

2013 drinking water quality report

INC. VILLAGE OF GARDEN CITY
PUBLIC WATER SUPPLY IDENTIFICATION NO. 2902824



ANNUAL WATER SUPPLY REPORT

MAY 2014

The Village of Garden City is pleased to present to you the 2013 Water Quality Report. The report is required to be delivered to all residents of our Village in compliance with Federal and State regulations and is designed to inform you about the quality water and services we deliver to you on a daily basis. It is important to the Village that our residents are familiar with the efforts that are taken to protect our water resources and to continually improve the water treatment process. Our goal is to deliver the highest quality water to your home.

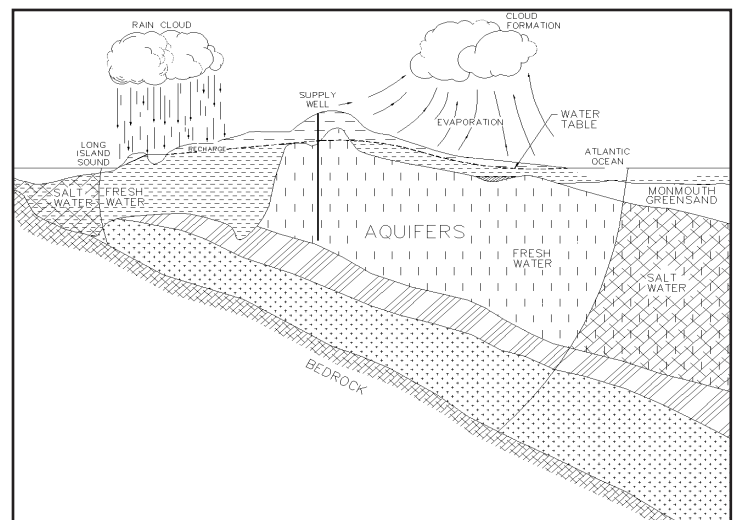
SOURCE OF OUR WATER

The Village's source of water is groundwater pumped from 10 wells located throughout the Village that are drilled into the Magothy aquifer located 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.

We are pleased to report that our drinking water is safe and meets all Federal and State requirements.

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 Village of Garden City during 2013 was 25,000. The total amount of water withdrawn from the aquifer in 2013 was 1.680 billion gallons, of which approximately 90 percent was billed directly to consumers.



THE LONG ISLAND AQUIFER SYSTEM

WATER TREATMENT

The Village of Garden City 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 utilized at Well Nos. 8, 9, 10, 11, 12, 13 and 14 for the removal of volatile organic compounds. A granular activated carbon filter system has been installed at Well No. 7 for the removal of volatile organic compounds. An iron removal treatment system is utilized for Well Nos. 15 and 16 at the Hilton Avenue Plant site. The iron in the water is related to aesthetics problems only and poses no health threat. The treatment system removes almost all of the iron from Well Nos. 15 and 16. The Village also adds small amounts of calcium hypochlorite (chlorine) as a disinfecting agent and to prevent the growth of bacteria in the distribution system.

CONTACTS FOR ADDITIONAL INFORMATION

NEW YORK STATE MANDATORY HEALTH ADVISORY

If you have any questions about this report or concerning your water utility, please contact Mr. Frank Koch, P.E., Superintendent of Water & Sewer at (516) 465-4017 or the Nassau County Department of Health (516) 227-9692. If you want to learn more, please attend any of our regularly scheduled Village Board meetings. They are normally held on the first and third Thursday of each month at 8:00 p.m. at the Village Hall. Village of Garden City Water Department personnel 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.

The Garden City Water Department routinely monitors for different parameters and 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 constituents. It's important to remember that the presence of these constituents 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.

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 Village's corrosion control treatment program was effective in preventing the leaching of lead and copper from your home's plumbing in to your drinking water. The same testing was last conducted last year with the same excellent results. The Village will conduct its next round of sampling and testing in 2014.

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).

Nitrate in drinking water at levels above 10 parts per million (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. Water from the Inc. Village of Garden City has a slightly elevated nitrate level, but well below the maximum contaminant level of 10.0. 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.

COST OF WATER

The Village utilizes the following step billing schedule with the average consumer being billed at \$2.61 per 1,000 gallons.

