

NEW YORK CITY 2014 DRINKING WATER SUPPLY AND QUALITY REPORT



**Environmental
Protection**

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Cannonsville Reservoir

New York City's Water Supply System





New York City 2014 Drinking Water Supply and Quality Report

The New York City Department of Environmental Protection (DEP) is pleased to present its *2014 Drinking Water Supply and Quality Report*, which contains important information about your drinking water. This report was prepared in accordance with the New York State Sanitary Code and the National Primary Drinking Water Regulations of the United States Environmental Protection Agency (EPA), which require all drinking water suppliers to provide the public with an annual statement describing the water supply and the quality of its water. DEP is pleased to report that in 2014, the quality of your drinking water remained high and met all health-related state and federal drinking water standards.

This report is divided into sections containing the following information:

- ◆ *An introduction to New York City's water supply, including information on the sources of the City's drinking water and how it is treated and disinfected*
 - ◆ *A brief discussion of some of the programs that DEP has in place to help protect the watershed and ensure a safe, reliable and sufficient water supply into the future*
 - ◆ *Water quality test results and information regarding compliance with drinking water standards and State Sanitary Code requirements*
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A. New York City's Water Supply

The New York City Water Supply System provides approximately one billion gallons of safe drinking water daily to more than eight million residents of New York City, and to the millions of tourists and commuters who visit the City throughout the year, as well as about 110 million gallons a day to one million people living in Westchester, Putnam, Ulster, and Orange Counties. In all, the New York City Water Supply System provides nearly half the population of New York State with high quality drinking water.

Sources of New York City's Drinking Water

New York City's surface water is supplied from a network of 19 reservoirs and three controlled lakes in a nearly 2,000-square-mile watershed, roughly the size of the State of Delaware, which extends 125 miles north and west of New York City. The New York City Water Supply System Public Water System Identification Number (PWSID) NY7003493 consists of three individual water supplies: the Catskill/Delaware supply, located in Delaware, Greene, Schoharie, Sullivan, and Ulster Counties; the Croton supply, New York City's original upstate supply, in Putnam, Westchester, and Dutchess Counties; and a groundwater supply system in southeastern Queens.

Water Supply Operations

The New York City Water Supply System map, located on the previous page of this report, displays the Catskill/Delaware and Croton service areas, and the groundwater supply system. The map provides further detail on the systems' locations. In 2014, 100 percent of New York City's drinking water came from the Catskill/Delaware supply. Water from the Croton and groundwater supply systems was not fed into distribution during 2014.



Water Treatment

Due to the very high quality of our Catskill/Delaware supply, New York City is one of only five large cities in the country with a surface drinking water supply that does not require filtration as a form of treatment, although the water is still disinfected to reduce microbial risk. DEP disinfects its water with chlorine and ultraviolet light (UV). Chlorine is a common disinfectant added to kill germs and stop bacteria from growing on pipes. UV treatment is a disinfection process that works by passing the water by special lamps that emit UV light, which can inactivate harmful microorganisms. UV treatment does not change the water chemically, as nothing is added except energy.

DEP also treats the water with food grade phosphoric acid, sodium hydroxide, and fluoride. Phosphoric acid is added to create a protective film on pipes that reduces the release of metals, such as lead, from household plumbing. Sodium hydroxide is added to raise the pH and reduce corrosivity, which also leads to a reduction in potential exposure to lead.

DEP is one of the many water suppliers in New York State that, since 1966, has been treating its drinking water with a controlled, low level of fluoride for consumer dental health protection. The DEP target dose of fluoride is 0.8 mg/L. During 2014, other than brief outages to perform preventative and corrective maintenance, DEP provided continuous fluoride treatment on the Catskill/Delaware supply. In total, fluoride was off-line two percent of the time during the year.

B. Ensuring a Safe, Reliable, and Sufficient Water Supply

DEP has developed and is implementing a number of programs designed to maintain New York City's world-renowned water supply and to ensure a safe, reliable, and sufficient water supply system into the future. The program elements, which are described below, include:

- ◆ Watershed protection and pollution prevention programs
- ◆ Capital construction programs
 - ◆ to meet new regulatory requirements for treatment
 - ◆ to improve water supply reliability and resiliency
- ◆ Water conservation programs

Watershed Protection and Pollution Prevention Programs

Source Water Assessment Program

Federal regulations require states to develop and implement Source Water Assessment Programs to: identify the areas that supply public tap water; inventory contaminants and assess water system susceptibility to contamination; and inform the public of the results. The states are given a great deal of flexibility on how to implement Source Water Assessment Programs. These assessments are created using available information to help estimate the potential for source water contamination. Higher susceptibility ratings do not mean that source water contamination has occurred or will occur in the water supply; rather, they indicate the need for water suppliers to implement additional precautionary measures.

In 1993, New York City secured its first Filtration Avoidance Determination (FAD) for the Catskill/Delaware supply, and, in 1997, the historic New York City Watershed Memorandum of Agreement was signed. Since that time, New York City has been implementing a series of programs to further reduce the susceptibility of all of its surface water supply to contamination from a variety of sources. These ongoing programs operate under the close scrutiny of both the New York State Department of Health (NYSDOH) and EPA. Because of these efforts, which are reported on in the *Watershed Water Quality Annual Report*, NYSDOH does not deem it necessary to perform a source water assessment on the New York City Water Supply. For information on the DEP *Watershed Water Quality Annual Report*, visit www.nyc.gov/dep.

Maintaining New York City's World-Renowned Water Supply

10-Year Filtration Avoidance Determination from EPA

The key elements for maintaining the high quality of our drinking water are the watershed protection and pollution prevention strategies DEP employs upstate. These strategies are designed to keep pollution out of our upstate reservoirs and watercourses. DEP is currently implementing a 10-year FAD, issued by EPA in July 2007 and updated in May 2014. Through watershed protection programs specified in the FAD, New York City maintains a high quality

(Continued on page 4)



PROTECTING THE WATERSHED

Watershed Agricultural Council (WAC)

One major aspect of New York City's watershed protection programs is preservation of the lands in the watershed. Managing the land in the watershed helps maintain the high quality of the drinking water and ensures that the FAD requirements are met, thereby avoiding the exorbitant cost of building a filtration plant for the Catskill/Delaware supply. New York City owns and manages just over 175,000 watershed acres, and New York State owns and manages approximately another 212,000 watershed acres. However, the majority of land in our watersheds is covered by privately-owned forests and family farms, especially in the Catskills where farming and forestry represent traditional cultural livelihoods. To help maintain well-managed farms and forests, and to meet the requirements of New York City's FAD, DEP partners with the Watershed Agricultural Council (WAC) to administer and implement voluntary incentive-based programs for watershed farming and forestry communities.

