

Annual Drinking Water Quality Report for Calendar Year 2023
Ilion Water Department
49 Morgan Street
Ilion, NY 13357
(Public Water Supply ID# NY2102307)

INTRODUCTION

To comply with State regulations, the Ilion Water Department 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, we conducted tests for many 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 State standards. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard.

If you have any questions about this report or concerning your drinking water, please contact Steven Duga (Water Treatment Plant Supervisor) at (315) 868-5247. 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 or Municipal Utilities Board meetings. Dates for the regularly scheduled meetings are posted on the community bulletin board in the Utilities Office lobby at Village Municipal Building, 49 Morgan Street Ilion and on the internet at www.ilionny.com.

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, 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 the Environmental Protection Agency prescribe regulations which limit the amounts 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.

Your surface water is drawn from creeks and reservoirs and is purified 365 days a year, 24 hours each day, by Slow Sand Gravity Filtration before distribution. The water is chlorinated after filtration to ensure proper disinfection. Before the water enters the distribution system it is disinfected again by ultraviolet (UV) light. A blended phosphate compound is added to the water to help offset the effects of corrosion in the pipes. This compound has the added benefit of helping to control lead and copper levels.

We also have 2 ground water wells located on West Clark Street in the village that supplement our surface water sources. The water is chlorinated at the well site to ensure proper disinfection. A blended phosphate compound is also added to the water to help offset the effects of corrosion in the pipes and to help control the iron in the water.

The New York State Department of Health has evaluated this public water supply's (PWS) susceptibility to contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraph(s) below. It is important to stress these assessments were created using available information and only estimate the potential for source water contamination. Elevated susceptibility ratings do not mean that source water contamination has or will occur for this PWS. This PWS provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards.

Our water is collected from a number of upland sources. The assessment found an overall elevated susceptibility to contamination for the sources. The amount of agriculture land in the assessment area results in an elevated potential for contamination by microbials, phosphorus, disinfection byproducts (DBP) precursors, and pesticides. Although there were no permitted discharges found in the assessment area, there is susceptibility to contamination associated with other discrete contaminant sources including a mine (near one stream intake). It should be noted that hydrologic characteristics (e.g. basin shape and flushing rates) generally make reservoirs highly sensitive to existing and new sources of phosphorus and microbial contamination.

Please note that your surface water is filtered and 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 can be obtained by contacting us as noted.

FACTS AND FIGURES

Your water system serves 9,022 people through a total of 2,817 service connections. The total water produced in 2023 was 266 million gallons. The average daily flow was 727 thousand gallons per day with a high single day of 1.9 million gallons. The amount of water delivered to customers was 156 million metered gallons. Additionally, there were approximately 52 million gallons for various identified other usages. This leaves an unaccounted-for flow of 58 million gallons. This unaccounted-for flow has been and remains one of the highest priority problems the Water Department faces and may be due to old inaccurate master meters and a high number of water service and main breaks. In 2023, the average charge per residential household was about \$441.12 for the year. This figure is derived from an average family size of four people using 14,000 gallons of water per billing quarter.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include turbidity, inorganic and volatile organic compounds, nitrate, nitrite, lead and copper, trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. Additionally, your water is tested for total coliform bacteria 13 times a month. Tables 1 and 2 on the following pages 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. All information published herein, is on the internet at www.ilionny.com/annual-water-quality-report, displayed on the public bulletin boards at the Ilion Library and the Municipal Building Utilities Office lobby and available upon request at the Municipal Utility Office.

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 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 (1-800- 426-4791) or the NYS DOH Herkimer District Office at (315- 866-6879).

Table 1 – Detected Contaminants (Surface Water and Distribution)

