

2022 drinking water quality report

PLAINVIEW WATER DISTRICT

PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902845

ANNUAL WATER SUPPLY REPORT

MAY 2023

The Plainview Water District is pleased to present this year's Water Quality Report. The report is required to be delivered to all residents of our District in compliance with Federal and State regulations. This report is designed to inform you about the quality of water and services we deliver to you every day. We have been proudly serving the Plainview-Old Bethpage community since 1928. We also want you to understand the efforts we make to continually improve the water treatment process and protect our water supply. The Board of Water Commissioners, who live in the community, and District employees are committed to ensuring that you and your family receive the highest quality drinking water.

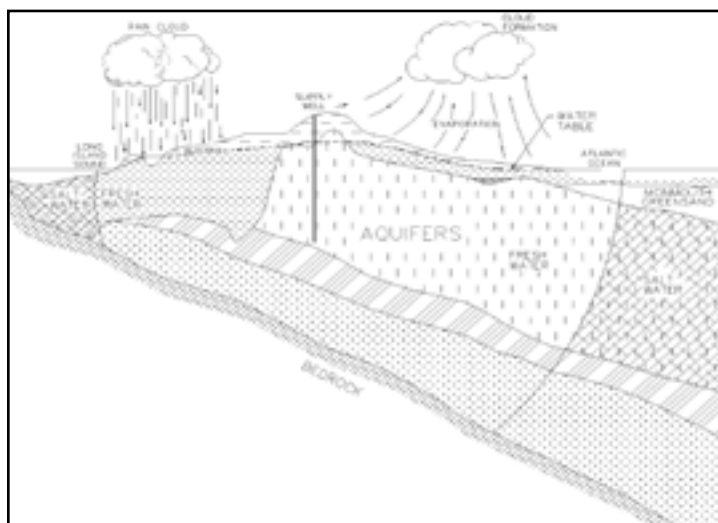
SOURCE OF OUR WATER

The source of water for the District is groundwater pumped from 12 wells located throughout the community that are drilled into the Magothy aquifer beneath Long Island, as shown on the adjacent figure. Generally, the water quality of the aquifer is good-to-excellent, although there are localized areas of contamination.

In order to ensure that our tap water meets or exceeds all health department regulations, the State and the EPA prescribe regulations that 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 population served by the Plainview Water District during 2022 is 34,000. The total amount of water withdrawn from the aquifer in 2022 was 1.75 billion gallons, of which approximately 96.7% was billed directly to consumers. The remaining 3.3% of total pumpage was used for firefighting, system flushing, sample testing, and/or water main breaks/leaks.

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.



THE LONG ISLAND AQUIFER SYSTEM

WATER TREATMENT

The Plainview Water District provides treatment at all wells to improve the quality of the water pumped prior to distribution to the consumer. The pH of the pumped water is adjusted upward to reduce corrosive action between the water and water mains and in-house plumbing by the addition of lime. The pumped water is also chlorinated to a minimum chlorine residual of 0.2 milligrams per liter (mg/l) to protect against the growth of bacteria within the distribution system. Carbon adsorption treatment systems are available for Well Nos. 1-1, 1-2, 2-1, 3-2, 7-1 and 7-2 for the removal of volatile organic compounds. Well Nos. 2-1, 4-2, 4-3, 5-1, 5-2, 5-3, 5-4, 7-1 and 7-2 are presently treated by air stripping treatment systems for the removal of volatile organic compounds. The District is also proud to announce that six Advanced Oxidation Process (AOP) Treatment systems are operational at Plant Nos. 1, 2, 3 and 7 to remove 1,4-Dioxane. Well Nos. 4-2, 4-3 and 5-3 were not utilized during 2022.

WATER CONSERVATION MEASURES

The underground water system of Long Island has more than enough water for present water demands. However, saving water will ensure that our future generations will always have an abundant water supply.

In 2022, the Plainview Water District continued to implement a water conservation program in order to minimize any unnecessary water use. The pumpage for 2022 was 4.8 percent less than in 2021. This can most likely be attributed to slightly less rainfall that occurred in 2022 than 2021.

