

# 2012 drinking water quality report

HICKSVILLE WATER DISTRICT  
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902829

## ANNUAL WATER SUPPLY REPORT

MAY 2013

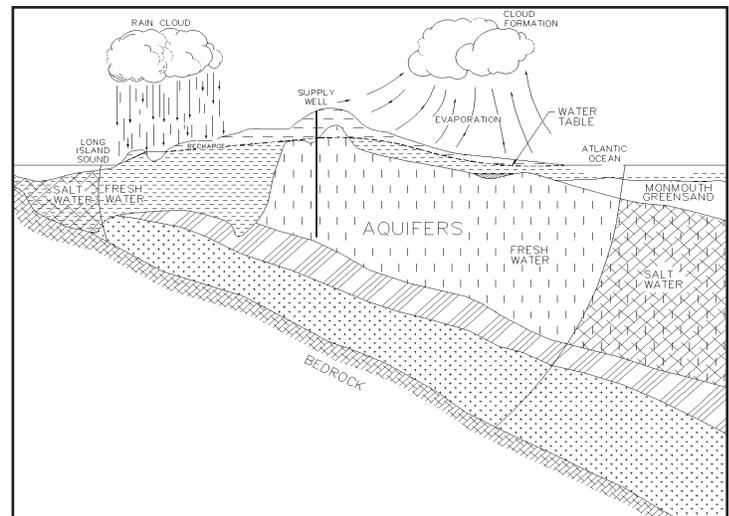
The Hicksville Water District is pleased to present this year's Water Quality Report. The report is required to be delivered to all residents of our District in compliance with Federal and State regulations. This report is designed to inform you about the quality of water and services we deliver to you 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 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 15 wells located throughout the community that are drilled into the Magohty 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. Similarly, 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 as tap water.

The population served by the Hicksville Water District during 2012 was 48,000. The total amount of water withdrawn from the aquifer in 2012 was 2.31 billion gallons, of which approximately 92.1% was billed directly to consumers, 1.4% was used for flushing, 4.8% was lost to system breaks and leaks and 1.7% was used for system testing to waste (total 100% accounted for water). The District has enacted a rigorous leak detection and system repair program to minimize water loss due to leaks and breaks.



THE LONG ISLAND AQUIFER SYSTEM

## WATER TREATMENT

The Hicksville 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 sodium hydroxide. Air stripping treatment units are located at Plant Nos. 1, 4, 5, 6, 8 and 9. The District also adds small amounts of calcium hypochlorite (chlorine) as a disinfection agent and to prevent growth of bacteria in the water distribution system. A nitrate removal system is currently being utilized at Plant No. 8 and a similar nitrate removal treatment system has been constructed at Plant No. 6. A granular activated carbon (GAC) system is employed at Plant No. 11.

## 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 2012, the Hicksville Water District continued to implement a water conservation program in order to minimize any unnecessary water use. The pumpage for 2012 was 2.9 percent less than in 2011. This decrease in pumpage can most likely be attributed to a slightly cooler and wetter weather of 2012.

Residents of the District can also implement their own water conservation measures such as retrofitting plumbing fixtures with low flow restrictors, modifying automatic lawn sprinklers to include rain sensors, repairing leaks in the home, installing water conservation fixtures/appliances 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).

## WATER QUALITY

In accordance with State regulations, the Hicksville 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.

## 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 Hicksville Water District, please contact Water District Superintendent Anthony Iannone at (516) 931-0184 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 Board meetings. They are normally held on the second and fourth Tuesday of each month at 5:00 p.m. at the Water District office.

The Hicksville 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.

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

## COST OF WATER

The District utilizes a step billing schedule as shown with the average consumer being billed at \$0.90 per 1,000 gallons.

