

2010 Water Quality Report

The Manhasset-Lakeville
Water District
serves all of Manhasset
and Lake Success and
portions of New Hyde
Park, North Hills,
and Great Neck



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Paul J. Schrader, P.E.

170 East Shore Road
Great Neck, NY 11023

Public Water Supply
ID # 2902836

This document has been
prepared in accordance
with the following:

Part 5-1.72 of the
New York State
Sanitary Code (10 NYCRR)

Federal Consumer
Confidence Report
Regulation
(40 CFR Part 141 Subpart O)

Look inside for
SPRING 2011
Newsletter



2010

WATER QUALITY REPORT

Introduction

To comply with State and Federal regulations, the Manhasset-Lakeville Water district is issuing an annual report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and your awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact Paul Schrader, our superintendent, at (516) 466-4416. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled board meetings held on Tuesday and Thursday at 6:30PM at our headquarters located at 170 East Shore Road. If you prefer, feel free to contact the Nassau County Department of Health at (516) 227-9692.

Where Does Drinking Water Come From?

In general, 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 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 activity. Contaminants that may be present in source water for which we test include: microbiological contaminants, inorganic contaminants, nitrate, lead and copper, pesticides and herbicides, volatile and synthetic organic chemical contaminants, radioactive contaminants, and triha-

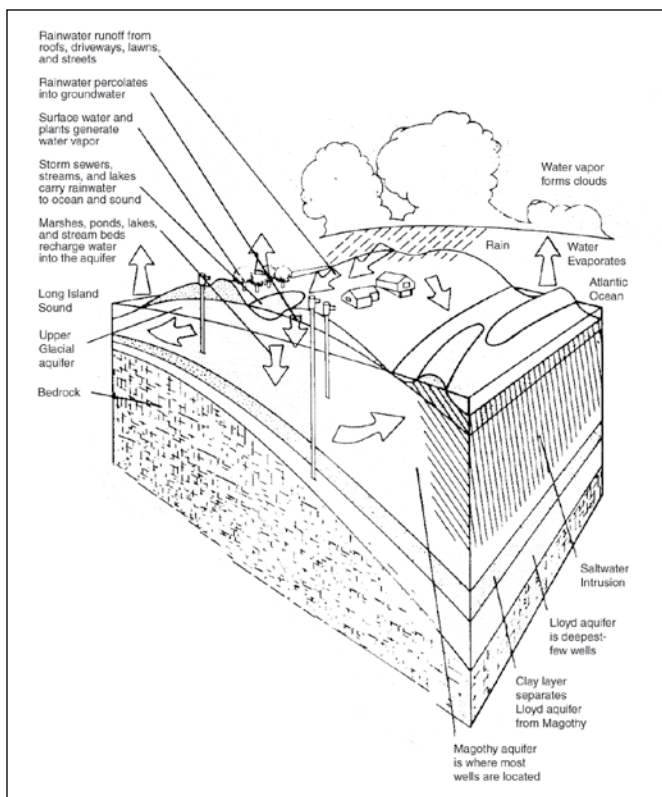
lomethanes. In order to ensure that tap water is safe to drink, the State and the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. In addition, the State Health Department and FDA's regulations also establish limits for contaminants in bottled water, which must provide the same protection for public health. All water pumped to the distribution system is in compliance with New York State Department of Health Standards for drinking water. Water pumped from unregulated private wells should not be used for consumption.

Our Manhasset-Lakeville Water District draws its groundwater supply from the Magothy and Lloyd aquifer systems that underlie our service area. The District currently operates eleven individual wells located at nine sites throughout Manhasset, Lake Success, North Hills, Great Neck, and New Hyde Park. Water delivered to your tap is a blend of water produced by the individual wells.

In compliance with the requirements of the Nassau County Department of Health, the District treats our raw water at each facility with Sodium Hydroxide for pH adjustment and with sodium and calcium hypochlorite (chlorine) to control bacteria. Volatile organic chemicals found in our source water are removed using air stripping (aeration) or carbon filtration (adsorption). The raw water from Shelter Rock Road well #2 and Gracefield well are blended before being pumped to the distribution system as a treatment technique for the high nitrate level found in the raw water of Shelter Rock well #2. Trace volatile organic chemicals have been detected in our Cumberland well. The levels detected are below the maximum contaminant level permitted for public water supply. The well has been moved to last on and first off status until a treatment plant can be built.

