

Annual Drinking Water Quality Report for 2021
Town of Warwick – Pine Island Water District
Warwick, NY
Public Water Supply ID# 3503590

INTRODUCTION

To comply with State regulations, Pine Island 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 sources. 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 the Water Department, at (845) 986-0630. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled board meetings. The meetings are held at 7:30 PM, at the town hall at 132 Kings Highway. Please call (845) 986-1124 ext. 247 for meeting dates.

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 amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water system serves approximately 140 people through approximately 25 service connections. Our water source is two groundwater wells, located off of Kay Road. The water is chlorinated prior to distribution.

The NYS DOH has completed a source water assessment based on available information. Possible and actual threats to this drinking water source 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 water, it does not mean that the water delivered to consumers is, or will become contaminated. See "Table of Detected Contaminants" for a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

As mentioned before, our water is derived from two drilled wells. The source water assessment has rated these wells as having a medium-high susceptibility to microbials, nitrates, herbicides, and pesticides other industrial contaminants. These ratings are due primarily to the close proximity of the low-level residential activity and the row crops that are located in the assessment area. In addition, the wells draw from an unconfined aquifer of unknown hydraulic conductivity and the overlying soils may not provide adequate protection from potential contamination. While the source water assessment rates our well as being 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 can be attained by contacting us.

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, inorganic compounds, nitrate, lead and copper, asbestos, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds the table presented below 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. Some of our data, though representative, are more than one year old.

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 (800-426-4791) or the Health Department at Orange County Health Department at (845) 291-2331.

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected Max (Range)	Unit Measure -ment	MCL G	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Barium	No	3/18/20	0.116 (.0482-0.116)	mg/l	2	MCL=2	Erosion of natural deposits
Arsenic	No	3/18/20	1.6 (1-1.6)	ug/L	N/A	MCL = 10	Erosion of Natural Deposits
Chloride	Yes	2/3/21 4/7/21 7/7/21 10/20/21	205 210 300 252	mg/l	N/A	MCL=250	Naturally occurring
Copper	No	8/4/21	0.210 ¹ (0.0342 - 0.220)	mg/l	1.3	AL=1.3	Corrosion of household plumbing systems
Iron	Yes	3/17/21 4/7/21 9/1/21 11/3/21	514 449 136 200	mg/l	0.3	MCL = 300	Naturally occurring.
Lead	No	8/4/21	10.37 ² (<1 - 17.5)	ug/l	0	AL=15	Corrosion of household plumbing systems
Manganese	No	3/17/21 4/7/21 9/1/21 11/3/21	305 285 63 188	ug/l	N/A	MCL = 300	Naturally occurring
Nickel	No	3/18/20	1.7 (0.8-1.7)	ug/l	100	MCL = 100	Erosion of natural deposits
Zinc	No	5/11/20	0.0127	mg/l	N/A	5	Naturally occurring; Mining waste.
Sulfate	No	5/11/20	16.6	mg/l	N/A	250	Naturally occurring.
Sodium	No	6/2/21	116	mg/l	N/a	* See health effects below	Naturally occurring
Nitrate	No	4/21/21	1.16	mg/l	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Total Trihalo-methanes (TTHM)	No	8/5/20	18.0	ug/l	N/A	MCL=80	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	No	8/5/20	9.3	ug/l	N/A	MCL=60	By-product of drinking water chlorination

Synthetic Organic Contaminants including Pesticides and Herbicides

Perfluorooctanoic Acid (PFOA)	No	2/15/21 6-9-21 8-25-21 12-22	4.72 3.10 4.55 3.75	ng/l	n/a	10	Released into the environment from widespread use is
Perfluorobutanoic Acid (PFOS)	No	2/15/21 6-9-21 8-25-21 12-22 21	5.17 4.23 4.74 4.66	ng/l	n/a	10	Released into the environment from widespread use is commercial and industrial applications

