NYC Environmental Protection

Vincent Sapienza, P.E.
Commissioner

Paul V. Rush, P.E.
Deputy Commissioner
Bureau of Water Supply
prush@dep.nyc.gov

59-17 Junction Boulevard
Flushing, NY 11373
T: (845) 340-7800
F: (845) 334-7175

November 10, 2020

Li Huang, P.E.
New York City Department of Health and Mental Hygiene
Environmental Sciences & Engineering
42-09 28th Street, 14th Floor CN# 56
Long Island City, NY 11101

Patrick Palmer
New York State Department of Health
Bureau of Water Supply Protection, NYC Watershed Section
Empire State Plaza, Corning Tower, Room 1198
Albany, NY 12237

Katie Lynch
United States Environmental Protection Agency
Clean Water Division - New York City Water Supply Protection Program
290 Broadway, 24th Floor
New York, New York 10007-1866

RE: Monthly Water Quality Report for October 2020

Dear Ms. Huang, Mr. Palmer and Ms. Lynch:

Enclosed, please find the New York City Water Quality report for the month of **October 2020**. There was no well pumpage to distribution in the Groundwater System this month. Croton water started feeding into distribution on October 27, 2020 at 9:37 AM. In addition to the following list of compliance reports, electronic files containing compliance and non-compliance data for this month are being emailed to you.

- Raw Water Fecal Coliform Report
- Raw Water Turbidity Report
- Distribution Microbiological Compliance Reports
  - Summary
  - Positive Samples
  - Resamples
- Chlorine Residual Reports
  - Entry Point Online
  - Entry Point Daily Minimum
  - Heterotrophic Plate Count
  - Monthly Summary
- Distribution Turbidity Reports
  - Distribution Turbidity Report
  - Source Water > 1.49 NTU Table
- Color Entry Point Report

- Fluoride Reports
  - Fluoride Entry Point Report
  - Distribution Fluoride Report
- Quarterly Disinfection By-products Report

The reports are summarized as follows:

FAD REQUIREMENTS

1. *Raw Water Fecal Coliform Concentrations* (Section 141.71(a)(1)):
Requirements met. The Delaware Aqueduct effluent from Kensico Reservoir exhibited fecal coliform concentrations in water prior to disinfection at levels less than or equal to 20 CFU/100 mL in at least 90% of the samples collected in the six-month period from May 1, 2020 to October 31, 2020. The six month running percentage of samples collected with fecal coliform concentrations >20 CFU/100 mL was 1.09% for the Catskill/Delaware System for this time period.

2. *Raw Water Turbidity* (Section 141.71(a)(2)):
Requirements met. The raw water leaving Kensico Reservoir via the Delaware Aqueduct in compliance samples collected at DEL18DT, just prior to disinfection, exhibited turbidity levels less than or equal to 5 NTU on an ongoing basis during the month. The highest reported turbidity value was 1.1 NTU on the Catskill/Delaware System for the month.

3. *Entry Point Chlorine Residual* (Section 141.71(b)(1)(iii) and 141.72(a)(3)):
Requirements met. As required, continuous monitoring for free chlorine residual was maintained at the distribution entry points throughout the month and at no time did the concentration fall below 0.2 mg/L for more than four hours. The minimum daily free chlorine residual value for entry point readings for the Catskill/Delaware System from sites 1S03 (Tunnel 1) was 0.55 mg/L, 1S03A (Tunnel 2) was 0.78 mg/L, and 1S03B (Tunnel 3) was 0.25 mg/L. As detailed below, the minimum reading for 1S03B (Tunnel 3) was low due to restricted flow to the online instrument from a clogged strainer and is not representative of the true chlorine levels.

On the morning of October 12, 2020, the Shaft 3B online chlorine meter readings began to drift downward starting at about 5:00 AM, and continued until 9:00 AM, when staff identified the problem as a clogged strainer which was restricting flow to the meter. Grab samples collected at 8:42 AM with a chlorine reading of 0.68 ppm verified that the meter reading of 0.25 ppm was false. Chlorine application was verified to be on target throughout the night. The strainer was cleaned, and maintenance was performed on the meter from 9:00 to 9:40 AM.

The Croton Filtration Plant was online and continuously feeding the Croton Low Service entry point from October 27, 2020 at 9:37 AM through October 31, 2020. The Croton High Service entry point was offline throughout October 2020. The minimum daily free chlorine residual value for Croton entry point readings from site 1SCL1 (Low Service) was 0.64 mg/L.

Please note the following addition for the July 2020 Monthly Water Quality Report. On July 9, 2020, the Shaft 3B data logger was off-line from 3:07 AM to 9:56 AM, most likely the result of a nearby lighting strike. The online water quality instruments and backup paperless chart recorders

were not affected and continued to store all the data locally during the event. Grab samples collected during the event period demonstrated the online water quality instruments continued to function properly. The locally stored data were used to back feed the historically stored data. Compliance was maintained.

