the City of Amsterdam to prevent bacterial contamination.

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 in some cases, radioactive 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 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.

FACTS AND FIGURES

The Town of Amsterdam provides water through 358 service connections to a population of approximately 3,500 people. Our average daily demand is 150,000 gallons. Our single highest day was 170,000 gallons. The total water pumped in 2021 was 55,831,343 gallons.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

In accordance with State regulations, the Town of Amsterdam routinely monitors your drinking water for numerous contaminants. We test your drinking water for inorganic contaminants, radiological contaminants, lead and copper, nitrate, volatile organic contaminants, haloacetic acids, trihalomethanes and synthetic organic contaminants. In addition, we test 1 sample for coliform bacteria each month. The table presented below depicts which contaminants 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 the data, though representative of the water quality, is more than one year old.

Unregulated Contaminant Monitoring 4 was conducted during 2018. This is a requirement of the 1996 Safe Drinking Water Act amendments. This monitoring provides a basis for future regulatory action to protect the public health. The number in parentheses refers to the number of measured for a total of 30 analytes. The breakdown of analytes is as follows: semi volatile organic chemicals (3), pesticides and pesticide manufacturing byproduct (9), metals (2), alcohols (3), cyanotoxin chemical contaminants (10), brominated haloacetic acid groups (3) and indicator compounds (2). We have listed those compounds that were detected in the table of Detected Contaminants for the Amsterdam Water Works. There are no associated MCL's for these compounds at this time with the exception of Manganese.

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 pose 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 New York State Department of Health, Herkimer District Office at (315) 866-6879.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had 3 violations. We exceeded the MCL for total coliform and *E. coli*. We exceeded the Action Level for Lead during our April and September Lead and Copper monitoring in 2018. Additionally, we exceeded the Maximum Contaminant Level for the Trihalomethanes in the 1st, 2nd, 3rd and 4th quarter at the Scott Beatty Insurance sampling site and are required to furnish the following information:

Total Coliform

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution.

E.coli

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

Lead

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that 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 you should flush your tap for 30 seconds to 2 minutes before using your tap water. Additional information regarding lead in drinking water is available from the Safe Drinking Water Hotline (1-800-426-4791).

Trihalomethanes

Some studies suggest that people who drink chlorinated water (which contains trihalomethanes) or water containing elevated levels of trihalomethanes for long periods of time may have an increased risk for certain health effects. For example, some studies of people who drank chlorinated drinking water for 20 to 30 years show that long term exposure to disinfection by-products (including trihalomethanes) is associated with an increased risk for certain types of cancer. A few studies of women who drank water containing trihalomethanes during pregnancy show an association between exposure to elevated levels of trihalomethanes and small increased risks for low birth weights, miscarriages and birth defects. However, in each of the studies, how long and how frequently people actually drank the water, as well as how much trihalomethanes the water contained is not known for certain. Therefore, we do not know for sure if the observed increases in risk for cancer and other health effects are due to trihalomethanes or some other factor. The individual trihalomethanes chloroform, bromodichloromethane and dibromochloromethane cause cancer in laboratory animals exposed to high levels over their lifetimes. Chloroform, bromodichloromethane and dibromochloromethane are also known to cause effects in laboratory animals after high levels of exposure, primarily on the liver, kidney, nervous system and on their ability to bear healthy offspring. Chemicals that cause adverse health effects in laboratory animals after high levels of exposure may pose a risk for adverse health effects in humans exposed to lower levels over long periods of time.

The Amsterdam Water Works is responsible for the treatment of the water we purchase. They are in the process of optimizing their corrosion control treatment to reduce the amount of lead leaching into the drinking water. They expect to implement the new treatment design in 2022.

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?

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 microbiological 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 Town of Amsterdam 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>.

ADDITIONAL INFORMATION ON LEAD

Lead is a common metal found in the environment. Drinking water is one possible source of lead exposure. The primary source of lead exposure for most children is lead-based paint. Other sources of lead exposure include lead-contaminated dust or soil and some plumbing materials. Lead is found in some toys, some playground equipment, some children's metal jewelry, and some traditional pottery. Although most lead exposure occurs when people eat paint chips and inhale dust or from contaminated soil, exposure to lead can come from lead in drinking water. Lead is rarely found in the source water but enters tap water through corrosion of plumbing materials. Homes built before 1988 are more likely to have lead pipes or lead solder. However, new homes are also at risk: even legally "lead-free" plumbing may contain up to 0.25% lead on a weighted average. The most common is with brass or chrome-plated brass faucets and fixtures which can leach lead into the water especially hot water. Exposure to lead is a significant health concern, especially for young children and infants whose growing bodies tend to absorb more lead than the average adult. If you are concerned about lead exposure, parents should ask their health care providers about testing children for high levels of lead in the blood.

