

Annual Drinking Water Quality Report for 2018
Village of Elmsford Water Department
15 S. Stone Avenue
Public Water Supply ID# 5903427

INTRODUCTION

To Comply with State regulations, the Village of Elmsford Water Department prepares an annual 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, 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. 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 Tony Capicotto, Village Engineer at 914-592-6555. 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 meetings. The meetings are typically held on Monday Evenings at 7:30 PM and are announced in the newspaper, the Village Cable TV Station the Village Web Page and posted at Village Hall.

INFORMATION FOR NON-ENGLISH SPEAKING RESIDENTS

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

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.

The Village purchases its water from the City of New York, Department of Environmental Protection (NYCDEP), Bureau of Water Supply. Partially treated water is supplied through a connection to the Catskill Aqueduct. The water originates in a protected watershed area 100 miles northwest of Elmsford in the Catskill Mountains where New York City has constructed 6 large reservoirs that together have the capacity of 473.4 billion gallons of water. This entire system consists of 17 reservoirs in three watershed areas (Delaware, Catskill, Croton), which allows maximum flexibility in delivering the highest quality of water possible. The entire New York City reservoir system has the ability to deliver a maximum of 1.45 billion gallons per day. The Catskill & Delaware waters normally mix in the Kensico Reservoir located in the town of Mount Pleasant. This "blending" of the water upstream of our point of withdrawal enhances the overall water quality. Kensico Reservoir also acts as a large settling basin due to the twenty to thirty-day retention time it takes water to travel through the reservoir. During this time, any natural organic materials measured as "turbidity" that seasonally

occurs from spring run-off and heavy rains upstate, settle out in the large reservoir thereby clarifying the water. Between the Kensico Reservoir and the Village of Elmsford, the water passes through the NYCDEP's Ultraviolet (UV) Disinfection facility which helps kill viruses, and pathogens in the water. The Catskill/Delaware raw water quality, south of the Kensico Reservoir, is of such high quality that the Federal Environmental Protection Agency and the New York State Health Department have given a filtration waiver to communities relying on this water. When the water reaches Elmsford, additional chlorine is added for disinfection, it is treated with Zinc Orthophosphate and Caustic Soda for corrosion control and then pumped into the water system and into a 750,000-gallon storage tank. During 2018, our system did not experience any restriction of our water source.

The Village also maintains emergency connections to the Town of Greenburgh Water System. Greenburgh purchases water from the City of New York, through a separate aqueduct. The connection is utilized during periods when the Catskill Aqueduct is shut down for maintenance by the City of New York.

FACTS AND FIGURES

Our water system serves approximately 4,664 people (based on 2010 census figures) through 1209 service connections. The total water produced in 2018 was 202.9 million gallons.

The total water treated and delivered to customers through the distribution system was 150.1 million gallons, (daily average of 411,000 gallons). When subtracted from the amount of water produced, this leaves an un-metered total of 34.8 million gallons or 26% of the total amount produced. This amount can be attributed to water used to flush mains to improve water quality, test fire hydrants, fight fires and losses due to leaks. In 2018, water customers were charged \$8.95 per 1,000 gallons of water; commercial users were charged a stepped rate beginning at \$9.00 per 1,000 gallons for the first 100,000 gallons used and topping off at \$ 10.30 per 1,000 gallons from 500,001 gallons and above.

In 2018 no additional water was purchased from the Town of Greenburgh.

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 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 Westchester County Health Department at 813-5000.