Residents of the District can also implement their own water conservation measures such as retrofitting plumbing fixtures with flow restrictors, modifying automatic lawn sprinklers to include rain sensors, installation of smart irrigation controllers, repairing leaks in the home, installing water conservation fixtures/applications and maintaining a daily awareness of water conservation in their personal habits. In addition, the Nassau County Lawn Sprinkler Regulations are still in effect. Besides protecting our precious underground water supply, water conservation will produce a cost savings to the consumer in terms of both water and energy bills (hot water).

The Plainview Water District has updated their Water Conservation Plan. This updated plan includes increased public awareness/public education, water audits of top water users and implementation of a leak detection program.

WATER QUALITY

In accordance with State regulations, the Plainview Water District routinely monitors your drinking water for numerous parameters. We test your drinking water for coliform bacteria, turbidity, inorganic contaminants, lead and copper, nitrate, volatile organic contaminants, total trihalomethanes, synthetic organic contaminants and radiological contaminants. Over 160 separate parameters are tested for in each of our wells numerous times per year. The table presented on page 3 depicts which parameters or contaminants were detected in the water supply. It should be noted that many of these parameters are naturally found in all Long Island drinking water and do not pose any adverse health effects.

COST OF WATER

The District utilizes a step billing schedule as shown below to promote conservation with the average consumer being billed at \$2.30 per 1,000 gallons.

QUARTERLY WATER RATES - 2023

Consumption (gallons)	Charges
Up to 8,000	\$18.00 minimum
9,000 - 30,000	\$2.30/thousand gallons
31,000 - 50,000	\$2.60/thousand gallons
51,000 - 70,000	\$2.90/thousand gallons
71,000 - 125,000	\$3.20/thousand gallons
126,000 - 175,000	\$3.50/thousand gallons
Over 175,000	\$3.80/thousand gallons

CONTACTS FOR ADDITIONAL INFORMATION

We are pleased to report that our drinking water meets all Federal and State requirements. If you have any questions about this report or the Plainview Water District, please contact Water District Superintendent Stephen Moriarty, P.E. at (516) 931-6469 or the Nassau County Department of Health at (516) 227-9692. We want our valued customers to be informed about our water system. If you want to learn more, please attend any of our regularly scheduled meetings. They are normally held every Tuesday at 5:30 p.m. at the Water District office, located at 10 Manetto Hill Road. Updated meeting schedules are posted on a monthly basis at the Water District office, Plainview Public Library and on the District website located at <http://www.plainviewwater.org>.

The Plainview District routinely monitors for different parameters and possible contaminants in your drinking water as required by Federal and State laws. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some impurities. It's important to remember that the presence of these impurities does not necessarily pose a health risk. For more information on contamination and potential health risks, please contact the USEPA Safe Drinking Water Hotline at 1-800-426-4791.

NEW YORK STATE MANDATORY HEALTH ADVISORY

Water from the Plainview Water District has elevated levels of nitrates, but below the maximum contaminant level of 10.0 parts per million (ppm). Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. The source of the nitrates is the nitrogen in fertilizers and from on-site septic systems. If you are caring for an infant, you should ask advice from your health care provider.

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 to infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).]

During 2020, the District collected 33 samples for lead and copper. The next round of samples will occur in 2023. 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. Plainview Water District is responsible for providing high quality drinking water, but cannot control the variety of materials used in your home'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>.

