

2020 drinking water quality report

DIX HILLS WATER DISTRICT

PUBLIC WATER SUPPLY IDENTIFICATION NO. 5103276

ANNUAL WATER SUPPLY REPORT

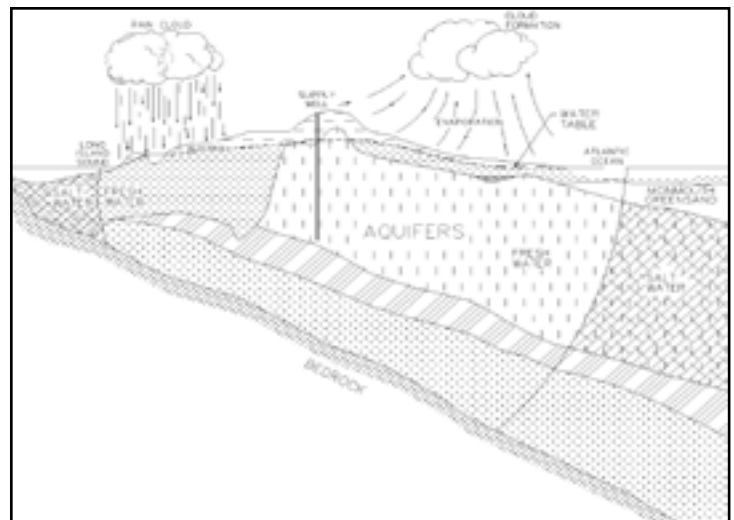
SPRING 2021

Each year, to comply with Federal and State requirements, the Dix Hills Water District sends you an annual Water Quality Report, and as in past years, the 2020 Water Quality Report notes that we are in full compliance with all Federal, State and County water quality regulations. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. The Huntington Town Board and the 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 17 wells located throughout the community that are drilled into the Glacial and Magothy aquifers 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. The water from these areas is treated by the District to remove any contaminants prior to the delivery of any water to the consumer.

The population served by the Dix Hills Water District during 2020 was 34,600. The total amount of water withdrawn from the aquifer in 2020 was 1.97 billion gallons, of which approximately 93 percent was billed directly to consumers. The remaining 7 percent is considered unaccounted for water due to leaks, fire fighting and water main flushing.



THE LONG ISLAND AQUIFER SYSTEM

WATER TREATMENT

The Dix Hills Water District provides treatment at all of its 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 the corrosive action between the water and water mains and in-house plumbing by the addition of sodium hydroxide. The District also adds small amounts of calcium hypochlorite (chlorine) as a disinfection agent and to prevent the growth of bacteria in the distribution system. Due to detectable levels of Volatile Organic Compounds (VOCs), granular activated carbon (GAC) filters have been installed at Plants No. 1, 5, and 8. The District is also in the process of designing and constructing an Advanced Oxidation Process (AOP) system at Well No. 5 to remove the emerging contaminant 1,4-Dioxane which was detected at notable levels in Well No. 5. Well No. 5 has been removed from service since 2019 and will not be used as a water supply source until the treatment system is in service.

Copies of a Supplemental Data Package, which includes the water quality data for each of our supply wells utilized during 2020, are available at the Dix Hills Water District office located at 683 Caledonia Road in Dix Hills, New York and at the Half Hollow Hills Public Library.

All of us at Dix Hills Water District work around the clock 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 futures.

WATER CONSERVATION MEASURES

In 2020 the Dix Hills Water District continued to implement a water conservation program in order to minimize any unnecessary water use. The District pumped 3.5 percent more water in 2020 than in 2019. This increase can be explained by the hotter and drier weather in 2020 compared to 2019.

From May 1st through September 30th, the District has established mandatory irrigation restrictions following the ODD and EVEN day of the month / ODD and EVEN house addresses schedule. Failure to comply with the lawn watering restrictions may result in fines. The District wishes to inform all of its residents that water conservation is in everyone's best interest.

WATER QUALITY

In accordance with State regulations, the Dix Hills 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 135 separate parameters are tested for in each of our wells numerous times each 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 affects.

CONTACTS FOR ADDITIONAL INFORMATION

We are pleased to report that our drinking water is safe and meets all Federal and State requirements with the exception of iron. If you have any questions about this report or the Dix Hills Water District, please contact Water District Superintendent John Hennessey at (631) 421-1812 or the Suffolk County Department of Health Services at (631) 852-5810. We want our residents to be informed about our water system. Major issues concerning the Dix Hills Water District can be discussed at the regularly scheduled Huntington Town Board meetings. They are normally held **once a month on a Tuesday or Wednesday at either 2:00 p.m. or 7:00 p.m.** at Huntington Town Hall, 100 Main Street, Huntington. Please check with the Town Clerk's office or the Town's home page at <http://huntingtonny.gov> for exact times and dates of the meetings. Due to COVID-19 restrictions, meetings can be viewed at Meetings On Demand as listed on the Town website.

