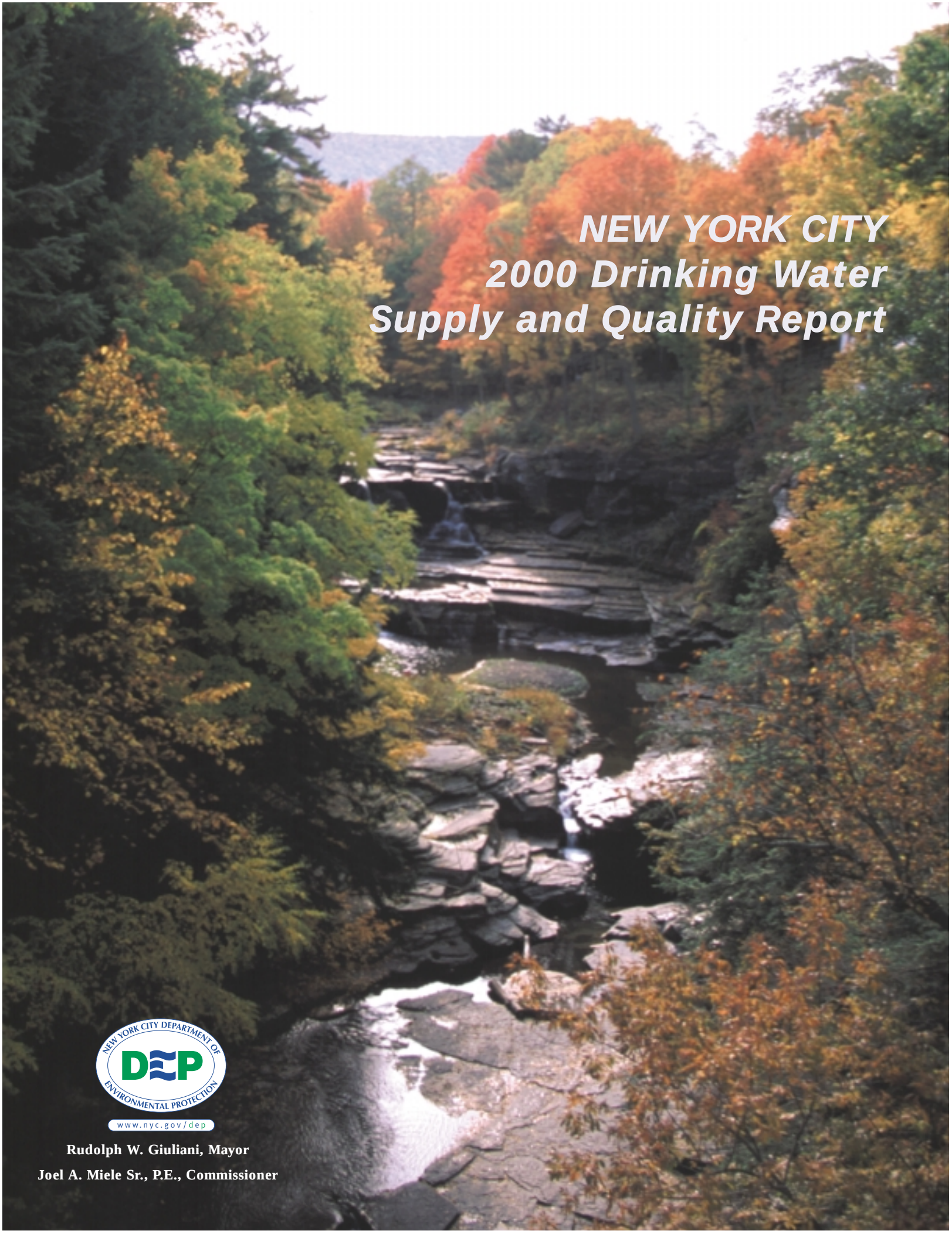


NEW YORK CITY 2000 Drinking Water Supply and Quality Report

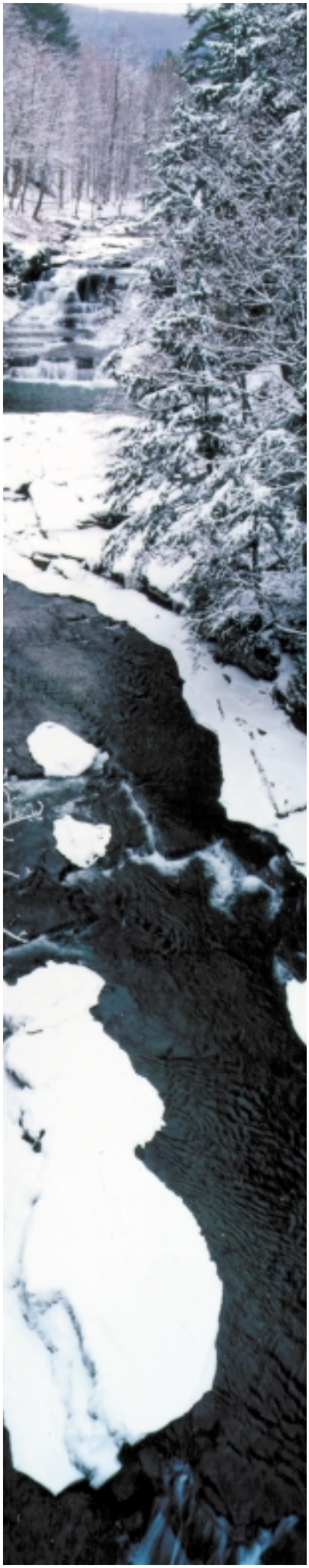
NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP

www.nyc.gov/dep

Rudolph W. Giuliani, Mayor

Joel A. Miele Sr., P.E., Commissioner



NEW YORK CITY 2000 DRINKING WATER SUPPLY AND QUALITY REPORT

The New York City Department of Environmental Protection is pleased to present its 2000 Annual Water Quality Report. This presentation is in accordance with Part 5-1.72 of the New York State Sanitary Code (10NYCRR), and the National Primary Drinking Water Regulations, 40 CFR Part 141 Subpart O, of the Environmental Protection Agency, which require all drinking water suppliers to provide the public with an annual statement describing the water supply and the quality of its water.

New York City's Water Supply

The New York City surface (reservoir) water supply system provides approximately 1.3 billion gallons of safe drinking water daily to over 8 million residents of New York City, approximately one million people living in Westchester, Putnam, Ulster, and Orange counties, plus the millions of tourists and commuters who visit the City throughout the year. In addition to our surface water supplies, approximately 350,000 people in southeastern Queens receive groundwater or a blend of groundwater and surface water. In all, the City system supplies high quality water to nearly half the population of New York State.

Where Does New York City's Water Come From?

New York City's surface water is supplied from a network of 19 reservoirs and three controlled lakes in a 1,969 square-mile watershed that extends 125 miles north of New York City. Approximately 90% of our water comes from the Catskill/Delaware System, located in Delaware, Greene, Schoharie, Sullivan, and Ulster counties, west of the Hudson River. The Croton System, the City's original upstate supply, normally provides about 10% of our daily water from 12 reservoir basins in Westchester, Putnam, and Dutchess counties. In 2000, New York City's Groundwater System in southeastern Queens operated 16 wells and supplied a daily average of 12 million gallons of drinking water, or less than 1% of the City's total use.