QUARTERLY WATER RATES - (effective June 2012)

Consumption (cubic feet)	Charges
Up to 2,000	\$41.00 minimum
2,001 - 6,000	\$20.50/1,000 cubic feet
Over 6,000	\$31.00/1,000 cubic feet

(cubic feet = 7.48 gallons)

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.

During 2013, the Village of Garden City continued to implement a water conservation program in order to minimize any unnecessary water use. The pumpage for 2013 was approximately 5 percent more than in 2012. This increase in water use can be attributed to the relatively warmer and drier weather conditions of 2013 compared to 2012.

Residents of the Village are encouraged to implement their own water conservation measures such as retrofitting plumbing fixtures with 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, consumers should be aware that the Village 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 Inc. Village of Garden City 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	Alachlor	Endothall	1,3-Dichloropropane
Cadmium	Simazine	1,2-Dibromoethane (EDB)	Chlorobenzene
Chromium	Atrazine	1,2-Dibromo-3-Chl.Propane	1,1,1,2-Tetrachloroethane
Fluoride	Metolachlor	Dioxin	Bromobenzene
Mercury	Metribuzin	Chloroacetic Acid	1,1,2,2-Tetrachloroethane
Silver	Butachlor	Bromoacetic Acid	1,2,3-Trichloropropane
Color	2,4-D	Dichloroacetic Acid	2-Chlorotoluene
Turbidity	2,4,5-TP (Silvex)	Trichloroacetic Acid	4-Chlorotoluene
Odor	Dinoseb	Dibromoacetic Acid	1,2-Dichlorobenzene
Iron	Dalapon	Total Haloacetic Acid	1,3-Dichlorobenzene
Ammonia	Picloram	Bromodichloromethane	1,4-Dichlorobenzene
Nitrite	Dicamba	Gross Beta	1,24-Trichlorobenzene
Detergents (MBAS)	Pentachlorophenol	Chloromethane	Hexachlorobutadiene
Free Cyanide	Hexachlorocyclopentadiene	Vinyl Chloride	1,2,3-Trichlorobenzene
Antimony	bis(2-Ethylhexyl)adipate	Bromomethane	Benzene
Beryllium	bis(2-Ethylhexyl)phthalate	Chloroethane	Toluene
Selenium	Hexachlorobenzene	Chlorodifluoromethane	Ethylbenzene
Thallium	Benzo(A)Pyrene	Methylene Chloride	M,P-Xylene
Lindane	Aldicarb Sulfone	Trans-1,2-Dichloroethene	O-Xylene
Heptachlor	Aldicarb sulfoxide	2,2-Dichloropropane	Styrene
Aldrin	Aldicarb	Bromochloromethane	Isopropylbenzene (Cumene)
Heptachloro Epoxide	Total Aldicarb	1,1,1-Trichloroethane	N-Propylbenzene
Dieldrin	Oxamyl	1,1-Dichloropropene	1,3,5-Trimethylbenzene
Endrin	Methomyl	1,2-Dichloroethane	Tert-Butylbenzene
Methoxychlor	3-Hydroxycarbofuran	1,2-Dichloropropane	1,2,4-Trimethylbenzene
Toxaphene	Carbofuran	Dibromomethane	Sec-Butylbenzene
Chlordane	Carbaryl	Trans-1,3-Dichloropropene	4-Isopropyltoluene (P-Cumene)
Total PCBs	Glyphosate	cis-1,3-Dichloropropene	N-Butylbenzene
Propachlor	Diquat	1,1,2-Trichloroethane	

