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Massapequa Water District

2009 Drinking Water Quality Report

Public Water Supply Identification No.: 2902837

ANNUAL WATER SUPPLY REPORT

May 2010

The Massapequa Water District is pleased to present to you 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. The Board of Commissioners is happy to report that our water is in full compliance with all Federal, State and County regulations and that no violations exist. Our constant goal is to provide you with a safe and dependable supply of drinking water every day. We also want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. 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 nine (9) wells located throughout the community that are drilled into the Magothy aquifer beneath Long Island, as shown on the enclosed figure. Generally, the water quality of the aquifer in Massapequa is excellent.

The population served by the Massapequa Water District during 2009 was 43,000. The total amount of water withdrawn from the aquifer in 2009 was 1.789 billion gallons, of which approximately 95 percent was billed directly to consumers.

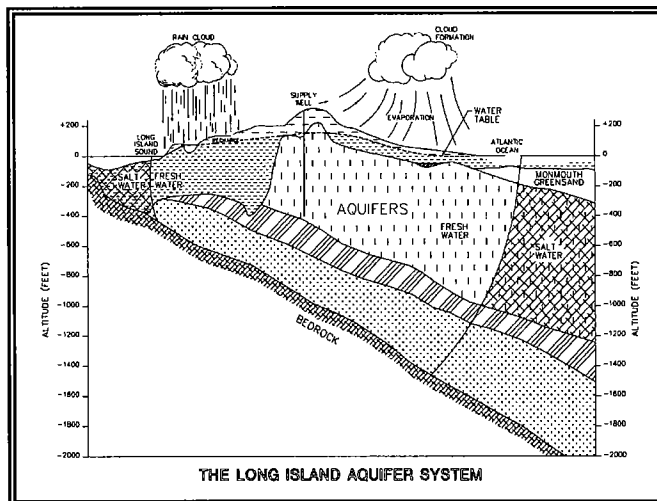
COST OF WATER

In 2009, the District utilized a step billing schedule as shown on the adjacent table.

Semi-Annual Water Rates – Residential

<u>Consumption (gallons)</u>	<u>Charges</u>
Up to 25,000	\$1.30/thousand gallons
25,001 to 100,000	\$1.73/thousand gallons
100,001 to 150,000	\$1.93/thousand gallons
150,001 to 200,000	\$2.13 /thousand gallons
Over 200,000	\$2.38/thousand gallons

The average household pays \$1.05 per day for water service (based on water rates and ad valorem taxes).



CONTACT FOR ADDITIONAL INFORMATION

If you have any questions about this report, concerning the Massapequa Water District or your water supply, please contact the Water District Asst. Supt. Andrew Colapinto (516) 798-5266 or the Nassau County Department of Health at (516) 227-9692. You may also want to visit our website at www.massapequawater.com. 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 on Wednesday mornings at 9:00 a.m. at the Water District office.

The Massapequa Water District 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 of our 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. Follow-up testing was conducted last year with the same excellent results.

WATER CONSERVATION MEASURES

In 2009, the Massapequa Water District continued to implement a water conservation program in order to minimize any unnecessary water use. The pumpage for 2009 was 3.6 percent less than in 2008. This decrease can most likely be attributed to the District's water conservation program, as well as the wet weather during 2009.

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, repairing leaks in the home, installing water conservation fixtures/appliances and maintaining a daily awareness of water conservation in their personal habits. Residents can pick up water conservation kits at the District office. In addition, consumers should be aware that the Nassau County Lawn Sprinkler Regulations are still in effect. This includes the ODD/EVEN day limitation and no irrigation between the hours of 10:00 a.m. and 4:00 p.m. 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). Utilizing the water conservation measures listed above can reduce your water use by 5%.

WHAT TYPE OF WATER TREATMENT IS USED?