2022 DRINKING WATER QUALITY REPORT - TABLE OF DETECTED PARAMETERS

Contaminants	Violation (Yes/No)	Date of Sample	Level Detected (Maximum Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, AL or HAL)	Likely Source of Contaminant
Inorganic Contaminants							
Copper	No	June-September 2020	ND - 0.18 0.082 ⁽¹⁾	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	No	June-September 2020	ND - 33.8 ND ⁽¹⁾	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits
Sodium	No	01/12/22	5.2 - 12.5	mg/l	n/a	None ⁽²⁾	Naturally occurring
Calcium	No	12/01/22	2.1 - 7.2	mg/l	None	None	Naturally occurring
Chloride	No	01/12/22	7.5 - 21.4	mg/l	n/a	MCL = 250	Naturally occurring
Barium	No	11/16/22	0.0042 - 0.025	mg/l	2.0	MCL = 2.0	Naturally occurring
Color	No	04/14/22	ND - 8.0	Units	n/a	MCL = 15	Naturally occurring
Nitrate	No	07/08/22	ND - 8.8	mg/l	10	MCL = 10	Runoff from fertilizer and leaching from septic tanks and sewage
Magnesium	No	01/12/22	1.0 - 2.7	mg/l	n/a	No MCL	Naturally occurring
Nickel	No	11/16/22	0.0016 - 0.0087	ug/l	n/a	MCL = 100	Naturally occurring
Turbidity	No	11/16/22	ND - 1.4	NTU	n/a	MCL = 5	Naturally occurring
Zinc	No	05/24/22	ND - 0.079	mg/l	n/a	MCL = 5.0	Naturally occurring
Antimony	No	05/17/22	ND - 0.53	ug/l	n/a	MCL = 6	Naturally occurring
Perchlorate	No	08/11/22	0.22 - 7.5	ug/l	0	AL = 18 ⁽⁴⁾	Fertilizer
Volatile Organic Contaminants							
1,1,1-Trichloroethane	No	11/03/22	ND - 3.0	ug/l	0	MCL = 5	Industrial discharge
1,1-Dichloroethane	No	11/03/22	ND - 1.9	ug/l	0	MCL = 5	Industrial discharge
Acetone	No	05/05/22	ND - 7.3	ug/l	0	MCL = 50	Naturally occurring
Disinfection By-Products							
Total Trihalomethanes	No	11/07/22	ND - 5.5	ug/l	0	MCL = 80	Disinfection By-Products
Radionuclides							
Gross Alpha	No	5/20/21	ND - 3.55	pCi/L	n/a	MCL = 15	Naturally occurring
Gross Beta	No	5/26/21	0.285 - 2.88	pCi/L	n/a	MCL = 50	Naturally occurring
Combined Radium 226 & 228	No	5/27/21	0.205 - 3.51	pCi/L	n/a	MCL = 5 ⁽⁵⁾	Naturally occurring
Uranium	No	5/20/21	ND - 1.78	ug/l	n/a	MCL = 30	Naturally occurring
Disinfectant							
Chlorine Residual	No	Continuous	0.5 - 0.9	mg/l	n/a	MRDL = 4.0	Measure of disinfectant
Physical Characteristics							
pH	No	Continuous	7.5 - 8.5	pH units	n/a	7.5 - 8.5 ⁽⁶⁾	Measure of acidity or alkalinity
Total Alkalinity	No	12/01/22	1.3 - 34.2	mg/l	n/a	No MCL	Naturally occurring
Calcium Hardness	No	12/01/22	5.2 - 18.1	mg/l	n/a	No MCL	Naturally occurring
Total Hardness	No	12/01/22	9.5 - 28.9	mg/l	n/a	No MCL	Naturally occurring
Total Dissolved Solids (TDS)	No	01/03/22	37.0 - 132.0	mg/l	n/a	No MCL	Naturally occurring

2022 DRINKING WATER QUALITY REPORT - TABLE OF DETECTED PARAMETERS (cont'd.)

Contaminants	Violation (Yes/No)	Date of Sample	Level Detected (Maximum Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, AL or HAL)	Likely Source of Contaminant
Synthetic Organic Contaminants (SOCs)							
1,4-Dioxane	No	04/06/22	ND - 0.81	ug/l	0	MCL = 1.0	Industrial discharge ⁽⁷⁾
UCMR							
Chlorate	No	07/07/22	ND - 13.4	ug/l	0	No MCL	Disinfection By-Products
Manganese	No	11/19/22	0.816 - 3.25	ug/l	0	MCL = 300	Naturally occurring
Hexavalent Chromium	No	07/27/22	ND - 0.16	ug/l	0	No MCL	Natural deposits
Perfluorobutanoic acid	No	09/01/22	ND - 12.3	ng/l	0	No MCL	Industrial discharge

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.

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Health Advisory (HA) - An estimate of acceptable drinking water levels for a chemical substance based on health effects information; a health advisory is not a legally enforceable Federal standard, but serves as technical guidance to assist Federal, State and local officials.