Over the past two decades, DEP has funded WAC to oversee a comprehensive portfolio of watershed programs that collectively achieve WAC's mission of protecting water quality, promoting economic viability of agriculture and forestry, and conserving working landscapes through strong local leadership and public-private partnerships. This mission aligns with DEP's mission to reliably deliver a sufficient quantity of high quality drinking water to protect public health and quality of life in New York City, and with DEP's 2011-2014 Strategic Plan, which includes a goal of supporting economic development compatible with watershed protection. Preserving this working landscape, and ensuring that farms and forest lands are well-managed and economically viable, naturally produces excellent water quality, and is a key strategy for preventing environmentally unsound development of watershed lands. The WAC website is www.nycwatershed.org.

Watershed Agricultural Program

Established in 1992, the Watershed Agricultural Program strives to reduce or eliminate agricultural sources of pollution that originate from watershed farms, with a focus on controlling pathogens and nutrients. The program works with participating farmers to develop comprehensive pollution prevention plans, or Whole Farm Plans, that farmers agree to implement at no cost to them. Each Whole Farm Plan assesses the environmental conditions of the farm's operation, identifies pollutant sources and potential risks to water quality, and recommends a series of scientifically-proven best management practices (BMPs) that are designed to prevent pollution and protect water quality. Every BMP is fully paid for by the program. Through 2014, the Watershed Agricultural Program developed more than 430 Whole Farm Plans on dairy, beef, livestock and vegetable farms while implementing more than 6,500 agricultural BMPs that improve the cleanliness and productivity of watershed farms.

Watershed Forestry Program

In 1997, New York City expanded its WAC partnership to include a Watershed Forestry Program for landowners, loggers, consulting foresters, and wood-using businesses. Similar to the agricultural

program, the goal of the forestry program is to promote and support a healthy, well-managed forest landscape that protects water quality without negatively impacting the economic livelihood of the forest products industry. WAC provides incentives to landowners and foresters to encourage their development and implementation of long-term forest management plans. Through 2014, the Watershed Forestry Program supported the development of more than 1,100 forest management plans covering over 200,000 watershed acres that are privately owned and managed.

WAC Conservation Easement Program

WAC's Conservation Easement Program was initially prescribed in the 1997 New York City Watershed Memorandum of Agreement as part of DEP's Land Acquisition Program. In addition to vacant land, DEP tries to buy conservation easements primarily on forest land. Similarly, WAC seeks to acquire conservation easements on agricultural or forested properties in the watershed. Although similar to DEP's conservation easements in that both seek to preserve land

for the purpose of protecting water quality and maintaining open space, WAC's conservation easements are designed to maintain working farms and working forests. Once a conservation easement is purchased by WAC, the eased land can never be developed and must remain as agricultural land or forest forever. Through 2014, the WAC Conservation Easement Program preserved more than 24,000 acres of watershed farm and forest lands.


In addition to protecting drinking water quality, the easements protect and preserve the local food system of the Catskills, while providing opportunities for downstate residents to visit the watershed. Over 126,000 acres of City-owned watershed lands are open to the public for fishing, hiking, hunting and other forms of low-impact recreation.



Pure Catskills Campaign

Although WAC is primarily a water quality protection organization that contracts with DEP to implement source water protection programs, a dual component of WAC's mission is to support farm and forestry economic development that is compatible with watershed protection. The centerpiece of WAC's economic viability program is the Pure Catskills "Buy Local" Campaign, which celebrated its 10-year milestone in 2014. Pure Catskills (www.purecatskills.com) promotes vegetables, meats, cheeses and other foods produced by watershed farmers. Today the campaign represents nearly 300 farm and forestry businesses and local craftsmen. DEP is also a member of Pure Catskills – our product is safe clean drinking water. Last year, almost all of the water that flowed out of New York City faucets originated in the Catskill Mountains.

The partnership between WAC, DEP, and the upstate farming and forestry communities has resulted in more productive and efficient farming in a more environmentally sensitive manner, greater stewardship and longer-term management of the privately-owned watershed forests, and a slate of successful watershed programs that protect the drinking water for more than nine million New Yorkers.



surface drinking water supply without a requirement for filtration. As part of the FAD, New York City continues to enhance its existing source water protection programs, including, among others, a commitment from DEP to continue to acquire certain undeveloped land in the Catskill/Delaware watershed as a means of water quality protection. In 2014, New York City allocated an additional \$65 million (beyond the \$541 million committed previously) to be spent for this purpose. DEP also secured a 15-year water supply permit in 2010 from the New York State Department of Environmental Conservation that allows New York City to continue acquisition of sensitive watershed land to protect the largest unfiltered drinking water supply in the world. Furthermore, DEP is developing new programs in the watershed to protect water quality and enhance community resiliency during flood events. Over the past two decades of source water protection, New York City has consistently demonstrated the commitment and ability to deliver effective programs to ensure the long-term quality of the water supply. For more information on DEP's watershed protection programs visit www.nyc.gov/dep.

Capital Construction Programs

Treatment and Disinfection

Catskill/Delaware Water Ultraviolet Disinfection Facility

The Catskill/Delaware Ultraviolet (UV) Disinfection Facility began treating Catskill/Delaware water in October 2012. The facility is located on a New York City-owned 153-acre property in the towns of Mount Pleasant and Greenburgh in Westchester County. The UV Disinfection Facility, the largest of its kind in the world, consists of fifty-six 40-million-gallons-per-day UV disinfection units, and is designed to disinfect a maximum of 2.4 billion gallons of water per day.

The facility was built in part to fulfill the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule, which requires additional treatment for many water suppliers that use surface water sources. For unfiltered surface water sources, such as the Catskill/Delaware system, the Long Term 2 Enhanced Surface Water Treatment Rule requires two types of disinfection. First, water is disinfected with chlorine before arriving at the UV Disinfection Facility. Once at the facility, the water flows under UV light as an additional measure to protect against potentially harmful microbiological contaminants, such as *Cryptosporidium* and *Giardia*.

Although EPA now requires that most surface drinking water be filtered, due to New York City's \$1.5 billion investment in watershed protection programs and its operation of the UV Disinfection Facility, the state and federal government allow DEP to continue supplying unfiltered drinking water from the Catskill/Delaware watersheds. This comprehensive and adaptive approach exempts New York City from building a mandated filtration plant estimated to cost \$10 billion or more.