The Massapequa 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 the corrosive action between the water and water mains and in-house plumbing by the addition of sodium hydroxide. To provide optimum corrosion

control, the Water District also adds blended polyphosphates to the water produced at each well site. This product will sequester the oxidation of metals such as iron (see section below) and provide a passivating film on the interior services of ferrous iron and copper piping to mitigate the potential leaching of lead and copper. It should be noted that all water treatment chemicals used by the District comply ANSI/NSF Standard 60. This standard is the accepted health-effect standard for drinking water additives. The District is also required to chlorinate the water supply with small amounts of chlorine.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

The natural geology of Long Island's south shore in areas like Massapequa contain significant amounts of minerals that result in naturally occurring elevated levels of iron in the water. The District adds iron sequestering agents (long chain polyphosphates) at all wells as part of the District's overall water treatment program to supplement corrosion control and to maintain the iron in the soluble state to minimize water stains on laundry and plumbing fixtures. The District is monitoring the iron levels. Once the levels exceed the regulatory requirements for iron sequestering, the District is prepared to proceed with the installation of iron removal treatment facilities. In accordance with State regulations, the Massapequa 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 your drinking water. It should be noted that many of these parameters are naturally found in some Long Island drinking water and do not pose any adverse health affects.

Groundwater contamination for organic compounds has been a critical issue in Nassau County. Massapequa Water District is one of the last water suppliers in the County that does not have to treat their water due to groundwater contamination.

WATER SYSTEM IMPROVEMENTS

The District is also continuing with a Capital Improvement Program to rehabilitate existing equipment and facilities to ensure that the District is able to supply a safe and reliable source of drinking water and sufficient pumping capacity for fire flow protection.

**MASSAPEQUA WATER DISTRICT
2009 WATER QUALITY REPORT
TABLE OF DETECTED PARAMETERS***

Contaminants or Constituents	Violation (Yes/No)	Date of Max. Sample	Level Detected (Maximum) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL or AL)	Likely Source of Contaminant
Inorganic Contaminants							
Copper	No	July/Aug/Sept. 2008	ND - 0.23 ⁽¹⁾	mg/l	1.3	AL = 1.3	Corrosion of galvanized pipes; Erosion of natural deposits
Lead	No	July/Aug/Sept. 2008	ND - 1.7 ⁽¹⁾	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits
Sodium	No	06/25/09	2.4 - 32.6	mg/l	n/a	No MCL ⁽²⁾	Naturally occurring
Nickel	No	08/26/09	ND - 4.2	ug/l	n/a	MCL = 100	Naturally occurring
Zinc	No	08/05/09	ND - 0.09	mg/l	n/a	MCL = 5	Naturally occurring
Calcium	No	06/25/09	ND - 2.0	mg/l	None	None	Naturally occurring
Chloride	No	08/26/09	2.7 - 18.7	mg/l	n/a	MCL = 250	Naturally occurring
Iron	Yes ⁽³⁾	09/30/09	ND - 1,060	ug/l	n/a	MCL = 300 ⁽³⁾	Naturally occurring
Manganese	No	08/05/09	ND - 40	ug/l	n/a	MCL = 300	Naturally occurring
Sulfate	No	08/05/09	ND - 9.3	mg/l	n/a	MCL = 250	Naturally occurring
Magnesium	No	8/5/09	ND - 1.1	mg/l	n/a	None	Naturally occurring
Synthetic Organic Contaminants Including Pesticides and Herbicides							
None Detected	--	--	ND	--	--	--	--
Volatile Organic Contaminants and Trihalomethanes and Haloacetic Acids							
Total Trihalomethanes	No	9/16/09	ND - 1.5	ug/l	n/a	MCL = 80	Disinfection By-Products

*Table prepared and analysis performed by H2M Labs

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).

pCi/L - pico Curies per Liter is a measure of radioactivity in water.

Non-Detects (ND) - Laboratory analysis indicates that the constituent is not present.

⁽¹⁾ - During 2008 we collected and analyzed 30 samples for lead and copper. The 90% percentile level is presented in the table. The action level for lead was not exceeded at any site tested. The next round of sampling and testing will occur in 2011.