Synthetic Organic Contaminants including Pesticides and Herbicides

Perfluorobutanoic Acid (PFBA)	No	6-9-21	5.82 (5.46-5.49)	ng/l	n/a	n/a	Released into the environment from widespread use is commercial and industrial applications
Perfluoropentanoic Acid (PFPeA)	No	8-25-21	8.16 (6.16-8.16)	ng/l	n/a	n/a	Released into the environment from widespread use is commercial and industrial applications
Perfluorobutanesulfonic Acid (PFBS)	No	6-9-21	5.97 (4.52-5.97)	ng/l	n/a	n/a	Released into the environment from widespread use is commercial and industrial applications
Perfluorohexanesulfuronic Acid (PFHxS)	No	8-25-21	1.22 (0.831-1.22)	ng/l	n/a	n/a	Released into the environment from widespread use is commercial and industrial applications
Perfluoroheptanoic Acid (PFHpA)	No	8-25-21 12-22-21	1.65 (1.13-1.65)	ng/l	n/a	N/A	Released into the environment from widespread use is commercial and industrial applications
Perfluorohexanoic Acid (PFHxA)	No	8-25-21	6.98 (4.55-6.98)	ng/l	n/a	n/a	Released into the environment from widespread use is commercial and industrial applications

Notes:

1 – The level presented represents the 90th percentile of the 5 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, 5 samples were collected at your water system and the 90th percentile value was the average of the 2 highest values. The action level for copper was not exceeded at any of the sites tested.

2 – The level presented represents the 90th percentile of the 5 samples collected. The action level for lead was not exceeded at any of the sites tested.

* Water containing more than 20 mg/l of sodium should not be used for drinking water by people on severely restricted sodium diets. Water containing more than 270 mg/l should not be used for drinking water 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

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.

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

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).

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

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

WHAT DOES THIS INFORMATION MEAN?

The table shows that our system uncovered some problems this year. We exceeded the chloride MCL during the third and fourth quarter of 2021. There are no potential adverse health effects associated with chlorides. The MCL for chloride is the level above which the taste of the water may become objectionable. In addition to the adverse taste effects, high chloride concentration levels in the water contribute to the deterioration of domestic plumbing and water heaters. Elevated chloride concentrations may also be associated with the presence of sodium in drinking water. Our system also exceeded the MCL for Iron during the 1st, and 2nd quarters of 2021, see health effects language below.

Chloride is essential for maintaining good health. Research has not conclusively demonstrated that human exposure to chloride itself causes adverse health effects, although exposure to high levels of certain chloride salts has been associated with adverse health effects in humans. For example, high dietary intake of sodium chloride can be a contributing factor to high blood pressure, but this has been attributed mainly to the presence of sodium. The New York State standard for chloride is 250 milligrams per liter, and is based on chloride's effects on the taste and odor of the water.

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.

Manganese is a common element in rocks, soil, water, plants, and animals. Manganese occurs naturally in water after dissolving from rocks and soil. Contamination of drinking water may occur if manganese gets into surface or groundwater after dissolving from rocks and soil. It may also occur if manganese gets into

surface or groundwater after improper waste disposal in landfills or by facilities using manganese in the production of steel or other products. Manganese is an essential nutrient that is necessary to maintain good health. However, exposure to too much manganese can cause adverse health effects. There is some evidence from human studies that long-term exposure to manganese in drinking water is associated with nervous system effects in adults (e.g., weakness, stiff muscles and trembling of the hands) and children (learning and behavior). The results of these studies only suggest an effect because the possible influences of other factors were not adequately assessed. There is supporting evidence that manganese causes nervous system effects in humans from occupational studies of workers exposed to high levels of manganese in air, but the relevance of these studies to long term drinking water exposure is less clear because the exposures were quite elevated and by inhalation, not by ingestion.

We are required to present the following information on lead in drinking water: 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. We are 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 2021, our system was in compliance with all other applicable State drinking water operating, monitoring and reporting requirements.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

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 and you can save almost 6,000 gallons per year.
- ◆ Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this 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. Please call our office if you have questions.