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Sources of Contamination
Turbidity ¹	no	3/7/18	1.6	NTU	N/A	5	Soil Runoff
Barium	no	3/20/18	16.1	ug/l	2,000	2,000	Naturally occurring
Chloride	no	3/20/18	15.4	mg/l	N/A	250	Naturally occurring or indicative of road salt contamination
Cyanide	no	3/20/18	4.8	ug/l	200	200	Discharge from steel/metal, plastic and fertilizer factories.
Sodium	no	3/20/18	8.32	mg/l	N/A	20	Naturally occurring; Road salt; Water Softeners; Animal Waste.
Sulfate	no	3/20/18	3.93	mg/l	N/A	250	Naturally occurring
Manganese	no	3/20/18	10.1	ug/l	N/A	300	Naturally occurring, indicative of landfill contamination
Magnesium	no	3/20/18	1.50	mg/l	N/A	N/A	Naturally occurring
Nitrate	no	3/20/18	166	ug/l	N/A	10,000	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Flouride	no	3/20/18	0.80	mg/l	N/A	2.2	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.
Chlorine Residual	no	5/9/18	1.70 (0.6 – 1.70)	mg/l	N/A	4	Water additive used to control microbes
Gross Alpha	no	3/20/18	0.279	pCi/l	N/A	15	Erosion of natural deposits
Gross Beta	no	3/20/18	0.514	pCi/l	N/A	50	Erosion of natural deposits
Unregulated Contaminants							
Chromium-6	no	1/22/14	0.06	ug/l	N/A	unregulated	

Disinfection Byproducts - Total Trihalomethanes (TTHM) and Haloacetic Acid							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Sources of Contamination
TTHM (Chloroform, Bromodichloromethane, Dichloromethane, And bromoform)	no	Site 1 12/3/18 Site 2 12/3/18	29.28 ⁴ (22.48– 29.28) 52.70 (38.08-52.70)	ug/L	N/A	80	By-product of drinking water Chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter
Haloacetic Acid	no	Site 1 12/3/18 Site 2 12/3/18	43.60 ⁴ (33.18– 43.60) 11.70 (11.33-23.80)	ug/L	N/A	60	By-product of drinking water Chlorination.

Lead and Copper								
Contaminant	Number of Samples Taken	Date of Sample	Level Detected (Range)	Unit Measurement	Number of Samples above AL	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Sources of Contamination
Copper	20	7/6/16 – 7/22/16	51.5 ⁽²⁾ (1.7 – 112)	ug/l	0	N/A	AL – 1,300	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives
Lead	20	7/6/16 – 7/22/16	4.3 ⁽³⁾ (ND – 16.3)	ug/l	1	0	AL – 15	Corrosion of household plumbing systems; Erosion of natural deposits

1 –Turbidity is a measure of the cloudiness of the water. Our highest single turbidity measurement (1.6 NTU) for the year occurred on March 7, 2018. State regulations require that turbidity must always be below 5 NTU.

2 – The level presented represents the 90th percentile of the 20 samples 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, 20 samples were collected at your water system and the 90th percentile value was the third highest value (51.5 ug/l). The action level for copper was not exceeded at any of the sites tested. The Village qualifies for reduced monitoring by not having exceeded action levels in 90% of the samples for a period of 3 consecutive years and currently only has to sample for copper once in each 3-year period.

3 – The level presented represents the 90th percentile of the 20 samples collected. In this case, 20 samples were collected at your water system and the 90th percentile value was the third highest value (4.3 ug/l). The action level for lead was exceeded at one of the sites tested. The Village qualifies for reduced monitoring by not having exceeded action levels in 90% of the samples for a period of 3 consecutive years and currently only has to sample for lead once in each 3-year period.

4 – This level represents the highest locational running annual average (LRAA) calculated from data collected.

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).

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

Locational running annual average (LRAA): The arithmetic average of analytical results for samples taken at a specific monitoring location during the previous four calendar quarters.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below New York State requirements. It should be noted that the action level for lead was exceeded in one sample collected. We are required to present the following information on lead in drinking water:

INFORMATION ON LEAD

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 Village of Elmsford Water System 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?

The Village Water Department continually performs sampling and testing throughout the water supply to comply with regulatory monitoring requirements. This past year we monitored for Total Trihalomethanes and Haloacetic Acids. Due to an error in scheduling for the monitoring periods April 1 to June 30, 2018 and July 1 to September 30, 2018, the samples were taken, however they were not taken within the allowable time period. This does not pose a threat to the quality of our water supply. To prevent future sample date errors, the Village's comprehensive sampling plan has been clarified to better reflect the allowable sample date range.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

Haloacetic acids are disinfection byproducts formed during the treatment of drinking water by chlorine, the most commonly used disinfectant in New York State. Drinking water is disinfected by public water suppliers to kill bacteria and viruses that could cause serious illnesses. For this reason, disinfection of drinking water by chlorination is beneficial to public health. The amount of haloacetic acids in drinking water can change from day to day, depending on temperature, the amount of organic material in the source water, the amount of chlorine added, and a variety of other factors.