Croton Water Filtration Plant

The Croton water supply, because of factors related to the surrounding area and water quality, is not covered by the Filtration Avoidance Determination. Therefore, New York City has built and will soon activate a filtration plant for the Croton water supply under a Consent Decree entered into between New York City and the United States and the State of New York. The Croton Water Filtration Plant is expected to reduce color levels, the risk of microbiological contamination, and disinfection by-products and will ensure compliance with stricter water quality standards. The Croton Water Filtration Plant is expected to deliver water into distribution in 2015. In addition to the construction of the filtration plant, New York City remains committed to maintaining a comprehensive watershed protection program for the Croton water supply.

Although the Croton water supply is not currently being used and is not anticipated to provide any drinking water to New York City until DEP begins to filter Croton water, DEP is required by law to make the following statement: Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Improved Reliability or Redundancy

City Water Tunnel No. 3

For over 40 years, New York City has been building City Water Tunnel No. 3. Being built in stages, City Water Tunnel No. 3 is one of the largest capital projects in New York City's history. Begun in 1970, City Water Tunnel No. 3 will enhance and improve New York City's water delivery system and create redundancy to allow the City to inspect and repair City Water Tunnels Nos. 1 and 2 for the first time since they were put into service in 1917 and 1936, respectively.

- The 13-mile Stage 1 section of City Water Tunnel No. 3 went into service in August 1998. It runs from Hillview Reservoir in Yonkers, through the Bronx, down Manhattan across Central Park, and into Astoria, Queens.
- Stage 2 of City Water Tunnel No. 3 consists of the Brooklyn/Queens leg and the Manhattan leg.
 - Tunneling on the 9-mile Manhattan leg of Stage 2 began in 2003 and was completed in 2008. Since 2008, 10 new supply shafts have been constructed that integrate the new tunnel section with the existing distribution system. The Manhattan leg was activated on October 16, 2013.
 - The Brooklyn/Queens leg is a 5.5-mile section in Brooklyn that connects to a 5-mile section in Queens. New York City completed the Brooklyn/Queens leg of the tunnel in May 2001, and substantially completed the shafts in 2006. The project is expected to be online by 2023. When activated, the Brooklyn/Queens leg will deliver water to Brooklyn, Queens, and Staten Island.

Water for the Future - Delaware Bypass Tunnel

New York City has implemented the Water for the Future program to supplement DEP's water supply, and to help meet water demands in an emergency. One major component of DEP's Water for the Future program is aimed at addressing the known leaks in the Rondout-West Branch Tunnel section of the Delaware Aqueduct, which conveys more than 50 percent of the daily drinking water for New York City. In November 2010, DEP unveiled a design to repair leaks in the 85-mile Delaware Aqueduct to ensure the integrity of New York City's vital infrastructure, which is fundamental to New York City's long-term growth and prosperity. The construction of the bypass tunnel, and the repair of the lining, will ensure that DEP can continue to deliver high quality drinking water every day for decades to come. DEP began work on the bypass tunnel in the spring of 2013, and plans to connect to the Delaware Aqueduct in 2022.

Other Water for the Future Projects

Other projects that will be implemented as part of the Water for the Future program include the repair and rehabilitation of the Catskill Aqueduct, conservation initiatives, and the reactivation of New York City's groundwater supply system in Queens. DEP is currently planning upgrades to the facilities and treatment systems at existing groundwater facilities to provide high quality drinking water that will meet all state and federal drinking water standards. DEP plans to reactivate the groundwater supply system before 2022, when the Rondout-West Branch Tunnel is scheduled to be shut down for the connection of the new bypass tunnel to the Delaware Aqueduct.

Water Conservation

DEP values the role of water conservation and demand management as a responsible way to plan for long-term use of New York City's water supply. As a result, actual water demand is down more than 30 percent since the 1990s, despite consistent increases in our population.

The goal of DEP's water conservation efforts, since the release of PlaNYC2030, is to reduce water use in New York City and in upstate communities by a total of five percent, thereby lowering consumption by approximately 50 million gallons of water per day. Using both active and passive conservation, significant reductions have already been achieved. Of the 50 million gallons in targeted savings, by the year 2021 DEP's interim goal is to decrease consumption by 25 million gallons per day. There are five major strategies DEP outlined in the 2014 Water Demand Management Plan. Since the release of the plan, DEP added a sixth strategy. These strategies are detailed below.



- **Municipal Water Efficiency Program** – As part of this program, DEP has already begun a partnership with the New York City Department of Parks and Recreation to install activation buttons on spray showers at 400 playgrounds around New York City that will save 1.5 million gallons of water a day. More than 40,000 bathroom fixtures in 500 public school buildings are also being updated. These retrofits will conserve approximately 4 million gallons of water each school day.
- **Residential Water Efficiency Program** – To encourage water conservation in private properties, DEP has begun a voucher-based program to replace roughly 150,000 outdated residential toilets with high efficiency models. The toilet rebate program will build on the success of a similar rebate program that ran from 1994 to 1997 and replaced 1.3 million toilets.
- **Non-Residential Water Efficiency Program** – DEP also recently honored 11 of the City's premier hotels for their participation in New York City's Hotel Water Conservation Challenge. Each of the hotels took steps to conserve water with the goal of reducing their total consumption by five percent.
- **Water Distribution System Optimization** – DEP has developed a strategy to handle system repairs and upgrades, manage water pressure, and refine water meter accuracy and leak detection, in order to optimize New York City's water distribution system. Leaking and/or vandalized fire hydrants can also contribute significantly to water waste, as an illegally opened fire hydrant can release more than 1,000 gallons per minute. DEP repairs, replaces, and provides other maintenance services to thousands of hydrants annually.
- **Water Supply Shortage Management** – To prepare for droughts and other water shortages, DEP is in the process of revising its Water Shortage Rules, previously known as Drought Rules, so emergency reductions and prohibitions can be implemented in times of water shortages that are not the result of droughts.
- **Wholesale Water Efficiency Program** – DEP is working with its largest upstate wholesale water customers to develop conservation plans aimed at saving water and money. DEP will work with the upstate customers to identify demand management strategies with a goal of reducing their water use by five percent. DEP began by offering the planning service to the 10 largest upstate wholesale customers, which include communities in Orange and Westchester Counties.

New York City is fortunate to have reasonably priced drinking water as compared to other cities around the country. The average single-family household in New York City uses approximately 80,000 gallons of water each year, at a cost of \$3.70 per 100 cubic feet of water (748 gallons), or about \$396 a year. Since nearly all New York City residences receive wastewater collection and treatment services in addition to water service, the combined annual water and sewer charge for the typical New York City household using 80,000 gallons per year is \$1,025, consisting of \$396 for water service and \$629 for wastewater services (based on the Fiscal Year 2015 rates).