4. *Distribution System Disinfection Residuals* (Section 141.71(b)(1)(iv) and 141.72(a)(4)): Requirements met. All free chlorine residuals measured at compliance sites within the distribution system during the month were greater than or equal to 0.02 mg/L.

A total of 1237 distribution samples were tested for free chlorine residual this month. For all monthly distribution sites free chlorine residual ranged from 0.02 to 1.18 mg/L, and averaged 0.62 mg/L.

5. *Trihalomethane Monitoring / HAA5 Monitoring* (Section 141.71(b)(6)): Requirements met. The results for the third quarter of 2020 were included in the report dated September 10, 2020 (for the August 2020 reporting period).

6. Total Coliform Monitoring (Section 141.71(b)(5)): Requirements met. The results of monthly coliform monitoring performed in the distribution system are enclosed. A total of 831 compliance samples were tested for total coliform during this period. HPC were all ≤500 CFU/mL, equivalent to a measurable free chlorine residual. Zero percent of the samples had an undetectable free chlorine residual or HPC >500 CFU/mL. This meets the requirements that a free chlorine residual be maintained at representative points in the distribution system, and that no more than 5% of the free chlorine residual samples be undetectable in any two months. During the month, four (4) samples tested positive for total coliform, and all samples were negative for *E. coli*.

- A sample collected on 10/3/2020 from Site 24350 (sample station west side Brighton 11 Street, second sample station south of Cass Place, in front of 82 Brighton 11th Street, Brooklyn) was positive for total coliform. Resampling on 10/5/2020 was coliform negative at all locations.
- A sample collected on 10/3/2020 from Site 38250 (sample station in front of 309 East 87th Street, Manhattan) was positive for total coliform. Resampling on 10/5/2020 was coliform negative at all locations.
- A sample collected on 10/5/2020 from Site 79150 (sample station in front of 127-11 Farmers Blvd, Queens) was positive for total coliform. Resampling on 10/7/2020 was coliform negative at all locations.
- A sample collected on 10/8/2020 from Site 29350 (sample station west side 4th Ave, between 28th and 29th Streets, Brooklyn) was positive for total coliform. Resampling on 10/10/2020 was coliform negative at all locations.

OTHER WATER QUALITY MONITORING

7. *Microbiological Monitoring:*
Coliform monitoring at distribution sites near first service connections, in response to source water having a turbidity >1.49 NTU, was not required this month, but all of these samples were negative for total coliform and *E. coli*.

The analyses of 406 distribution Operational samples resulted in four (4) samples testing positive for total coliform. No *E. coli* were detected.

The analyses of 248 Pre-Finished samples resulted in four (4) samples testing positive for total coliform. No *E. coli* were detected.

The analyses of 616 Autosampler Pre-finished samples resulted in sixteen (16) samples testing positive for total coliform. No *E. coli* were detected.

8. *Distribution Turbidity Monitoring:*
For distribution sites, turbidity ranged from 0.10 to 1.65 NTU and averaged 0.67 NTU for the month. This meets the MCL of 5 NTU for the monthly average of all distribution samples.

9. *Color Monitoring:*
The MCL of 15 units for color was met at each Catskill/Delaware entry point for the month. Daily analyses of entry point samples (98 samples in total), produced monthly average color values of seven (7) units for sites 1S03 (Tunnel 1), 1S03A (Tunnel 2), 1S03B (Tunnel 3), and four (4) units for site 1SCH1 (Croton Low Service).

10. *Volatile Organic/TTHM/HAA5 Monitoring:*
Monthly Results: Twenty (20) distribution and three (3) entry point samples were collected for volatile organic contaminant (VOC) analysis. All VOC samples from distribution sites and entry points were below detection. Twenty (20) TTHM distribution samples were collected ranging from 26 µg/L to 75 µg/L. Three (3) TTHM entry point samples were collected ranging from 25 µg/L to 56 µg/L. Twenty (20) HAA5 distribution samples were collected ranging from 29 µg/L to 52 µg/L. Three (3) HAA5 entry point samples were collected ranging from 27 µg/L to 35 µg/L.

11. *Semivolatile and Other Organic Chemicals/parameters:*
Monitoring for Method 505 organohalide pesticides was conducted on October 26, 2020 at three Catskill/Delaware entry points (1S07, 1S03A, and 1S03B), and at the Croton High Service entry point (1SCH3) which represented distribution Catskill/Delaware water. All results were below detection.

12. *Fluoride Monitoring:*
Daily analyses of entry point samples (98 samples in total), produced monthly average fluoride levels of 0.73 mg/L for sites 1S03 (Tunnel 1), 1S03A (Tunnel 2), 1S03B (Tunnel 3), and 0.57 mg/L for site 1SCL1 (Croton Low Service). The fluoride levels at the entry points did not exceed the MCL of 2.2 mg/L at any time during the month.