⁽²⁾ - No MCL has been established for sodium. However, 20 mg/l is a recommended guideline for people on highly restricted sodium diets and 270 mg/l for those on moderately restricted sodium diets

⁽³⁾ - Iron is only a secondary drinking water standard. Elevated iron concentrations do not present any health affects. Therefore, exceeding the MCL for iron represents a level at which adverse aesthetic effects start to occur.

The District has continued its diligent and proactive efforts to upgrade and keep current with our customer water quality and consumptive use demands, while meeting and exceeding the stringent regulatory requirements of the EPA, New York State Department of Environmental Conservation and New York State and the local health departments. Furthermore, the well planned and progressive capital improvements will provide our residents with a safe and reliable source of drinking water at the lowest possible cost.

During 2009, the District has completed the following projects:

1) **Comprehensive upgrade of supply well control system:** This major project upgraded all control equipment to a digital platform. This system employs the latest computer technology to provide real time monitoring of vital water system attributes. This upgrade has already yielded valuable dividends by improving operational and energy efficiency. Furthermore, the real time monitoring facilitates improved emergency response and rapid response to changes in system demand conditions.

2) **Installation of emergency generator at the May Place plant site:** This on going project is being performed in conjunction with the Nassau County Police Department to meet the local Massapequa residents needs during a time of disaster. Ultimately, this cooperative project will improve vital emergency communication and disaster response that is of paramount and mutual concern to both the District and County.

3) **Rehabilitation of Well No. 2:** This project has been completed and has restored vital water supply capacity and improve operational reliability of the facility. Such projects are performed on a routine and proactive basis to ensure that adequate capacity is available to meet the needs of our customers and to ensure that ample fire protection is provided at all times.

The District, in accordance with its responsibility to protect public health and provide a high level of service, has commenced with the implementation of the following projects: 1) Structural maintenance and repairs of the May Place 1.0 MG elevated tank; 2) the design of an emergency generator at the Administrative office located at 84 Grand Avenue. This new generator will allow the District to effectively operate during power outages and emergency conditions.

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 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 nine (9) wells. The source water assessment has rated most of the wells as having a medium high to 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 high susceptibility to nitrate contamination is attributable to residential, commercial and institutional 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 obtained by contacting the Water District.

The residents of the District should be aware that the Water District is monitoring the contamination plume from the Grumman site and have placed the Nassau County Department of Health, New York State DEC and USEPA on notice of our concern that these plumes be remediated before they have the ability to impact our supply wells. For the past decade the District has taken every step possible to have the Grumman plume remediated. This has been ignored by the state (NYSDEC) and federal (EPA) regulatory agencies with jurisdiction over it. Therefore, the District will continue to aggressively address this serious water quality issue and will only be satisfied once the threat of contamination is completely eliminated.

To continue with our commitment to public health protection, the District recently authorized a study that will proactively identify, monitor and address groundwater contamination sources that have the potential to impact our supply wells.

Copies of a Supplemental Data Package, which includes the water quality data for each of our supply wells utilized during 2009, are available at the Massapequa Water District office located at 84 Grand Avenue, Massapequa, New York and the local Public Library.

We at the Massapequa Water District work continually to provide the highest quality water to every tap throughout the community. The security of our system is everyone's responsibility. We ask all of our consumers to be vigilant and if any suspicious activity is observed at any of our facilities we ask you to call 911 and the Massapequa Water District at 516-798-5266.

GRUMMAN PLUME – UPDATE

DISTRICT CONTINUES TO PROACTIVELY PUSH FOR PUBLIC HEALTH AND SUPPLY WELL PROTECTION

As you are aware, the Massapequa Water District has a vital role to ensure the integrity of our vital drinking water supply and to provide optimum public health protection. To this end, the District continues to aggressively and proactively address groundwater contamination concerns. At present the Grumman groundwater contamination plume continues to travel rapidly toward our vital public water supply wells. Based on our comprehensive sampling and laboratory testing procedures, our drinking water supply wells are not impacted by the plume and presently comply with all federal and state water quality standards. This situation will change unless swift and determined action is undertaken to remediate the plume and prevent the contamination from advancing toward our wells. The Massapequa Water District is the last water district in the path of the Grumman contamination plume that has not been impacted to date.