1. Run your water to flush out lead. Run water for 15-30 seconds or until it becomes cold or reaches steady temperature before using it for drinking or cooking if it hasn't been used for several hours. This flushes water containing lead from the pipes.
2. Use cold water for cooking and preparing baby formula. Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.
3. Do not boil water to remove lead. Boiling water will not reduce lead.
4. Replace your plumbing fixtures if they are found to contain lead. Plumbing materials including brass faucets, fittings and valves, including brass faucets, fittings and valves, including those advertised as "lead-free" may contribute lead to drinking water. The law previously allowed end-use brass fixtures, such as faucets with up to 8 percent lead to be labeled as "lead-free." As of January 4, 2014, end-use brass fixtures, such as faucets, fittings and valves, must meet the new "lead-free" definition of having no more than 0.25 percent lead on a weighted average. Visit the National Sanitation Foundation website at: http://www.nsf.org/newsroom_pdf/Lead_free_certification_marks.pdf to learn about lead containing plumbing fixtures and how to identify lead-free certification marks on new fixtures.
5. Use bottled water or use a water filter. If your home is served by a lead service line, and/or if lead containing plumbing materials are found to be in your home, you may want to consider purchasing bottled water or a water filter. Read the package to be sure the filters approved to reduce lead of contact NSF International at 800-NSF-8010 or visit <http://www.nsf.org/consumer-resources/what-is-nsf-certification/faucets-plumbing-certification/lead-older-homes> for a consumer guide of approved water filters. Be sure to maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality. Any measure you can take to reduce your exposure to lead should be continued until the lead source has been minimized or eliminated.

Should you test your water for lead?

If lead-containing plumbing materials are identified in your home you may want to consider testing your water for lead to determine how much lead is in your drinking water for lead to determine how much lead is in your drinking water. Call us at 518-842-1539 to find out how to get your water tested for lead.

Should your child be tested for lead?

New York Public Health Law requires primary health care providers to screen each child for blood lead levels at one and two years of age as part of routine well child care. In addition at each routine well-child visit or at least annually if a child has not had routine well-child visit; primary health care providers assess each child who is at least six-months of age but under six years of age for high lead exposure. Each child found to be at risk for high lead exposure is screened or referred for lead screening.

If your child has not had routine well-child visits (since the age of one year) and you are concerned about lead exposure to your child, contact The Montgomery County Public Health Department at 518-853-3531 or your healthcare provider to find out how you can get your child tested for lead.

To find out if you have a lead service line in your home, you can find where the water line enters the building, generally through the basement wall. Lead service lines are generally soft and a dull grey color. You can identify them by carefully scratching them with a key. If the pipe is made of lead, the area you scratched will turn a bright silver color. Do not use a knife or other sharp instrument and be careful not to puncture a hole in the pipe. Note: galvanized pipe can also be dull grey in color. A strong magnet will typically cling to galvanized pipes, but will not cling to lead pipes. We will be happy to have someone confirm your service line type and give you more information on testing.

Along with this public education the City of Amsterdam is in the process of design upgrades related to the optimization of their corrosion control techniques in 2021. Implementation and completion are expected in 2022.

WATER CONSERVATION TIPS

The Town of Amsterdam encourages water conservation. There are a lot of things you can do to conserve water in your own home. Conservation tips include:

- ◆ Only run the dishwasher and clothes washer when there is a full load
- ◆ Use water saving showerheads
- ◆ Install faucet aerators in the kitchen and the bathroom to reduce the flow from 4 to 2.5 gallons per minute
- ◆ Water gardens and lawn for only a couple of hours after sunset
- ◆ Check faucets, pipes and toilets for leaks and repair all leaks promptly
- ◆ Take shorter showers

CAPITAL IMPROVEMENTS

- ◆ The Town installed a new mixer in the tank on 5/24/21

CLOSING

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit our customers. We ask that all our customers help us protect our water sources. Please call our office if you have questions.

TOWN OF AMSTERDAM TABLE OF DETECTED CONTAMINANTS
Public Water Supply Identification Number NY2811730