DEP asks that everyone do his or her part to conserve this important resource. All New Yorkers should observe good water conservation habits, and are required to obey New York City's year-round water use restrictions, which include a prohibition on watering sidewalks and lawns between November 1 and March 31, and between 11am and 7pm from April 1 to October 31. Remember, it is illegal to open fire hydrants at any time without a permit. However, during the summer, you can contact your local firehouse to have a DEP-approved spray cap installed on a hydrant.

C. Drinking Water Quality

Regulation of Drinking Water

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 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 NYSDOH and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The NYSDOH and the federal Food and Drug Administration's (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. The presence of contaminants does not necessarily indicate that water poses a health risk. These regulations also establish the minimum amount of testing and monitoring that each system must undertake to ensure that the tap water is safe to drink.

DEP's water quality monitoring program – far more extensive than that required by law – demonstrates that the quality of New York City's drinking water remains high and meets all health-related state and federal drinking water standards. Additional information concerning drinking water can be found at: www.epa.gov/safewater/ or www.health.state.ny.us.

Drinking Water Sampling and Monitoring

DEP monitors the water in the distribution system, upstate reservoirs and feeder streams, and wells that are sources for New York City's drinking water supply. Certain water quality parameters are monitored continuously as the water enters the distribution system, and DEP regularly tests water quality at nearly 1,000 water quality sampling stations throughout New York City. DEP conducts analyses for a broad spectrum of microbiological, chemical, and physical measures of quality. In 2014, DEP performed 347,000 analyses on 30,000 samples from the distribution system, meeting all state and federal monitoring requirements. Additionally, DEP performed 190,000 analyses on 14,400 samples from the upstate reservoir watersheds to support FAD watershed protection programs and to optimize water quality. Results of this regular monitoring are an indicator of whether New York City drinking water meets all health-based and other drinking water standards. The results of the tests conducted in 2014 under DEP's distribution system monitoring program are summarized in the tables at the end of this report.

Unregulated Contaminant Monitoring Rule (UCMR)

Under the 1996 amendments to the federal Safe Drinking Water Act and the Third Unregulated Contaminant Monitoring Rule (UCMR3), EPA is required once every five years to issue a new list of up to 30 unregulated contaminants which public water systems must monitor. The intent of the rule is to provide baseline occurrence data that EPA can combine with toxicological research to make decisions about potential future drinking water regulations. DEP is currently participating in the third round of this contaminant testing. The data from this sampling can be found in the tables of this report. For more information on the rule, and to see a list of the unregulated contaminants, go to water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3.

Turbidity

Turbidity is a measure of the cloudiness of the water. DEP monitors turbidity because it is a good indicator of water quality and because high turbidity can hinder the effectiveness of disinfectants. Turbidity is one of a number of specific contaminants DEP is required to monitor on a regular basis. Results of regular monitoring are an indicator of whether or not drinking water meets health standards. DEP monitors turbidity every four hours at the selected compliance location representative of the raw source water. In 2014, the highest single turbidity measurement was 2.4 NTU; at no time did a value exceed the MCL of 5 NTU.



Lead in Drinking Water

New York City water is virtually lead-free when it is delivered from New York City's upstate reservoir system, but water can absorb lead from solder, fixtures, and pipes found in the plumbing of some buildings or homes. DEP has an active corrosion control program aimed at reducing lead absorption from service lines and internal plumbing. Under the federal Lead and Copper Rule, mandated at-the-tap lead monitoring is conducted at select households throughout New York City. In 2014, based on the results of this monitoring, the 90th percentile did not exceed 15 µg/L, the established standard or Action Level for lead. The at-the-tap monitoring results are presented in a separate table on page 11 of this report.

If present, 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. DEP 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.

DEP offers a Free Residential Lead Testing Program that allows all New York City residents to have their tap water tested at no cost. The Free Residential Testing Program is the largest of its kind in the nation: DEP has distributed nearly 100,000 sample collection kits since the start of the program in 1992. To request a free kit to test for lead in your drinking water, call New York City's 24-hour helpline at 311 or visit www.nyc.gov/apps/311.

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 www.epa.gov/safewater/lead.

Monitoring for *Cryptosporidium* and *Giardia*

In 1992, New York City started a comprehensive program to monitor its source waters and watersheds for the presence of *Cryptosporidium* and *Giardia*. In 2014, DEP collected samples weekly from the active outflow of the Kensico Reservoir, prior to chlorination, and before treatment at the Catskill/Delaware UV Disinfection Facility. Downstream from the UV Disinfection Facility, weekly samples were collected from the outflow of Hillview Reservoir, just prior to secondary disinfection with chlorine, after which the water flows into distribution. In addition, DEP collected samples monthly from the outflow of the New Croton Reservoir (although Croton water was not delivered to New York City consumers in 2014). While there is no evidence that any cases of cryptosporidiosis or giardiasis have been attributed to the New York City water supply, federal and state law requires all water suppliers to notify their customers about the potential risks from *Cryptosporidium* and *Giardia*. Cryptosporidiosis and giardiasis are intestinal illnesses caused by microscopic pathogens, which can be waterborne. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Some people may be more vulnerable to disease causing micro-organisms, 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 providers about their drinking water.

From January 1 to December 31, 2014, a total of 52 routine weekly samples and two supplementary samples were collected and analyzed for *Cryptosporidium* oocysts and *Giardia* cysts at the Kensico Reservoir outflow, 52 routine weekly samples and two supplementary samples were collected at the Hillview Reservoir outflow, and 12 routine monthly samples were collected at the New Croton Reservoir outflow. Samples were analyzed using standard EPA methods. The test method, however, is limited in that it does not differentiate between organisms that are dead, alive or capable of causing disease. Of the 52 routine Kensico Reservoir samples, three were positive for *Cryptosporidium* (0 to 1 oocysts/50L), and 29 were positive for *Giardia* (0 to 6 cysts/50L). Of the 52 routine Hillview Reservoir samples, two were positive for *Cryptosporidium* (0 to 1 oocysts/50L), and 17 were positive for *Giardia* (0 to 8 cysts/50L). The four supplementary samples, two from Kensico Reservoir and two from Hillview Reservoir, were collected in response to an elevated *Giardia* count from a routine sample in March 2014 (8 cysts/50L).