2013 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	July/August 2011	ND-0.21 0.08 ⁽¹⁾	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	No	July/August 2011	ND - 6.25 3.27 ⁽¹⁾	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits
Barium	No	08/28/13	ND - 0.02	mg/l	n/a	MCL = 2.0	Naturally occurring
Sodium	No	08/23/13	10.2 - 42.1	mg/l	n/a	No MCL ⁽²⁾	Naturally occurring
Iron	No	11/22/13	ND - 130	ug/l	n/a	MCL = 300	Naturally occurring
Zinc	No	08/07/13	ND - 0.05	mg/l	n/a	MCL = 5	Naturally occurring
Magnesium	No	08/28/13	2.3 - 6.1	mg/l	n/a	No MCL	Naturally occurring
Chloride	No	08/28/13	20.0 - 68.1	mg/l	n/a	MCL = 250	Naturally occurring
Nickel	No	08/28/13	1 - 4	ug/l	n/a	MCL = 100	Naturally occurring
Calcium	No	08/28/13	4.0 - 13.1	mg/l	n/a	No MCL	Naturally occurring
Nitrate	No	08/28/13	0.8 - 6.5 ⁽³⁾	mg/l	10	MCL = 10	Runoff from fertilizer and leaching from septic tanks and sewage
Sulfate	No	08/07/13	10.2 - 30.9	mg/l	n/a	MCL = 250	Naturally occurring
Unregulated Contaminants							
Perchlorate	No	04/24/13	ND - 4.5	ug/l	0	AL = 18 ⁽⁴⁾	Industrial/Commercial chemical discharge
Volatile Organic Contaminants							
Tetrachloroethene	No	10/16/13	ND - 1.4	ug/l	0	MCL = 5	Industrial/Commercial discharge
Trichloroethene	No	08/29/13	ND - 1.7	ug/l	0	MCL = 5	Industrial/Commercial discharge
Total Trihalomethanes (TTHM)	No	12/19/13	ND - 3.2	ug/l	0	MCL = 80	Disinfection By-Products
Synthetic Organic Contaminants Including Pesticides and Herbicides							
None Detected	--	--	ND	--	--	--	--
Radionuclides							
Gross Alpha	No	12/27/13	14.45 - 5.2	pCi/L	--	MCL = 15	Naturally occurring
Radium 226	No	12/20/13	0.54 - 1.51	pCi/L	--	MCL = 5	Naturally occurring
Radium 228	No	12/27/13	0.51 - 1.44	pCi/L	--	MCL = 5	Naturally occurring
Unregulated Contaminant Monitoring Rule⁽⁵⁾							
1,4-dioxane	No	11/19/13	1.1 - 3.9	ug/l	n/a	MCL = 50	Used in manufacturing process
Cobalt	No	05/21/13	2.8 - 2.9	ug/l	n/a	No MCL	Naturally occurring
Chromium	No	06/27/13	0.3 - 1.0	ug/l	n/a	MCL = 100	Natural deposits
Strontium	No	05/21/13	39.0 - 66.0	ug/l	n/a	No MCL	Naturally occurring
Vanadium	No	05/21/13	ND - 0.3	ug/l	n/a	No MCL	Naturally occurring
Hexavalent Chromium	No	05/23/13	0.1 - 0.8	ug/l	n/a	No MCL	Natural deposits
Chlorate	No	11/19/13	ND - 180	ug/l	n/a	No MCL	By-Product of Chlorination
Micro-Bacteriological							
Total Coliform	No	02/26/13	1 positive out of 484 samples	Positive or Negative	--	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.

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.

⁽¹⁾ - During 2011, we collected and analyzed 30 samples for lead and copper. The 90% percentile level is presented in the table. The next sampling program for lead and copper will be conducted in 2014.

⁽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⁾ - Well No. 10 has high nitrates above the MCL. However, it is blended with Well No. 11 to reduce the nitrates below the MCL.

⁽⁴⁾ - Perchlorate is an unregulated contaminant. However, the State Health Dept. has established an action level of 18 ug/l.

⁽⁵⁾ - UCMR3 - Unregulated Contaminant Monitoring Rule 3 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.

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 the section entitled "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 ten (10) wells. The source water assessment has rated seven (7) of the wells as having a very high susceptibility to industrial solvents. The elevated susceptibility to industrial solvents is due primarily to point sources of contamination related to commercial/industrial facilities and related activities in the assessment area.

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

In accordance with State regulations, the Inc. Village of Garden City 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 130 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 your drinking water. 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.

Copies of a Supplemental Data Package, which includes the water quality data for each of our supply wells utilized during 2013, are available at the Department of Public Works at Village Hall located at 351 Stewart Avenue, Garden City, New York and the Garden City Public Library, 60 Seventh Street.

INCORPORATED VILLAGE OF GARDEN CITY

351 Stewart Avenue
Garden City, New York 11530

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