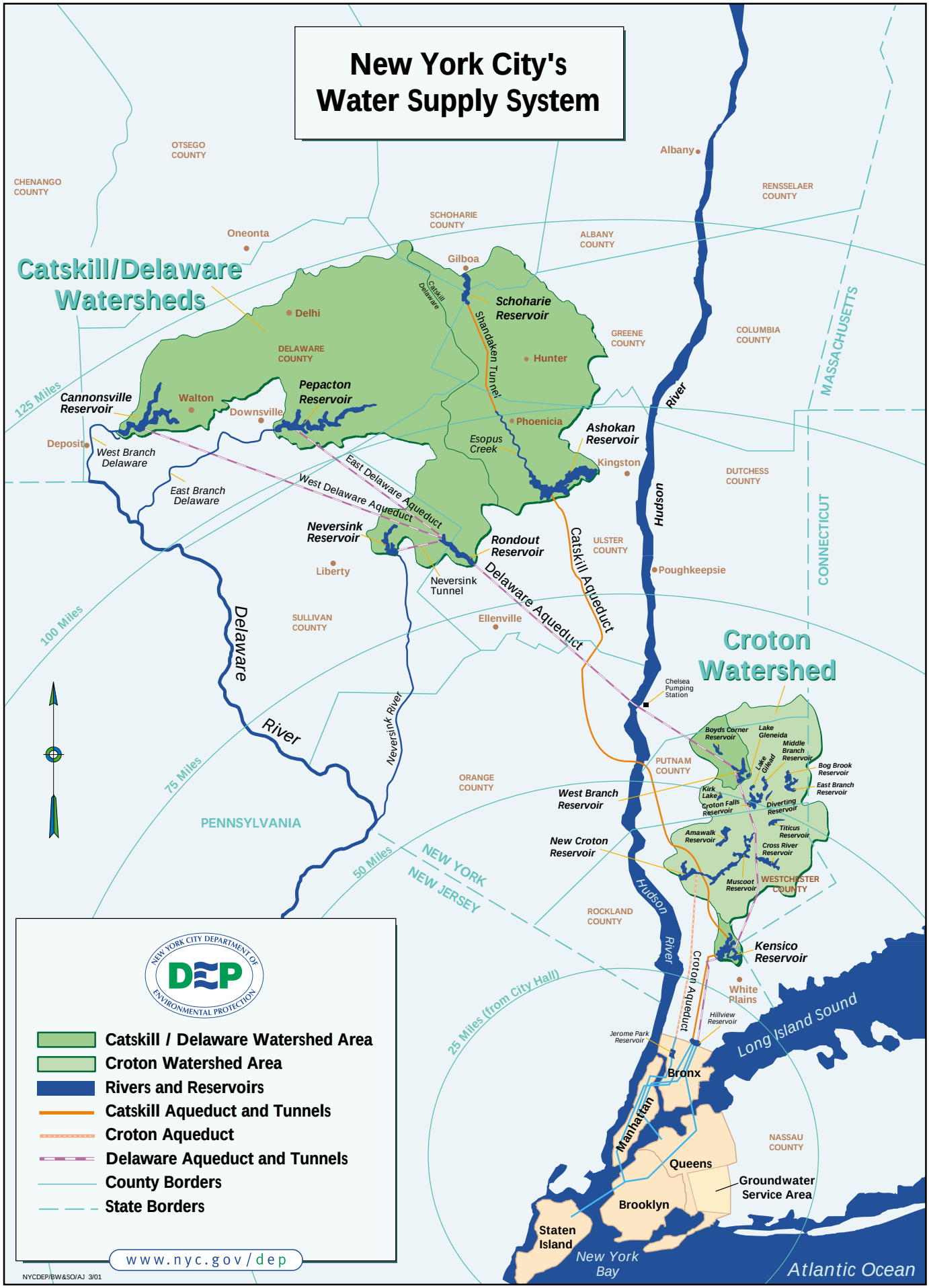
What's in Source Water?

Sources of drinking water worldwide (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.

Regulation of Drinking Water

In order to ensure that tap water is safe to drink, the New York State Department of Health and the United States Environmental Protection Agency (EPA) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the federal Food and Drug Administration's regulations establish limits for contaminants in bottled water.

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.


New York City's
Water Supply System
Catskill/Delaware
Watersheds
Croton
Watershed
OTSEGO
COUNTY
CHENANGO
COUNTY
SCHOHARIE
COUNTY
ALBANY
COUNTY
RENSSELAER
COUNTY
GREENE
COUNTY
COLUMBIA
COUNTY
DELAWARE
COUNTY
DUTCHESS
COUNTY
ULSTER
COUNTY
SULLIVAN
COUNTY
ORANGE
COUNTY
PUTNAM
COUNTY
ROCKLAND
COUNTY
WESTCHESTER
COUNTY
NASSAU
COUNTY
Albany
Oneonta
Gilboa
Delhi
Hunter
Phoenicia
Kingston
Poughkeepsie
Liberty
Ellenville
Walton
Downsville
Deposit
Schoharie
Reservoir
Shandaken Tunnel
Pepacton
Reservoir
Cannonsville
Reservoir
West Branch
Delaware
East Branch
Delaware
Esopus
Creek
Ashokan
Reservoir
East Delaware Aqueduct
West Delaware Aqueduct
Neversink
Reservoir
Neversink
Tunnel
Rondout
Reservoir
Delaware Aqueduct
Catskill Aqueduct
Catskill
Delaware
Hudson
River
Delaware
River
Neversink River
125 Miles
100 Miles
75 Miles
50 Miles
25 Miles (from City Hall)
PENNSYLVANIA
NEW YORK
NEW JERSEY
MASSACHUSETTS
CONNECTICUT
Chelsea
Pumping
Station
Boyds Corner
Reservoir
Lake
Gleneida
Middle
Branch
Reservoir
Lake
Gilead
Bog Brook
Reservoir
East Branch
Reservoir
Kirk
Lake
Croton Falls
Reservoir
Diverting
Reservoir
West Branch
Reservoir
Amawalk
Reservoir
Titicus
Reservoir
Cross River
Reservoir
New Croton
Reservoir
Muscoot
Reservoir
Kensico
Reservoir
White
Plains
Hillview
Reservoir
Croton Aqueduct
Jerome Park
Reservoir
Long Island Sound
Bronx
Manhattan
Queens
Brooklyn
Staten
Island
Groundwater
Service Area
New York
Bay
Atlantic Ocean
NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEP
Catskill / Delaware Watershed Area
Croton Watershed Area
Rivers and Reservoirs
Catskill Aqueduct and Tunnels
Croton Aqueduct
Delaware Aqueduct and Tunnels
County Borders
State Borders
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NYCDEP/BW&SO/AJ 3/01

Is New York City's water "hard?"

Hardness is a measure of dissolved calcium and magnesium in the water. The less calcium and magnesium in the water ("soft" water), the easier it is to create lather and suds. Depending upon location, the hardness can be 1 grain/gallon (CaC03) for Catskill/Delaware System, and 5 grains/gallon for Croton System. New York City's water is predominantly "soft."

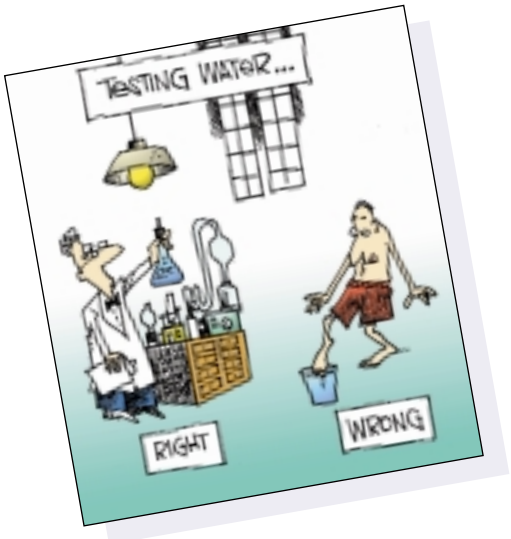
New York City's Water Quality

The New York City Department of Environmental Protection (DEP) operates the water supply system that delivers water to City residents. DEP's monitoring program — far more extensive than 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. Color, an aesthetic condition, may exceed the standard on a seasonal basis.