13. Other Monitoring:
Monitoring for Taste and Odor (T&O) compounds was conducted in October on 45 samples from New Croton Reservoir, Jerome Park reservoir, and the Croton Filtration Plant as part of the Croton Filtration Plant Granular Activated Carbon Commissioning and continued operations. Results from October 26 and 27, 2020 sampling events are pending. Available results ranged from ND to 6.9 ng/L for Geosmin and from ND to 12 ng/L for 2-Methylisoborneol

(MIB). Contract laboratory reports of available data are included as electronic files with this report.

First quarter monitoring for perfluorooctane sulfonate (PFOS), perfluorooctanic acid (PFOA), and 1,4-Dioxane for the Catskill/Delaware System entry point sites 1S03 (Tunnel 1), 1S03A (Tunnel 2) and 1S03B (Tunnel 3) was conducted on October, 22, 2020, and for the Croton entry point site 1SCL1 (Low Service) on October 28, 2020. All sites' results were ND. Contract laboratory data reports are included as electronic files with this report.

Please feel free to contact me at (845) 340-7701 if you would like to discuss any of this information in greater detail.

Sincerely,

Steven C. Schindler
Director, Water Quality

Enclosure

cc:
by email
Mr. Andrew Brunsden, Inspector General for NYCDEP
Mr. Kenneth Kosinski, NYSDEC
Mr. David Kvinge, Westchester County Water Agency
Mr. Huan Li, NYCDOHMH
Ms. Millie Magraw, Westchester County Water Agency
Mr. Trevor McProud, NYCDOHMH
Mr. Andy Tse, NYSDOH
Mr. Steven Zahn, NYSDEC – Region 2

bcc:
Electronic file:

V. Sapienza, P.E., Commissioner
K. Alderisio
A. Bader
D. Borchert
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K. Czarnogorski/file
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D. Warne
M. Warne
V. Xu

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RAW WATER FECAL COLIFORM CONCENTRATIONS
(FAD Requirement)

NYCDEP Division of Watershed Water Quality Operations

Catskill/Delaware System Raw Water Fecal Coliform Compliance Report

Hawthorne Laboratory, ELAP Lab ID No. 10771
15 Skyline Drive, Hawthorne, NY 10532

Deputy Chief: David Robinson
914-345-4973

Catskill/Delaware Public Water System at Shaft 18 (DEL18DT) - Raw Water				Period: 08/18 To: 10/20
Date	Number of Fecal Coliform Samples Examined per Month	Number of Fecal Coliform Samples with >20 colonies per 100 mL	Percent of Monthly Fecal Coliform Samples with >20 colonies per 100 mL	Percent of Monthly Fecal Coliform Samples with >20 colonies per 100 mL for Previous Six Months
8-18	31	0	0.00	0.00
9-18	30	2	6.67	3.23
10-18	31	2	6.45	4.30
11-18	30	0	0.00	3.25
12-18	31	0	0.00	2.60
1-19	31	0	0.00	2.17
2-19	28	0	0.00	2.21
3-19	31	0	0.00	1.10
4-19	30	0	0.00	0.00
5-19	31	0	0.00	0.00
6-19	30	0	0.00	0.00
7-19	31	0	0.00	0.00
8-19	31	0	0.00	0.00
9-19	30	0	0.00	0.00
10-19	31	0	0.00	0.00
11-19	30	0	0.00	0.00
12-19	31	0	0.00	0.00
1-20	31	0	0.00	0.00
2-20	29	0	0.00	0.00
3-20	31	0	0.00	0.00
4-20	30	0	0.00	0.00
5-20	31	0	0.00	0.00
6-20	30	0	0.00	0.00
7-20	31	0	0.00	0.00
8-20	31	1	3.23	0.54
9-20	30	1	3.33	1.09
10-20	31	0	0.00	1.09

J.W. Robinson 11/5/20

Reported by: David Robinson, Deputy Chief, Hawthorne Water Quality Operations 11/2/2020

All results that fall within the scope of the NELAP program meet that program's requirements unless stated in the qualifiers addendum printed at the end of this

RAW WATER TURBIDITY
(FAD Requirement)

NYCDEP Division of Watershed Water Quality Operations

Water Systems Operation Report - Catskill/Delaware System

Hawthorne Laboratory, ELAP Lab ID No. 10771
15 Skyline Drive, Hawthorne, NY 10532

Deputy Chief: David Robinson
914-345-4973

Catskill/Delaware Public Water System at Shaft 18 (DEL18DT) - Raw Water — **Period: October, 2020**

