

Annual Drinking Water Quality Report for 2021

ARKVILLE WATER DISTRICT
BOX 407 Arkville N.Y. 12406
Public Water Supply ID#1200249

INTRODUCTION

To comply with State and Federal regulations, **ARKVILLE WATER DISTRICT** 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 source. During the year 2021 we evaluated for several contaminants. Any detects are listed in the table below. We also did monthly coliform sampling and testing and the results proved to be negative or no detect. 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 Robert Payne, 845-663-7982. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled Town board meetings every second Tuesday of each month at the Town of Middletown Town Hall located at 42339 State Hwy 28, Margaretville, NY 12455 from 6:00pm until all business is completed.

Our water system serves approximately 300 people with 115 connections. Our water source is ground water from 2 wells at Pavilion Road and Frank Street. The water has chlorine and Carus added at source, and Ferric Chloride added before green sand filters to remove Arsenic, then Chlorine and Carus after for disinfection and sequestration. *While all required tests were taken, some results did not reach the Health Dept. in a timely manner, these include PFOA and PFOS samples.*

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 number 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.

Source Assessment Report

The NYS DOH has completed a source water assessment for our system, based on 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 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. While nitrates (and other inorganic contaminants) were detected in our water, 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 from natural sources. The presence of

contaminants does not necessarily indicate that the water poses a health risk. The nitrate level in our source is not considered high in comparison with other sources in this area. See section "Are there contaminants in our drinking water?" for a list of contaminants that have been detected.

As mentioned before, our water is derived from two drilled wells. The source water assessment has rated well #1 as having a medium susceptibility to microbials. This rating is due primarily to the close proximity of septic systems and low intensity residential activities within the assessment area. In addition, the well draws from a confined aquifer that likely provides adequate protection from potential contamination. While the source water assessment rates our well as being somewhat 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 us, as noted below.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely evaluate your drinking water for numerous contaminants. These contaminants include total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. The State allows us to evaluate 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, 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 New York State Health Department at (607) 432-3911.

Table of Detected Contaminants

Contaminant	Violation Y/N	Date of Sample	Level Detected	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Nitrate	N	11/10/21	0.69	mg/l	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
		11/10/21	0.02				
Chloride	N	9/26/19	28.3	Mg/l	N/A	250	Naturally occurring or indicative of road salt contamination
	N	12/18/14	46.9				
Barium	N	9/9/21	0.158	mg/l	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
			0.069				
Total Trihalomethanes (TTHMs- chloroform, bromodichloromethane, dibromochloromethane, and bromoform)	N	09/9/21	7.88	Ug/l	N/A	80	By product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains organic matter
Haloacetic Acids (mono-, di-, and	N	9/9/21	1.5	Ug/l	N/A	60	By-product of drinking water disinfection needed to kill harmful organisms.

trichloroacetic acid, and mono- and dibromoacetic acid)							
Nickel	N	9/9/21	0.0012	Mg/l	N/A	N/A	Naturally Occurring
Arsenic Treatment Plant	N	Quarterly 2021	1.5 Range .5-2.6	Ug/l	N/A	10	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Arsenic Well	N	Quarterly 2021	10.9 Range 9.2-13.1 (2) See footnote	Ug/l	N/A	10	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Manganese	N	3/30/17	11.4	Ug/l	N/A	300	Naturally occurring; Indicative of landfill contamination
Lead	N	8/24/21	1.4 (3) Range ND- 1.5	Ug/l	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits
		12/15/19	1 (3) Range,1-4.8				
Copper	N	8/24/21	0.406 Range: .003- .482	Mg/l	1.3	AL= 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
		12/15/19	.900 (4) Range: .005- .900				
Chloromethane (Methyl Chloride)	N	6/29/20	1	UG/l	N/A	5	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
		Quarterly 2021	0.58				
Xylene, Meta and Para	Y	11/10/21	3.6	Ug/l	N/A	5	Leaks from gasoline tanks, discharge from petroleum factory. Leaching of solvent from lining of potable water tanks
Xylene, Ortho	Y	11/10/21	1.1	Ug/l	N/A	5	Leaks from gasoline tanks, discharge from petroleum factories. Leaching of solvent from lining of potable water tanks
Ethylbenzene	Y	11/10/21	0.86	Ug/l	N/A	5	Discharge from petroleum refineries; Leaks from gasoline tanks

Dibromoethane (Methylene Bromide)	N	Quarterly 2021	1.06 Range .52-1.2	Ug/l	N/A	5	Dibromoethane finds limited use in chemical synthesis, as a solvent and a gage fluid. It may be released into the environment during these used as well as in its production and transport. Also used as a solvent for fats, waxes and resins and an ingredient of fire extinguisher fluids
Toluene (Methylbenzene)	N	8/26/21	17	Ug/l	N/A	5	Is an organic chemical compound, a clear, colorless, liquid with a distinctive, sweet odor
Bromomethane	N	9/30/20	1.6	Ug/l	N/A	5	Used to kill a variety of pests; used to make other chemicals or as a solvent to get oil out of nuts, seeds, and wool
Lead	N	06/15/19 12/15/19	1(3) Range <1-6.7 1(3) Range, 1-4.8	Ug/l	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits
Copper	N	6/15/19 12/15/19	.345(4) Range .003-.482 .900(4) Range .005-.900	Mg/l	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

NOTES:

- (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) The raw water from well #2 does contain a level of arsenic that exceeds the MCL. we have arsenic removal treatment for this well. we monitor the arsenic levels in the untreated well water to make sure our treatment system is adequately removing arsenic from the water.
- (3) The level presented represents the 90th percentile of the ten 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 10 samples were collected at your water system during each six month monitoring period and the 90th percentile values were the second highest values(1 ug/l in the set samples collected in June and 1 ug/l in the set of samples collected in December).
- (4) The level presented represents the 90th percentile of the ten 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 10 samples were collected at your water system during each six month monitoring. And the 90s percentile values were the second highest values (0.345 mg/l in the set samples collected in June and 0.900 mg/l in the set of samples collected in December).

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

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

Level 1 Assessment: A Level 1 assessment is an evaluation of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is an evaluation of the water system to identify potential problems and determine, if possible, why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

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

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).

Nanograms per liter (ng/l): Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion - ppt).

Picograms per liter (pg/l): Corresponds to one part per of liquid to one quadrillion parts of liquid (parts per quadrillion - ppq).

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

Millirems per year (mrem/yr): A measure of radiation absorbed by the body.

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

What does this information mean?

The table shows that our system uncovered some problems this year we found levels of meta and para xylene exceeding drinking water standards in our fourth quarter sample. the potential adverse health effects are some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system. we've begun investigating possible sources of xylene and have discontinued using well to routinely supply water to the system.

New York State and EPA have promulgated a drinking water arsenic standard of 10 parts per billion. while you're drinking water meets the standard for arsenic it does contain low levels of arsenic. the standard balances the current understanding of arsenics possible health effects against the cost removing arsenic from drinking water. EPA continues to research the health effect of low levels of arsenic which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

If present elevated levels of lead can cause serious health problems especially for pregnant women infants and young children 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 homes plumbing the Arkville water district 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 two minutes before using water for drinking or cooking if you are concerned about the lead in your water you may wish to have your water tested information on lead and drinking water testing methods and steps you can take to minimize exposure it's available from the safe drinking water hotline 1-800-426-4791 or at [HTTP://www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead)

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 microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

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, 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 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.*

♦

CLOSING:

Thank you for allowing us to continue to provide your family with quality drinking water this 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.