State-certified operators inspect each well location daily to check and record the amounts of chemical

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treatment added to the water supply and to monitor our wells and pumping stations. We collect representative water samples throughout the distribution system and have them analyzed at an independent New York State approved lab. The Nassau County Department of Health also collects and tests drinking water from our distribution system and reviews all testing results. In addition, our water system and treatment plants are monitored continually by state of the art computer systems for proper operation. Operators are on stand-by 24 hours a day to respond to any emergencies.

Source Water Assessment

The NYS DOH, with assistance from the Nassau County Department of Health and the CDM consulting firm, has completed a source water assessment for our district, based on available information. Possible and actual threats to our 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 contamination 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 customers is, or will become contaminated. The source water assessments provide us with additional information for protecting and managing our resource for the future.

The source water assessment has rated most of the wells as having a very high susceptibility to industrial solvents and a high to very 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 residential areas, commercial land use, and lawn fertilizers.

NITRATE

In the early 1970s, the Nassau County Department of Health strongly recommended that the Kings Point-Manhasset Sewage Collection District be created to protect the public water supply. Local civic associations opposed the installations, arguing that sewers would pave the way for large-scale housing developments and buildings, and the proposal was defeated. Consequently, the Manhasset area uses cess-

pools for sewage disposal.

Since then, the nitrate level in several of the district's wells that draw their water from the Magothy Aquifer have risen steadily and, in 2004, two of the wells exceeded the maximum allowable level for nitrate in drinking water. In 2009, an additional two wells, Searingtown wells 1 & 2, exceeded the maximum allowable limit. Since the district no longer has the capacity to manage these wells through reduced pumping and blending, nitrate removal systems have to be built. The District recently awarded contracts for the construction of a nitrate removal plant at our Searingtown station.

A supplement showing laboratory results for analyses of the source water at each well is available for inspection and review at our headquarters located at 170 East Shore Road, Great Neck, NY and at your local library.

Facts and Figures

Our water system serves over 43,000 people through over 10,500 individual service connections within a 10.2 square mile service area and includes the Village of Plandome. The total amount of water produced in 2010 was 2.619 billion gallons, which averaged 7.177 million gallons per day. The amount of water delivered to customers was 2.416 billion gallons. Unaccounted for water totaled 7.8%. This water was used to flush mains, fight fires, or was lost through leakage. In 2010, residential water customers were charged an average of \$2.17 per 1000 gallons used and were taxed \$4.54 per 100 dollars of assessed value of their property. The average annual residential consumption was 145,000 gallons. The average annual residential tax bill was \$129.

Are There Contaminants in Our Drinking Water?

As the State regulations require, we routinely test your water for numerous contaminants. These contaminants include total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds. The "Table of Detected Contaminants" depicts which compounds were detected in your drinking water.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental

Definitions

Action Level or AL: the concentration of a contaminant which, if exceeded, triggers treatment.

Adsorption: works on the principle of adhesion. In our filtering process, organic contaminants are attracted to granular activated carbon and adhere to its surface by a combination of complex physical forces and chemical action. The process removes organic chemicals to non-detectable levels.

Aeration: is the process of bringing air and water into contact in order to release volatile chemicals. In our air stripping process, packed aeration towers and blowers are used to remove volatile organics to non-detectable levels.

Inorganic contaminants: such as salts and metals, which can be naturally occurring or result from urban water run off, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Maximum Contaminant Level or MCL: the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as possible.

Maximum Contaminant Level Goal or MCLG: the level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

Microbiological contaminants: such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Micrograms per liter or ug/l: corresponds to one part liquid in one billion parts of liquid (parts per billion- ppb)

Milligrams per liter or mg/l: corresponds to one part liquid in one million parts of liquid (parts per million-ppm)

Nanograms per liter or ng/l: corresponds to one part liquid in one trillion parts of liquid (parts per trillion - ppt)

Non-Detects or ND: laboratory analysis indicates that the constituent is not present.

Organic chemical contaminants: including synthetic and volatile organic chemicals, which are by-products of industrial processes, and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

Pesticides and herbicides: which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Picocuries per liter or pCi/L: a measure of radioactivity in water.

Radioactive contaminants: which can be naturally occurring or be the result of oil and gas production or mining activities.

Are there Contaminants in our Drinking Water?