Date	Turbidity (NTU) 12 AM	4 AM	8 AM	12 PM	4 PM	8 PM	Total Coliform (Colonies per 100 mL)	Fecal Coliform (Colonies per 100 mL)
10/1/20	0.75	0.75	0.75	0.80	0.85	0.75	E120	E10
10/2/20	0.75	0.70	0.70	0.70	0.65	0.65	E200	E10
10/3/20	0.70	0.65	0.65	0.70	0.65	0.70	E80	E5
10/4/20	0.70	0.65	0.70	0.70	0.70	0.70	E60	E6
10/5/20	0.75	0.65	0.70	0.70	0.65	0.70	E60	E3
10/6/20	0.70	0.65	0.65	0.75	0.80	0.75	E20	E2
10/7/20	0.80	0.75	0.80	0.70	0.70	0.65	E200	E1
10/8/20	0.70	0.70	0.65	0.60	0.60	0.65	E200	E1
10/9/20	0.60	0.60	0.60	0.65	0.65	0.65	E40	E2
10/10/20	0.65	0.65	0.60	0.65	0.70	0.75	<20	E3
10/11/20	0.70	0.75	0.75	0.75	0.75	0.85	<20	E2
10/12/20	1.0	1.0	1.0	0.90	1.1	1.0	E60	E6
10/13/20	0.95	1.0	0.90	0.65	0.70	0.70	E80	E1
10/14/20	0.60	0.65	0.70	0.80	0.80	0.75	E60	E2
10/15/20	0.85	0.80	0.75	0.80	0.75	0.70	E150	E3
10/16/20	0.70	0.80	0.75	0.65	0.65	0.65	E150	E1
10/17/20	0.70	0.70	0.65	0.65	0.65	0.75	E40	<1
10/18/20	0.65	0.60	0.75	0.75	0.75	0.80	E20	E3
10/19/20	0.75	0.75	0.70	0.70	0.65	0.65	E60	E1
10/20/20	0.65	0.65	0.65	0.70	0.75	0.75	E50	E6
10/21/20	0.75	0.75	0.65	0.70	0.70	0.75	E20	E2
10/22/20	0.70	0.65	0.70	0.75	0.80	0.75	E20	E1
10/23/20	0.75	0.70	0.75	0.65	0.60	0.60	<20	E8
10/24/20	0.65	0.65	0.60	0.65	0.70	0.70	E100	E1
10/25/20	0.85	0.75	0.70	0.75	0.75	0.75	E20	E2
10/26/20	0.70	0.70	0.75	0.80	0.85	0.90	E80	E1
10/27/20	0.80	0.75	0.80	0.75	0.75	0.75	E20	E1
10/28/20	0.70	0.75	0.70	0.90	0.90	0.75	>=E100	E2
10/29/20	0.90	0.80	0.95	0.85	0.75	0.70	E20	E1
10/30/20	0.85	0.75	0.65	0.60	0.70	0.70	<20	E4
10/31/20	0.65	0.70	0.70	0.65	0.65	0.70	E20	E1

.: Aqueduct Shutdown, CONF: Confluent Growth (+ indicates positive coliform growth), LE: Lab Error, FE: Field Error,
E: estimated count based on non-ideal plate, >=: plate count may be biased low based on heavy growth, >: observed count replaced with dilution based value

1. Does a raw water turbidity M & R violation exist? ___ Yes X__ No
2. Does the turbidity reading exceed 5 NTU at any time? ___ Yes X_ No
   If yes, check for MCL violation, and notify state by the end of the next business day.
3. Minimum number of microbiological samples required per week: __5__
4. A daily microbiological sample is required every day the raw water turbidity exceeds 1 NTU.

Additional Comments:

D.W. Robinson 11/5/20

Reported by: David Robinson, Deputy Chief, Hawthorne Water Quality Operations 11/2/2020

All results that fall within the scope of the NELAP program meet that program's requirements unless stated in the qualifiers addendum printed at the end of this report.

Report Printed on 11/02/202010:24 am

NYCDEP Division of Watershed Water Quality Operations

Water Systems Operation Report - Qualifiers and Methods Addendum

Hawthorne Laboratory, ELAP Lab ID No. 10771
15 Skyline Drive, Hawthorne, NY 10532

Deputy Chief: David Robinson
914-345-4973

Data Qualifiers and Additional Notes — Period: October 2020

Date/Time	Site	Analytes Affected	Qualifier
10/24/20 09:44	DEL18DT	Fecal Coliform, Total Coliform	Overnight power failure. Power out for approximately 12 hours.