DEP monitors the water in the distribution system, the upstate reservoirs and feeder streams, and the wells that are the sources for our supply. Water quality is monitored continuously as the water enters the distribution system, and is regularly tested at sampling points throughout the entire City. DEP conducts analyses for a broad spectrum of microbiological, chemical, and physical measures of quality. In 2000, DEP collected more than 39,100 in-City samples and performed approximately 752,700 analyses.

Test Results

The results of the tests conducted in 2000 on distribution water samples under DEP's Distribution System Monitoring Program are summarized in the tables in this Statement. Data is presented separately for the Croton, Catskill/Delaware, and Groundwater Systems. Whether a particular user receives Croton, Catskill/Delaware, groundwater, or a mixture, depends on location, system operations, and consumer demand.



The State requires monitoring for some parameters at a frequency of less than once per year because the concentrations of these parameters do not change frequently. Accordingly, some of these data, though representative, are more than one year old. Unregulated parameter monitoring is conducted to help EPA determine where certain parameters occur and whether it needs to regulate those parameters.

Sampling Stations

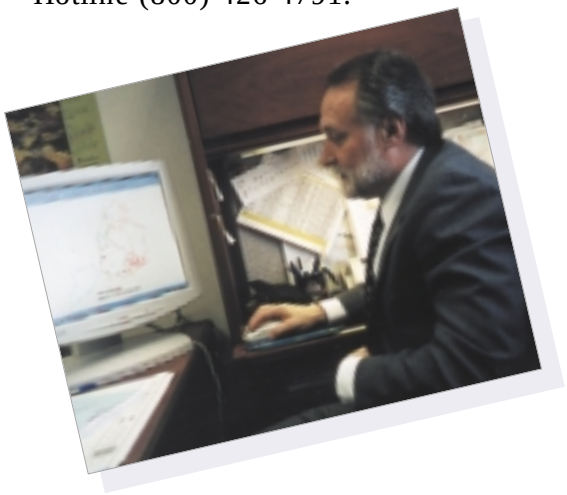
DEP conducts most of its distribution water quality monitoring at approximately 1000 fixed sampling stations throughout the city. These stations, which you may have seen in your neighborhood, allow DEP to collect water samples throughout the distribution system in an efficient and sanitary manner.

Lead in Drinking Water

New York City water is virtually lead-free when it is delivered from the City's upstate reservoir system, but water can absorb lead from solder, fixtures, and pipes found in the plumbing of some buildings or homes. Mandated at-the-tap lead monitoring is conducted at various households around the City. Based on the results of monitoring of 107 homes in 2000, New York City met the established standard or Lead Action Level (AL).

Infants and young children are typically more vulnerable to lead in drinking water than the general population. 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. If you are concerned about elevated lead levels in your home's water you may flush your cold-water tap for 30 seconds to 2 minutes, until the water turns cold, before using water that has been standing in the pipes for more than six hours. Use only water from the cold water tap for cooking, drinking, and making baby formula. You also may wish to have your water tested. To request a free kit to test for lead in your drinking water, call DEP's 24-hour Help Center at (718) DEP-HELP. Additional information is available from the EPA's Safe Drinking Water Hotline (800) 426-4791.



Water Quality Tracking System

DEP operates a new state of the art computer program and water quality tracking system. This system, called the Distribution Water Quality Module (DWQM), allows Drinking Water Quality Control staff to quickly access a large number of water quality parameters, including chlorine residual, orthophosphate concentration, color, turbidity, bacteria, Heterotrophic Plate Count, and disinfection by-products, throughout the City as a whole or any section of the City. The system's ability to identify problem locations or areas with low chlorine or high color, and track water quality trends, makes it an effective water quality management tool and helps to provide the best possible water quality throughout the City.

Cryptosporidium and Giardia

While there is no evidence of illness related to the New York City water supply, federal and New York State law requires all water suppliers to notify their customers about the potential risks of 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. Most healthy individuals can overcome both of these diseases within a few weeks.

According to the EPA and the Centers for Disease Control and Prevention (CDC), it is unclear how most cases of cryptosporidiosis in the United States are contracted. The relative importance of various risk factors is unknown. Such factors include eating contaminated food, swallowing contaminated recreational water while swimming or camping, contact with animals, contact with human waste, certain sexual practices, or drinking contaminated water. Individuals who think they may have cryptosporidiosis or giardiasis should contact their health care provider.

Some people may be more vulnerable to disease-causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with Crohn's disease or 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. 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 (800) 426-4791.

At times I can detect chlorine odors in tap water. What can I do about it?

Chlorine odors may be more noticeable when the weather is warmer. Chlorine is a disinfectant and is added to the water to kill germs. The following are ways you can remove the chlorine and its odor from your drinking water:

- Fill a pitcher and let it stand in the refrigerator overnight. (This is the best way.)
- Fill a glass or jar with water and let it stand in sunlight for 30 minutes.
- Pour water from one container to another about 10 times.
- Heat the water to about 100 degrees Fahrenheit.

Once you remove the chlorine, be sure to refrigerate the water to limit bacterial regrowth.

Does my drinking water contain Fluoride?

Yes, all New York City tap water contains fluoride. In accordance with Article 141.08 of the New York City Health Code, DEP, as the New York City water supplier, adds a fluoride compound which provides our water supply with a concentration of approximately 1.0 part per million (ppm) fluoride. Fluoridation commenced in 1964.

