



## CITY OF MOUNT VERNON BOARD OF WATER SUPPLY

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Mount Vernon, New York 10550

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Superintendent

# YEAR 2011

## WATER QUALITY

### REPORT

**PWS ID NY5903441**

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WATER SUPPLY AT (914) 668-7820.

The Board of Water Supply of the City of Mount Vernon (**Public Water System Identification Number 5903441**) is pleased to present the Annual Drinking Water Quality Report for 2011, as required by Federal and State regulations. The purpose of this report is to raise your understanding of drinking water and your awareness of the need to protect our drinking water resources. It provides information on where your water comes from, what it contains and how it compares with standards set by Federal and State regulatory agencies. We are proud to report that our system did not violate a maximum contaminant level or any other water quality or monitoring standard. For more information or to discuss any drinking water issues, feel free to contact Marianne Vogel, Superintendent, at (914) 668-7820. Or, you may call the Westchester County Department of Health, Bureau of Environmental Quality at (914) 813-5000. Your water bill also has useful information about your water supply. Further information about contaminants and potential health effects is available at [www.epa.gov/safewater](http://www.epa.gov/safewater).

### Source of Water Supply

The Board of Water Supply receives all its water from New York City's Catskill / Delaware reservoir system, an unfiltered surface supply located in a protected watershed area in upstate New York west of the Hudson River. New York City's Department of Environmental Protection (DEP) oversees the operation, maintenance, and protection of their reservoir system. It consists of 19 reservoirs and three controlled lakes, all of which allow for maximum flexibility in delivering the highest quality water possible. The water travels through the Catskill and Delaware Aqueducts to the Kensico Reservoir, where it is blended under normal operating conditions. This blending enhances overall water quality. The Kensico Reservoir also acts as a large settling basin, since it takes from twenty to thirty days for the water to travel from one end to the other. During this time, any particulate matter or "turbidity" from spring run-off or heavy rains can settle out in the reservoir, thereby clarifying the water. From Kensico, the water continues south, entering Mount Vernon at two locations.

The first location takes its water from the 48 inch Kensico Line which is owned and operated by Westchester County Water District #1. Water enters the 48 inch Kensico Line from the Delaware Aqueduct at Shaft 22 in Yonkers. Under certain operating conditions, water can enter the Kensico Line at Kensico Reservoir and be delivered all the way south to Mount Vernon.

The second entry point for Mount Vernon is in south central Yonkers. Water from the Catskill Aqueduct passes into a large transmission main just before reaching Hillview Reservoir. It travels through Yonkers and into Mount Vernon.

From these entry points, the water enters the 106 miles of distribution piping to serve Mount Vernon's 67,467 residents through 10,163 metered service connections. In 2011 alone, 2.83 billion gallons of water coursed through the city's mains. The average daily flow was 7.76 million gallons (MG) and the highest single day was 9.90 MG. Unaccounted for water (resulting from service leaks and main breaks, fire fighting, hydrant flushing, under-registration of meters, and unauthorized use) comprised 17.7% of the total. The industry average is 25 to 35% unaccounted for water with anything below 20% considered a "tight" system.

### Water Treatment

The water is chlorinated (for disinfection purposes) and fluoridated (for protection against tooth decay) by New York City DEP at Kensico Reservoir Shaft 18. DEP is one of the many water suppliers in New York State that treats water with a controlled low level of fluoride for consumer dental health protection. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal range from 0.7 to 1.2 mg/l (parts per million). The New York City Health Code requires a fluoride concentration of 1.0 mg/L, and the NYSDOH maximum

contaminant level (MCL) for fluoride is 2.2 mg/L. To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that the DEP monitor fluoride levels on a daily basis. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/L MCL for fluoride. During 2011, fluoride was not continuously supplied in the NYC Catskill and Delaware Systems due to maintenance on the fluoride feed system and other aqueduct construction activities that required the system to be turned off. Fluoridation on the Catskill System was offline 7% of the time, while fluoridation on the Delaware System was offline 20% of the time. There was an extended period of frequent fluoridation interruptions during a 106-day period, from March 15 to June 28, 2011 due to construction work at Delaware Shaft 19. According to the New York State Dental Association, a continuous interruption of fluoridation is not expected to have a significant impact on dental health. Outside of this time period, DEP met optimal fluoride levels more than 85% of the time. Interruption of fluoridation in 2011 did not require public notification.