Analytical Methods

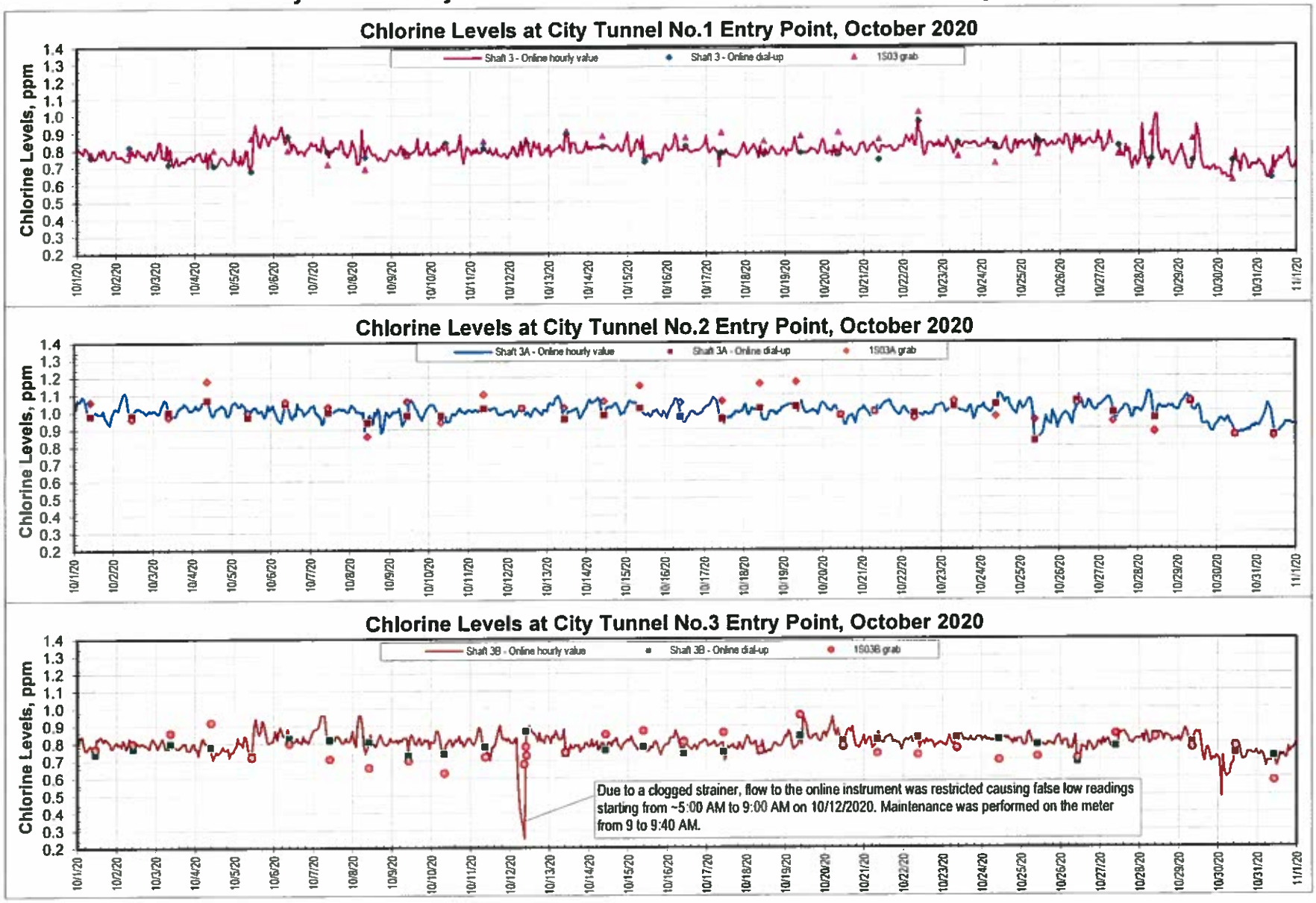
Coliform, Fecal	-	SM 9222D (2006)
Coliform, Total	-	SM 9222B (2006)
Turbidity	-	SM 2130B (01)

ENTRY POINT CHLORINE RESIDUAL
(FAD Requirement)

New York City Department of Environmental Protection

Bureau of Water Supply

City Tunnel Entry Point Residual Chlorine Continuous Monitoring Results



Note: Continuous monitoring of free chlorine residual (FCR) at distribution entry points was maintained. FCR was maintained at or above 0.2 ppm at all times. Since 3/8/20, all online readings, grab and online dial-up readings were recorded in Eastern Daylight Saving Time.

