ANNUAL DRINKING WATER QUALITY REPORT FOR 2012

JERICHO WATER DISTRICT | 125 CONVENT RD. SYOSSET, NY 11791

(PUBLIC WATER SUPPLY ID # 2902831)

INTRODUCTION

To comply with State regulations, the Jericho Water District will annually issue a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and 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. An annual supplement is available at the Jericho Water District Office. This supplement contains water quality data for each well operated during 2012.

If you have any questions about this report or concerning your drinking water, please contact District Superintendent, Peter F. Logan, at (516) 921-8280 or the Nassau County Department of Health at (516) 227-9692. We want you to be informed about your drinking water. If you care to learn more, please attend any of our regularly scheduled Board of Commissioners meetings. The meetings are held at the District office at 125 Convent Rd. Syosset, on the first and third Wednesday of each month, commencing at 8:30 a.m.

WHERE DOES OUR 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 the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive materials, and can pick up substances resulting from the presence of animals or from 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 the EPA prescribe regulations which 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.

All of our water is pumped from 25 wells, ranging in depth from 372-688 feet, located throughout the District on 15 different well sites. The water delivered to your tap is a blend of water produced by the individual wells. 5 wells are located in Syosset, 5 are in Woodbury, 1 is in Laurel Hollow, 2 are in Jericho, 6 are in Muttontown, 3 are in Brookville, 2 are in Old Brookville, and 1 is in Glen Head. 24 of the wells pump from the Magothy Aquifer and one well pumps from the Lloyd Aquifer. Six storage tanks have a total storage capacity of 12.40 million gallons with a usable storage capacity of 8.79 million gallons. The District covers 37 square miles and maintains 353 miles of mains. The District maintains interconnections with the following neighboring water districts: City of Glen Cove, Hicksville, Locust Valley, Old Westbury, Oyster Bay, Plainview, Roslyn, South Huntington, and Westbury. In the event of an emergency, the Jericho Water District could supply or be supplied with water via these interconnections. During 2012, our system did not experience any restriction of our water source.

WATER TREATMENT

In compliance with the requirements of the Nassau County Board of Health, the District adds Sodium Hydroxide to the water at the individual wells prior to distribution. This is added to adjust the pH of the water so as to minimize its corrosive effect on water mains and water services. Additionally, the District adds chlorine at the level of .9 mg/L leaving the pumping stations and maintains a chlorine residual of .2 mg/L at the most remote point in the District.

SOURCE WATER ASSESSMENT

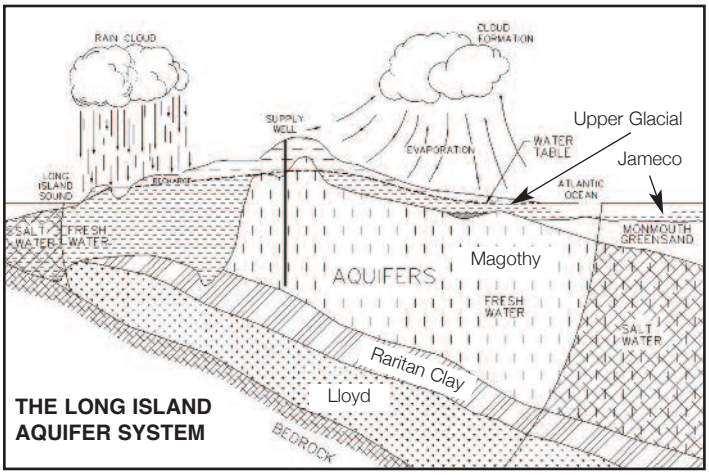
The NYSDOH, with assistance from the local health department and the CDM consulting firm, has completed a source water assessment for this system, based on available information. Possible and actual threats to this drinking water source were evaluated. The source water assessment includes a susceptibility 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 "Are there contaminants in our drinking water?" 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.

Drinking water is derived from 25 wells. The source water assessment has rated most of the wells as having a high susceptibility to industrial solvents and 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 residential and commercial land use and related practices in the assessment area, including fertilizing lawns.

A copy of the assessment, including a map of the assessment area, is available for review at the District's main office.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, radon and synthetic organic compounds. In 2012, we conducted tests for over 150 contaminants.