The results of these samples showed that *Giardia* levels had returned to normal (2 to 5 cysts/50L). One of the supplementary samples from Kensico Reservoir was also positive for *Cryptosporidium* (3 cysts/50L). Of the 12 routine New Croton Reservoir effluent samples, none were positive for *Cryptosporidium* and seven were positive for *Giardia* (0 to 8 cysts/50L). The presence of these low levels of *Cryptosporidium* and *Giardia* detected in the source water, required no action on the part of DEP. DEP's *Cryptosporidium* and *Giardia* data from 1992 to the present, along with weekly updates, can be viewed on the DEP website at www.nyc.gov/dep.

DEP's Waterborne Disease Risk Assessment Program conducts disease surveillance for cryptosporidiosis and giardiasis to track the disease incidence and syndromic surveillance for gastrointestinal illness to identify potential citywide gastrointestinal outbreaks. All persons diagnosed with cryptosporidiosis are interviewed concerning potential exposures, including tap water consumption. Disease and syndromic surveillance indicates that there were no outbreaks of cryptosporidiosis or giardiasis attributed to tap water consumption in New York City in 2014. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium*, *Giardia* and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline at (800) 426-4791.

Administrative and Judicial Orders

Hillview Reservoir is the last reservoir in the Catskill/Delaware system prior to distribution. On May 24, 2010, New York City and EPA entered into an Administrative Order on Consent which sets forth a milestone schedule to install a cover over the Hillview Reservoir by mid-2028. The milestones of a previous Administrative Order on Consent from 2008 between New York City and NYSDOH were incorporated into the 2010 Administrative Order on Consent. Additionally, in August of 2011, EPA released a report called *Improving Our Regulations: Final Plan for Periodic Reviews of Existing Regulations*, in which EPA indicated that it will evaluate the reservoir cover requirement of the Long Term 2 Enhanced Surface Water Treatment Rule. DEP has been actively involved in EPA's review process.

The Catskill/Delaware Ultraviolet (UV) Disinfection Facility, which began treating Catskill/Delaware water in October 2012, was constructed, and is operating, pursuant to an Administrative Order with EPA. DEP is in compliance with the Administrative Order.

DEP is required to construct a filtration plant for the Croton water supply under a Consent Decree entered into between New York City and the United States and the State of New York. Construction of the plant continued in 2014, and DEP started up and tested the plant process systems in 2014 in preparation for sending water through the plant and into distribution in 2015. DEP did not deliver any water to consumers from the Croton system during 2014.

How to Read the New York City Drinking Water Quality Testing Results

The following section of the *Drinking Water Supply and Quality Report* compares the quality of your tap water to federal and state standards for each parameter (if applicable). Table 1 reflects the compliance monitoring results for all regulated and non-regulated parameters, the number of samples collected, the range of values detected, the average of the values detected, and the possible sources of the parameters, unless otherwise footnoted. The monitoring frequency of each parameter varies and is parameter specific. All data presented are for the Catskill/Delaware system, which was the only source of water in 2014. Table 2 represents those parameters monitored for, but not detected in any sample. The monitoring results indicate that our drinking water met all health-based and other drinking water standards in 2014.

Most of our data are representative of 2014 testing; the concentrations of these parameters or contaminants do not change frequently. For previous results you can view our reports at: www.nyc.gov/dep.