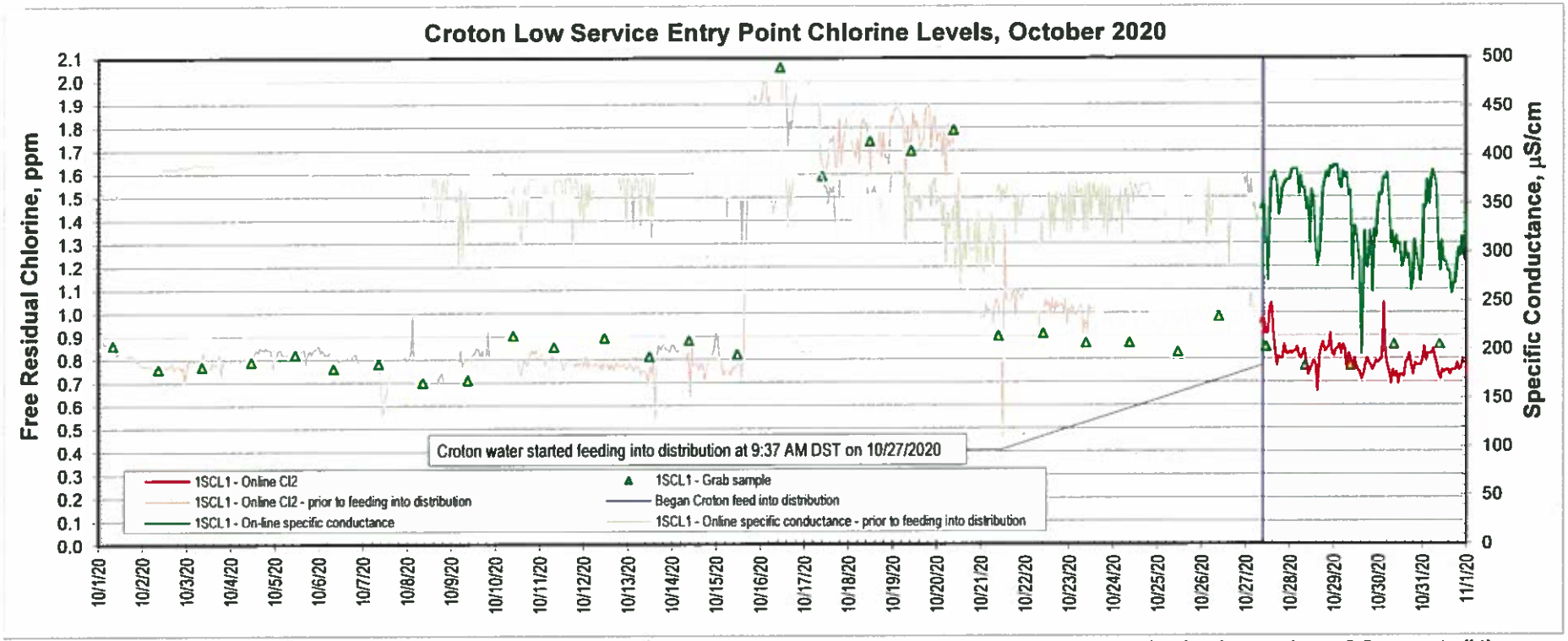
New York City Department of Environmental Protection
Bureau of Water Supply

Daily Minimum Chlorine Readings Recorded at Tunnel Entry Shafts for Catskill/Delaware System

Tunnel No.1 (Catskill) at Shaft 3			Tunnel No.2 (Delaware) at Shaft 3A			Tunnel No.3 (Cat/Del) at Shaft 3B		
Date	MinCl_1DL	Remark 1	Date	MinCl_2DL	Remark 2	Date	MinCl_3DL	Remark 3
10/01/20	0.73		10/01/20	0.92		10/01/20	0.72	
10/02/20	0.72		10/02/20	0.97		10/02/20	0.75	
10/03/20	0.67		10/03/20	0.96		10/03/20	0.76	
10/04/20	0.66		10/04/20	0.97		10/04/20	0.65	
10/05/20	0.67		10/05/20	0.96		10/05/20	0.71	
10/06/20	0.76		10/06/20	0.93		10/06/20	0.78	
10/07/20	0.73		10/07/20	0.91		10/07/20	0.78	
10/08/20	0.71		10/08/20	0.87		10/08/20	0.72	
10/09/20	0.70		10/09/20	0.91		10/09/20	0.72	
10/10/20	0.72		10/10/20	0.93		10/10/20	0.74	
10/11/20	0.74		10/11/20	0.97		10/11/20	0.69	
10/12/20	0.75		10/12/20	0.96		10/12/20	0.25	The minimum reading is low due to restricted flow to online instrument from a clogged strainer and not representative of the true chlorine levels.
10/13/20	0.77		10/13/20	0.95		10/13/20	0.73	
10/14/20	0.78		10/14/20	0.95		10/14/20	0.74	
10/15/20	0.70		10/15/20	0.95		10/15/20	0.72	
10/16/20	0.76		10/16/20	0.92		10/16/20	0.71	
10/17/20	0.64		10/17/20	0.92		10/17/20	0.68	
10/18/20	0.68		10/18/20	0.92		10/18/20	0.72	
10/19/20	0.75		10/19/20	0.96		10/19/20	0.76	
10/20/20	0.72		10/20/20	0.91		10/20/20	0.76	
10/21/20	0.71		10/21/20	0.96		10/21/20	0.76	
10/22/20	0.74		10/22/20	0.96		10/22/20	0.77	
10/23/20	0.76		10/23/20	0.94		10/23/20	0.78	
10/24/20	0.75		10/24/20	0.98		10/24/20	0.78	
10/25/20	0.74		10/25/20	0.78		10/25/20	0.74	
10/26/20	0.66		10/26/20	0.92		10/26/20	0.68	
10/27/20	0.68		10/27/20	0.95		10/27/20	0.66	
10/28/20	0.65		10/28/20	0.95		10/28/20	0.79	
10/29/20	0.66		10/29/20	0.88		10/29/20	0.66	
10/30/20	0.60		10/30/20	0.85		10/30/20	0.46	
10/31/20	0.55		10/31/20	0.83		10/31/20	0.63	

Legend: MinCl_1DL: Shaft 3's minimum chlorine level measured at the shaft and recorded at the location via data logger, in ppm.
MinCl_2DL: Shaft 3A's minimum chlorine level measured at the shaft and recorded at the location via data logger, in ppm.
MinCl_3DL: Shaft 3B's minimum chlorine level measured at the shaft and recorded at the location via data logger, in ppm.