On January 13, 2011, the United States Department of Health and Human Services requested public comment on its proposal to lower the optimal fluoride target to 0.7 mg/L. In response, NYSDOH issued guidance to public water supplies indicating that water suppliers in New York State could reduce the optimal fluoride target dose to 0.8 mg/L. Based on these developments, the New York City Department of Health and Mental Hygiene authorized DEP to lower the target dose for fluoride to 0.8 mg/L. This dosage change took effect on February 14, 2012.

Either Westchester County Water District #1 or Mount Vernon again adds chlorine at the entry point in order to provide a detectable chlorine residual throughout the distribution system. Additionally, sodium hydroxide is added for pH adjustment, and orthophosphate is added to coat the interior surface of the pipes, thereby shielding them from the corrosive action of the water. The goal of this treatment is to reduce the amount of lead and copper leaching into the water from the individual service lines and household plumbing. Test results indicate that it has been quite effective.

### Board of Water Supply Responsibilities

The Board of Water Supply ensures Mount Vernon's compliance with all federal and state monitoring and reporting requirements, and maintains and repairs water mains, service lines (from the curb valve to the main), fire hydrants, and water meters. During 2011, the Water Board installed 8 and repaired 77 hydrants; installed, repaired, or replaced 311 meters; repaired 27 main breaks and 97 street side service leaks, and made 11 water taps and cut-ins. We also replaced 75 lead and 5 plastic service lines, the majority of them during the repair of street side leaks.

### Capital Improvements

In June 2011, a firm specializing in leak detection was engaged to perform a water leakage survey of the entire 106 miles of water mains. They pinpointed some major leaks that had not surfaced and would not have been identified without the survey. Following subsequent main repairs, per capita usage by September 2011 was 115 gallons per person per day, as compared to 122 gallons in September 2010. The Board of Water Supply is planning to conduct another leak survey in 2012, in order to further reduce unaccounted for water.

In the fall of 2011, the Board of Water Supply cleaned and cement lined approximately 7,500 lineal feet of 6, 8, and 10-inch water mains in southeast Mount Vernon. This project improved the availability of water for fighting fires in the area, and should reduce the number of off-color water complaints.

### Cost of Water

Given that the typical annual consumption for a family of four is 100,000 gallons, the average quarterly water bill was approximately \$79. Residential water rates at \$2.35 per 100 cubic feet are still among the lowest in Westchester County.

## Health Considerations

All drinking water, including bottled 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 (800-426-4791).

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 material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include microbial contaminants, inorganic contaminants, pesticides and herbicides, radioactive contaminants, and organic chemical contaminants.

In order to ensure that tap water is safe to drink, the State and 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.

Although our water met or exceeded state and federal regulations, there are some people who 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 about their drinking water from their health care providers. EPA/CDC guidelines on the 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).

## Source Water Assessment Program

The New York State Department of Health has evaluated the susceptibility of water supplies statewide to potential contamination under the Source Water Assessment Program (SWAP), and their findings relative to our water supply are summarized in the paragraphs below. It is important to stress that these assessments were created using available information and only estimate the potential for source water contamination. Elevated susceptibility ratings do not mean that source water contamination has or will occur for this public water system (PWS). This PWS provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards.

## New York City Watershed

This PWS obtains water from the NYC water supply system. Water comes from the Catskill / Delaware watersheds west of the Hudson River. The NYC DEP has implemented a series of programs to evaluate and protect source water quality within these watersheds. Their efforts focus on three important program areas: the enforcement of Strengthened Watershed Rules and Regulations; the acquisition and protection of watershed lands; and implementation of partnership programs that target specific sources of pollution in the watersheds. Due to these intensive efforts, the SWAP methodologies applied to the rest of the state were not applied for this PWS.