THE LONG ISLAND AQUIFER SYSTEM

We detected 20 of these contaminants, however, none exceeded a drinking water standard. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA'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 did not have any violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

Table 1

Contaminant	Violation (Yes/No)	Date of Sample	Level Detected Avg (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contamination
Primary Inorganics							
Barium	No	2012	7.7 (6.4 - 9)	ug/L	2,000	MCL - 2,000	Discharge from metal refineries; Erosion of natural deposits
Secondary Inorganics							
Chloride	No	2012	17.4 (15.8 - 19)	mg/L	n/a (1)	MCL - 250	Naturally occurring or indicative of road salt contamination
Copper	No	2012	90 (32 - 148)	ug/L	0	AL - 1,300	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	No	2012	.795 (ND - 1.59)	ug/L	n/a	AL - 15	Corrosion of household plumbing systems; Erosion of natural deposits
Nitrate as N	No	2012	3.56 (2.25 - 4.2)	mg/L	10	MCL - 10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Iron	No	2012	15 (ND - 30)	mg/L	n/a	MCL - 300	Naturally occurring
Sodium	No	2012	19.15 (18.3 - 20)	mg/L	n/a (2)	MCL - NDL	Naturally occurring; Road salt; Water softeners; Animal waste
Zinc	No	2012	20 (10 - 30)	ug/L	n/a	MCL - 5,000	Naturally occurring
Corrosivity							
Calcium	No	2012	3.32 (ND - 6.64)	mg/L	n/a	MCL - NDL	Naturally occurring
Langlier Index	No	2012	-2.68 (-1.65- -7)	n/a	n/a	MCL - NDL	Naturally occurring
pH	No	2012	7.75 (7.4 - 8.1)	n/a	n/a	TT - 7.5 - 8.5	Naturally occurring
Total Alkalinity	No	2012	42 (40 - 44)	mg/L	n/a	MCL - NDL	Naturally occurring
Total Dissolved Solids	No	2012	106 (102 - 110)	mg/L	n/a	MCL - NDL	Naturally occurring
Total Hardness	No	2012	27 (26 - 28)	mg/L	n/a	MCL - NDL	Naturally occurring
Sulfate	No	2012	8.06 (6.12 - 10)	mg/L	n/a	MCL - 250	Naturally occurring
POC's Volatile Organics							
Bromoform	No	2012	125 (ND -500)	ug/L	n/a	MCL - 50,000	By-product of chlorination
Dibromochloromethane	No	2012	150 (ND - 600)	ug/L	n/a	MCL - 50,000	By-product of chlorination
1,4 Dichlorobenzene	No	2012	250 (ND - 1,000)	ug/L	n/a	MCL - 50,000	By-product of chlorination
Chlorodibromomethane	No	2012	125 (ND - 500)	ug/L	n/a	MCL - 50,000	By-product of chlorination
Total Trihalomethane	No	2012	166 (ND - 1,000)	ug/L	n/a	MCL - 50,000	By-product of chlorination

Notes:
1 – N/A means not applicable.
2 – 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.

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. The MCL is established by the E.P.A. It is defined in terms of health risk as follows – If a person drank one-half gallon of water each day for 70 years and that water contained a contaminant at the MCL, there would be a one in a million risk of developing an adverse reaction to that substance.
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.
Distribution System: Consists of water mains, individual water services, hydrants and interconnections with other water districts.
Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
Non-Detects (ND): Laboratory analysis indicates that the constituent is not present.
No Designated Limit (NDL): No limit has been established.
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 per liter (ng/L): Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion - ppt).
Picocuries per liter (pCi/L): A measure of the radioactivity in water.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER Monitoring Requirements Not Met For Jericho Water District

Our water system violated the testing requirement for Specific Organic Chemicals[1] (SOC's) for the fourth (4th) quarter monitoring period of 2012 and therefore received a notice of violation. As required by the New York State Sanitary Code, if SOC contaminants are detected in a public water supply well, that well must be sampled in every quarter in which it is operated for the detected contaminant. During the fourth (4th) quarter of 2012, the well was operated without the required sample being taken. Results from samples taken each month since April indicate levels far below the Maximum Contaminant Level (MCL) and meets all drinking water standards. That is why this notification is coming at this time. Even though it was not an emergency, as our customers, you have the right to know what happened and what we did to correct the situation.

What should I do? What is being done?