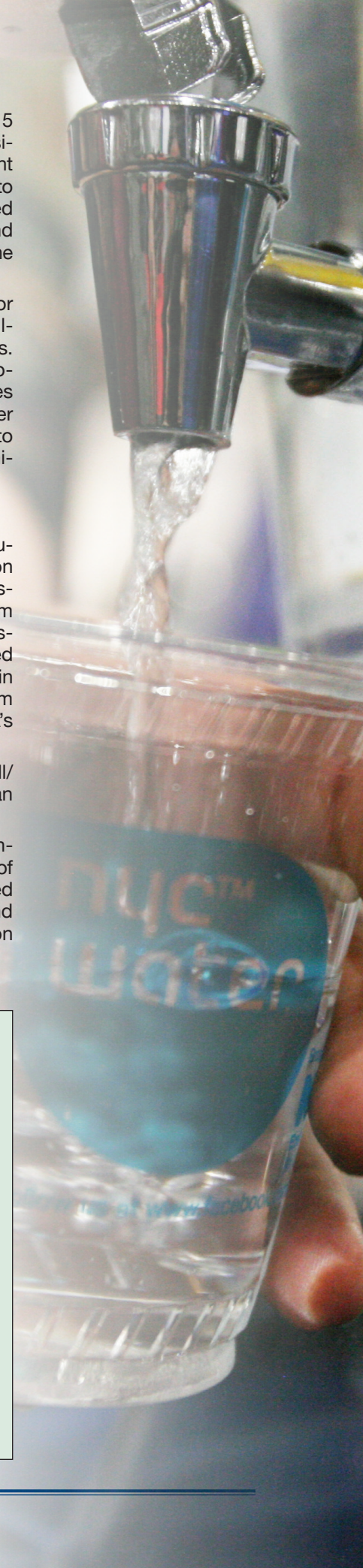


Table 1: Detected Parameters

This table summarizes the monitoring results for all detected parameters

CONVENTIONAL PHYSICAL AND CHEMICAL PARAMETERS							
PARAMETERS	NYSDOH MCL (Highest Level Allowed)	EPA MCLG (Ideal Goal)	CATSKILL/DELAWARE SYSTEM			MCL VIOLATION	SOURCES IN DRINKING WATER
			# SAMPLES	RANGE	AVERAGE		
Alkalinity (mg/L CaCO ₃)	-		272	13.5 - 18.1	15.7	No	Erosion of natural deposits
Aluminum (µg/L)	50 - 200 ⁽¹⁾		275	11 - 144	23	No	Erosion of natural deposits
Barium (mg/L)	2	2	275	0.013 - 0.028	0.017	No	Erosion of natural deposits
Calcium (mg/L)	-		272	5.2 - 6.9	5.9	No	Erosion of natural deposits
Chlorate (mg/L)	- ⁽²⁾		18	ND - 0.039	0.032	No	By-product of drinking water chlorination using sodium hypochlorite
Chloride (mg/L)	250		272	9 - 14	11	No	Naturally occurring; road salt
Chlorine Residual, Free (mg/L)	4 ⁽³⁾		15,023	0.00 - 1.51	0.63 ⁽³⁾	No	Water additive for disinfection
Chromium (µg/L)	100		290	ND - 0.31	ND	No	Erosion of natural deposits
Chromium VI (µg/L)	- ⁽²⁾		18	0.033 - 0.054	0.041	No	Erosion of natural deposits
Color - distribution system (color units - apparent)	-		13,929	3 - 40	6	No	Presence of iron, manganese, and organics in water
Color - entry points (color units - apparent)	15 ⁽⁴⁾		1,095	5 - 8	6	No	Presence of iron, manganese, and organics in water
Copper (mg/L)	1.3 ⁽⁵⁾	1.3	285	0.002 - 0.038	0.006	No	Corrosion of household plumbing systems; erosion of natural deposits
Corrosivity (Langelier index)	0 ^{(1) (6)}		272	-2.82 to -1.66	-2.38	No	
Fluoride (mg/L)	2.2 ⁽⁴⁾	4.0	1,689	ND - 0.9	0.8	No	Water additive which promotes strong teeth; erosion of natural deposits
Hardness (mg/L CaCO ₃)	-		272	18 - 23	20	No	Erosion of natural deposits
Hardness (grains/gallon[US] CaCO ₃) ⁽⁷⁾	-		272	1.0 - 1.3	1.1	No	Erosion of natural deposits
Iron (µg/L)	300 ^{(4) (8)}		285	21 - 313	38	No	Naturally occurring
Lead (µg/L)	15 ⁽⁵⁾	0	285	ND - 6	ND	No	Corrosion of household plumbing systems; erosion of natural deposits
Magnesium (mg/L)	-		272	1.1 - 1.6	1.3	No	Erosion of natural deposits
Manganese (µg/L)	300 ^{(4) (8)}		285	9 - 206	17	No	Naturally occurring
Nickel (µg/L)	-		275	ND - 1	ND	No	Erosion of natural deposits
Nitrate (mg/L nitrogen)	10	10	272	0.1 - 0.32	0.17	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
pH (pH units)	6.8 - 8.2 ⁽⁹⁾		15,025	6.9 - 9.1	7.3	No	
Phosphate, Ortho- (mg/L)	-		15,024	0.74 - 3.54	2.11	No	Water additive for corrosion control
Potassium (mg/L)	-		272	ND - 0.7	0.3	No	Erosion of natural deposits
Silica [silicon oxide] (mg/L)	-		272	1.9 - 3.1	2.5	No	Erosion of natural deposits
Sodium (mg/L)	NDL ^{(4) (10)}		272	7 - 10	9	No	Naturally occurring; road salt; water softeners; animal waste
Specific Conductance (µS/cm)	-		15,024	75 - 109	87	No	

Table 1 (continued)

CONVENTIONAL PHYSICAL AND CHEMICAL PARAMETERS (continued)							
PARAMETERS	NYSDOH MCL (Highest Level Allowed)	EPA MCLG (Ideal Goal)	CATSKILL/DELAWARE SYSTEM			MCL VIOLATION	SOURCES IN DRINKING WATER
			# SAMPLES	RANGE	AVERAGE		
Strontium (µg/L)	-		290	17 - 25	20	No	Erosion of natural deposits
Sulfate (mg/L)	250		272	3.7 - 4.8	4.2	No	Naturally occurring
Temperature (°F)	-		15,025	34 - 79	53	No	
Total Dissolved Solids (mg/L)	500 ⁽¹⁾		272	41 - 63	53	No	Metals and salts naturally occurring in the soil; organic matter
Total Organic Carbon (mg/L carbon)	-		272	1.3 - 1.7	1.5	No	Organic matter naturally present in the environment
Turbidity ⁽¹¹⁾ - distribution system (NTU)	5 ⁽¹²⁾		13,929	0.5 - 8.6	1.4 ⁽¹²⁾	No	Soil runoff
Turbidity ⁽¹¹⁾ - source water (NTU)	5 ⁽¹³⁾		-	-	2.4 ⁽¹³⁾	No	Soil runoff
UV 254 Absorbency (cm ⁻¹)	-		271	0.021 - 0.043	0.029	No	Organic matter naturally present in the environment
Zinc (mg/L)	5 ⁽⁴⁾		285	ND - 0.017	ND	No	Naturally occurring

ORGANIC PARAMETERS							
PARAMETERS	NYSDOH MCL (Highest Level Allowed)	EPA MCLG (Ideal Goal)	CATSKILL/DELAWARE SYSTEM			MCL VIOLATION	SOURCES IN DRINKING WATER
			# SAMPLES	RANGE	AVERAGE		
Bromochloroacetic Acid (µg/L)	50		267	ND - 2.4	1.2	No	By-product of drinking water chlorination
Chloropicrin (µg/L)	50		16	0.27 - 0.72	0.52	No	By-product of drinking water chlorination
Di(2-ethylhexyl)phthalate (µg/L)	6		75	ND - 0.64 ⁽¹⁴⁾	ND	No	Probable source is sample contamination from plastic gloves or air particulates.
Dalapon (µg/L)	50		267	ND - 1.1 ⁽¹⁴⁾	ND	No	By-product of drinking water chlorination
Haloacetic Acid 5 (HAA5) (µg/L)	60 ⁽¹⁵⁾		267	13 - 60	46	No	By-product of drinking water chlorination
Haloacetonitriles (HANs) (µg/L)	50		16	1.41 - 3.54	2.30	No	By-product of drinking water chlorination
Halogenated Ketones (HKs) (µg/L)	50		16	1.17 - 3.50	2.40	No	By-product of drinking water chlorination
Hexachlorocyclopentadiene (µg/L)	5		15	ND - 0.056	ND	No	By-product of drinking water chlorination
Phenanthrene (µg/L)	50		75	ND - 0.2 ⁽¹⁴⁾	ND	No	Incomplete combustion of fossil fuels
Total Organic Halogen (µg/L)	-		129	82 - 300	148	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHM) (µg/L)	80 ⁽¹⁵⁾		268	10 - 73	50	No	By-product of drinking water chlorination

LEAD AND COPPER RULE SAMPLING AT RESIDENTIAL WATER TAPS: JANUARY TO DECEMBER 2014							
PARAMETERS	NYSDOH AL	EPA MCLG (Ideal Goal)	90% OF YOUR LEVELS WERE LESS THAN	RANGE	# SAMPLES EXCEEDING AL	VIOLATION	SOURCES IN DRINKING WATER
Copper (mg/L)	90% of homes less than 1.3	1.3	0.194	0.004 - 0.817	0 out of 191	No	Corrosion of household plumbing systems
Lead (µg/L)	90% of homes less than 15	0	11	ND - 4,960	15 out of 191	No	Corrosion of household plumbing systems

Table 1 (continued)