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Total Coliform ¹	Y	3 positive samples	N/A	0	2 or more positive samples	Naturally present in the environment.
<i>E. Coli</i> ²	Y	2 positive samples	N/A	0	Any Positive Sample	Human and animal fecal waste.
Turbidity ³ (Highest turbidity sample 1/9/21)	N	0.30 ¹	NTU	N/A	TT=1 NTU	Soil runoff
January 2021		99.4%			TT= 95% samples < 0.3 NTU	
Inorganic Contaminants (sample data from 2/5/21 unless otherwise noted)						
Barium	N	6.7	ppb	2000	2000	Erosion of natural deposits
Chloride	N	10.2	ppm	N/A	250	Naturally occurring or indicative of road salt contamination.
Copper (samples from April 2018) Range of copper concentration	N	0.095 ⁴ 0.01-0.21	ppm	1.3	AL=1.3	Corrosion of household plumbing systems. Erosion of natural deposits
Copper (samples from September 2018) Range of copper concentration		0.055 ⁴ 0.01-0.13				
Lead (samples from April 2018) Range of lead concentration	Y	16 ⁵ ND-660	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Lead (samples from September 2018) Range of lead concentration		21 ⁵ ND-140				
Manganese	N	8.9	ppb	N/A	300	Naturally occurring
Odor	N	1	unit	N/A	3	Natural sources
pH	N	7.40	units		6.5-8.5	
Sodium ⁶	N	4.39	ppm	N/A	N/A	Naturally occurring; Road salt; Water softeners; Animal waste
Sulfate	N	5.81	ppm	N/A	250	Naturally occurring
Zinc	N	5.3	ppb	N/A	5000	Naturally occurring
Stage 2 Disinfection Byproducts (quarterly samples from 2/5/21, 5/7/21, 8/6/21 & 11/5/21 collected at 2 sites)						
Chlorine [daily samples] Range	N	0.10-3.58	ppm	MRDLG	MRDL	Used in the disinfection and treatment of drinking water
				N/A	4	
Chlorine Dioxide	N	50-150	ppb	800	800	Water additive used to control microbes
Chlorite (quarterly samples from (2/10/21, 5/13/21, 8/12/21 & 11/10/21) for 3 sites range of samples	N	ND-14	ppb	N/A	1000	Byproduct of chlorine dioxide used in disinfection
Haloacetic Acids (HAA5) ⁷ Range of Values for HAA5 (DBPMAX)	N	30.1 2.1-79.1	ppb	N/A	60	By-product of drinking water disinfection
Haloacetic Acids (HAA5) ⁷ Range of Values for HAA5 (LRAA1)	N	41.4 30.2-53.2				
TTHM[Total Trihalomethanes](Average) ⁷ Range of values for Total Trihalomethanes (DBPMAX)	Y	101 91.7-113	ppb	N/A	80	By-product of drinking water chlorination
TTHM[Total Trihalomethanes](Average) ⁷ Range of values for Total Trihalomethanes (LRAA1)	N	77.1 48.3-97.1				
Total Organic Carbon (monthly samples for 2021)						
Total Organic Carbon Compliance Ratio	N	1.02-1.12	ppm	NA	TT	Organic material both natural and manmade; Organic pollutants, decaying vegetation.
Unregulated Contaminant Monitoring 4⁸ (Quarterly samples collected 1/10/18, 4/23/18, 7/25/18, & 10/22/18) (HAA's & TOC samples 2/14/18, 5/7/18, 8/8/18 & 11/14/18)						
Manganese(range of 4 quarters)	N	6.15-31.8	ppb	N/A	300	Erosion of natural deposits
HAA9 (range of 4 quarters)	N/A	13.1-53.98	ppb	N/A	N/A	By-product of drinking water disinfection
HAA6 (range of 4 quarters)	N/A	13.1-53.98	ppb	N/A	N/A	By-product of drinking water disinfection
Total Organic Carbon Raw Water	N/A	6.16-7.05	ppm	N/A	N/A	Organic material both natural and manmade;

NOTES-

1. Positive Total Coliform samples were detected on 10/7/21, 10/20/21 and on 10/21/21. Two or more positive coliform in 1 month is considered a violation.
2. A violation occurs when a total coliform positive sample is positive for E. Coli and a repeat total coliform sample is positive or when a total coliform positive sample is negative for E. Coli but a repeat total coliform sample is positive and the sample is also positive for E. Coli.
3. 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 range of levels 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. Our range of turbidity measurements was 0.02-0.30 NTU.
4. The level presented represents the 90th percentile of 60 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, 60 samples were collected at your water system and the 90th percentile value was the 54th sample with the sixth highest value (level detected 0.095 mg/l in April 2018 and 0.055 mg/l in September 2018). The action level for copper was not exceeded at any of the sites tested in April or September.
5. The level presented represents the 90th percentile of 60 test sites. The action level for lead was exceeded at any of the 60 sites tested. In April 2018 there were 7 sites and in September 2018 there were 9 sites which exceeded the Action Level of 15 ppb.
6. Water containing more than 21 mg/l should not be consumed by persons on severely restricted sodium diets.
7. The average is based on a Locational Running Annual Average. The averages shown represents the highest LRAA's of the 4 quarters at each site in 2021. The highest LRAAs at DBBMAX for the HAA5s was in the 4th quarter and the 3rd quarter for the THM. The highest LRAA at site LRAA1 for the HAA5s was in the 4th quarter and for the THMs in the 3rd quarter.
8. There are no regulatory limits for these compounds with the exception of manganese

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) (ng/l) corresponds to one part of liquid to one trillion parts of liquid

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

90th Percentile Value- The values reported for lead and copper represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent

Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

Maximum Contaminant Level - 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.

Maximum Contaminant Level Goal - 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.

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.

Locational Running Annual Average (LRAA): The LRAA is calculated by taking the average of the four most recent samples collected at each individual site

N/A-not applicable