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 in one trillion parts of liquid (parts per trillion - ppt).

Nephelometric Turbidity Units (ntu) - Intensity of light scattered at 90 degrees as a beam of light passes through a water sample

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.

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

pCi/L - pico Curies per Liter is a measure of radioactivity in water.

⁽¹⁾ - During 2020, we collected and analyzed 33 samples for lead and copper. The action level (AL) for lead was only exceeded at one home. Source of lead is within the one home and not from system water. The action level for copper was not exceeded at any site. The next round of sampling and testing will occur in 2023. The values reported for lead and copper represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead and copper values detected at your water system. In our sampling program, the 90th percentile value is the 4th highest result.

⁽²⁾ - No MCL has been established for sodium. However, 20 mg/l is a recommended guideline for people on high restricted sodium diets and 270 mg/l for those on moderate sodium diets.

⁽³⁾ - If iron and manganese are present, the total concentration of both should not exceed 300 ug/l. Higher levels may be allowed by the State when justified by the supplier of water.

⁽⁴⁾ - Perchlorate is an unregulated contaminant. However, the NYS Dept. of Health has established an action level of 18.0 ug/l.

⁽⁵⁾ - MCL for Radium is for Radium 226 and Radium 228 combined.

⁽⁶⁾ - As per Nassau County Department of Health guidelines.

⁽⁷⁾ - Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites.

⁽⁸⁾ - MCL of 60 ug/l is the combined results for the group of 5 haloacetic acids.

EMERGING CONTAMINANTS

As you may have read in our District Newsletter, the New York State Department of Health established new drinking water standards for three emerging contaminants; 1,4-Dioxane, PFOA and PFOS in August 2020. The District has implemented an aggressive Infrastructure Improvement Program to install wellhead treatment system for the removal of these contaminants. The District has six of these treatment systems on-line. The wells with elevated levels of these contaminants have been removed from service until such time the treatment systems are in operation. Please be assured that the District will not provide water to the community that does not meet drinking water standards.

SOURCE WATER ASSESSMENT

The NYSDOH, with assistance from the local health department, has completed a source water assessment for this system, based on available information. Possible and actual environmental threats to this drinking water source were evaluated. The source water assessment includes a susceptibility rating based on the risk posed by potential source of contamination and how rapidly contaminants can move through the subsurface to the wells. The susceptibility of a water supply well to contamination is dependent upon both the presence of potential sources of contamination within the well's contributing area and the likelihood that the contaminant can travel through the environment to reach the well. The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is, or will become contaminated. Please refer to section "Water Quality" 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.

Drinking water is derived from 12 wells. The source water assessment has rated most of the wells as having a very high susceptibility to industrial solvents and a high susceptibility to nitrates. The elevated susceptibility to industrial solvents is due primarily to point sources of contamination related to transportation routes and commercial/industrial facilities and related activities in the assessment area. The elevated susceptibility to nitrates is due to unsewered residential land use and related practices, such as fertilizing lawns, in portions of the assessment area.

A copy of the assessment, including a map of the assessment area, can be reviewed by contacting the District Office.

It must be noted that assessment results indicating an elevated susceptibility does not imply supply well contamination or inevitability. Susceptibility correlates to contamination prevalence and sensitivity. Furthermore, a supply well that has a medium to high susceptibility demonstrates the need for continuing management of potential contamination sources. It is important to note that there is a distinct difference between raw source water and actual finished (treated) water delivered to the customers. Water suppliers are obligated by strict federal, state and local laws and regulations to provide water that meets all state and local health department regulations. Treatment is required when water quality results indicate the presence of contaminants at or above an established maximum contaminant level.