## Source Specific Assessment

The reservoirs of the Catskill / Delaware watersheds west of the Hudson are in a mountainous rural area and are relatively deep with little development along their shorelines.

The main water quality concern associated with land cover is agriculture, which can contribute microbial contaminants, pesticides, and algae producing nutrients. There are also some potential contamination concerns associated with residential lands and associated wastewater discharges.

However, advanced treatments which reduce contaminants are in place for most of these discharges. There are also a number of other discrete facilities, such as landfills, chemical bulk storages, etc. that have the potential to impact local water quality, but large significant

water quality problems associated with these facilities are unlikely due to the size of the watershed and surveillance and management practices. Additional information on the water quality and protection efforts in these NYC watersheds can be found at DEP's website

at [www.nyc.gov/html/dep/html/watershed\\_protection/index.shtml](http://www.nyc.gov/html/dep/html/watershed_protection/index.shtml).

## Information on Cryptosporidium and Giardia

Cryptosporidium is a microbial pathogen found in surface water and ground water under the influence of surface water. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. During 2011, as part of routine and enhanced sampling, NYC collected 119 - 50 liter samples from their source water at Kensico Reservoir and analyzed them for Cryptosporidium oocysts. In these samples, 3 oocysts were detected. Therefore, testing indicates the presence of Cryptosporidium in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. The method also cannot distinguish among different species of Cryptosporidium, only a few of which can infect humans. Ingestion of Cryptosporidium may cause cryptosporidiosis, a gastrointestinal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their health care provider regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Giardia is a microbial pathogen present in varying concentrations in many surface waters and groundwater under the influence of surface water. Giardia is removed / inactivated through a combination of filtration and disinfection or by disinfection alone. During 2011, as part of routine and enhanced sampling, NYC collected 119 - 50 liter samples from their source water at Kensico Reservoir, and analyzed them for Giardia cysts. In these samples, 202 Giardia cysts were detected. Therefore, testing indicates the presence of Giardia in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. The source water is disinfected before reaching our distribution system to remove / inactivate the Giardia cyst. Ingestion of Giardia may cause giardiasis, an intestinal illness. People exposed to Giardia may experience mild or severe diarrhea, or in some instances, no symptoms at all. Fever is rarely present. Occasionally, some individuals will have chronic diarrhea over several weeks or a month, with significant weight loss. Giardiasis can be treated with anti-parasitic medication. Individuals with weakened immune systems should consult with their health care providers about what steps would best reduce their risks of becoming infected with Giardiasis. Individuals who think that they may have been exposed to Giardiasis should contact their health care providers immediately. The Giardia parasite is passed in the feces of an infected person or animal and may contaminate water or food. Person to person transmission may also occur in day care centers or other similar settings where hand washing practices are poor.

Additional information on Cryptosporidium and Giardia can be found on New York City DEP's website at [www.nyc.gov/html/dep](http://www.nyc.gov/html/dep).

## Water Quality Testing and Variances

Water quality is monitored daily by Board of Water Supply personnel. Bacteriological and chemical samples are collected as required and analyzed by a New York State approved Environmental Laboratory to insure that the water meets all the physical, chemical, and bacteriological standards of the New York State Sanitary Code. In 2011, we conducted more than 7,500 tests for approximately 140 different water contaminants. We only detected 28; none of them exceeded the regulated levels.

Under the Surface Water Treatment Rule, surface supplies such as those of New York City must be filtered unless certain stringent water quality and monitoring criteria are met. In 1991, New York was initially granted filtration avoidance

through December 31, 2002, for the Catskill and Delaware supplies south of the Kensico Reservoir. This was based on the high quality of the source water and New York City's long term efforts to protect its watershed areas.

In 2002, the EPA extended New York City's filtration waiver to 2008. In return, watershed protection measures were significantly enhanced and expanded, and some of the protection programs were extended to certain Westchester and Putnam reservoirs. In 2008, the EPA issued a 10-year extension of NYC's filtration waiver. Under this agreement, NYC will continue to acquire undeveloped land and upgrade sewage treatment plants in watershed areas. Additionally, the City is proceeding with the construction of an Ultraviolet Treatment Plant to provide additional disinfection and water quality protection.

