

Annual Drinking Water Quality Report for 2024
Village of Warwick
77 Main Street
Warwick, N.Y. 10990
(Public Water Supply ID# 3503561)

INFORMACIÓN PARA RESIDENTS QUE NO HABLAN INGLÉS

Español

Este informe contiene información muy importante sobre el agua potable. Este informe se puede ver en español en el sitio web de el Pueblo de Warwick <http://www.villageofwarwick.org>

INTRODUCTION

To comply with State and Federal regulations, the Village of Warwick annually issues a report describing the quality of your drinking water. The purpose of this report is to raise your understanding and awareness of the need to protect our drinking water sources. 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. Included in the report are details about where your water comes from, what it contains, and how it compares to state and federal standards.

If you have any questions, concerns or suggestions regarding your drinking water or this report, please consult the Village website www.villageofwarwick.org. If you need further information contact Cathy Schweizer, Village DPW office at (845) 986-2031 ext. 110, between the hours of 8:30 am and 4:00 p.m. Monday through Friday. The Village wants you to be informed about your drinking water. If you want to learn more, please attend or view online any of the regularly scheduled Village Board meetings. These meetings are normally held on the first and third Monday of each month. The meetings can be viewed live or recorded and can be accessed by going to the Village of Warwick website <https://villageofwarwick.org>

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 EPA prescribe regulations, which limit the concentration of certain contaminants in water provided by public water systems. The New York State Department of Health (NYSDOH) and the FDA regulations establish limits for contaminants in bottled water, which are required to provide the same protection for public health.

Reservoir Filtration Plant (a.k.a. RWTP)

Our main surface water source is the Village of Warwick's three reservoirs located on Village owned property north of Black Rock Road in the Town of Warwick. The water from these reservoirs is gravity fed into the Reservoir Filtration Plant where it is treated with Sodium Permanganate for taste and odor control, treated with a Pac1 coagulant, then filtered to remove particulate matter; it is then chlorinated to destroy microorganisms prior to entering the distribution system. The plant injects Orthophosphate into the treated water to sequester iron and manganese, which can cause discoloration of the water without this treatment.

Well #1

Well #1 is in Memorial Park and is a small supply source that has not been in service for many years primarily because it is hydraulically connected to Well #2.

Well #2 / Microfiltration Plant (a.k.a. MWTP)

Well #2 is a substantial supply, which supplies the new Microfiltration Plant. Both are in Memorial Park. This plant is a membrane filter system with a rated capacity to treat 1,000,000 gallons per day. This facility went into service in April 2012. The plant has been producing water of outstanding quality from a source that previously had no filtration and was determined to be Groundwater Under Direct Influence (GWUDI) of surface water. Chlorine for disinfection and Orthophosphate for sequestering are the only chemicals added to the water at this plant.

Well # 3

Well #3 is a backup source and is located north of Route 17A at the east end of the Village. Well #3 has been offline since May 2nd, 2012 shortly after the Microfiltration Plant came online on April 30th, 2012. In the past when Well #3 was used, the water was disinfected with chlorine to destroy microorganisms prior to entering the distribution system. The water from Well #3 has been determined to be Groundwater Under Direct Influence (GWUDI) of surface water, which requires treatment by filtration. Because of this determination, this supply, currently without filtration, would only be used in a very limited fashion, generally during emergency situations. Were the well to be used without filtration the Village would issue a Boil Water Order for its customers. The Village completed an engineering evaluation for a treatment system that will provide the ability to use the well as a safe water resource meeting State and Federal requirements. The final design and contract documents were completed and approved by the Orange County Health Department. The Village received bids and entered into contracts to construct the project. The project schedule calls for the construction to be completed and the plant brought online in August 2025. The Village has received a \$959,752 grant from Congressman Pat Ryan which will pay for a portion of the cost of the project.

SOURCE WATER ASSESSMENT PROGRAM SUMMARY

The NYS DOH has evaluated this Public Drinking Water Sources (PWS)'s susceptibility to contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraph below. It is important to stress that 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 the PWS. This PWS provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards.

The assessment area for this drinking water source contains no discrete Potential Contaminant Sources (PCS)'s, and the amount of pastureland in the watershed results in this reservoir system having a high susceptibility to protozoa. However, the high mobility of microbial contaminants in reservoirs results in this drinking water intake also having medium-high susceptibility ratings for enteric bacteria and viruses. Furthermore, reservoirs are highly susceptible to water quality problems caused by phosphorus additions. A copy of this assessment, including a map of assessment area, can be obtained by contacting the Village of Warwick.