MICROBIAL PARAMETERS									
PARAMETERS	NYSDOH MCL (Highest Level Allowed)	EPA MCLG (Ideal Goal)	CITYWIDE DISTRIBUTION					MCL VIOLATION	SOURCES IN DRINKING WATER
			# SAMPLES	RANGE	# SAMPLES POSITIVE	AVERAGE	HIGHEST MONTH % POSITIVE		
Total Coliform Bacteria (% of samples positive/month)	5%	0	9,818	-	35	-	2%	No	Naturally present in the environment
<i>E. coli</i> (MPN/100mL)	⁽¹⁶⁾	0	9,818	-	0	-	0%	No	Human and animal fecal waste
Heterotrophic Plate Count (CFU/mL)	TT	-	11,610	ND - 5,700	284	1	-	No	Naturally present in the environment

Table 2: Not-Detected Parameters

The following parameters were monitored for, but not detected in any sample

CONVENTIONAL PHYSICAL AND CHEMICAL PARAMETERS
Antimony, Arsenic, Asbestos *, Beryllium, Bismuth-212 *, Bismuth-214 *, Cadmium, Cesium-134 *, Cesium-137 *, Cyanide, Gross Alpha *, Gross Beta *, Lead-212 *, Lead-214 *, Lithium, Mercury, Nitrite, Potassium-40 *, Radium-226 *, Radium-228 *, Selenium, Silver, Thallium, Thallium-208 *, Thorium-234 *, Uranium *, Uranium-235 *
ORGANIC PARAMETERS
Principal Organic Contaminants:
Benzene, Bromobenzene, Bromochloromethane, Bromomethane, n-Butylbenzene, sec-Butylbenzene, tert-Butylbenzene, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloromethane, 2-Chlorotoluene, 4-Chlorotoluene, Dibromomethane, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, 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, Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, p-Isopropyltoluene, Methylene chloride, n-Propylbenzene, Styrene, 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, Tetrachloroethylene, Toluene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethene, Trichlorofluoromethane, 1,2,3-Trichloropropane, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, m-Xylene, o-Xylene, p-Xylene
Specified Organic Contaminants:
Alachlor, Aldicarb (Temik), Aldicarb sulfone, Aldicarb sulfoxide, Aldrin, Atrazine, Benzo(a)pyrene, Butachlor, Carbaryl, Carbofuran (Furadan), Chlordane, 2,4-D, 1,2-Dibromo-3-chloropropane, Dicamba, Dieldrin, Di(2-ethylhexyl)adipate, Dinoseb, Diquat, Endothall, Endrin, Ethylene dibromide (EDB), Glyphosate, Heptachlor, Heptachlor epoxide, Hexachlorobenzene, 3-Hydroxycarbofuran, Lindane, Methomyl, Methoxychlor, Methyl-tertiary-butyl-ether (MTBE), Metolachlor, Metribuzin, Oxamyl (Vydate), Pentachlorophenol, Picloram, Polychlorinated biphenyls [PCBs], Propachlor, Simazine, Toxaphene, 2,4,5-TP (Silvex), 2,3,7,8-TCDD (Dioxin), Vinyl chloride
Unspecified Organic Contaminants:
Acenaphthene, Acenaphthylene, Acetochlor, Acetone, Acifluorfen, Allyl chloride, Ametryn, tert-Amyl ethyl ether, tert-Amyl methyl ether, Anthracene, Bentazon, Benzo[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[g,h,i]perylene, alpha-BHC, beta-BHC, delta-BHC, Bromacil, 2-Butanone (MEK), tert-Butyl alcohol, Butylate, Butylbenzylphthalate, tert-Butyl ethyl ether, Carbon disulfide, Caffeine, Carboxin, Chloramben, alpha-Chlordane, gamma-Chlordane, Chlorobenzilate, 2-Chlorobiphenyl, 1-Chlorobutane, Chloroneb, Chlorothalonil (Draconil, Bravo), Chlorpropham, Chlorpyrifos (Dursban), Chrysene, Cycloate, 2,4-DB, DCPA(Dacthal), DCPA (total mono & diacid degradate), 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, DEF(Merphos), Diazinon, Dibenz[a,h]anthracene, Di-n-Butylphthalate, 3,5-Dichlorobenzoic acid, 2,3-Dichlorobiphenyl, Dichlorprop, Dichlorvos (DDVP), Diethyl ether, Diethylphthalate, Di-isopropyl ether, Dimethoate, Dimethylphthalate, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, Di-N-octylphthalate, Diphenamid, Disulfoton, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin aldehyde, EPTC, Ethoprop, Ethyl methacrylate, Etridiazole, Fenamiphos, Fenarimol, Fluoranthene, Fluorene, Fluridone, alpha-HCH, beta-HCH, delta-HCH, 2,2',3,3',4,4',6-Heptachlorobiphenyl, Heptachlor epoxide (isomer B), 2,2',4,4',5,6'-Hexachlorobiphenyl, Hexachloroethane, Hexazinone, Indeno[1,2,3-cd]pyrene, Isophorone, Malathion, Methiocarb, Methyl acetate, Methyl iodide, Methyl paraoxon, 4-Methyl-2-pentanone (MIBK), Mevinphos, MGK264-isomer a, MGK264-isomer b, Molinate, Naphthalene, Napropamide, 4-Nitrophenol, cis-Nonachlor, trans-Nonachlor, Norflurzon, 2,2',3,3',4,5',6,6'-Octachlorobiphenyl, Paraquat, Parathion, Pebulate, Pendimethalin, 2,2',3',4,6-Pentachlorobiphenyl, Pentachloroethane, Permethrin (cis- & trans-), Prometryn, Pronamide, Propazine, Propoxur (Baygon), Pyrene, 2,4,5-T, Simetryn, Stirofos, Tebuthiuron, Terbacil, Terbufos, Terbutylazine, Terbutryn, 2,2',4,4'-Tetrachlorobiphenyl, Tetrahydrofuran, Thiobencarb, Triademefon, 2,4,5-Trichlorobiphenyl, Trichlorotrifluoroethane (Freon 113), Tricyclazole, Trifluralin, Vernolate
Third Unregulated Contaminant Monitoring Rule (UCMR3) parameters:
Androstenedione, Bromochloromethane, Bromomethane, 1,3-Butadiene, Chlorodifluoromethane, Chloromethane, Cobalt, 1,1-Dichloroethane, 1,4-Dioxane, Equilin, Estradiol, Estriol, Estrone, Ethynylestradiol, Molybdenum, Perfluorobutanesulfonic acid (PFBS), Perfluoroheptanoic acid (PFHpA), Perfluorohexanesulfonic acid (PFHxS), Perfluorononanoic acid (PFNA), Perfluorooctanesulfonic acid (PFOS), Perfluorooctanoic acid (PFOA), Testosterone, 1,2,3-Trichloropropane, Vanadium

Definitions

Action Level (AL):

The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow. An exceedance occurs if more than 10 percent of the samples exceed the Action Level.

