

2019 drinking water quality report

PLAINVIEW WATER DISTRICT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902845

ANNUAL WATER SUPPLY REPORT

MAY 2020

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. Our constant goal is to provide you with a safe and dependable supply of drinking water. 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 water.

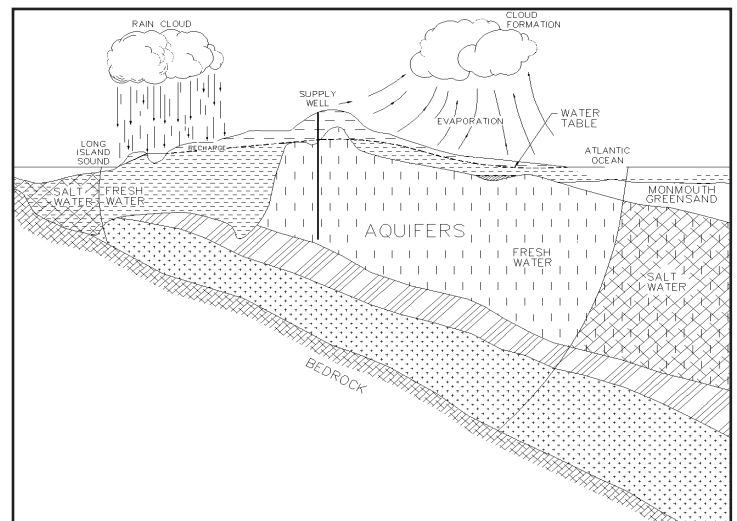
SOURCE OF OUR WATER

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 is safe to drink, 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 2019 was 34,000. The total amount of water withdrawn from the aquifer in 2019 was 1.805 billion gallons, of which approximately 90.8 percent was billed directly to consumers. Remaining 9.2% of total pumpage was used for firefighting, system flushing, sample testing, and 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. At Plant No. 4, an individual well with high nitrate levels is blended with another well with low nitrate levels to meet the nitrate limit of 10 mg/l. Carbon adsorption treatment systems are available for Well Nos. 1-2 and 3-2 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. Well Nos. 1-1, 3-1 and 4-2 were not utilized during 2019.

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 a safe and abundant water supply.

In 2019, the Plainview Water District continued to implement a water conservation program in order to minimize any unnecessary water use. The pumpage for 2019 was 1.1 percent more than in 2018. This can most likely be attributed to hotter and drier weather that occurred in 2019 than 2018.

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 and synthetic organic contaminants. Over 135 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 with the average consumer being billed at \$1.99 per 1,000 gallons.

QUARTERLY WATER RATES - 2020

Consumption (gallons)	Charges
Up to 8,000	\$16.00 minimum
9,000 - 30,000	\$1.99/thousand gallons
31,000 - 50,000	\$2.40/thousand gallons
51,000 - 70,000	\$2.70/thousand gallons
71,000 - 125,000	\$3.00/thousand gallons
Over 125,000	\$3.25/thousand gallons

CONTACTS FOR ADDITIONAL INFORMATION

We are pleased to report that our drinking water is safe and 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 2017, the District collected 30 samples for lead and copper. The next round of samples will occur in 2020. 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>.