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the fourth (4th) quarter monitoring period, we did not monitor Well 17 SOC's and therefore cannot be sure of the quality of our drinking water during that time. However, there is nothing you need to do at this time and no alternative water supply is needed to be used. In 2012, the District took over 1,100 water quality samples for 150 different contaminants from our wells, treatment facilities, storage tanks and distribution system. The contaminants tested for include microbiological, POC's (Principal Organic Contaminants), IOC's (Inorganic Contaminants), nitrates, perchlorate, radiological, disinfection byproducts, asbestos, and SOC's. Each contaminant has a specific sampling cycle in which it is required to be tested. SOC's are required to be sampled from each well every 18 months, unless there is a detection, as in this case, then quarterly samples are required.

What happened?

During routine sampling in April of 2012, trace amounts of Atrazine and Simazine, both SOC's, were detected in Well 17. The New York State Health Department requires that SOC samples are collected from wells every eighteen (18) months. Due to these detections, the frequency for required monitoring changed to quarterly. The District, however, sampled this well each month since the first detection, taking more samples than what was required; the last sample being collected in September. All results of these analysis reported levels far below the MCL. Well 17 was run into the system in the fourth (4th) quarter for 22 days in October, and then shut down at the end of the month for the winter. Due to a clerical error, the quarterly sample for SOC's was inadvertently overlooked and not sampled prior to the winter shutdown. Only 1 water quality sample out of 1,100 samples was missed however, to avoid the reoccurrence of such a monitoring violation, a system of checks and balances has been instituted. Well 17 will be sampled prior to putting it back on line for the summer.

For more information, please contact Superintendent Peter F. Logan at (516) 921-8280 or the Nassau County Department of Health at (516) 227-9692.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

[1] LIST OF SOC CONTAMINANTS: Alachlor, Aldicarb, Aldicarb Sulfone, Aldicarb Sulfoxide, Aldrin, Atrizine, Benzo(a)pyrene, Butachlor, Carbaryl, Carbofuran, Chlordane (Total), Dalapon, DBCP(G), Di(2-ethylhexyl)adipate, Di(2-ethylexyl)phthalate, Dicamba, Dieldrin, Dinoseb, Diquat, 2,4-D, Endothall, Endrin, 1,2-Dibromoethane (EDB), Glyphosate, Heptachlor, Heptachlor Epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, 3-Hydroxycarbofuran, Methomyl, Methoxychlor, Metolachlor, Metribuzin, Oxamyl (Vydate), Pentachlorophenol, Picloram, Propachlor, Polychlorinated Biphenyls (PCB's), Simazine, Toxaphene, 2,3,7,8-TCDD (Dioxin), 2,4,5-TP (Silvex)

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 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 (1 800-426-4791).

NON – DETECTED CONTAMINANTS

According to State regulations, the Jericho Water District routinely monitors your drinking water for various contaminants. The following contaminants were analyzed for but not detected:

Antimony, Arsenic, Beryllium, Cadmium, Chromium, Cyanide (Free), Fluoride, Mercury, Nickel, Selenium, Silver, Thallium, Ammonia, Foaming Agent, Manganese, Nitrite, Five Haloacetic Acid (Haa5), Radiological (Gross Alpha), Asbestos Fibers, Bromochloromethane, Bromomethane, Carbon Tetrachloride, Chloroethane, Chloromethane, Dibromomethane, Dichlorodifluoromethane, 1,1-Dichloroethene, t-1,2-Dichloroethene, c-1,2-Dichloroethene, 1,1- Dichloroethane, 1,2–Dichloroethane, 1,1-Dichloroethylene, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,2-Dichloropropane, 1,3-Dichloropropane, 2,2-Dichloropropane, 1,1-Dichloropropene, cis-1,3-Dichloropropene, trans-1, 3-Dichloropropene, Methylene Chloride, 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, Tetrachloroethene, Tetrachloroethylene, 1,1,1 Trichloroethane, 1,1,2-Trichloroethane, Trichloroethene, Trichlorofluoromethane, 1,2,3-Trichloropropane, Vinyl Chloride, Methyl tert-butyl ether, Benzene, Bromobenzene, n-Butylbenzene, sec-Butylbenzene, tert-Butylbenzene, Chlorobenzene, 2-Chlorotoluene, 4-Chlorotoluene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, p-Isopropyltoluene, n-Propylbenzene, Styrene, Toluene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, m-Xylene, o-Xylene, p-Xylene.