Table of Detected Contaminants

Parameter	Violation Yes/No	Level Detected (Range)	Level Detected (Average)	Date of Highest Detection	Regulatory Limit (MCL)	Regulatory Goal (MCLG)	Unit of Measure	Likely Source of Contaminant
Physical								
pH	No	7.5 - 7.7	7.6	6-Dec	6.5 - 8.5	N/A	N/A	Naturally present
Alkalinity	No	25.5 - 99.2	48.8	28-Jun	N/A	N/A	mg/l	in the environment
Total Dissolved Solids	No	60 - 238	123.8	28-Jun	500	N/A	mg/l	
Total Hardness	No	8.9 - 87.2	43.8	28-Jun	N/A	N/A	mg/l	
Inorganic Contaminants								
Calcium	No	1.8 - 17.0	8.7	28-Jun	N/A	N/A	mg/l	Erosion
Chloride	No	3.8 - 38.7	18.3	28-Jun	250	250	mg/l	of natural
Iron	No	ND - 0.07	0.06	28-Jun	0.3	N/A	mg/l	Deposits
Sulfate	No	5.2 - 21.5	11.1	28-Jun	250	N/A	mg/l	
Magnesium	No	1.0 - 8.6	5.4	28-Jun	N/A	N/A	mg/l	
Sodium	No	14.1 - 49.0	25.4	28-Jun	*	*	mg/l	
Zinc	No	ND - 0.03	0.2	6-Dec	5	N/A	mg/l	
Nitrate	No	0.1 - 6.6	3.0	6-Dec	10	10	mg/l	Leaching from septic tanks
Trihalomethanes								
Chloroform	No	ND - 0.8	0.70	27-Sep	50	N/A	ug/l	
Lead & Copper								
Lead	No	ND - 2.2	1.38**	9-Aug-08	AL = 15	0	ug/l	Corrosion of household plumbing
Copper	No	ND - 0.24	0.09**	23-Aug-08	AL = 1.3	1.3	mg/l	

* Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.
 ** The level presented represents the 90th percentile of the 30 sites tested. The 90th percentile is equal to or greater than 90% of the copper values detected in the water system.

Contaminants Tested for But Not Detected

1,1,1,2-Tetrachloroethane	2-Chlorotoluene	Isopropylbenzene	2,4-D	Diquat	Antimony
1,1,1-Trichloroethane	4-Chlorotoluene	m,p-Xylene	3-Hydroxycarbofuran	Endothall	Arsenic
1,1,2,2-Tetrachloroethane	4-Isopropyltoluene	Methyl tert-butyl ether	Alachlor	Endrin	Barium
1,1,2-Trichloroethane	Benzene	Methylene chloride	Aldicarb	Glyphosate	Beryllium
1,1-Dichloroethane	Bromobenzene	n-Butylbenzene	Aldicarb sulfone	Heptachlor	Cadmium
1,1-Dichloroethene	Bromochloromethane	n-Propylbenzene	Aldicarb sulfoxide	Heptachlor epoxide	Chromium
1,1-Dichloropropene	Bromodichloromethane	o-Xylene	Aldrin	Hexachlorobenzene	Copper
1,2,3-Trichlorobenzene	Bromomethane	sec-Butylbenzene	Atrazine	Hexachlorocyclopentadiene	Lead
1,2,3-Trichloropropane	Carbon tetrachloride	Styrene	Benzo(a)pyrene	Lindane	Manganese
1,2,4-Trichlorobenzene	Chlorobenzene	tert-Butylbenzene	bis(2-Ethylhexyl)adipate	Methomyl	MBAS
1,2,4-Trimethylbenzene	Chloroethane	Tetrachloroethene	Bis(2-ethylhexyl)phthalate	Methoxychlor	Mercury
1,2-Dichlorobenzene	Chloroform	Toluene	Butachlor	Metolachlor	Nickel
1,2-Dichloroethane	Chloromethane	trans-1,2-Dichloroethene	Carbaryl	Metribuzin	Nitrogen
1,2-Dichloropropane	cis-1,2-Dichloroethene	trans-1,3-Dichloropropene	Carbofuran	Oxamyl	Selenium
1,3,5-Trimethylbenzene	cis-1,3-Dichloropropene	Trichloroethene	Chlordane	Pentachlorophenol	Silver
1,3-Dichlorobenzene	Dibromochloromethane	Trichlorofluoromethane	Dalapon	Picloram	Thallium
1,3-Dichloropropane	Dibromomethane	Vinyl chloride	Dicamba	Propachlor	Zinc
1,4-Dichlorobenzene	Ethylbenzene	1,2-Dibromo-3-chloropropane	Dieldrin	Simazine	
Dichlorodifluoromethane	Free Cyanide	1,2-Dibromoethane	Dinoseb	Total PCBs	
2,2-Dichloropropane	Hexachlorobutadiene	2,4,5-TP (Silvex)	Dioxin	Toxaphene	

THE DISTRICT IS PROUD TO REPORT THAT YOUR TAP WATER CONTINUES TO MEET OR EXCEED ALL FEDERAL, STATE, AND LOCAL STANDARDS FOR DRINKING WATER QUALITY.