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.

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, using the best available treatment technology.

Maximum Residual Disinfectant Level (MRDL):

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG):

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Treatment Technique (TT):

A required process intended to reduce the level of a contaminant in drinking water.

90th Percentile Value:

The values reported for lead and copper represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below the value. The 90th percentile is equal to or greater than 90 percent of the lead and copper values detected at your water system.

Units & Abbreviations:

CFU/mL = colony forming units per milliliter

mg/L = milligrams per liter (10^{-3} grams per liter)

MPN/100mL = most probable number per 100 milliliter

ND = lab analysis indicates parameter is not detected

NTU = nephelometric turbidity units

µg/L = micrograms per liter (10^{-6} grams per liter)

µS/cm = microsiemens per centimeter

NDL = no designated limit

Footnotes

- (1) EPA Secondary MCL: NYSDOH has not set an MCL for this parameter.
 - (2) Chlorate and chromium (VI), also known as hexavalent chromium were monitored in March, June and September 2014 under the requirements of the Unregulated Contaminant Monitoring Rule. No MCL has been set for chlorate and the NYSDOH chromium MCL is for chromium (total).
 - (3) Value represents MRDL, which is a level of disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects. The MRDL is enforceable in the same manner as an MCL and is the calculated running annual average. Data presented are the range of individual sampling results and the highest of the four quarterly running annual averages.
 - (4) Determination of MCL violation: If a sample exceeds the MCL, a second sample must be collected from the same location within two weeks or as soon as practical. If the average of the two results exceeds the MCL, then an MCL violation has occurred.
 - (5) Action Level (not an MCL) measured at-the-tap. The data presented in this table were collected from sampling stations at the street curb. For at-the-tap monitoring, see the Lead and Copper Rule Sampling at Residential Water Taps table.
 - (6) A Langelier Index of less than zero indicates corrosive tendencies.
 - (7) Hardness of up to 3 grains per gallon is considered soft water; between 3 and 9 is moderately hard water.
 - (8) If iron and manganese are present, the total concentration of both should not exceed 500 µg/L. The level of iron was elevated at site 26850 (Coney Island, 11224) on 4/01/14 at 313 µg/L and the manganese level was 206 µg/L. While the concentration of the iron and manganese combined did exceed 500 µg/L, the average iron and manganese levels of the initial sample and the subsequent confirmation sample did not exceed the MCL, so compliance was maintained. All other samples collected in 2014 from this location had iron levels well below the MCL.
 - (9) NYSDOH established Optimal Water Quality Parameters (OWQP) under the Lead and Copper Rule which includes a range for pH presented here. The reported average value for pH is the median value. On 11/07/14, one pH sample was elevated at site 47500 (Broad Channel, 11693) with a reading of 9.05. This elevated pH reading was due to a problem with a pressure regulator in the vicinity. The regulator was reset and all other samples collected in 2014 from this location reflected pH in the expected ranges.
 - (10) 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.
 - (11) Turbidity is a measure of cloudiness of the water. Turbidity is monitored because it is a good indicator of water quality and because high turbidity can hinder the effectiveness of disinfection.
 - (12) This MCL for turbidity is the monthly average rounded off to the nearest whole number. Data presented are the range of individual sampling results and the highest monthly average from distribution sites.
 - (13) This MCL for turbidity is on individual readings taken every four hours at the source water entry point. Value presented is the highest individual sampling result.
 - (14) Only detected in one sample: dalapon was detected in only one sample which was collected from site 53550 (Grasmere, 10305) on 9/9/2014, di(2-ethylhexyl)phthalate was detected in only one sample which was collected from site 31850 (Tribeca, 10007) on 3/6/14, and phenanthrene was detected in only one sample collected from site 45250 (Somerville, 11692) on 9/8/14. In all other samples the parameters were not detected.
 - (15) The MCLs for HAA5 and TTHMs are the calculated locational running annual average. The data in the Range column are the minimum and maximum values of all sample sites monitored in the distribution system whether for compliance purposes or not. The values in the Average column are the highest locational running annual averages under the Stage 2 Disinfectants and Disinfection Byproducts Rule.
 - (16) If a sample and its repeat sample are both positive for coliform bacteria and one of the two samples is positive for *E. coli*, then an MCL violation has occurred.
- * New York State allows monitoring for these contaminants less frequently than once per year. These data, though representative, are from 2012.

Where to Go for Additional Information

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 at (800) 426-4791.

For additional copies of this report, to report unusual water characteristics, or to request a free kit to test for lead in your drinking water, call 311 or from outside New York City call (212) New-York or visit 311 online. TTY services are available by calling (212) 504-4115.

For more information about *Cryptosporidium* and *Giardia*, contact the Bureau of Communicable Diseases of the New York City Department of Health and Mental Hygiene at (347) 396-2600 or call 311 or visit www.nyc.gov/apps/311.

To contact the New York City Department of Health and Mental Hygiene about other water supply health-related questions, call 311 or visit 311 online, or call New York State Department of Health, Bureau of Water Supply Protection at (518) 402-7650.

To report pollution, crime or terrorism activity occurring in the watershed, call (888) H2O-SHED (426-7433).

To view the 2014 *Drinking Water Supply and Quality Report*, announcements of public hearings, and other information about the New York City Water Supply System, visit DEP's website at www.nyc.gov/dep.

Please share this information with other people who drink New York City tap water, especially those who may not have received this publication directly such as people who live in apartment buildings or nursing homes, attend schools, or have businesses. You can do this by posting this publication in a public place or distributing copies by hand mail or email.

Este reporte contiene información muy importante sobre el agua que usted toma. Haga que se la traduzcan o hable con alguien que la entienda.

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Rapò sa a gen enfòmasyon ki enpòtan anpil sou dlo w'ap bwè a. Fè tradwi-l pou ou, oswa pale ak yon moun ki konprann sa ki ekri ladan-l.

Ten raport zawiera bardzo istotną informację o twojej wodzie pitnej. Przetłumacz go albo porozmawiaj z kimś kto go rozumie.

В этом материале содержится важная информация относительно вашей питьевой воды. Переведите его или поговорите с кем-нибудь из тех, кто понимает его содержание.

這個報告中包含有關你的飲用水的重要信息。請將此報告翻譯成你的語言，或者詢問懂得這份報告的人。

이 보고서는 귀하의 식수에 관한 매우 중요한 정보를 포함하고 있습니다. 이 정보에 대해 이해하는 사람에게 그 정보를 번역하거나 통역해 받으십시오.

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