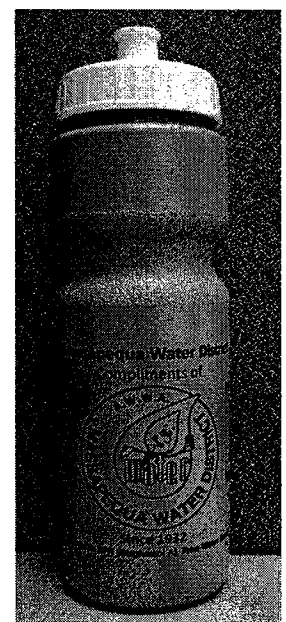
The Board of Commissioners takes public health protection very seriously. Accordingly meetings have been held with Senator Schumer's Long Island representative in order to obtain much needed federal assistance and funding. For the past decade we have taken every step possible to have the Grumman plume remediated. This has been ignored by the state (NYSDEC) and federal (EPA) regulatory agencies with jurisdiction over it. Therefore, we are seeking the Senator's assistance to compel federal and state regulatory agencies to perform their regulatory duties properly by remediating the groundwater contamination. The District also recently met with the U.S. Geological Survey (USGS) to determine if this federal agency can provide their valuable impartial technical and scientific resources to address the massive groundwater contamination plume. We believe that Senator Schumer may be able to provide

assistance with allocating federal dollars to facilitate USGS involvement and clean-up of the pollution.

The District is also asking the NYSDEC To strongly consider the remediation of the plume flowing from Grumman. The District has informed the NYSDEC that their reliance on wellhead treatment is not in conformance with the law which specifically provides that well head treatment shall be a measure of last resort. The District has explained to NYSDEC that the cleanup of the groundwater is certainly feasible as demonstrated at may sites where groundwater is subject to remediation. The District has also explained to the NYSDEC that the Grumman plume could cause a vapor intrusion problem, the evaporation of the contaminants presents in the groundwater moving upward through the soil and potentially passing through foundations into the indoor air. The NYSDEC must require the responsible parties to restore the aquifer and have the necessary remediation performed to achieve compliance with water quality standards.

As we have clearly stated, it is the mission of the District to provide optimal public health protection. This can only be achieved by remediating the plume and stopping the contamination from advancing toward our critical drinking water supply wells. The use of well head treatment methods to address the concern does not provide the comprehensive protection that we demand for the residents we serve. Please rest assured that the District will continue to aggressively address this serious water quality issue and will only be satisfied once the threat of contamination is completely eliminated.

The Board of Commissioners of the Massapequa Water District strongly encourages its customers to "Kick the Bottled Water Habit" and just drink tap water by offering environmentally friendly, reusable water bottles free of charge. Contrary to commonly held beliefs; tap water has been deemed safer than bottled water because of the more rigorous required drinking water testing standards. Residents can pick up their reusable tap water bottles at the Water District office located at 84 Grand Avenue.



Massapequa Water District
84 Grand Avenue
Massapequa, New York 11758

BUSINESS HOURS

Monday-Friday 8:30AM – 4:30 PM

www.massapequawater.com

Assistant Superintendent

Andrew Colapinto

Business Manager

Constance Belegrios

Office Manager

Kerri Alter

PROFESSIONAL MEMBERSHIPS

Long Island Water Conference
Nassau-Suffolk Water Commissioners
Massapequa Chamber of Commerce
American Waterworks Association

24 HOUR EMERGENCY NUMBER

516-798-5266

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WATER RESTRICTIONS

All residents must follow Nassau County's sprinkling regulations which prohibit any type of irrigation from 10:00 a.m. to 4:00 p.m. Water is permitted all other hours under the following conditions:

1. **EVEN-numbered addresses and premises without numbers may be watered on EVEN-numbered days.**
2. **Residents with ODD-numbered addresses may irrigate on ODD-numbered days.**

These regulations apply 365 days a year to both automatic and time-controlled sprinkler systems and manually operated hose sprinkling.