2019 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 2017	ND - 078 0.19 ⁽¹⁾	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	No	June-September 2017	ND - 91.7 1.3 ⁽¹⁾	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits
Ammonia	No	03/27/19	ND - 0.1	mg/l	None	None	Runoff from fertilizer and leaching from septic tanks and sewage
Sodium	No	06/07/19	4.6 - 11.0	mg/l	n/a	None ⁽²⁾	Naturally occurring
Calcium	No	10/23/19	4.4 - 26.3	mg/l	None	None	Naturally occurring
Chloride	No	10/23/19	7.9 - 16.3	mg/l	n/a	MCL = 250	Naturally occurring
Barium	No	1/23/19	0.0033 - 0.029	mg/l	2.0	MCL = 2.0	Naturally occurring
Iron	No	1/14/19	ND - 190	ug/l	n/a	MCL = 300	Naturally occurring
Nitrate	No	9/23/19	1.7 - 7.7	mg/l	10	MCL = 10	Runoff from fertilizer and leaching from septic tanks and sewage
Manganese	No	05/17/19	ND - 29	ug/l	n/a	MCL = 300	Naturally occurring
Magnesium	No	06/07/19	1.3 - 2.4	mg/l	n/a	No MCL	Naturally occurring
Nickel	No	06/07/19	1.5 - 4.8	ug/l	n/a	MCL = 100	Naturally occurring
Total Alkalinity	No	10/23/19	ND - 50.8	mg/l	n/a	No MCL	Naturally occurring
Calcium Hardness	No	01/16/19	23.3 - 61.7	mg/l	n/a	No MCL	Naturally occurring
Total Hardness	No	10/23/19	9.0 - 74.4	mg/l	n/a	No MCL	Naturally occurring
Total Dissolved Solids (TDS)	No	10/23/19	25.0 - 149.0	mg/l	n/a	No MCL	Naturally occurring
Sulfate	No	01/23/19	ND - 7.3	mg/l	5.0	MCL = 250	Naturally occurring
Turbidity	No	01/19/19	ND - 1.4	NTU	n/a	MCL = 5	Naturally occurring
Zinc	No	01/23/19	ND - 0.036	mg/l	n/a	MCL = 5.0	Naturally occurring
Volatile Organic Contaminants							
<i>cis</i> -1,2-Dichloroethene	No	10/28/19	ND - 0.67	ug/l	0	MCL = 5	Industrial/Commercial discharge
Tetrachloroethane	No	07/10/19	ND - 0.65	ug/l	0	MCL = 5	Industrial/Commercial discharge
Trichloroethene	No	07/10/19	ND - 2.3	ug/l	0	MCL = 5	Industrial/Commercial discharge
1,1-Dichloroethane	No	10/28/19	ND - 0.96	ug/l	0	MCL = 5	Industrial/Commercial discharge
Methyl Tert. Butyl Ether (MTBE)	No	11/04/19	ND - 0.53	ug/l	0	MCL = 10	Gasoline additive
Disinfection By-Products							
Monobromoacetic Acid	No	November 2018	ND - 0.39	ug/l	n/a	MCL = 60 ⁽⁷⁾	By-Product of drinking water chlorination
Dichloroacetic Acid	No	November 2018	ND - 0.20	ug/l	n/a	MCL = 60 ⁽⁷⁾	By-Product of drinking water chlorination
Bromochloroacetic Acid	No	November 2018	ND - 0.42	ug/l	n/a	MCL = 60 ⁽⁷⁾	By-Product of drinking water chlorination
Dibromoacetic Acid	No	November 2018	ND - 1.26	ug/l	n/a	MCL = 60 ⁽⁷⁾	By-Product of drinking water chlorination
Total Trihalomethanes	No	11/07/19	ND - 1.7	ug/l	0	MCL = 80	Disinfection By-Products
Radionuclides							
Gross Alpha	No	03/09/18	0.18 - 5.55	pCi/L	n/a	MCL = 15	Naturally occurring
Gross Beta	No	05/22/18	0.06 - 3.44	pCi/L	n/a	MCL = 50	Naturally occurring
Combined Radium 226 & 228	No	03/09/18	0.58 - 2.41	pCi/L	n/a	MCL = 5 ⁽³⁾	Naturally occurring
Uranium	No	03/09/18	0.09 - 5.55	ug/l	n/a	MCL = 30	Naturally occurring