The presence of haloacetic acids at the concentrations detected in the water system does not constitute an immediate health hazard. Although the standard is slightly exceeded, it is not a "bright line" between drinking water concentrations that cause health effects and those that do not. The standard for haloacetic is set at a water concentration at which exposure is much lower than exposures identified as causing health effects in animals. Thus, exceedance of the standard is not a trigger for health effects, but a trigger for water suppliers to take action to reduce the haloacetic acid concentrations and maintain what is already a large margin of protection against health effects. The risks for adverse effects from the haloacetic acids in the drinking water are small compared to the risk for illness from drinking inadequately disinfected water.

This paragraph summarizes and characterizes the available studies on human populations exposed to haloacetic acids and provides a general summary of the health effects of haloacetic acids in animals, which occur at exposure levels much higher than exposures that could result through normal use of the water. Some studies suggest that people who drank chlorinated drinking water containing disinfection byproducts (including haloacetic acids) for long periods of time (e.g., 20 to 30 years) have an increased risk for cancer. However, how long and how frequently people actually drank the water, and how much haloacetic acids the water contained is not known for certain. Therefore, the evidence from these studies is not strong enough to conclude that the observed increased risk for cancer is due to haloacetic acids, other disinfection byproducts, or some other factor. Studies of laboratory animals show that the two haloacetic acids, dichloroacetic acid and trichloroacetic acid, can cause cancer following exposure to high levels over their lifetimes. Dichloroacetic acid and trichloroacetic acid are also known to cause other effects in laboratory animals after high levels of exposure, primarily the liver, kidneys, and nervous system and on their ability to bear health offspring.

INFORMATION ON CRYPTOSPORIDIUM

Cryptosporidium is a microbial pathogen found in surface water and groundwater under the influence of surface water. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. During 2018, as part of their routine sampling, NYC collected 53 samples from their source water at Kensico Reservoir and analyzed them for Cryptosporidium oocysts. Of these samples, five were positive Cryptosporidium. Therefore, testing indicates the presence of Cryptosporidium in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, a gastrointestinal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their health care provider regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

INFORMATION ON GIARDIA

Giardia is a microbial pathogen present in varying concentrations in many surface waters and groundwater under the influence of surface water. Giardia is removed/inactivated through a combination of filtration and disinfection or by disinfection. During 2018, as part of routine sampling, NYC collected 53 samples from their source water at Kensico Reservoir and analyzed them for Giardia cysts. Of these samples, 37 were confirmed positive. Therefore, our testing indicates the presence of Giardia in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Giardia may cause giardiasis, an intestinal illness. People exposed to Giardia may experience mild or severe diarrhea, or in some instances no symptoms at all. Fever is rarely present. Occasionally, some individuals will have chronic diarrhea over several weeks or a month, with significant weight loss. Giardiasis can be treated with anti-parasitic medication. Individuals with weakened immune systems should consult with their health care providers about what steps would best reduce their risks of becoming infected with Giardiasis. Individuals who think that they may have been exposed to Giardiasis should contact their health care providers immediately. The Giardia parasite is passed in the feces of an infected person or animal and may contaminate water or food. Person to person transmission may also occur in day care centers or other settings where handwashing practices are poor.

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).

INFORMATION ON UNREGULATED CONTAMINANTS

Under the 1996 amendments to the federal Safe Drinking Water Act and the Third Unregulated Contaminant Monitoring Rule (UCMR3), EPA is required once in every five years to issue a new list of up to 30 unregulated contaminants which public water systems must monitor. The intent of the rule is to provide baseline occurrence data that EPA can combine with toxicological research to make decisions about potential future drinking water regulations. In 2014 the Village of Elmsford was randomly chosen to participate in the third round of this contaminant testing. The data from this sampling can be found in the tables of this report. For more information on the rule, and to see a list of the unregulated contaminants, go to <http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/> or call the office of the Village Engineer at 914-592-6555 for more information.