DEP's Monitoring for Pathogens

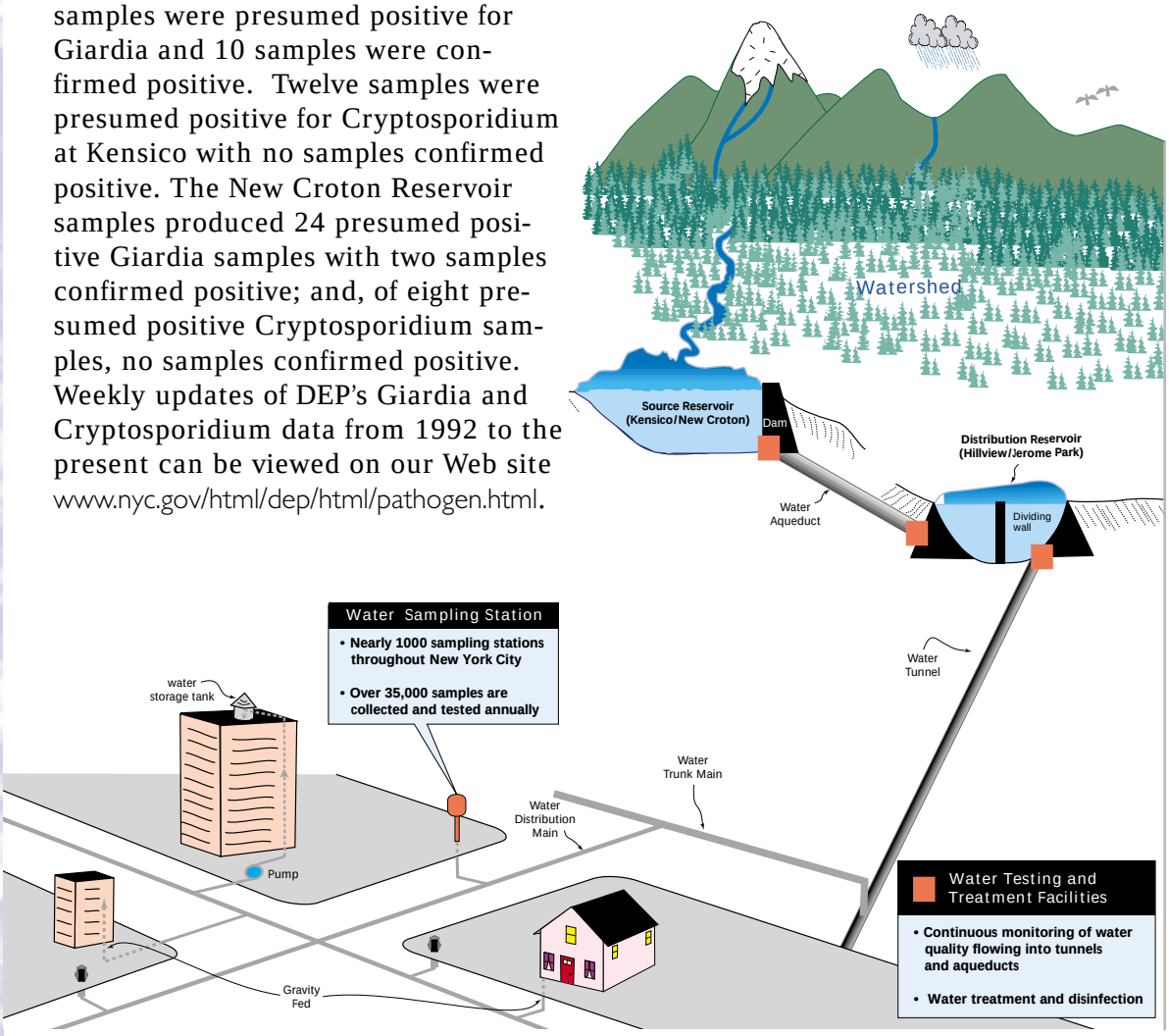
In 1992, the City added a pathogen monitoring component to its comprehensive watershed monitoring program. Since then, samples have been collected weekly from the effluents of Kensico and New Croton Reservoirs, before water is first chlorinated in the Catskill/Delaware and Croton Systems, respectively. In May 1999, DEP implemented a more sensitive analytical method which improved the Department's ability to detect both Giardia cysts and Cryptosporidium oocysts. Current test methods, however, are limited in that they do not allow us to determine if organisms identified are dead or if they are capable of causing disease.

In 2000, as part of the routine sampling program, 105 samples of Kensico Reservoir effluent and 52 samples of New Croton Reservoir effluent were collected and analyzed for Giardia cysts and Cryptosporidium oocysts. Of the 105 Kensico Reservoir samples, 67 samples were presumed positive for Giardia and 10 samples were confirmed positive. Twelve samples were presumed positive for Cryptosporidium at Kensico with no samples confirmed positive. The New Croton Reservoir samples produced 24 presumed positive Giardia samples with two samples confirmed positive; and, of eight presumed positive Cryptosporidium samples, no samples confirmed positive. Weekly updates of DEP's Giardia and Cryptosporidium data from 1992 to the present can be viewed on our Web site www.nyc.gov/html/dep/html/pathogen.html.

New York City's Water Treatment

All surface water and groundwater entering New York City's distribution system is treated with chlorine, fluoride, orthophosphate, and, in some cases, sodium hydroxide. New York City uses chlorine to meet the New York State Sanitary Code and federal Safe Drinking Water Act disinfection requirements. Fluoride, at a concentration of one part per million, is added to help prevent tooth decay and has been added since 1964 in accordance with the New York City Health Code. Orthophosphate 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 Catskill/Delaware water to raise the pH and reduce corrosivity.

A sequestering phosphate is applied at several wells to prevent the precipitation of naturally occurring minerals,



mostly iron and manganese, in the distribution mains and customers' household piping. Air stripper facilities operate at several wells to remove volatile organic chemicals.

Ensuring a Safe and Sufficient Supply of Water

Watershed Programs

During 2000, New York City continued implementation of the watershed protection and partnership programs set forth in the January 1997 Watershed Memorandum of Agreement (MOA). These efforts focused on three key programs: the acquisition of watershed lands; the enforcement of strengthened Watershed Regulations; and the expansion of partnership programs that target specific sources of pollution in the watershed. In addition, DEP continued work on a number of water quality studies, and continued implementing the upgrades of non-City-owned wastewater treatment plants (WWTPs).

Land Acquisition

In 2000, DEP met the goals for procuring watershed lands set forth in the 1997 Filtration Avoidance Determination (FAD) and the MOA. Specifically, DEP solicited 52,846 acres of watershed lands in designated priority areas. As of December 2000, DEP had 26,970 acres either acquired or under purchase contract for a cost of $76.5 million.

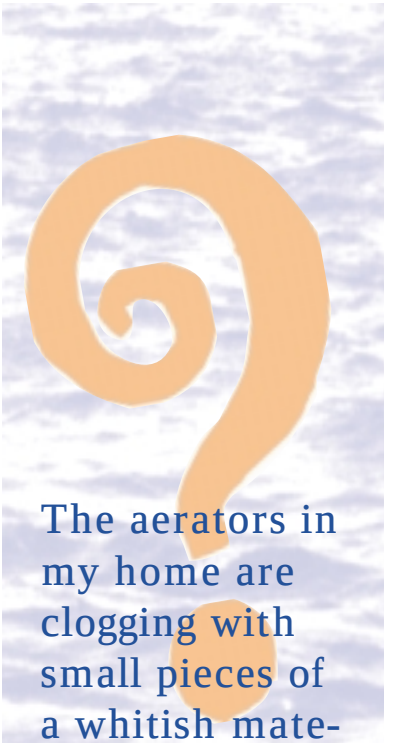
Watershed Regulations

On May 1, 1997, enhanced Watershed Regulations became effective, replacing regulations that had been in place since 1953. The Regulations are vital to water supply protection and provide a higher level of defense against modern-day threats to water quality. By vigorously enforcing the new Regulations, DEP is ensuring that the City's source waters are protected. The steps taken to ensure a high quality water supply include: aggressive policing and inspection of the watersheds; greatly increased water quality monitoring; systematic inspections of wastewater treatment plants; investigations of other potentially polluting activities; and legal actions against polluters. Furthermore, in 2000, DEP staff reviewed more than 1,719 applications for new or remediated septic systems, 125 stormwater pollution prevention plans, and more than 200 proposals for other projects that included one or more regulated activities.

Partnership Programs

West of the Hudson River, many of the partnership programs are being administered by the Catskill Watershed Corporation (CWC), a non-profit corporation formed solely for that purpose. Together, CWC and DEP continued to implement programs that remediated 193 failing septic systems, completed construction of 29 winter road de-icing materials storage facilities, and identified a second group of best management practices to address existing stormwater runoff.

The Watershed Agricultural Program, funded by DEP and implemented by the Watershed Agricultural Council has become a national model. More than 90% of watershed farms have joined the program, which develops Best Management Practices to reduce agricultural pollution and enhance the economic viability of participating farms.



The aerators in my home are clogging with small pieces of a whitish material. What is causing this to occur?

This is a frequent complaint from consumers. The problem may be accompanied by a significant drop in water pressure at the affected faucet in addition to a decrease in your hot water supply. The culprit is the hot water heater's 'dip-tube'. This is a long internal tube which delivers cold water to the bottom of the hot water heater tank. The tube, which is composed of polypropylene, may disintegrate. The problem affects approximately 16 million water heaters manufactured between 1993 and 1996.