2019 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
Unregulated Contaminant Rule - Phase 3 (UCMR3)⁽⁴⁾							
Perchlorate	No	02/26/19	ND - 11.0	ug/l	0	AL = 18 ⁽⁵⁾	Fertilizer
1,4-Dioxane	No	03/13/19	0.19 - 11.0	ug/l	0	HAL = 35	Industrial discharge ⁽⁶⁾⁽⁷⁾
Chromium	No	05/14/14	ND - 0.5	ug/l	0	MCL = 100	Natural deposits
Cobalt	No	05/14/14	ND - 5.2	ug/l	0	No MCL	Naturally occurring
Strontium	No	11/05/14	11.0 - 63.2	ug/l	0	HAL = 4000	Naturally occurring
Vanadium	No	05/14/14	ND - 0.3	ug/l	0	No MCL	Naturally occurring
Hexavalent Chromium	No	03/27/17	ND - 0.82	ug/l	0	No MCL	Natural deposits
Chlorate	No	11/05/14	ND - 63.0	ug/l	0	No MCL	Disinfection by-product
Unregulated Contaminant Rule - Phase 4 (UCMR4)⁽⁴⁾							
Manganese	No	November 2018	0.54 - 9.61	ug/l	n/a	MCL = 300 ⁽⁸⁾	Naturally occurring
Monobromoacetic Acid	No	November 2018	ND - 0.39	ug/l	n/a	MCL = 60 ⁽⁹⁾	By-Product of drinking water chlorination
Dichloroacetic Acid	No	November 2018	ND - 0.20	ug/l	n/a	MCL = 60 ⁽⁹⁾	By-Product of drinking water chlorination
Bromochloroacetic Acid	No	November 2018	ND - 0.42	ug/l	n/a	MCL = 60 ⁽⁹⁾	By-Product of drinking water chlorination
Dibromoacetic Acid	No	November 2018	ND - 1.26	ug/l	n/a	MCL = 60 ⁽⁹⁾	By-Product of drinking water chlorination
Bromide	No	November 2018	ND - 85.0	ug/l	n/a	No MCL	Naturally occurring
Perfluorochemicals⁽¹⁰⁾							
Perfluorooctanoic Acid ⁽¹¹⁾	No	08/08/19	ND - 2.1	ng/l	0	HAL = 70	Industrial discharge
Bacteriologicals							
Total Coliform ⁽¹²⁾	No	06/06/19	1 positive out of 480 annual samples	Positive or Negative	n/a	MCL - Positive results in more than 5% of the monthly samples	Commonly found in the environment

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

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 2017, we collected and analyzed 30 samples for lead and copper. The action level (AL) for lead was not exceeded at any site tested. The action level for copper was not exceeded at any site. The next round of sampling and testing will occur in 2020. 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⁾ - MCL for Radium is for Radium 226 and Radium 228 combined.

⁽⁴⁾ - UCMR - Unregulated Contaminant Monitoring Rule is a Federal water quality sampling program where water suppliers sample and test their source water for 1 year. Results will be used by the USEPA to determine if the contaminants need to be regulated in the future.

⁽⁵⁾ - Perchlorate is an unregulated contaminant. However, the NYS Dept. of Health has established an action level of 18.0 ug/l.

⁽⁶⁾ - 1,4-Dioxane - The New York State (NYS) proposed MCL for 1,4 dioxane is 1 part per billion (ppb).

⁽⁷⁾ - It is used as a solvent for cellulose formulations, resins, oils, waxes and other organic substances. It is also used in wood pulping, textile processing, degreasing, in lacquers, paints, varnishes, and stains; and in paint and varnish removers.

⁽⁸⁾ - If iron and manganese are present, the total concentration of both should not exceed 500 ug/l.

⁽⁹⁾ - MCL of 60 ug/l is the combined results for the group of 5 haloacetic acids.

⁽¹⁰⁾ - PFOA has been used to make carpets, leathers, textiles, fabrics for furniture, paper packaging, and other materials that are resistant to water, grease, or stains. It is also used in firefighting foams at airfields. Many of these uses have been phased out by its primary U.S. manufacturer; however, there are still some ongoing uses.