In 1991, Mount Vernon applied for and received filtration avoidance. This variance is still in effect, contingent on Mount Vernon and the City of New York continuing to meet avoidance criteria.

The Board of Water Supply was granted a biofilm variance from the New York State Department of Health on August 29, 1994. This variance recognizes that the Maximum Contaminant Level (MCL) can not be used to determine the public health significance of coliform bacteria detected in the distribution system when biofilms, and not contaminated water, are the source of the bacteria. (Biofilms are established colonies of bacteria that have been determined not to represent an unreasonable risk to the public health.) The continuation of this variance requires an ongoing "Biofilm Control Program". The Board of Water Supply's program consists of regular hydrant flushing, cleaning and cement lining of water mains, and maintaining adequate chlorine residuals throughout the distribution system. This variance also remains in effect.

## Source Water Turbidity Monitoring Violation

During the first quarter of 2011, a number of samples collected by DEP from one of the upstate Kensico Reservoir locations was found not to be representative of source water entering the distribution system at that time. Therefore we cannot be sure of the quality of your drinking water at that time. Extensive water quality monitoring downstream during this period demonstrated that the water met all other drinking water quality standards.

These incidents were determined by the New York State Department of Health to constitute a Tier 3 monitoring violation, as specified in the Safe Drinking Water Act and the New York State Sanitary Code. Information concerning this incident is being included in the Annual Water Quality Report to meet the requirements for Public Notification of Tier 3 violations within a year.

## Water Quality Data

The following table lists all the drinking water contaminants we detected during the 2011 calendar year. The presence of contaminants in the water does not necessarily indicate the water poses a health risk. In fact, during 2011, our system complied with all applicable State drinking water operating, monitoring, and reporting requirements.

In January 2006, the EPA published Stage 2 of the Disinfectants and Disinfection Byproducts Rule (Stage 2 DBP Rule). This rule was intended to better protect the public health by reducing exposure to Disinfection Byproducts (Trihalomethanes and Haloacetic Acids). In accordance with Stage 2 DBP Rule, the Board of Water Supply chose to conduct a System Specific Study, using a hydraulic model to meet the Initial Distribution System Evaluation (IDSE) requirements. In 2008, during August (historically the month with the highest DBP concentration and water temperature), one round of IDSE monitoring was performed to validate the calibrated model. The results are included in the chart on the following page. The Stage 2 DBP Rule goes into effect in May 2012.

The data in this report is from the most recent testing done in accordance with regulations. Unless otherwise indicated the data in this table is from testing done between January 1 and December 31, 2011. The state requires us to monitor for certain other contaminants less than once per year because their concentrations are not expected to vary significantly from year to year. Not one of these contaminants has been detected during analyses conducted over the last five years.

**Terms and Abbreviations Used Below**

- \***Action Level (AL):** The concentration of a contaminant, which, if exceeded, triggers treatment, or other requirements that a water system must follow.
- \***Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected health risk. MCLG's allow for a margin of safety.
- \***Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to MCLG as feasible using the best available treatment technology.
- \***Nephelometric Turbidity Unit (NTU):** A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- \***Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.
- \***Variance and Exemption:** State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
- \***µS/cm:** Microsiemens per centimeter (a measure of the ability to conduct current)      \***pCi/L:** Picocurie per liter (a measure of radioactivity)
- \***NDL:** No determined limit.      \***n/d:** Not detected in routine laboratory analysis.      \***N/A:** Not applicable.
- \***ppb:** Parts per billion or micrograms per liter.      \***ppm:** Parts per million or milligrams per liter.      \***LT:** Less than.