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
SOC							
1-4 Dioxane	No	3/30/23	0.025	ug/l	1	1	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites.
Microbiological							
Turbidity (CFET)* (1)	No	Every 4 hrs.	0.106 Ave. (0.04 – .83)	NTU	N/A	TT = 99.9% of samples ≤ 1.0 NTU	Soil Runoff
Turbidity (Distribution) (1)	No	Daily	Avg. 0.65 (0.21– 0.98)	NTU	N/A	5.0 NTU	Soil Runoff
Inorganics							
Barium	No	5/15/23	37	ug/l	2000	2000	Erosion of Natural Deposits
Copper Clearwell	No	5/15/23	0.0071	mg/l	1.3	AL=1.3	Corrosion of Household Plumbing Systems
Copper (2)	No	7/2 – 7/24 2020	0.79 ⁽²⁾ 0.01 – 1	mg/l	1.3	AL=1.3	Corrosion of Household Plumbing Systems
Lead (3)	Yes	7/2 – 7/24 2020	36 ⁽³⁾ ND – 130	ug/l	0	AL=15	Corrosion of Household Plumbing Systems
Nickel	No	5/15/23	4	ug/l	N/A	N/A	Erosion of Natural Deposits
Sodium (5)	No	6/5/23	16	mg/l	N/A	See Health Effects	Naturally Occurring
Chloride	No	6/5/23	19	mg/l	N/A	250	Naturally Occurring
Sulfate (6)	No	6/5/23	300	mg/l	N/A	250	Naturally Occurring
Nitrate as N (combined)	No	5/15/23	0.88	mg/l	10	10	Runoff from Fertilizer
Color	No	6/5/23	10	Units	N/A	15	Large quantities of organic chemicals.
Zinc	No	6/5/23	0.034	mg/l	N/A	5	Naturally occurring; Mining waste.
Disinfection By-products							
Entry Point Chlorine Disinfection	No	Daily	Avg. 1.41 .3 – 4.75	mg/l	N/A	4.0	By-product of drinking water disinfection needed to kill harmful organisms
Location A High School Total Trihalomethanes (TTHM's) (4)	No	2/12-12/21 2023	24.7 6.3 – 36.8	ug/l	N/A	80	By-product of drinking water disinfection needed to kill harmful organisms
Location B Barringer Rd. Total Trihalomethanes (TTHM's) (4)	No	2/12-12/21 2023	34.8 6.0 – 35.2	ug/l	N/A	80	By-product of drinking water disinfection needed to kill harmful organisms
Location C Ebling Total Trihalomethanes (TTHM's) (4)	No	2/12-12/21 2023	42.0 7.9 – 38.9	ug/l	N/A	80	By-product of drinking water disinfection needed to kill harmful organisms
Location D Bowen Total Trihalomethanes (TTHM's) (4)	No	2/12-12/21 2023	18.9 1.96 – 18.4	ug/l	N/A	80	By-product of drinking water disinfection needed to kill harmful organisms
Location E Extra Mart Total Trihalomethanes (TTHM's) (4)	No	2/12-12/21 2023	27.1 4.73 - 24	ug/l	N/A	80	By-product of drinking water disinfection needed to kill harmful organisms
Location A High School Total Haloacetic Acids (HAA5) (4)	No	2/12-12/21 2023	7.43 0 – 9.3	ug/l	N/A	60	By-product of drinking water disinfection needed to kill harmful organisms
Location B Barringer Rd. Total Haloacetic Acids (HAA5) (4)	No	2/12-12/21 2023	9.1 0 – 9.3	ug/l	N/A	60	By-product of drinking water disinfection needed to kill harmful organisms
Location C Ebling Total Haloacetic Acids (HAA5) (4)	No	2/12-12/21 2023	13.3 1.1 – 9.7	ug/l	N/A	60	By-product of drinking water disinfection needed to kill harmful organisms
Location D Bowen Total Haloacetic Acids (HAA5) (4)	No	2/12-12/21 2023	5.70 0 – 2.8	ug/l	N/A	60	By-product of drinking water disinfection needed to kill harmful organisms
Location E Extra Mart Total Haloacetic Acids (HAA5) (4)	No	2/12-12/21 2023	9.3 0 – 4.2	ug/l	N/A	60	By-product of drinking water disinfection needed to kill harmful organisms

1 – *CFET (Composite Filter Effluent Turbidity). Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of our filtration system. Our highest single distribution system turbidity measurement (.99 NTU) for the year occurred on 7/01/2021. State regulations require that distribution turbidity must always be below 5 NTU. The regulations require that 95% of the filter effluent turbidity samples collected have measurements below 1 NTU. In 2021 100% of all samples collected were below 1.0 NTU.

2 - The level presented represents the 90th percentile of the 40 sites tested and the range of results. 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, 40 samples were collected at your water system and the 90th percentile value was the 5th highest sample. The action level for copper was not exceeded at any of the sites sampled.

3 - The level presented represents the 90th percentile of the 40 samples collected with results ranging from 0-130 ug/l. The action level for lead was exceeded at twelve (12) of the sites sampled.

4 - This level represents the highest locational running annual average calculated from data collected and range of data.

5 - 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 diets.

6 – The sulfate was not collected from the entry point. Therefore, this was not a compliance sample.

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.