DRINKING WATER SOURCE PROTECTION PROGRAM (DWSP2)

The Village is participating in the state-run Drinking Water Source Protection Program (DWSP2). The voluntary Program is directed at municipalities with proactively protecting the drinking water sources. The Village entered the program in 2024 and was assigned a technical assistance provider who will lead the Village in preparing drinking water source protection plans. A stakeholder group has been formed and work has begun on developing the plan. The process is expected to take about two years with completion in 2026.

FACTS AND FIGURES

Our water system serves approximately 6,767 people and numerous businesses through 2605 service connections. The highest single day production was 848,000 gallons, which occurred June 14, 2024. Village Usage includes public buildings, water main breaks, hydrant flushing, storage tank overflows, cemetery usage, park usage, wastewater treatment plant usage, firefighting and training, and Fire Department tanker filling. Unaccounted for water was 19.72% of the total amount of water produced. The unaccounted water can be attributed to undetected/unrepaired leaks, losses through under registering and failed meters and estimating accuracy.

Water Use Figures	2024	2023	2022	2021
Produced Annual (gallons)	216,184,000	214,873,000	235,841,000	234,194,000
Produced- Average Daily (gallons/day)	592,285	588,693	646,140	641,627
Produced Highest Single Day (gallons)	848,000	1,127,000	991,000	1,156,000
Metered Delivered Annual (gallons)	163,709,000	158,086,000	165,873,000	169,214,000
Village Usage- Metered and Unmetered (gallons)	9,850,500	15,872,850	8,759,500	19,814,000
Total Accountable Water (gallons)	173,559,500	173,958,850	174,632,500	189,028,000
Accountable Water Average Daily (gallons/day)	475,505	476,600	478,445	517,885
Unaccounted for Usage Annual	42,624,500	37,705,150	61,208,500	45,166,000
Percent Unaccounted Water (%)	19.72	17.55	25.95	19.29

Village of Warwick Water Rates FY 2024-25	Residential/ Commercial Customer In-Village	Industrial Customer In-Village	Residential/ Commercial Customer Outside Village	Industrial Customer Outside Village
Minimum Service Charge per Quarter	\$12.25	\$12.25	\$15.00	\$15.00
1000-25,000 gallons (per 1000 gallons)	\$6.71	\$10.91	\$16.26	\$20.80
26,000-75,000 gallons (per 1000 gallons)	\$8.41	\$10.91	\$18.03	\$20.80
Over 76,000 gallons (per 1000 gallons)	\$11.56	\$10.91	\$20.80	\$20.80

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, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. The table presented below depicts the results of that testing. 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, is more than one year old. It should be noted that all drinking water, including bottled drinking water, might be reasonably expected to contain 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 Orange County Health Department at (845-291-2331).

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit Measure- ment	MCL G	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Sulfate	No	1/10/2024	15.7	mg/l	250	MCL = 250	Naturally occurring
Zinc	No	1/10/2024	25.8	ug/l	N/A	MCL = 5000	Naturally occurring
Nitrate	No	5/01/2024	Max=2.54 Range= 0.065 to 2.54	mg/l	10	MCL = 10	Runoff from fertilizer use.
Five Haloacetic Acids** (HAA5)	No	Quarterly	Max=52.4 Range= 5.6 to 52.4	ug/l	N/A	MCL = 60	By-product of drinking water disinfection needed to kill harmful organisms.
Total Trihalo- methanes** (TTHMs)	No	Quarterly	Max=49 Range= 5.9 to 49.0	ug/l	N/A	MCL = 80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Copper (see note 1)	No	6/08/2023	90 th =0.229 Range = 0.029 - 0.280	mg/l	1.3	AL=1.3	Corrosion of household plumbing
Lead (see note 2)	No	6/08/2023	90 th = ND Range =ND - 1.62	ug/l	0	AL=15	Corrosion of household plumbing
Manganese	No	2/28/2024	53.2	ug/l	N/A	MCL = 300	Naturally occurring
Sodium	No	1/10/2024	110	mg/l	N/A	See Note 5	Road Salt
Chloride	No	1/10/2024	186	mg/l	N/A	MCL=250	Road Salt

Turbidity MWTP ³	No	7/17/2024	0.051	NTU	N/A	TT=< 1	Soil Runoff
Turbidity MWTP ³	No	Monthly	100%	NTU	N/A	TT=95% of samples ≤ 0.3 NTU	Soil Runoff
Turbidity RWTP ³	No	10/18/2024	0.1	NTU	N/A	TT=< 1	Soil Runoff
Turbidity RWTP ³	No	Monthly	100%	NTU	N/A	TT=95% of samples ≤ 0.3 NTU	Soil Runoff
Total Coliform Bacteria	No	8 per month	100% Absent	N/A	0	MCL= 2 positive samples/month	Naturally present in the environment
Distribution System Turbidity ⁴	No	5/19/2024	3.44	NTU	N/A	MCL > 5 NTU	Soil runoff

** The values shown in the table represent the highest locational running annual average calculated from data collected for Stage 2 compliance monitoring; however, the range of values includes Stage 2 and any Health Department surveillance samples.