The Dix Hills Water 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 or www.epa.gov/safewater.

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, and people with HIV/AIDS or other immune system disorders, some elderly and infants can also 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 (1-800-426-4791).

NEW YORK STATE MANDATORY HEALTH ADVISORY

Water from some of the wells within the Dix Hills Water District have a slightly elevated nitrate level. This level is well 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 healthcare provider.

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 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 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.

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 or AL)	Likely Source of Contaminant
Inorganic Contaminants							
Copper	No	August 2019	ND - 0.23 0.21 ⁽¹⁾	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	No	August 2019	ND - 30.4 2.4 ⁽¹⁾	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits
Barium	No	06/04/20	ND - 0.072	mg/l	2	MCL = 2.0	Naturally occurring
Sodium	No	12/08/20	2.6 - 24.9	mg/l	n/a	No MCL ⁽²⁾	Naturally occurring
Chloride	No	06/16/20	2.6 - 40.7	mg/l	n/a	MCL = 250	Naturally occurring
Iron	Yes ⁽³⁾	02/13/20	ND - 790	ug/l	n/a	MCL = 300	Naturally occurring
Manganese	No	06/16/20	ND - 24	ug/l	n/a	MCL = 300	Naturally occurring
Ammonia	No	06/11/20	ND - 0.33	mg/l	n/a	No MCL	Runoff from fertilizer and leaching from septic tanks and sewage
Nitrate	No	02/19/20	ND - 7.8	mg/l	10	MCL = 10	Runoff from fertilizer and leaching from septic tanks and sewage
Zinc	No	06/16/20	ND - 0.025	mg/l	n/a	MCL = 5	Naturally occurring
Nickel	No	06/04/20	ND - 2.1	ug/l	n/a	MCL = 100	Naturally occurring
Sulfate	No	06/11/20	ND - 22.0	mg/l	n/a	MCL = 250	Naturally occurring
Perchlorate	No	10/21/20	ND - 1.7	ug/l	0	AL = 18 ⁽⁴⁾	Fertilizer
Volatile Organic Contaminants							
Trichlorofluoromethane	No	11/17/20	ND - 0.63	ug/l	0	MCL = 5	Industrial discharge
Chlorodifluoromethane	No	03/10/20	ND - 1.3	ug/l	n/a	MCL = 5	Industrial chemical discharge Refrigerant
MTBE	No	02/20/20	ND - 0.59	ug/l	n/a	MCL = 5	Gasoline
1,2-Dichloropropane	No	08/31/20	ND - 0.56	ug/l	n/a	MCL = 5	Industrial discharge
Disinfection By-Products							
Chloroform	No	02/13/20	ND - 1.6	ug/l	0	MCL = 50	Disinfection By-Products
Total Trihalomethanes	No	02/13/20	ND - 1.6	mg/l	0	MCL = 80	Disinfection By-Products
Radionuclides							
Gross Alpha	No	07/26/17	0.1 - 0.73	pCi/L	n/a	MCL = 15	Naturally occurring
Gross Beta	No	12/27/16	0.17 - 1.65	pCi/L	n/a	MCL = 50	Naturally occurring
Combined Radium 226 & 228	No	07/26/17	0.5 - 1.52	pCi/L	n/a	MCL = 5	Naturally occurring
Disinfectant							
Chlorine Residual	No	01/07/20	0.3 - 1.5	mg/l	n/a	MRDL = 4.0	Measure of disinfectant
Physical Characteristics							
pH	No	12/08/20	6.4 - 7.8	pH units	n/a	7.5 - 8.5	Measure of acidity or alkalinity
Total Hardness	No	06/11/20	ND - 49.8	mg/l	n/a	No MCL	Naturally occurring
Calcium Hardness	No	06/11/20	0.9 - 26.5	mg/l	n/a	No MCL	Naturally occurring
Specific Conductivity	No	06/11/20	ND - 197.0	umhos/cm	n/a	No MCL	Naturally occurring