### QUARTERLY WATER RATES

Consumption (gallons)	Charges
Up to 10,000	\$7.50 minimum
11,000 - 30,000	\$0.90/thousand gallons
31,000 - 50,000	\$1.15/thousand gallons
51,000 - 70,000	\$1.65/thousand gallons
Over 71,000	\$2.25/thousand gallons

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

The USEPA established a Lead and Copper Rule that required all public water suppliers to sample and test for lead and copper at the tap. The first testing was required in 1992. All results were excellent indicating that the District's corrosion control treatment program was effective in preventing the leaching of lead and copper from your home's plumbing into your drinking water. The same testing is repeated every three years and was last conducted in 2011. Results of the 2011 testing also were excellent.

Some of the water from the Hicksville Water District has elevated levels of nitrates, but well below the maximum contaminant level of 10.0 parts per million. Nitrate in drinking water at levels about 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.

# 2012 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
<b>Inorganic Contaminants</b>							
Copper	No	June - September 2011	ND - 0.14 <sup>(1)</sup>	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	No	June - September 2011	ND - 1.05 <sup>(1)</sup>	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits
Sodium	No	09/24/12	5.6 - 25.4	mg/l	n/a	No MCL <sup>(2)</sup>	Naturally occurring
Chloride	No	09/19/12	6.5 - 38.3	mg/l	n/a	MCL = 250	Naturally occurring
Calcium	No	09/19/12	2.6 - 18.0	mg/l	None	None	Naturally occurring
Iron	No	09/13/12	ND - 60	ug/l	n/a	MCL = 300	Naturally occurring
Nitrate	No	12/20/13	2.9 - 5.2	mg/l	10	MCL = 10	Runoff from fertilizer and leaching from septic tanks and sewage
Magnesium	No	09/19/12	1.3 - 4.8	mg/l	n/a	None	Naturally occurring
Barium	No	09/19/12	ND - 0.02	mg/l	n/a	MCL = 2.0	Naturally occurring
Nickel	No	09/12/12	0.6 - 4.0	ug/l	n/a	MCL - 100	Naturally occurring
Sulfate	No	09/19/12	ND - 21.9	mg/l	n/a	MCL = 250	Naturally occurring
<b>Synthetic Organic Contaminants Including Pesticides and Herbicides</b>							
None Detected	--	--	--	--	--	--	--
<b>Volatile Organic Contaminants</b>							
Tetrachloroethene	No	08/09/12	ND - 3.6	ug/l	0	MCL = 5	Industrial/Commercial discharge
Trichloroethene	No	08/07/12	ND - 2.1	ug/l	0	MCL = 5	Industrial/Commercial discharge
cis-1,2-Dichloroethene	No	08/09/12	ND - 0.7	ug/l	0	MCL = 5	Industrial/Commercial discharge
1,1-Dichloroethane	No	05/09/12	ND - 0.6	ug/l	0	MCL = 5	Industrial/Commercial discharge
Total Trihalomethanes	No	06/12/12	ND - 6.8	mg/l	0	MCL = 80	Disinfection By-Products
<b>Radionuclides</b>							
Gross Alpha	No	10/15/12	ND - 2.30	pCi/L	n/a	MCL = 15	Naturally occurring
Gross Beta	No	10/16/12	0.1 - 3.69	pCi/L	n/a	MCL = 50	Naturally occurring
Radium 228	No	07/18/11	ND - 1.66	pCi/L	n/a	NO MCL	Naturally occurring
<b>Unregulated Contaminants</b>							
Perchlorate	No	04/10/12	ND - 5.4	ug/l	0	AL = 18 <sup>(3)</sup>	Fertilizer
<b>Microbiological</b>							
Total Coliform	No	09/25/12	1 positive sample out of 64 samples collected in the month of September <sup>(4)</sup>	Positive or Negative	n/a	MCL = More than 5% of monthly samples are positive	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.

**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).

**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.

<sup>(1)</sup> - During 2011, we collected and analyzed 32 samples for lead and copper. The 90% percentile level is presented in the table. The action levels for lead and copper were not exceeded at any site. The next round of sampling and testing will occur in 2014.