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

Table 2 – Detected Contaminants (Wells)

Table of Detected Contaminants								
Contaminant		Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measure- ment	MCLG	Regulatory Limit MCL, TT or AL	Likely Source of Contamination
Inorganic								
Barium	Well 1	No	6/20/22	0.76	mg/l	2	MCL 2	Erosion of Natural Deposits
	Well 2	No	6/20/22	0.84	mg/l	2	MCL 2	
Chloride	Well 1	No	5/15/23	48	mg/l	N/A	MCL 250	Naturally Occurring
	Well 2	No	5/15/23	66	mg/l	N/A	MCL 250	
Copper	Well 1	No	5/15/23	0.0012	mg/l	1.3	AL = 1.3	Corrosion of Household Plumbing Systems
Copper	Well 2	No	5/15/23	0.0092	mg/l	1.3	AL = 1.3	
Fluoride	Well 1	No	6/20/22	0.20	mg/l	N/A	MCL 2.2	Erosion of Natural Deposits
	Well 2	No	6/20/22	0.17	mg/l	N/A	MCL 2.2	
Iron (1 & 3)	Well 1	No	5/15/23	420	ug/l	N/A	MCL 300	Naturally Occurring
	Well 2	No	5/15/23	560	ug/l	N/A	MCL 300	
Manganese	Well 1	No	5/15/23	16	ug/l	N/A	MCL 300	Naturally Occurring
	Well 2	No	5/15/23	30	ug/l	N/A	MCL 300	
Sodium (2)	Well 1	No	5/15/23	35	mg/l	N/A	See Health Effects	Naturally Occurring
	Well 2	No	5/15/23	33	mg/l	N/A	N/A	
Sulfate	Well 1	No	5/15/23	5	mg/l	N/A	MCL 250	Naturally Occurring
	Well 2	No	5/15/23	24	mg/l	N/A	MCL 250	
Calcium (4)	Well 1	No	5/15/23	34	mg/l	N/A	N/A	Large quantities of organic chemicals.
	Well 2	No	5/15/23	43	mg/l	N/A	N/A	
Color (4)	Well 1	No	5/15/23	10	Units	15	N/A	Large quantities of organic chemicals.
	Well 2	No	5/15/23	10	Units	15	N/A	
Oder	Well 1	No	5/15/23	1.4	T.O.N.	3	N/A	Naturally Occurring

1 – Higher levels may be allowed by the State when justified by the supplier of water.

2 – 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 diets.

3 – Iron is a common metal and a dietary mineral that is essential for maintaining human health. It is used in construction materials, in drinking water pipes, in paint pigments and plastics, and as a treatment for iron deficiency in humans. Iron can be elevated in drinking water in areas where there are high concentrations of iron in soil and rocks, and where iron salts are used in the water treatment process. Iron can also get into drinking water from corrosion of cast iron, steel, and galvanized iron pipes used for water distribution. Elevated levels of iron in water can result in a rusty color and sediment, a metallic taste, and reddish or orange staining.

Although iron is essential for good health, too much iron can cause adverse health effects. For example, oral exposure to very large amounts of iron can cause effects on the stomach and intestines (nausea, vomiting, diarrhea, constipation and stomach pain). These effects occur at iron exposure levels higher than those typically found in drinking water, and usually diminish once the elevated iron exposure is stopped. A small percentage of people have a condition called hemochromatosis, in which the body absorbs and stores too much iron. People with hemochromatosis may be at greater risk for health effects resulting from too much iron in the body (sometimes called “iron overload”) and should be aware of their overall iron intake. The New York State standard for iron in drinking water is 0.3 milligrams per liter and is based on the effects of iron on the taste, odor and appearance of the water.

WHAT DOES THIS INFORMATION MEAN?

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.

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 home's plumbing. The Ilion 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>.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2023, 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 microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

INFORMATION FOR NON-ENGLISH-SPEAKING RESIDENTS

Spanish

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

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 firefighting 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:

- ◆ 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.
- ◆ 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

The Village is continuing water system improvements including water main and valve replacements.

The Village Water Department Has completed rebuilding its #3 and #4 treatment plant filter beds which has allowed for better and more efficient water filtration.

The Village Water Department has completed over 90% of its meter replacement project to better monitor water usage and bill more accurately.

The Village continues to implement updates to its current corrosion control plan to aid in decreasing lead, copper, iron, and manganese levels in the water system.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. We have hired a new engineering firm to help us further improve our water system. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call us if you have questions at 315-868-5247.