FACTS AND FIGURES

Our water system serves 58,000 people through 18,604 services. The total water produced in 2012 was 4.7 billion gallons. The daily average of water treated and pumped into the distribution system is 12,773,000 gallons per day. The maximum daily pumpage occurred on August 3rd, 2012 wherein 28.05 million gallons were pumped. The minimum daily pumpage occurred

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on October 29th, 2012 when 3.1 million gallons of water were pumped. For 2012, a figure for the unaccounted for water cannot be given. There is no reason to believe that the unaccounted for water would be substantially different than it has been in past years; wherein it has always been well below the DEC goal of 10%. The unaccounted for water represents that used for sampling, to flush mains and hydrants, street cleaning, fighting fires, as well as water lost through leaking services, hydrants, and mains. In 2012, water customers within the boundaries of the District were billed for water as follows:

Minimum Charge per Quarter - $9.00

0 – 10,000 gallons	$0.90 per 1,000
10,001 – 30,000 gallons	$0.95 per 1,000
30,001 – 100,000 gallons	$1.65 per 1,000
Over 100,000 gallons	$2.20 per 1,000

Tax Rate - $1.771 per $100.00 of assessed valuation.

Outside the boundary of the District, customers were billed as follows:

Minimum Charge per Quarter - $12.00

0 – 10,000 gallons	$1.20 per 1,000
10,001 – 30,000 gallons	$1.25 per 1,000
30,001 – 100,000 gallons	$1.95 per 1,000
Over 100,000 gallons	$2.50 per 1,000

On Long Island, the average family of four uses approximately 120 – 150 gallons of water per person per day. Based on this average, the quarterly cost for water would range from $47.50 - $64.00.

Size Connection from District Mains	Charge per Annum Payable in Advance
2” Diameter	$30.00
3” Diameter	$42.00
4” Diameter	$85.00
6” Diameter	$250.00
8” & Larger Diameter	$500.00

SPECIAL NEEDS CUSTOMERS

Some of the District’s customers may require a continuous supply of water. Most commonly, these are people who use dialysis machines at home. If you have this special need, kindly inform the District by letter, so that we can update our emergency plan.

WATER CONSERVATION

The water supply is one of the most critical environmental elements that must be safeguarded to ensure the continuance of an adequate supply for present and future generations. The District must be concerned with both quality and quantity issues, as they are inextricably linked. What is not wasted or contaminated will be available for future use. It is clear then that the responsibility for conserving water rests with each and every one of us. Each person must take a hard look at their individual water use and implement as many conservation measures as may apply to their life style. By conserving water you are also:

- Saving energy and some of the costs associated with both of these necessities of life;
- Reducing the cost of energy required to pump water and the need to construct costly new wells, pumping systems, and water towers; and
- Lessening 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.

Each person can play a role in conserving water and saving money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever they can. It is not hard to conserve water.

CONSERVATION TIPS INCLUDE:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it up and you can save almost 6,000 gallons per year.
- Check your 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 a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, then check the meter after 15 minutes, if the dial on the meter has moved, you have a leak.

LEAKS – COSTLY AND WASTEFUL

APPROXIMATE NUMBER OF GALLONS WASTED*

Size of leak	Per Hour	Per Day	Per Quarter	Cost per Quarter
.25	547	13,128	1,181,520	$2,523.90
.1875	308	7,392	665,280	$1,386.50
.125	137	3,288	295,920	$574.70
.0625	34	816	73,440	$98.95

*At 60 pounds per square inch of water pressure

SYSTEM IMPROVEMENTS

Commenced / Completed 2012 -

- Installation of a new well in Old Brookville
- Conversion of obsolete telemetry operational system to cable-based SCADA communication system
- Study and evaluation for the installation of a nitrate removal system for Wells 9 & 14, Jericho

Planned in 2012 / Completed in 2013

- Relocation of telemetry equipment at the Woodbury and Split Rock tanks
- Rehabilitation of Wells 23 & 29
- Purchase of several new vehicles
- Design, bid & commence construction of the de-nitrification plant for Wells 9 & 14
- Installation of enhanced security system

CLOSING

To take anything for granted, is in a real sense, to neglect it and that is how most of us treat water.
- Robert Raikes, Water Weather and Prehistory

Water is one of the most precious resources and yet it is often taken for granted simply because it is always there for us. The purpose of this report is to keep you informed about your water supply. Knowledge is power. The power to conserve and protect this resource is in all of our hands. Please feel free to call on us at (516) 921-8280 with any questions you may have relative to this report.