Contaminant	Date	Unit	MCL,TT or AL	MCLG	Detected Level	Range	Major Sources	Violation
<b>Regulated Inorganic Chemicals</b>								
Lead	6-9/10	ppb	AL (a)	0	14.3	LT 1 - 47.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	No
Copper	6-9/10	ppb	AL (b)	1300	156	17.7 - 213	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	No
Aluminum	1/11	ppb	N/A	N/A	65.5	48.1 - 65.5	Erosion of natural deposits	No
Barium	1/11	ppb	2000	2000	17.7	17.2 - 17.7	Erosion of natural deposits	No
Calcium Hardness	1/11	ppm	NDL	N/A	15.0	14.0 - 15.0	Erosion of natural deposits	No
Chlorides	1/11	ppm	250	N/A	10.0	9.14 - 10.0	Erosion of natural deposits or indicative of road salt contamination	No
Copper (Entry Point)	1/11	ppb	AL (b)	1300	6.4	6.1 - 6.4	Erosion of natural deposits; leaching from wood preservatives	No
Fluoride	1/11	ppm	2.2	N/A	1.10	1.07 - 1.10	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	No
Color, Apparent	1/11	Color Units	15	N/A	7	5 - 7	Iron and manganese or organic sources, such as decaying leaves and plants	No
Iron	1/11	ppb	300 (d)	N/A	77.0	72.0 - 77.0	Erosion of natural deposits; corrosion of water mains	No
Manganese	1/11	ppb	300 (d)	N/A	24.5	18.8 - 24.5	Erosion of natural deposits	No
Nickel	1/11	ppb	NDL	N/A	0.65	0.62 - 0.65	Erosion of natural deposits	No
Nitrate	1,4/11	ppm	10	10	0.209	0.185-0.209	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	No
Sodium	1/11	ppm	NDL (e)	N/A	9.92	8.94 - 9.92	Erosion of natural deposits	No
Sulfate	1/11	ppm	250	N/A	5.14	5.08 - 5.14	Erosion of natural deposits	No
Total Hardness (c)	1/11	ppm	NDL	N/A	20.0	20.0	Erosion of natural deposits	No
Total Dissolved Solids	1/11	ppm	250	N/A	39.6	38.8 - 39.6	Erosion of natural deposits	No
Total Organic Carbon	1/11	ppm as C	NDL	N/A	2.25	2.23 - 2.25	Organic matter naturally present in the environment	No
UV 254 Absorbency	1/11	cm <sup>-1</sup>	NDL	N/A	0.043	0.040 - 0.043	Organic matter naturally present in the environment	No
Zinc	1/11	ppb	5000	N/A	2.7	2.1 - 2.7	Naturally occurring	No
<b>Microbiological Contaminants</b>								
Total Coliform (f)	2011	%	5%	0	2.56	0 - 2.56	Naturally present in the environment	No
Turbidity (Entry Point)	1/11	NTU	5NTU(g)	N/A	3.2	0.77 - 3.2	Soil runoff	No
Turbidity (Distribution)	2/11	NTU	5NTU(h)	N/A	2.24	0.99 - 2.24	Soil runoff	No
Free Cl <sub>2</sub> Res. (Entry Point)	2011	ppm	4.0	4	1.19	0.6 - 1.7	Water additive used to control microbes	No
Free Cl <sub>2</sub> Res. (Distribution)	2011	ppm	4.0	4	0.93	0.30 - 1.6	Water additive used to control microbes	No
<b>Regulated Organic Contaminants</b>								
TTHM's	2011	ppb	80	N/A	41.6 (i)	21.1 - 68.8	Byproduct of drinking water chlorination	No
HAA5	2011	ppb	60	N/A	47.0 (i)	31.5 - 75.6	Byproduct of drinking water chlorination	No
Bis (2-ethylhexyl) adipate	10/11	ppb	6	0	0.79	0.76 - 0.79	Released during production and wastes disposal of plastic products, inks, pesticides, cosmetic and vacuum pump oil	No
<b>Stage 2 DBP Rule - IDSE Monitoring</b>								
TTHM's	8/08	ppb	80	N/A	43.6	11.6 - 43.6	Byproduct of drinking water chlorination	No
HAA5	8/08	ppb	60	N/A	29.0	20.9 - 29.0	Byproduct of drinking water chlorination	No
<b>Water Quality Parameters (Monitored for Corrosion Control)</b>								
Total Alkalinity	2011	ppm	NDL	N/A	--	LT 20-37.4	Erosion of natural deposits; impacted by water treatment chemicals	No
Calcium (j)	2011	ppm	NDL	N/A	--	4.80 - 7.01	Erosion of soil and rock formations	No
Orthophosphate	2011	ppm	NDL	N/A	--	LT 0.2 - 3.11	Water additive for corrosion control	No
pH	2011	-		N/A	--	6.91 - 7.77	Impacted by acid rain and water treatment chemicals	No
Specific Conductance	2011	µS/cm	NDL	N/A	--	74.8 - 122	Presence of ions due to erosion of natural deposits	No
Temperature	2011	°C	NDL	N/A	--	3.0 - 21.0		No