INFORMATION ON FLUORIDE ADDITION

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. Fluoride is added to your water by the NYCDEP before it is delivered to us. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at a properly controlled level. To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that the NYCDEP monitor fluoride levels on a daily basis to make sure fluoride is maintained at a target level of 0.7 mg/l. During 2018 monitoring showed fluoride levels in your water were in the optimal range over 99% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride.

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.
- Saving water saves you money.

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 and shaving.

- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day (6,000 gallons/yr.)
- Check your toilets for leaks. 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 over 30,000 gallons a year. Check your toilets for leaks by adding a few drops of food coloring in the tank and watch for a few minutes to see if the color shows up in the bowl.
- 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

In 2018 Village Water Department performed system maintenance including replacement and repair of fire hydrants and water meters, leak repairs, water main flushing, maintenance of facilities and equipment; tapping mains for installation of new water services and meter reading.

ANNUAL HYDRANT FLUSHING

A note on hydrant flushing, each year the Village flushes all fire hydrants in order to improve water quality in the system. This also allows for testing of the hydrants. Following the flushing you may experience discolored water. The water is safe, however it should not be used for washing clothes, especially whites, as staining may occur. After flushing is complete it is best to run a laundry sink, bathtub or hose bib at the lowest level of the house until the water runs clear, then run the other fixtures in the home to clear the rest of the piping and to let any air out of the lines.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community and our way of life. Please call the Village Engineer's office at 592-6555 if you have questions.

Information on Storm Water Pollution Prevention

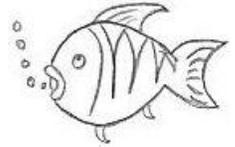
<https://www.elmsfordny.org/storm-water-management-committee>

What is Storm Water?

Storm water is water from precipitation that flows across the ground and pavement when it rains or when snow and ice melt. The water seeps into the ground or drains into what we call storm sewers. You see these drains at street corners or at low points on the sides of your streets. Collectively, the draining water is called storm water runoff and is a concern to us in commercial and industrial sites as well as your neighborhood because of the pollutants it carries.

Where Does the Storm Water go after it drains into a Storm Drain?

Storm water that does not seep into the ground drains into systems of underground pipes or open swales and eventually discharges into the Saw Mill River or the Bronx River. This storm water eventually ends up in the Hudson River and/or Long Island Sound.



Did You Know that all Substances that Enter Storm Drain Inlets in the Streets Cannot be Removed by a Treatment Process before Entering our rivers and the Long Island Sound?

Those substances that enter the storm drain system are not treated at all! Anything poured into a gutter or a storm drain, such as used motor oil or antifreeze, flows directly to the Rivers and Long Island Sound, usually via neighborhood storm sewers.

What are Common Contributors to Storm Water Pollution?

When it rains, oil, antifreeze, detergents, pesticides and other pollutants get washed from driveways, backyards, parking lots, and streets into storm drains and then directly to the Rivers untreated! The following items specify everyday pollutants occurring at our homes.

- Pet waste left on the ground is carried away by storm water, contributing harmful bacteria, parasites and viruses to our rivers. Please clean up after your pet.
- Vehicle fluids such as oil, gas, and antifreeze are the #1 surface water quality problems nationwide. Recycle used oil in a clean, sealed, plastic container. Call Westchester County's Household Chemical Clean-up Info Line at 813-5425 for information on used oil and about proper disposal of other chemicals.
- SWEEP! Hosing off pavements washes pollutants into storm drains leading straight to the rivers.
- Deliver old paint, pesticides, solvents and batteries to Westchester County's Household Chemical Clean-up Day, call the info line at 813-5425
- Street litter such as Styrofoam, plastic, and paper can be prevented from blowing into inlets by keeping trash bins covered and by not littering.
- Yard waste such as grass clippings, tree trimmings, and leaves can be composted and used for fertilizer around the yard. Or put it out on Organic Yard Waste pick up day (see your recycling/sanitation calendar, pick one up at Village Hall).

Spread the word about protecting our rivers, tell your neighbors.