2020 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 or AL)	Likely Source of Contaminant
Synthetic Organic Contaminants (SOCs)							
1,4-Dioxane	No	08/31/20 09/16/20	ND - 0.60 ND - 0.62	ug/l	n/a	MCL= 1.0 ⁽⁶⁾	Industrial discharge ⁽⁶⁾
Perfluorooctanoic Acid (PFOA)	No	11/17/20	ND - 5.1	ng/l	n/a	MCL = 10 ⁽⁷⁾	Released into the environment from widespread use in commercial and industrial applications ⁽⁸⁾
Perfluorooctanesulfonic Acid (PFOS)	No	10/20/20	ND - 6.3	ng/l	n/a	MCL = 10.0 ⁽⁷⁾	Released into the environment from widespread use in commercial and industrial applications ⁽⁸⁾
UCMR⁽¹⁰⁾							
Perfluoroheptanoic Acid	No	08/31/20	ND - 5.4	ng/l	n/a	MCL = 50,000	Released into the environment from widespread use in commercial and industrial applications
Perfluorohexanesulfonic Acid	No	11/17/20	ND - 2.6	ng/l	n/a	MCL = 50,000	Released into the environment from widespread use in commercial and industrial applications
Bacteriologicals							
Total Coliform ⁽⁹⁾	No	05/27/20	1 positive sample out of 40 monthly samples = 2.5%	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 (ng/l) - Corresponds to one part of liquid in one trillion parts of liquid.(Parts per trillion-ppt).

Micromhos (umhos/cm) - The unit of measurement for conductivity.

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 2019, the District collect 33 samples for lead and copper. The 90% level is presented in the table as the maximum result. The next round of samples will occur in 2022. 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. Dix Hills Water District 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>.

⁽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⁾ - Iron is essential for maintaining good health. However, too much iron can cause adverse health effects. Drinking water with very large amounts of iron can cause nausea, vomiting, diarrhea, constipation and stomach pain. These effects usually diminish once the elevated iron exposure is stopped. A small number 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 iron's effects on the taste, odor and color of the water. The maximum iron level detected was from Well No. 10-1 on February 27, 2019. Follow-up sampling later in the year showed iron levels below 1.0 mg/l. The District treats the water from Well No. 10-1 with a sequestering agent that keeps the iron in suspension and prevents it from settling out in water mains and laundry. Iron sequestering is effective for iron levels up to 1.0 mg/l. The District will continue to monitor for iron. Should levels consistently be above 1.0 mg/l, the District will consider other treatment options. If Iron and Manganese are present, the total concentration of both should not exceed 500 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⁾ - 1,4-Dioxane -The New York State (NYS) established an MCL for 1,4 dioxane at 1 part per billion(ppb) effective August 26, 2020.

⁽⁶⁾ - 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.

⁽⁷⁾ - The US Environmental Protection Agency (EPA) has established a life time health advisory level (HA) 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 effective August 2020.

⁽⁸⁾ - PFOA/PFOS 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.

⁽⁹⁾ - Total coliform bacteria was detected in 1 out of 480 routine compliance samples collected within our distribution system. The one positive sample occurred in May 2020. 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 threats to this drinking water source were evaluated. The source water assessment includes a susceptibility rating based on the risk posed by each 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. See section "Water Quality" for a list of the contaminants that have been detected (if any). The source water assessments provide resource managers with additional information for protecting source waters into the future.

Drinking water is derived from 17 wells. The source water assessment has rated most of the wells as having a high susceptibility to industrial solvents and nitrates, and some wells having a high susceptibility to pesticides. The susceptibility to nitrates is due primarily to unsewered residential and institutional land-use, and related activities in the assessment area. The susceptibility to industrial solvents is primarily due to point sources of contamination related to transportation routes and commercial/industrial activities. The high susceptibility to pesticides is due primarily to agricultural land use practices in the assessment area. A copy of the assessment, including a map of the assessment area, can be obtained by contacting the Water District.

The Dix Hills Water District conducts over 10,000 water quality tests throughout the year, testing for over 130 different contaminants. The parameters listed below have been undetected in our water supply:

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

COST OF WATER

The District utilizes a unit price billing schedule with the consumers being billed at rates listed below:

Water Consumed	Charges
0 to 10,000	\$0.80/thousand gallons
10,001 to 50,000	\$0.90/thousand gallons
50,001 to 100,000	\$1.25/thousand gallons
100,001 to 150,000	\$1.65/thousand gallons
150,001 to 200,000	\$2.10/thousand gallons
Over 200,000	\$2.55/thousand gallons

Minimum Quarterly Charges are:

Size of Meter	Gallons Included	Quarterly Minimum
5/8"	10,000	\$8.00
3/4"	12,000	\$9.80
1"	23,000	\$19.70
1-1/2"	45,000	\$39.50
2"	78,000	\$79.00
3"	132,000	\$159.30
4"	179,000	\$249.90
6"	241,000	\$398.55
8"	320,000	\$600.00