At times, my drinking water often looks "milky" when first taken from a faucet, but then clears up. Why?

Air becomes trapped in the water as it makes its long trip from the upstate reservoirs to the City. As a result, microbubbles of air can sometimes cause water to appear cloudy or milky. This condition is not a public health concern. The cloudiness is temporary and clears quickly after the water is drawn from the tap and the excess air is released.

The Program includes a watershed forestry component and the Conservation Reserve Enhancement Program (CREP). Under CREP, the US Department of Agriculture pays enhanced annual rental rates and other incentives to agricultural landowners to take environmentally sensitive lands out of production. The City and USDA each pay half the cost of treating those lands with conservation practices. To date, more than fifty landowners have enrolled over 600 acres of riparian buffer lands into CREP.

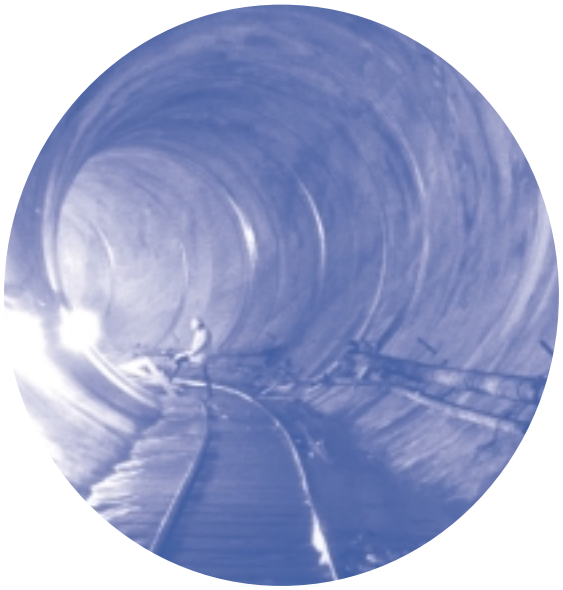
Wastewater Treatment Plant Upgrades

The City continues to advance the program to upgrade all of the 102 non-City-owned wastewater treatment plants (WWTP) in the watershed. All facilities have signed agreements to participate in the upgrade program and have hired engineers to complete upgrade designs. Construction is expected to begin on the first of these upgrades in 2001. The City had upgraded its own watershed WWTPs in the late 1990s.

Upstate Capital Improvements

The City continued to implement a multi-year program to upgrade and improve its upstate water supply facilities, including gatehouses, aqueducts, water testing laboratories, and other facilities which are important to ensuring a safe and reliable supply of drinking water. An ongoing dam reconstruction program has also been in effect for rehabilitation of dams. In 2000, work was done on facilities at five reservoirs and three controlled lakes. In addition, work is expected to begin on five more reservoirs in 2001. Highlights of this year's work include the replacement of roller and sluice gates as well as the chlorination systems in Shaft 18 and the Catskill Screen Chamber, and repairs to the gate valve in Shaft 6 of the Delaware Aqueduct completed in the first week of December.

The Distribution System



City Water Tunnel No. 3

The Third Water Tunnel, begun in 1970, is being built in stages. The first stage of Tunnel No. 3, which became operational in July 1998, has already helped to improve the reliability of the City's drinking water distribution system. Stage 2 of Tunnel No. 3 includes two sections, and is scheduled to be finished in 2008. The first section of Stage 2, which is in Brooklyn and Queens, is currently under construction and upon completion will improve service to Staten Island, Brooklyn and Queens. This will be followed by the construction of the Manhattan section of Stage 2.

When completed, Tunnel No. 3 will create a more flexible means of supplying drinking water to the entire City and will provide delivery alternatives in the event of disruption in any of the older tunnels. It will also permit New York City to drain, examine and rehabilitate City Tunnels No. 1 and 2.

This map of the City indicates the general areas where water can be supplied by the Croton and Groundwater Systems when they are on line. It is possible to distribute Catskill/Delaware water through both the Croton and Groundwater Systems.

Sometimes my water is a rusty brown color. What causes this?

Brown water is commonly associated with plumbing corrosion problems inside buildings and from rusting hot water heaters. If you have an ongoing problem with brown water, it is probably due to rusty pipes. It is recommended that you run your cold water for 2 - 3 minutes if it has not been used for an extended period of time. This will flush the line. You can avoid wasting water by catching your "flush" water in a container and using it to water plants or for other purposes. In addition, brown water can result from street construction or water main work being done in the area. Any disturbance to the main, including the opening of a fire hydrant, can cause pipe sediment to shift, resulting in brown water. The settling time of the main will vary, depending on the size of the water main.

Should I buy bottled water?

You do not need to buy bottled water for health reasons in New York City since our water meets all federal and State health-based drinking water standards. Also, bottled water costs up to 1,000 times more than the City's drinking water.

Operations

In our ongoing efforts to maintain the appropriate volume and high quality of water in the distribution system, there is some rotation in the water sources used by DEP. In the Groundwater System, wells are routinely removed and returned to service for maintenance or due to changes in demand. After Hurricane Floyd poured torrential rains on the watershed, the entire Croton System was shut down from September 17, 1999, through April 20, 2000, due to elevated levels of color (which is an aesthetic problem, not a public health concern) and to permit contract work in the Croton Aqueduct. On April 20, 2000, the Croton System was placed back in limited service when the Mosholu Pumping Station was activated, which pumped about 35 million gallons per day (MGD) of Croton water into Tunnel #1 of the Catskill/Delaware Supply through the end of the year. For the month of May and the first half of June the maximum pumped flow was 52.5 MGD. In addition about 14 MGD was distributed in the East Bronx from April 24 to June 13, 2000.

Croton Filtration Plant

The City is planning to build a treatment facility to filter water from the Croton System.

The federal Surface Water Treatment Rule (SWTR) requires that all water supplies be filtered by June 29, 1993, unless the system meets special criteria to receive a waiver. Even though Croton water quality is high, it experiences seasonal color problems and will be subjected to stricter standards for disinfection by-products in the near future. In November 1998, a Consent Decree, committing the City to design, construct, and operate a Croton filtration facility, was signed by the City, the United States and the State of New York. The facility is expected to reduce color levels in the Croton water supply and ensure compliance with stricter drinking water standards to be imposed in the future.

Until DEP begins to filter Croton water, we are required 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.