The Plainview Water District conducts over 14,000 water quality tests throughout the year, testing for over 160 different contaminants which have been undetected in our water supply, including:

Arsenic	Total Aldicarb	11Cl-PF64dS
Cadmium	Oxamyl	ADONA
Chromium	Methomyl	4:2FTS
Copper	3-Hydroxycarbofuran	cis-1,3-Dichloropropene
Fluoride	Carbofuran	1,1,2-Trichloroethane
Mercury	Carbaryl	Tetrachloroethene
Langlier Saturation Index	Glyphosate	1,3-Dichloropropane
Selenium	Diquat	Chlorobenzene
Silver	Endothall	1,1,1,2-Tetrachloroethane
Odor	Perfluorododecanoic Acid	Bromobenzene
Iron	Perfluoro-4-Methoxybutanoic Acid	1,1,2,2-Tetrachloroethane
Antimony	Perfluoropentanesulfonic Acid	1,2,3-Trichloropropane
Lindane	NETFOSSA	2-Chlorotoluene
Heptachlor	NFDHA	4-Chlorotoluene
Aldrin	8:2FTS	1,2-Dichlorobenzene
Perfluorodecanoic Acid	1,2-Dibromo-3-Chl.Propane	1,3-Dichlorobenzene
Perfluoropentanoic Acid	Dioxin	1,4-Dichlorobenzene
Perfluorotridecanoic Acid	Chloroacetic Acid	1,24-Trichlorobenzene
HFPO-DA	Bromoacetic Acid	Hexachlorobutadiene
6:2FTS	Dichloroacetic Acid	1,2,3-Trichlorobenzene
Heptachlor Epoxide	Trichloroacetic Acid	Benzene
Dieldrin	Dibromoacetic Acid	Toluene
Endrin	Total Haloacetic Acid	Ethylbenzene
Methoxychlor	Chloroform	M,P-Xylene
Toxaphene	Bromodichloromethane	O-Xylene
Chlordane	Dibromochloromethane	Styrene
Total PCBs	Bromoform	Isopropylbenzene (Cumene)
Propachlor	Dichlorodifluoromethane	N-Propylbenzene
Alachlor	Chloromethane	1,3,5-Trimethylbenzene
Simazine	Vinyl Chloride	Tert-Butylbenzene
Atrazine	Bromomethane	1,2,4-Trimethylbenzene
Metolachlor	Chloroethane	Sec-Butylbenzene
Metribuzin	Trichlorofluoromethane	4-Isopropyltoluene (P-Cumene)
Butachlor	Chlorodifluoromethane	N-Butylbenzene
2,4-D	1,1-Dichloroethene	Methyl Tert-Butyl Ether (MTBE)
2,4,5-TP (Silvex)	Methylene Chloride	Perfluorobutanesulfonic acid
Dinoseb	Trans-1,2-Dichloroethene	Perfluoroheptanoic acid
Dalapon	cis-1,2-Dichloroethene	Perfluorononanoic acid
Picloram	2,2-Dichloropropane	Perfluoro(2-ethoxyethane)sulfonic Acid
Dicamba	Bromochloromethane	Perfluorooctanesulfonic acid
Pentachlorophenol	Carbon Tetrachloride	Perfluorooctanoic acid
Hexachlorocyclopentadiene	1,1-Dichloropropene	Perfluoro-3-Methoxypropanoic Acid
bis(2-Ethylhexyl)adipate	1,2-Dichloroethane	Perfluoro-1-heptansulfonic Acid
bis(2-Ethylhexyl)phthalate	Trichloroethene	Perfluorohexanoic Acid
Hexachlorobenzene	1,2-Dichloropropane	Perfluorotetradecanoic Acid
Benzo(A)Pyrene	Dibromomethane	9CL-PF30NS
Aldicarb Sulfone	Trans-1,3-Dichloropropene	1,2-Dibromoethane (EDB)
Aldicarb sulfoxide	Perfluoroundecanoic Acid	1,1,2-Trichlorotrifluoroethane
Aldicarb	NMeFOSSA	Bromochloroacetic Acid

Note: (SOC) - Synthetic Organic Contaminant

Copies of the Supplemental Data Package, which includes the water quality data for each of our supply wells utilized during 2022, are available at the Plainview Water District office which is located at 10 Manetto Hill Road, Plainview, New York, the Plainview-Old Bethpage Public Library and the Water District website located at <http://www.plainviewwater.org>.

We, at the Plainview Water District, work diligently to provide high quality water to every tap throughout the community. We ask that all our customers help us protect our water resources, which are the heart of our community, our way of life and our children's future.