- (a) Action Level (not an MCL) is 15 ppb. Measured at the tap. Between June 1 and September 30, 2010, 27 out of 30 samples were below the Action Level. The Detected Level is the 90<sup>th</sup> percentile of the 30 samples tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90<sup>th</sup> percentile is greater than or equal to 90 percent of the lead values detected in the Distribution System.
- (b) Action Level (not an MCL) is 1300 ppb. Measured at the tap. All sample results between June 1 and September 30, 2010 were below the Action Level. The Detected Level is the 90<sup>th</sup> percentile of the 30 samples tested. It is greater than or equal to 90 percent of the copper values detected in the Distribution System.
- (c) Hardness is a measure of dissolved calcium and magnesium in the water. It is measured as mg/L as CaCO<sub>3</sub>. Our drinking water is considered "soft". In general, surface waters such as NYC water are softer than groundwater (well water).
- (d) If iron **and** manganese are present, the total concentration of both should not exceed 500 ppb.
- (e) Water with greater than 20 mg/L sodium should not be consumed by those on a severely restricted sodium diet. People on a moderately restricted sodium diet should not consume water with greater than 270 mg/L.
- (f) Coliforms are bacteria that are naturally present in the environment. They are used as indicators that other potentially harmful bacteria may be present.
- (g) Turbidity is a measure of the cloudiness of the water. It is a good indicator of water quality but has no health effects. High turbidity can hinder the effectiveness of disinfectants and act as a medium for microbial growth. MCL for Entry Points is the average of two consecutive days. Entry point data are individual sample measurements; Distribution System data is representative of the monthly distribution system average.
- (h) MCL for Distribution samples is the monthly average.
- (i) MCL's for THM's & HAA5 are the calculated Running Annual Average (RAA). It represents the average of 4 quarters of sampling results. Data presented are the range of individual sampling results and the Annual Running Average.
- (j) Calcium contributes to the total hardness of water.

<p><b>About TTHMs (Total Trihalomethanes):</b> The sum of the concentration of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. They are formed as a result of chlorine combining with the natural organics in water.</p> <p><b>About HAA5 (Haloacetic Acids):</b> The sum of the concentration of mono-, di-, and trichloroacetic acids, and mono-, and dibromoacetic acids. They are also formed when chlorine reacts with the natural organics in water.</p>	<p><b>About Lead:</b> Elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. The Board of Water Supply is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a>.</p>	<p><b>Maximum Residual Disinfectant Level (MRDL):</b> The highest level of disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for the control of microbial contaminants. The MRDL for Chlorine is 4.0 ppm.</p> <p><b>Maximum Residual Disinfectant Level Goal (MRDLG):</b> The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of disinfectant use to control microbial contamination. For Chlorine the MRDLG is 4 ppm.</p>
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## Water Conservation

Water is a vital resource. We all recognize the need to conserve water during times of drought. It is just as important to use water wisely when the supply is plentiful. Careful use of water can result in less money spent on water, energy, and wastewater treatment. Some common sense measures to conserve water include:

- \*Shut faucets off tightly. A small drip can waste 25 gallons per day.
- \*Check all toilets for leakage by putting a few drops of food coloring in the tank. Wait 10 to 15 minutes without flushing. If color shows up in the bowl, you have a leak. A bad toilet leak can waste as much as 200 gallons a day.
- \*Don't run the faucet to get a cold drink. Place a container of water in the refrigerator.
- \*Don't run the faucet while shaving or brushing your teeth.
- \*Take shorter showers and half-full baths. Install low flow showerheads and faucets.
- \*Run washing machine and dishwasher only when full. Do not wash dishes under a running faucet.
- \*When cleaning, use a pail or basin instead of running water.
- \*Use your water meter to detect hidden leaks. Turn off all taps and water using appliances, and then check the meter. Check it again after 15 minutes. If it moved, you have a leak.
- \*Do not cut the lawn too short; longer grass saves water.
- \*Water your lawn early in the morning or in the evening to reduce water loss by evaporation. Don't overwater.
- \*Mulch around trees and plants to help retain moisture.