New York City
Drinking Water Quality Testing Results 2000

DETECTED REGULATED PARAMETERS

PARAMETERS	NYS DOH MCL	US EPA MCLG	CATSKILL-DELAWARE SYSTEM PWSID NY7003493			CROTON SYSTEM PWSID NY70036666			GROUNDWATER SYSTEM PWSID NY7011735			SOURCE OF PARAMETER
			# SAMPLES	RANGE	AVERAGE	# SAMPLES	RANGE	AVERAGE	# SAMPLES	RANGE	AVERAGE	
REGULATED CONVENTIONAL PHYSICAL AND CHEMICAL PARAMETERS												
Barium (mg/L)	2.00	2	193	0.013 - 0.027	0.018	3	0.024 - 0.026	0.025	57	ND - 0.097	0.018	Erosion of natural deposits
Chloride (mg/L)	250.0	-	227	6.4 - 20.8	9.5	3	39.1 - 48.8	45.6	207	8.3 - 91.8	34.8	Naturally occurring; road salt
Chromium (µg/L)	100	100	193	ND - 2*	ND	3	ND	ND	57	ND - 5	<2	Erosion of natural deposits
Color - entry points (color units)	15 (1)	-	1132	**4 - 20**	8	51	4 - 13	9	203	**1 - 30**	6	Iron and manganese; or organic sources, such as algal growth
Copper (mg/L)	1.3 (2)	1.3	265	ND - 0.070	0.009	4	0.003 - 0.027	0.014	210	ND - 0.155	0.019	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride (mg/L)	2.2	-	9803	0.2 - 1.5	1.1	73	0.7 - 1.1	1.0	1120	0.4 - 1.5	1.1	Erosion of natural deposits; water additive which promotes strong teeth; runoff from fertilizer
Gross Beta particle (pCi/L) (3)	50 (4)	-	9	ND - 1.0	<0.7	3	1.2 - 2.1	1.7	1	1.8	1.8	Decay of natural deposits and man-made emissions
Iron (µg/L)	300 (5)	-	201	20 - 140	40	3	30 - 40	30	221	ND - 1710	290	Naturally occurring
Lead (µg/L)	15 (2)	0	273	ND - 18	<1	4	ND	ND	213	ND - 8	<1	Corrosion of household plumbing systems; erosion of natural deposits
Manganese (µg/L)	300 (5)	-	194	9 - 69	22	3	27 - 33	30	219	ND - 286	51	Naturally occurring
Nickel (µg/L)	100 (6)	-	193	ND	ND	3	ND	ND	51	ND - 3	<2	Naturally occurring, all detections were in Well 36 water only
Nitrate (mg/L nitrogen)	10	10	227	0.11 - 0.38	0.19	3	0.40 - 0.49	0.45	207	ND - 8.55	2.55	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (mg/L nitrogen)	1	1	193	ND - 0.003	<0.001	3	ND	ND	88	ND - 0.006	<0.001	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (mg/L)	NDL (7)	-	200	6.6 - 12.4	8.3	3	19.6 - 24.7	23.0	100	8.6 - 50.1	25.0	Naturally occurring; road salt; water softeners; animal waste
Sulfate (mg/L)	250.0	-	227	5.8 - 8.8	6.7	3	13.1 - 14.8	14.2	207	8.7 - 86.4	33.8	Naturally occurring
Turbidity (8) - distribution system (NTU)	5 (9)	-	8706	0.50 - 10.00	1.06	23	0.80 - 2.50	1.24	1125	0.07 - 9.90	0.83	Soil runoff
Turbidity (8) - entry points (NTU)	1 (10)	-	-	-	-	51	0.96 - 1.13	1.06	-	-	-	Soil runoff
Zinc (mg/L)	5	-	194	ND - 0.004	<0.002	3	ND	ND	219	ND - 0.545	0.059	Naturally occurring
REGULATED ORGANIC CONTAMINANTS												
Total Trihalomethanes (µg/L)	100 (11)	-	177	13 - 75	37	3	36 - 40	42	109	1 - 55	20	By-product of drinking water chlorination
Principal Organic Contaminants detected:												
Dichlorodifluoromethane (µg/L)	5	-	177	ND	ND	3	ND	ND	109	ND - 1*	ND	Refrigerant; aerosol propellant; foaming agent
Hexachlorobutadiene (µg/L)	5	-	177	ND - 1*	ND	3	ND	ND	109	ND	ND	Used to make rubber compounds; used as a solvent, and to make lubricants; used as a heat transfer liquid and a hydraulic fluid
Tetrachloroethylene (µg/L)	5	0	177	ND	ND	3	ND	ND	109	ND - 3	<0.5	Discharge from dry cleaners
Toluene (µg/L)	5	1	177	ND	ND	3	ND	ND	109	ND - 1*	ND	Discharge from petroleum factories
Trichloroethene (µg/L)	5	0	177	ND	ND	3	ND	ND	109	ND - 2	<0.5	Residual of cleaning solvents and metal degreasers
Specified Organic Contaminants detected:												
Hexachlorocyclopentadiene (µg/L)	50	50	3	ND - 0.06	<0.05	-	-	-	6	ND	ND	Discharge from chemical factories
MICROBIAL PARAMETERS												
Total Coliform Bacteria (% of samples positive/month)	5%	0	9807	0.0% - 0.6%	0.2%	72	ND	ND	1122	0.0% - 1.9%	0.6%	Naturally present in the environment
E. coli (CFU/100mL)	(12)	0	9807	ND	ND	72	ND	ND	1122	0.0% - 1%	0.1%	Human and animal fecal waste
Heterotrophic Plate Count (CFU/mL)	TT	-	6620	ND - 670	1	61	ND - 3	ND	763	ND - 251	1	Naturally present in the environment

LEAD AND COPPER RULE SAMPLING AT RESIDENTIAL WATER TAPS: January - June 2000

PARAMETERS	NYS DOH AL	US EPA MCLG	# SAMPLES	RANGE	90th PERCENTILE VALUES	# SAMPLES EXCEEDING ACTION LEVEL(AL)	SOURCE OF PARAMETER
Copper (mg/L)	1.3	1.3	107	0.011 - 0.514	0.202	0	Corrosion of household plumbing systems
Lead (µg/L)	15	0	107	ND - 657	13	10	Corrosion of household plumbing systems

1999 CORRECTION

PARAMETERS	NYS DOH MCL	US EPA MCLG	CATSKILL-DELAWARE SYSTEM PWSID NY7003493			CROTON SYSTEM PWSID NY70036666			GROUNDWATER SYSTEM PWSID NY7011735			SOURCE OF PARAMETER
			# SAMPLES	RANGE	AVERAGE	# SAMPLES	RANGE	AVERAGE	# SAMPLES	RANGE	AVERAGE	
Total Coliform Bacteria (% of samples positive/month)	5%	0	9283	0.0% - 1.0%	0.2%	883	0.0% - 0.8%	0.1%	1222	0.0% - 2.0%	0.3%	Naturally present in the environment

The 1999 range of values for Total Coliform Bacteria in the Croton System was incorrectly reported in the New York City 1999 Drinking Water Supply and Quality Statement; these are the corrected numbers. The corrected values reported above show that no Total Coliform Bacteria violations occurred for any System during 1999.