New York City Department of Environmental Protection
Bureau of Water Supply
Croton Distribution Entry Point Residual Chlorine Continuous Monitoring Results



Note: Continuous monitoring of free chlorine residual (FCR) at distribution entry points was maintained. FCR was maintained at or above 0.2 ppm at all times.

New York City Department of Environmental Protection
Bureau of Water Supply

Daily Minimum Chlorine Readings Recorded at Croton Distribution Entry Points

Low Service			High Service		
Date	MinCl_1SCL1	Remark 1	Date	MinCl_1SCH3	Remark 2
10/01/20		No Croton water.	10/01/20		No Croton water.
10/02/20			10/02/20		
10/03/20			10/03/20		
10/04/20			10/04/20		
10/05/20			10/05/20		
10/06/20			10/06/20		
10/07/20			10/07/20		
10/08/20			10/08/20		
10/09/20			10/09/20		
10/10/20			10/10/20		
10/11/20			10/11/20		
10/12/20			10/12/20		
10/13/20			10/13/20		
10/14/20			10/14/20		
10/15/20			10/15/20		
10/16/20			10/16/20		
10/17/20			10/17/20		
10/18/20			10/18/20		
10/19/20			10/19/20		
10/20/20			10/20/20		
10/21/20			10/21/20		
10/22/20			10/22/20		
10/23/20			10/23/20		
10/24/20			10/24/20		
10/25/20			10/25/20		
10/26/20			10/26/20		
10/27/20	0.69	Croton water started feeding into distribution at 9:37 AM DST on 10/27/2020.	10/27/20		
10/28/20	0.66		10/28/20		
10/29/20	0.64		10/29/20		
10/30/20	0.64		10/30/20		
10/31/20	0.67		10/31/20		

Legend: MinCl_1SCL1: 1SCL1's minimum chlorine level measured and recorded at the location via data logger, in ppm.
MinCl_1SCH3: 1SCH3's minimum chlorine level measured and recorded at the location via data logger, in ppm.

Note: Croton water fed to High Service time period was determined by specific conductance greater than 150 uS/cm.

DISTRIBUTION SYSTEM DISINFECTION RESIDUAL
(FAD Requirement)

REPORT

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY, DISTRIBUTION LAB (NYSDOH ELAP #10770; USEPA #NY01351)

Residual Chlorine (mg/L) Distribution Samples

October 2020

All Distribution Sites			
Samples	Min	Max	Average
1237	0.02	1.18	0.62

Hach DPD Method (analyte is not ELAP certified)

SAMPLE NUMBER	SAMPLE DATE	SAMPLE SITE	LOCATION TYPE	RESIDUAL CHLORINE	COMMENT
28426	10/4/20	1S03A	Sub	1.18	Max
28817	10/7/20	41850	Reg Stop	0.02	Min
30945	10/26/20	79450	Reg Stop	0.02	Min

A FCR is to be maintained at representative points in the distribution system and no more than 5% of the samples can be undetectable in any two months.

TOTAL COLIFORM MONITORING
(FAD Requirement)

REPORT

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY, DISTRIBUTION LAB (NYSDOH ELAP #10770; USEPA #NY01351)

Summary of Results for Microbiological Quality
Compliance Samples

10/1/2020 to 10/31/2020

Location	Number of Sampling Points	Number of Samples Collected	Number of Samples Tested	Number of Samples with Positive Coliform *	Number of Samples with Positive E. coli *	Percent of Samples with Positive Coliform **
Bronx	46	135	135	0	0	0.0%
Brooklyn	70	206	206	2	0	1.0%
Manhattan	57	172	172	1	0	0.6%
Queens ***	79	233	233	1	0	0.4%
Staten Island	29	85	85	0	0	0.0%
Ground Water Supply ***	-	-	-	-	-	-
Total	281	831	831	4	0	0.5%

* As determined by Colilert Quanti-Tray-18 Method (SM 9223 B).

** If more than 5.0 % of all monthly TCR compliance samples are positive for total coliform, a Level I Assessment must be conducted.