Protection Agency's Safe Drinking Water Hotline does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline 1-800-426-4791 or the Nassau County Department of Health at 516-227-9692.

What Does This Information Mean?

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below New York State requirements. Although nitrate was detected below the MCL, at times it has been detected at levels greater than one-half of the MCL. Therefore, we are required to present the following information on nitrate in drinking water:

Nitrate: Nitrate in drinking water above 10 mg/l is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Currently, 7 of our 11 active wells have shown trace levels of volatile organic chemicals. The District currently operates four treatment plants to remove these chemicals from our public supply. The District continues to strive for 100% non-detectable levels of all organic constituents in our finished water.

Do I Need to Take Special Precautions?

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to contaminants 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 about drinking water from their health care providers. EPA/CPC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia, and other Microbiological contaminants are available from the Safe Drinking Water Hotline 1-800-426-4791.

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 CONTINUES TO MEET OR EXCEED
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 WATER QUALITY.



Lead and Copper Testing

The Manhasset-Lakeville Water District completed its required testing of 30 possible high risk samples for lead and copper levels in 2008. **The results show no violation of the EPA criteria.** Another round of these 30 samples will be tested during the summer of 2011.

System Improvements

In 2010 the District continued the construction of new well facilities at our Lakeville Road and IU Willet's sites. In addition, the District completed the installation of new water mains on Lake Road in Lake Success. The rehabilitation of our Thomaston Tank was completed and brought back online in July. The construction of a nitrate removal plant at Searingtown station

got underway last fall and is expected to be online this summer. Our 2011 capital improvement plan includes an upgrade to our existing chemical injection equipment, completion of the nitrate plant, and the completion of new water mains on Lake Road, Bay Driveway, and North Plandome Road. The District is also working on a wireless communications network between our pumping facilities.

Why Save Water and How to Avoid Wasting It?

Water conservation continues to be a priority of the District. Lawn sprinkling remains as the leading non-essential use of water. Please remember that odd numbered houses may sprinkle on odd-numbered days and even numbered houses on even-numbered days. No sprinkling is allowed between the hours of 10:00AM and 4:00PM. Experts have indicated that lawn irrigation is only necessary twice per week. The District encourages the use of retrofits and the conscientious use of water within the home. Using a hose for cleaning sidewalks and driveways is prohibited.

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons it is important to conserve water:

Saving water SAVES ENERGY and some of the costs associated with both necessities of life;

Saving water REDUCES THE COST OF ENERGY required to pump water and the need to construct costly new wells, pumping systems, and water towers;

Saving water LESSONS THE STRAIN on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.

You can play an active role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It's not hard to conserve water.

Conservation tips include:

Load dishwashers to capacity.

Automatic dishwashers use 15 gallons per cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.

Turn off the tap while brushing your teeth.

Check every faucet in the house for leaks.

Just a slow drip can waste 15-20 gallons per day. Fix it and you can save almost 6,000 gallons per year.

Check toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons per year.

Use your water meter to detect leaks.

Simply turn off all taps and water using appliances, and then check the meter. If it moved after fifteen minutes, you have a leak.

Did you know?

A slow drip from a faucet can waste 15-20 gallons per day?

Fix it and you can save almost 6,000 gallons per year.

Up to 100 gallons a day can be lost from one toilet leak?

Fix it and you can save more than 30,000 gallons per year.

Manhasset, New York 11030
 Postal Patron

The Board of Commissioners Meets Weekly

The Board meets Tuesdays and Thursdays at 6:30 pm to discuss the weekly business of the Water and Fire District.

Special arrangements can be made through Barbara Fisoni 466-4416, ext. 704. All meetings will be conducted in the boardroom of the district office, 170 East Shore Road, Great Neck, unless otherwise publicly notified. Office hours are 8 am to 4 pm.

Member: Long Island Water Conference, American Water Works Association, Nassau Suffolk Water Commissioners Association, National Fire Prevention Association

EMERGENCY NUMBERS

Water.....(516) 466-4413
 Fire.....(516) 466-4411

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