1. The copper level presented represents the 90th percentile of the 21 customer locations 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, 21 samples were collected at your water system and the 90th percentile value was the nineteenth highest value, 0.229 mg/l with a range of 0.029 - 0.280 mg/l. The action level for copper was not exceeded at any of the sites tested.
2. The lead level presented represents the 90th percentile of the 21 customer samples collected. 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 because of materials used in customers plumbing components. The Village of Warwick is responsible for providing high quality drinking water but cannot control the variety of materials used in a customer's 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>.
3. MWTP and RWTP 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 systems. The highest single turbidity measurement (0.1 NTU) for the year occurred on 10/18/2024. State regulations require that turbidity leaving the filter plants must always be at or below 1 NTU. The regulations also require that at least 95% of the turbidity samples which are collected every four hours have measurements at or below 0.3 NTU. The Village satisfied this requirement for turbidity at each filter plant each month of 2024 as 100% of the 4-hour samples were below 0.3 NTU.
4. Distribution Turbidity is a measure of the cloudiness of the water found in the distribution system. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants. Our highest average monthly distribution turbidity measurement detected during the year (3.44 NTU) occurred May 2024. This value is below the State's Maximum Contaminant Level (5 NTU).
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 sodium diets.

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.

Method Reporting Limit (MRL): The minimum concentration of a contaminant that can be reported with a specified degree of confidence

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).

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

MWTP: Well #2 / Microfiltration Plant.

RWTP: Reservoir Filtration Plant.

WHAT DOES THIS INFORMATION MEAN?

As noted on the table, the Village of Warwick water system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

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). Please note that after May 2, 2012 all water delivered to customers was treated to remove these microorganisms.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During 2024, our water met all drinking water standards established by the U.S.E.P.A. and the N.Y.S.D.O.H.

LEAD IN DRINKING WATER

Lead in drinking water is due to leaching from lead service lines and lead solder joints in service lines and interior building piping. The Village does not believe that it has any lead water lines and in replacing service lines between the main and the curb stop has no history of finding lead lines. The customer is responsible for the line from the curb stop to the structure and all internal piping. If lead is a concern, you should check the materials in your system. The Village of Warwick is responsible for providing high quality drinking water but cannot control the variety of materials used in a customer's plumbing components. When water has been sitting in the pipes for several hours, the potential for lead exposure can be minimized by flushing the tap for 30 seconds to 2 minutes before using water for drinking or cooking.

The Village is undertaking a mandated Lead Service Line Inventory of the entire system to determine where there are lead and galvanized service lines. The Village submitted the initial inventory to NYS Health Department on October 4, 2024 and provided letter notification to customers as required. Confirmatory potholing and ElectroScan was commenced and will continue in 2025 to more accurately determine the material in each customer's service line.

A summary of the Lead Service Line Inventory is available online at the following New York State Health Department address: https://www.health.ny.gov/environmental/water/drinking/service_line/NY3503561.htm

The full, searchable Lead Service Line Inventory can be found on the Village's website at the following address: <https://villageofwarwickny.gov/village-of-warwick-lead-service-line-inventory/>

The Village of Warwick also injects Orthophosphate into the treated water prior to it entering the distribution system. Orthophosphate works as a sequestering agent which provides a coating on the inside of the pipes creating a shield that prevents corrosion and minimizes leaching of lead and other metals. Scientific American has a brief explanation about how this chemical works: <http://www.scientificamerican.com/video/corrosive-chemistry-how-lead-ended-up-in-flint-s-drinking-water1/>

Further the Village of Warwick tests for lead at 21 locations in the system. Samples are taken from tap water inside customer locations and are taken as a first draw after the water has remained in the internal piping for 6 hours. In addition, in 2024 the Village will be conducting a Lead Service Line Inventory to determine where in the system there are lead components. This will include service lines between the curb stop and the building. 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>.

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although the Village's 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 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.
- ◆ Water Softener- Check the softener for leaks from the bottom that may be entering a drain below the unit.
- ◆ 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 of Warwick during 2024 made a substantial investment into its water system through multiple improvements and upgrades.