DETECTED UNREGULATED PARAMETERS

PARAMETERS	NYS DOH MCL	CATSKILL-DELAWARE SYSTEM PWSID NY7003493			CROTON SYSTEM PWSID NY70036666			GROUNDWATER SYSTEM PWSID NY7011735			SOURCE OF PARAMETER
		# SAMPLES	RANGE	AVERAGE	# SAMPLES	RANGE	AVERAGE	# SAMPLES	RANGE	AVERAGE	
UNREGULATED CONVENTIONAL PHYSICAL AND CHEMICAL PARAMETERS											
Alkalinity (mg/L $CaCO_3$)	-	278	5.9 - 23.8	13.2	4	32.2 - 49.6	42.9	227	6 - 188.6	54.1	Erosion of natural deposits
Aluminum (µg/L)	50 - 200 [13]	193	ND - 96	27	3	4 - 6	5	50	ND - 59	15	Erosion of natural deposits
Ammonia (µg/L nitrogen)	-	193	ND - 20	<20	3	ND	ND	61	ND - 20	<20	Animal waste and fertilizer runoff
Boron (µg/L)	-	193	ND - 118	51	3	40 - 60	50	50	ND - 224	89	Erosion of natural deposits
Calcium (mg/L)	-	272	4.0 - 10.2	6.3	4	15.6 - 22.6	19.5	241	5.3 - 75.4	22.3	Erosion of natural deposits
Carbon dioxide (mg/L)	-	12	1 - 2	1.4	1	3	3	-	-	-	Present in air
Chemical Oxygen Demand (mg/L O_2)	-	193	2.2 - 7.1	4.5	3	6.3 - 6.9	6.7	50	ND - 5.5	1.5	
Chlorine Residual, free (mg/L)	4 [14]	9838	0.1 - 1.3	0.6	74	0.4 - 1.1	0.7	1124	0.0 - 1.5	0.6	Water additive for disinfection
Color - distribution system (color units)	-	8705	2 - 50	8	23	5 - 16	10	1125	1 - 240	7	Presence of iron, manganese, and organics in water
Corrosivity (Langelier index)	0 [13, 15]	193	-2.8 to -1.8	-2.4	3	-1.7 to - 1.5	-1.6	92	-3.3 to 0.3	-1.4	
Dissolved Oxygen (mg/L)	-	12	8.8 - 15.8	11.9	1	9.7	9.7	-	-	-	
Foaming Agents (µg/L linear alkyl sulfonate)	500 [13]	193	ND - 20	<10	3	ND	ND	65	ND	ND	Residual of washing detergents
Hardness (grains/gallon [US] $CaCO_3$) [16]	-	200	1.0 - 2.2	1.3	3	3.9 - 5.1	4.7	211	1.3 - 19.2	5.9	Erosion of natural deposits
Iodide (µg/L)	-	193	ND - 13*	ND	3	ND	ND	50	ND - 15*	ND	Erosion of natural deposits
Magnesium (mg/L)	-	201	1.1 - 3.0	1.5	3	5.7 - 7.5	6.9	237	1.6 - 34.2	10.9	Erosion of natural deposits
pH (pH units)	6.5 - 8.5 [13]	9838	6.8 - 7.9	-	74	6.9 - 7.3	-	1125	5.9 - 8.0	-	
Phosphate, Ortho- (mg/L)	-	9838	0.2 - 3.2	2	72	1.1 - 3.3	1.9	1124	0.3 - 3.3	1.7	Water additive for corrosion control
Phosphate, Total (mg/L)	-	193	1.2 - 2.8	1.8	3	1.9 - 2	1.9	93	0.2 - 12.4	2.1	Water additive for corrosion control
Potassium (mg/L)	-	200	0.5 - 10.2	0.8	3	1.5 - 2.0	1.8	52	0.6 - 3.4	1.2	Erosion of natural deposits
Silica (mg/L)	-	193	2.2 - 4.1	2.9	3	4.7 - 5.4	5.2	170	2.1 - 21.5	12.1	Erosion of natural deposits
Specific Conductance (µmhos/cm)	-	9838	67 - 178	85	74	190 - 318	250	1125	69 - 758	194	
Strontium (µg/L)	-	200	ND - 30	20	3	50 - 70	60	52	10 - 200	50	Erosion of natural deposits
Temperature (°F)	-	9832	34 - 74	54	74	46 - 63	52	1125	35 - 75	57	
Total Dissolved Solids (mg/L)	500 [13]	193	28 - 111	51	3	133 - 177	161	97	56 - 494	193	Metals and salts naturally occurring in the soil; organic matter
Total Organic Carbon (mg/L carbon)	-	193	1.1 - 2.0	1.4	3	2.2 - 2.7	2.5	50	ND - 1.3	0.5	Organic matter naturally present in the environment
Total Organic Halogen (µg/L)	-	187	98 - 315	166	3	220 - 259	242	50	ND - 176	76	By-product of drinking water chlorination
UV 254 Absorbency (absorbency unit)	-	193	0.026 - 0.038	0.032	3	0.053 - 0.059	0.057	50	0.005 - 0.045	0.020	Organic matter naturally present in the environment
UNSPECIFIED ORGANIC CHEMICALS											
Disinfection By-Products detected											
Bromochloroacetic acid (µg/L)	50	153	ND - 2.5	1.3	-	-	-	43	ND - 2.7	0.9	By-product of drinking water chlorination
Chloral Hydrate (µg/L)	NA	87	3.2 -16.2	9.9	-	-	-	29	ND - 8.5	3.8	By-product of drinking water chlorination
Chloropicrin (µg/L)	NA	89	ND - 0.8	0.6	-	-	-	31	ND - 0.5	0.2	By-product of drinking water chlorination
Haloacetic acid 5 (HAA5) (µg/L)	60 [17]	129	16.1 - 64.0	34.9	-	-	-	38	0.3 - 33.7	14.3	By-product of drinking water chlorination
Haloacetonitriles (HANs) (µg/L)	50	88	2.0 - 4.6	3.5	-	-	-	31	0.2 - 4.1	2.4	By-product of drinking water chlorination
Halogenated ketones (HKs) (µg/L)	50	88	2.3 - 4.8	3.4	-	-	-	31	ND - 3.0	1.2	By-product of drinking water chlorination
Unspecified Organic Chemicals detected											
DCPA (Dacthal) (µg/L)	5	3	ND	ND	-	-	-	2	0.52 - 0.95	0.74	Runoff from pesticide use
Methyl tert-butyl ether (MTBE) (µg/L)	50	177	ND - 3.9	<0.5	3	ND	ND	109	ND - 10.4	0.8	Additive to gasoline in the winter

UNDETECTED PARAMETERS

NON-DETECTED CONVENTIONAL PHYSICAL AND CHEMICAL PARAMETERS

Regulated Conventional Physical and Chemical Parameters not detected:

Antimony, Arsenic, Asbestos [18], Beryllium, Cadmium, Cyanide, Gross Alpha particle [3], Mercury, Selenium, Silver, Thallium

Unregulated Conventional Physical and Chemical Parameters not detected:

Bromide, Chlorate, Lithium, Phenols, ^{90}Strontium - radiological [3], Tritium (^{3}H) - radiological [3]

NON-DETECTED ORGANIC CONTAMINANTS

Principal Organic Contaminants not detected:

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, 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, Isopropylbenzene, p-Isopropyltoluene, Methylene chloride, n-Propylbenzene, Styrene, 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, Trichlorofluoromethane, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, m-Xylene, o-Xylene, p-Xylene

Specified Organic Contaminants not detected:

Alachlor, Aldicarb (Temik), Aldicarb sulfone, Aldicarb sulfoxide, Aldrin, Atrazine, Benzo(a)pyrene, Butachlor, Carbaryl, Carbofuran (Furadan), Chlordane, 2,4-D, Dalapon, 1,2-Dibromo-3-chloropropane, Dicamba, Dieldrin, Di(2-ethylhexyl)adipate, Di(2-ethylhexyl) phthalate, Dinoseb, Diquat, Endothall, Endrin, Ethylene dibromide (EDB), Glyphosate, Heptachlor, Heptachlor epoxide, Hexachlorobenzene, 3-Hydroxycarbofuran, Lindane, Methomyl, Methoxychlor, Metolachlor, Metribuzin, Oxamyl (Vydate), Pentachlorophenol, Picloram, Polychlorobiphenyls [PCBs], Propachlor, Simazine, Toxaphene, 2,4,5-TP (Silvex), Vinyl chloride

Unspecified Organic Chemicals not detected:

Acenaphthene, Acenaphthylene, Acetochlor, Acifluorfen, Anthracene, Bentazon, Benzo[a]anthracene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[g,h,I]perylene, a-BHC, b-BHC, d-BHC, Bromocil, Bromodichloroacetic acid, Butylbenzylphthalate, Caffeine, a-Chlordane, g-Chlordane, Chlorobenzilate, Chloroneb, Chlorothalonil (Draconil, Bravo), Chrysene, 2,4-DB, p,p'DDD, p,p'DDE, p,p'DDT, Diazinon, Dibenz[a,h]anthracene, Di-n-Butyl phthalate, 3,5-Dichlorobenxoic acid, Dichlorprop, Diethylphthalate, Dimethoate, Dimethylphthalate, 2,4-Dinitrotoluene, Di-N-octylphthalate, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin aldehyde, Etridiazole, EPTC, Fluoranthene, Fluorene, Indeno[1,2,3-cd] pyrene, Isophorone, Malathion, Methiocarb, MGK - 264, Molinate, Naphthalene, 4-Nitrophenol, trans-Nonachlor, Norflurazon, Paraquat, Parathion, Permethrin, Phenanthrene, Prometryn, Propoxur (Baygon), Pyrene, 2,4,5-T, Terbacil, Terbufos, Tetrachloroterephthalic acid, Thiobencarb, Trifluralin, Vernolate

FOOTNOTES

(1) Determination of MCL violation: If a sample exceeds 15 color units, a second sample must be collected from the same location within 2 weeks. If the average of the two results exceeds 15 color units, then an MCL violation has occurred. In the Catskill-Delaware System there were 4 color violations on 8/19/00, 9/9/00, 9/16/00, and 9/23/00. In the Groundwater System there were 5 color violations on 2/8/00, 7/12/00, 8/23/00, 9/13/00, and 10/4/00.
(2) Action Level (not an MCL) measured at the tap.
(3) Reported radiological data for gross alpha, gross beta, strontium 90, and tritium are for samples collected during 1997. Regulations stipulate that samples be taken every 4 years.
(4) New York State considers 50 pCi/L to be the level of concern for beta particles.
(5) If iron and manganese are present, the total concentration of both should not exceed 500 µg/L. Values in the groundwater system above the MCL are not a violation because the water at particular wells is treated, as allowed by the State, to meet aesthetic concerns.
(6) USEPA MCL; NYSDOH has not set an MCL for this parameter.
(7) 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.
(8) Turbidity is a measure of cloudiness of the water. Turbidity is monitored because it is a good indicator of water quality and can hinder the effectiveness of disinfection.
(9) MCL is the monthly average. Data presented are individual sample results.
(10) This MCL only applies to the Croton System. The MCL and data presented are monthly averages. This MCL was not exceeded.
(11) MCL is the calculated quarterly running average. In 2000 the MCL was never exceeded. Data presented are the range of individual sampling results and the highest running average.
(12) 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.
(13) USEPA Secondary MCL; NYSDOH has not set an MCL for this parameter.
(14) 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 currently is not regulated but will become effective for DEP's surface water systems on January 1, 2002 and will be enforceable in the same manner as MCLs.
(15) A Langelier Index of less than zero indicates corrosive tendencies.
(16) Hardness of up to 3 grains per gallon is considered soft water; between 3 and 9 is moderately hard water.
(17) This contaminant is currently not regulated. The MCL presented becomes effective for the Catskill-Delaware and Croton Systems on January 1, 2002 and for the Groundwater System on January 1, 2004.
(18) Reported asbestos data was collected in 1993. Regulations require this parameter to be sampled every 9 years.
* The contaminant was detected in only one sample. The level found was below the MCL.

Color - entry point values highlighted and bolded indicate a violation occurred, see footnote (1)

DEFINITION OF TERMS

Action Level (AL):
The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow. An exceedence occurs if more than 10% of the samples exceed the Action Level.

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 Contaminant Level Goal (MCLG):
The level of a contaminant in drinking water below which there is not known or expected risk to health. MCLGs allow for a margin of safety.

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.

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% of the lead and copper values detected at your water system.

ABBREVIATIONS

NA = Not Applicable

ND = Laboratory analysis indicates that the constituent is not present

NDL = No Designated Limit

CFU/ml = colony forming units per milliliter

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

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

pCi/L = picocurie per liter (a measure of radioactivity)

NTU = Nephelometric Turbidity Units

µmho/cm = micromhos per centimeter

Water Conservation

The average single family household in New York City uses approximately 100,000 gallons of water each year, at a cost of $1.31 per 100 cubic feet of water (748 gallons), or about $175.00 in the year 2000. Although New York City is fortunate to have a plentiful supply of reasonably priced drinking water, everyone should do their part to conserve this precious resource.

DEP's ongoing efforts to save water include: use of sonar equipment to survey all water supply piping for leaks; replacement of approximately 70 miles of old water supply pipe a year; equipping fire hydrants with special locking devices; and installing home water meters to encourage conservation.

These programs and others have proven successful and together have reduced water consumption in the City by approximately 200 million gallons per day in the last ten years. This is more water than the City of Boston or Westchester County uses in a day.

You can help save water by ordering a Home or Apartment Water Saving Kit. If you are an apartment building owner/manager or a home owner, you can obtain a free leak survey. Call our Leak Survey contractor at (718) 326-9426 for information.

For additonal water saving tips follow *The Do's and Don'ts of Water Conservation* on the following page.

The DO'S & DON'TS of Water Conservation

In or out of a drought, every New Yorker can save hundreds of gallons of water every week by following these water-saving tips.

Bathroom

- ✔ Do take short showers and save 5 to 7 gallons a minute.
- ✔ Do fill the tub halfway and save 10 to 15 gallons.
- ✔ Do install water-saving toilets, showerheads and faucet aerators. Place a plastic bottle filled with water in your toilet tank if you can't switch to a low flow toilet.
- ✖ Don't run the water while shaving, washing your hands or brushing your teeth. Faucets use 2 to 3 gallons a minute.
- ✖ Don't use the toilet as a wastebasket, and don't flush it unnecessarily.

Kitchen & Laundry

- ✔ Do run the dishwasher and washing machine only when full. Save even more by using the short cycle.
- ✔ Do install faucet aerators.
- ✖ Don't let the water run while washing dishes. Kitchen faucets use 2 to 3 gallons a minute. Filling a basin only takes 10 gallons to wash and rinse.
- ✖ Don't run water to make it cold. Have it chilled in the refrigerator, ready to drink.

Everywhere

- ✔ Do repair leaky faucets and turn taps off tightly. A slow drip wastes 15 to 20 gallons each day.
- ✖ Don't open fire hydrants.

Outdoor

- ✔ Do use a self-closing nozzle on your hose.
- ✖ Don't water your sidewalk or driveway - sweep them clean.
- ✖ Don't overwater your lawn or plants. Water before 9 a.m. or after 7 p.m.

Cut along dottted line and post in your home or office.

SAVE WATER

REPORT LEAKS & WATER WASTE.

Call (718) DEP-HELP

Visit our Web site at: www.nyc.gov/dep

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION — DEP

Rudolph W. Giuliani, Mayor
Joel A. Miele Sr., P.E., Commissioner

Contact Us

For a copy of this report, to report unusual water characteristics, or to request a free kit to test for lead in your drinking water, call DEP's 24-hour Help Center at (718) DEP-HELP (337-4357).

For more information on *Giardia* and *Cryptosporidium*, please contact the Parasitic Disease Surveillance Unit of the New York City DEP and New York City Department of Health (NYCDOH) at: (212) 788-4728.

To contact NYCDOH about other water supply health related questions call (212) 442-9666 or call the New York State Department of Health Bureau of Public Water Supply Protection at (518) 402-7650.

To report any polluting activities occurring in the watershed, call 1-888-DEP-NYC1 (1-888-337-6921), 24-hours a day.

To view this 2000 Statement, announcements of public hearings, or other information, visit DEP's Web site at:

www.nyc.gov/dep

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

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

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 informacje 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.

New York City
Department of Environmental Protection
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Corona, New York 11368-5107