(The bacteria *Escherichia coli* (associated with human and animal fecal waste) was not found in the distribution system. In addition, we monitored entry point samples for inorganic contaminants that were not detected. These include antimony, arsenic, beryllium, cadmium, total chromium, cyanide, mercury, nitrite, lead, thallium, selenium, and silver. Organic contaminants that were tested for and not detected in the source water include 3-Hydroxycarbofuran, Aldicarb, Aldicarb sulfone, Aldicarb sulfoxide, Carbaryl, Carbofuran, Methomyl, Oxamyl, Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Heptachlor Epoxide, Lindane, Methoxychlor, PCB's, Propachlor, Toxaphene, 2,4,5-T, 2,4-D, Dalapon, Dicamba, Dinoseb, Pentachlorophenol, Picloram, Silvex, Butachlor, Metolachlor, Metribuzin, Alachlor, Atrazine, Benzo(a)pyrene, bis(2-Ethylhexyl) phthalate, Hexachlorobenzene, Hexachlorocyclopentadiene, Simazine, 1,1,1,2-tetrachloroethane, 1,1,1-trichloroethane, 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,1-dichloroethane, 1,1-dichloroethene, 1,1-dichloropropene, 1,2,3-trichlorobenzene, 1,2,3-trichloropropane, 1,2,4-trichlorobenzene, 1,2,4-trimethylbenzene, 1,2-dichlorobenzene, 1,2-dichloroethane, 1,2-dichloropropane, 1,3,5-trimethylbenzene, 1,3-dichlorobenzene, 1,3-dichloropropane, 1,4-dichlorobenzene, 2,2-dichloropropane, 2-butanone (MEK), 2-chlorotoluene, 4-chlorotoluene, Bromoform, Dibromochloromethane, Benzene, Bromobenzene, Bromochloromethane, Bromomethane, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloromethane, cis-1,2-dichloroethene, cis-1,3-dichloropropene, Dibromomethane, Dichlorodifluoromethane, Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, Methyl iso-butyl ketone (MIBK), Methyl tert-butyl ether (MTBE), Methylene Chloride, n-butylbenzene, n-propylbenzene, Naphthalene, o-xylene, p-xylene, m-xylene, p-isopropyltoluene, SEC-butylbenzene, Styrene, TERT-butylbenzene, Tetrachloroethene, Toluene, trans-1,2-dichloroethene, trans-1,3-dichloropropene, Trichloroethene, Trichlorofluoromethane, and Vinyl chloride. Radiological contaminants tested for and not detected in the source water include Strontium-90, and tritium. In 2009, the following seven Unregulated Contaminants (under UCMR 1) were tested for and not found in the source water: 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,4-DDE, Acetochlor, EPTC, Molinate, and Terbacil. The purpose of this monitoring was to provide assessment and occurrence data to support future decisions relating to the regulation of these contaminants.) In 2010, the NYSDOH waived the source monitoring requirement (every 18 months) for the following Pesticides, Herbicides, and Dioxin: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, Diquat, Endothall, Glyphosate, and 2,3,7,8-TCDD (Dioxin).

**Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.**

**Ce rapport contient des informations importantes sur votre eau potable. Traduisez-le ou parlez en avec quelqu'un qui le comprend bien.**

**La relazione contiene importante informazione sulla qualita dell' acqua della comunita. Tradurlo o parliamo con un amico che lo comprenda.**

**O relatório contem informações importantes sobre a qualidade da água da comunidade. Traduza-o ou peça ajuda de uma pessoa amiga para ajuda-lo a entender melhor.**

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