<sup>(2)</sup> - 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.

<sup>(3)</sup> - Perchlorate is an unregulated contaminant. However, the NYS Dept. of Health has established an action level of 18.0 ug/l.

<sup>(4)</sup> - Total coliform bacteria was detected in routine monthly compliance samples collected within our distribution system. Total Coliform was not detected in additional sampling subsequently collected. 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. 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.

Our drinking water is derived from 15 wells. The source water assessment has rated most of the wells as having a very high susceptibility to industrial solvents and all of the wells as having a high susceptibility to nitrates. The very high 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 high susceptibility to nitrate contamination is attributable to unsewered, high density residential land use and related practices, in the assessment area, such as fertilizing lawns.

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

The Hicksville Water District conducts over 10,000 water quality tests throughout the year, testing for over 130 different contaminants which have been undetected in our water supply including:

Arsenic	Dinoseb	Methylene Chloride
Cadmium	Dalapon	Trans-1,2-Dichloroethene
Chromium	Picloram	2,2-Dichloropropane
Fluoride	Dicamba	Bromochloromethane
Mercury	Pentachlorophenol	1,1-Dichloropropene
Selenium	Hexachlorocyclopentadiene	1,2-Dichloroethane
Silver	bis(2-Ethylhexyl)adipate	1,2-Dichloropropane
Zinc	bis(2-Ethylhexyl)phthalate	Dibromomethane
Color	Hexachlorobenzene	Trans-1,3-Dichloropropene
Turbidity	Benzo(A)Pyrene	cis-1,3-Dichloropropene
Odor	Aldicarb Sulfone	1,1,2-Trichloroethane
Manganese	Aldicarb sulfoxide	1,3-Dichloropropane
Ammonia	Aldicarb	Chlorobenzene
Nitrite	Total Aldicarb	1,1,1,2-Tetrachloroethane
Detergents (MBAS)	Oxamyl	Bromobenzene
Free Cyanide	Methomyl	1,1,2,2-Tetrachloroethane
Antimony	3-Hydroxycarbofuran	1,2,3-Trichloropropane
Beryllium	Carbofuran	2-Chlorotoluene
Thallium	Carbaryl	4-Chlorotoluene
Lindane	Glyphosate	1,2-Dichlorobenzene
Heptachlor	Diquat	1,3-Dichlorobenzene
Aldrin	Endothall	1,4-Dichlorobenzene
Heptachlor Epoxide	1,2-Dibromoethane (EDB)	1,24-Trichlorobenzene
Dieldrin	1,2-Dibromo-3-Chl.Propane	Hexachlorobutadiene
Endrin	Dioxin	1,2,3-Trichlorobenzene
Methoxychlor	Chloroacetic Acid	Toluene
Toxaphene	Bromoacetic Acid	Ethylbenzene
Chlordane	Dichloroacetic Acid	M,P-Xylene
Total PCBs	Trichloroacetic Acid	O-Xylene
Propachlor	Dibromoacetic Acid	Styrene
Alachlor	Total Haloacetic Acid	Isopropylbenzene (Cumene)
Simazine	Bromodichloromethane	N-Propylbenzene
Atrazine	Radium 226	1,3,5-Trimethylbenzene
Metolachlor	Radium 228	Tert-Butylbenzene
Metribuzin	Vinyl Chloride	1,2,4-Trimethylbenzene
Butachlor	Bromomethane	Sec-Butylbenzene
2,4-D	Chloroethane	4-Isopropyltoluene (P-Cumene)
2,4,5-TP (Silvex)	Chlorodifluoromethane	N-Butylbenzene

Copies of the Supplemental Data Package, which includes the water quality data for each of our supply wells utilized during 2012, are available at the Hicksville Water District office which is located at 4 Dean Street, Hicksville New York and the local Public Library.

We, at the Hicksville 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 future.