Microfiltration Plant

- Replaced roof on Well #1 building
- Replaced air manifold and relays for actuated valves on Skid B
- Changed 3 valve actuators

Reservoir Filtration Plant

- Removed underground fuel storage tank
- Refabricated filter waste gates.
- Generator replacement installed. Awaiting connection.
- Installed security cameras
- Changed 4 valve actuators
- Added Security Camera System
- Improved Drainage System

Well #3 Filtration Plant

Engineering firm prepared the final design and contract documents for the treatment facility for Well #3. The design has been approved by the Orange County Health Department. Project was bid and contracts executed. Project completion expected August 2025 and brought online in August 2025. The Village has received a \$959,752 grant from Congressman Pat Ryan which will pay for a portion of the cost of the project.

Water Sources- Reservoirs and Wells

The Village Water Department monitors and reports water levels on a biweekly basis. Raw water in the reservoir and well sources saw diminished capacity during the year to a point where water advisory alerts were issued requesting customers to voluntarily reduce water use. The reservoirs returned to full capacity just before the end of the calendar year.

Listed below are the accomplishments made during the year to the reservoir system.

- Annual dam inspection conducted by Tectonic, Village's dam engineer. Semiannual dam inspection by NYSDEC was performed in November 2023.
- Conducted annual watershed property inspection.
- Village applied for a WQIP Dam Rehabilitation grant requesting a \$3.125 grant on a total project cost of \$4.026.

- A remote-controlled slope mower was used to mow the dam embankments six times during the year.

The Village received a Water Quality Improvement Project program grant from New York State that will provide funding for the Village to acquire land in the Reservoir watershed so that the Village has greater control over activities and uses that could be detrimental to the water quality. The grant requires a 25% match by the Village and the total received from the State is limited to \$288,150. The Village will begin negotiations with property owners and conduct appraisals and surveys in 2024 with the expectation that transfer of the properties or securing easements will occur in 2025.

Pump Stations and Storage Tanks

Improvements were made to the following:

- Reservoir Storage Tank Replacement design was completed. Village is pursuing grant funding for the construction of the tanks.
- Maple Ave Pump Station- Completed design to relocate the Maple Ave PS to Grand St. Design submitted to and approved by Orange County Health Department Bids received and contracts awarded. Received a \$250,000 grant through State Senator Skoufis. Project is being done ahead of a NYSDOT project to reconfigure the intersection of Maple Ave and Colonial Ave.
- Replaced booster pump at Maple Ave PS.
- Replaced booster pump at Galloway PS.
- Ridgefield PS- rebuilt one pump.
- Repaired multiple leaks on Hilltop and Highland Ave Tanks

Distribution

The Village Water Department is responsible for maintaining approximately 45 miles of water main, with portions originally installed during the early 1900's. Given the length of pipe in the system and its age it is understandable breaks occur from time to time.

Below is a listing of the Distribution projects performed during 2024.

- Completed initial step of Lead Service Line inventory of the Village's distribution system to determine where there are lead and galvanized service lines. Submitted the inventory to NYS Health Department on October 4, 2024. Confirmatory potholing and ElectroScan was commenced and will continue in 2025
- Performed system-wide flushing in April and July. Unable to perform October flushing due to low water levels in reservoirs.
- Leak Detection- One mile of pipe using Zcorr Digital Correlating Loggers and the LD-18 Digital Leak Detector
- Altitude valves and Pressure Reducing Valves (PRV) pressures were inspected for proper operation.
- Installed 5 new hydrant to replace existing.
- Repaired 14 hydrants that had failed.
- Repaired one water main break.
- Installed 4 new services.
- Repaired 10 service lines.
- Residential water meters- updated 158 to Sensus iPERL and Omni meters and 167 MXU's
- Valves- checked 32; installed one new 6" valve to replace existing
- Curb stops- located and mapped approx. 584 and raised 62
- Hydrant isolation valves- located and mapped 117
- Altitude valves and PRV's were inspected for proper operation and adjusted as required.
- Installed 20 Storz adapters on hydrants. The Storz Adapters Installation Program has been completed for all hydrants.
- Serviced the 3" and 8" Valves in the Sheffield and Kenilworth Lane PRV Vaults
- Backflow Prevention- Developed notification system and notified customers with devices who have not provided current test results.

General

- Maintained and updated the GIS-based system for inventory, management, and maintenance of water infrastructure.
- Emergency Response Plan and Vulnerability Assessment updated and submitted to Orange County Health Department.

CLOSING

Thank you for allowing us to continue to provide you with quality drinking water. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office at the Village Hall (845) 986-2031 ext. 110 if you have any questions, concerns, or suggestions.