⁽¹¹⁾ - The US environmental Protection Agency (EPA) has established a life time health advisory level (HAL) of 70 parts per trillion (ppt) for PFOA and PFOS combined. The new York State (NYS) proposed maximum contaminant level (MCL) is 10 ppt for PFOA and 10 ppt for PFOS.

⁽¹²⁾ - Total coliform bacteria was detected in 1 out of 480 routine compliance samples collected within our distribution system. The one positive sample occurred in June 2019. No positive samples were detected for the rest of the year. All repeat samples were negative for bacteria. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present.

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 is safe to drink. 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 130 different contaminants which have been undetected in our water supply, including:

Arsenic	Dicamba (SOC)	1,1-Dichloropropene
Cadmium	Pentachlorophenol (SOC)	4-Isopropyltoluene (P-Cumene)
Chromium	Hexachlorocyclopentadiene (SOC)	Dibromomethane
Fluoride	bis(2-Ethylhexyl)adipate (SOC)	Trans-1,3-Dichloropropene
Mercury	bis(2-Ethylhexyl)phthalate (SOC)	cis-1,3-Dichloropropene
Selenium	Hexachlorobenzene (SOC)	1,1,2-Trichloroethane
Silver	Benzo(A)Pyrene (SOC)	1,3-Dichloropropane
Color	Aldicarb Sulfone (SOC)	Chlorobenzene
1,2-Dibromoethane (EDB)	Aldicarb sulfoxide (SOC)	1,1,1,2-Tetrachloroethane
Odor	Aldicarb (SOC)	Bromobenzene
Ammonia	Total Aldicarb (SOC)	1,1,2,2-Tetrachloroethane
Nitrite	Oxamyl (SOC)	1,2,3-Trichloropropane
Detergents (MBAS)	Methomyl (SOC)	2-Chlorotoluene
Free Cyanide	3-Hydroxycarbofuran (SOC)	4-Chlorotoluene
Antimony	Carbofuran (SOC)	1,2-Dichlorobenzene
Beryllium	Carbaryl (SOC)	1,3-Dichlorobenzene
Thallium	Glyphosate (SOC)	1,4-Dichlorobenzene
Lindane (SOC)	Diquat (SOC)	1,24-Trichlorobenzene
Heptachlor (SOC)	Endothall (SOC)	Hexachlorobutadiene
Aldrin (SOC)	1,2,4-Trimethylbenzene	1,2,3-Trichlorobenzene
Heptachloro Epoxide (SOC)	1,2-Dibromo-3-Chl.Propane (SOC)	Benzene
Dieldrin (SOC)	Dioxin (SOC)	Ethylbenzene
Endrin (SOC)	Chloroacetic Acid	M,P-Xylene
Methoxychlor (SOC)	Bromoacetic Acid	O-Xylene
Toxaphene (SOC)	Dichloroacetic Acid	Styrene
Chlordane (SOC)	Trichloroacetic Acid	Isopropylbenzene (Cumene)
Total PCBs (SOC)	Sec-Butylbenzene	N-Propylbenzene
Propachlor (SOC)	N-Butylbenzene	1,3,5-Trimethylbenzene
Alachlor (SOC)	1,1-Dichloroethene	Tert-Butylbenzene
Simazine (SOC)	Dichlorodifluoromethane	1,1,1-Trichloroethane
Atrazine (SOC)	Chloromethane	1,2-Dichloroethane
Metolachlor (SOC)	Vinyl Chloride	
Metribuzin (SOC)	Bromomethane	
Butachlor (SOC)	Chloroethane	
2,4-D (SOC)	Chlorodifluoromethane	
2,4,5-TP (Silvex) (SOC)	Methylene Chloride	
Dinoseb (SOC)	Trans-1,2-Dichloroethene	
Dalapon (SOC)	2,2-Dichloropropane	
Picloram (SOC)	Bromochloromethane	

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 2019, 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 top 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.