*** There was no groundwater sample this month because no well was in operation to distribution.

Supervisor: _____ Date: 11/04/2020

Director: _____ Date: 11/6/2020

REPORT

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY, DISTRIBUTION LAB (NYSDOH ELAP #10770; USEPA #NY01351)

Results for Microbiological Quality
Positive Compliance Samples
10/1/2020 to 10/31/2020

Date	Time	Site Number	Boro	Location	Coliform *	E. coli *	Chlorine Residual (mg/L) **	Remarks
10/3/2020	10:20	24350	Brooklyn	SS - W/S Brighton 11th St, 2nd SS S/O Cass Pl, IFO 82 Brighton 11th St.12 "	1.0	<1	0.64	To Be Resampled
10/3/2020	10:25	38250	Manhattan	SS - IFO 309 N/S E 87th St, 2nd SS W/O 1st Ave, 12 "	3.1	<1	0.44	To Be Resampled
10/5/2020	11:17	79150	Queens	SS - IFO 127-11 E/S Farmers Blvd (Keyspan), 2nd SS N/O Merrick Blvd	20.7	<1	0.04	To Be Resampled
10/8/2020	8:52	29350	Brooklyn	SS - W/S 4th Ave, BTW 28th & 29th Sts, 20 "	200.5	<1	0.29	To Be Resampled

* As determined by Colilert Quanti-Tray-18 Method (SM 9223 B). Results expressed in "MPN/100 mL."

** As determined by Hach DPD Method (analyte is not ELAP certified).

Supervisor: Palleri ge Date: 11/04/2020

Director: Date: 11/06/2020

REPORT

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY, DISTRIBUTION LAB (NYSDOH ELAP #10770; USEPA #NY01351)

Results for Microbiological Quality
Resamples for Positive Compliance Samples

10/1/2020 to 10/31/2020

Date	Time	Site Number	Boro	Location	Coliform *	E. coli *	Chlorine Residual (mg/L) **	Remarks
10/5/2020	8:32	24350	Brooklyn	SS - W/S Brighton 11th St, 1st SS S/O Cass Pl OPP 59 Brighton 11th St.	<1	<1	0.63	Upstream
10/5/2020	8:47	24350	Brooklyn	SS - W/S Brighton 11th St, 2nd SS S/O Cass Pl, IFO 82 Brighton 11th St.12 "	<1	<1	0.66	Original Location
10/5/2020	9:00	24350	Brooklyn	SS - W/S Brighton 11th St, 1st SS N/O Ocean View AveIFO 102 Brighton 11th St	<1	<1	0.65	Downstream
10/5/2020	7:29	38250	Manhattan	SS - N/S E 87th St, 1st SS E/O 2nd Ave, IFO 309 E 87th St.	<1	<1	0.48	Upstream
10/5/2020	7:51	38250	Manhattan	SS - IFO 309 N/S E 87th St, 2nd SS W/O 1st Ave, 12 "	<1	<1	0.44	Original Location
10/5/2020	8:12	38250	Manhattan	SS - N/S E 87th St, 1st SS W/O 1st Ave	<1	<1	0.47	Downstream
10/7/2020	7:27	79150	Queens	SS - E/S Farmers Blvd, 1st SS N/O Merrick Blvd	<1	<1	0.19	Upstream
10/7/2020	7:42	79150	Queens	SS - IFO 127-11 E/S Farmers Blvd (Keyspan), 2nd SS N/O Merrick Blvd	<1	<1	0.13	Original Location
10/7/2020	7:56	79150	Queens	SS - E/S Farmers Blvd, 3rd SS N/O Merrick Blvd	<1	<1	0.04	Downstream
10/10/2020	7:21	29350	Brooklyn	SS - W/S 4th Ave, BTW 27th & 28th Sts	<1	<1	0.18	Upstream
10/10/2020	7:36	29350	Brooklyn	SS - W/S 4th Ave, BTW 28th & 29th Sts, 20 "	<1	<1	0.12	Original Location
10/10/2020	7:53	29350	Brooklyn	SS - W/S 4th Ave, BTW 29th & 30th Sts	<1	<1	0.16	Downstream

* As determined by Colilert Quanti-Tray-18 Method (SM 9223 B). Results expressed in "MPN/100 mL."
** As determined by Hach DPD Method (analyte is not ELAP certified).

Supervisor: Pallen Ga Date: 11/04/2020

Director: [signature] Date: 11/06/2020

REPORT

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY, DISTRIBUTION LAB (NYSDOH ELAP #10770; USEPA #NY01351)

Results for Microbiological Quality
Free Chlorine Residual and Heterotrophic Plate Count
Compliance Samples

10/1/2020 to 10/31/2020

Location	Number of Sampling Points	Number of Samples Collected	Number of Samples Tested (Free Chlorine Residual)	Number of Samples Tested (Heterotrophic Plate Count)	Number of Samples with Free Chlorine Residual *		Range of Heterotrophic Plate Count (CFU/mL) for Free Chlorine Residual of 0.00 mg/L **	Number of Samples with Free Chlorine Residual of 0.00 mg/L and HPC > 500	Percent of Samples with Free Chlorine Residual of 0.00 mg/L and HPC > 500 ***
					< 0.20 mg/L	0.00 mg/L			
Bronx	46	135	135	93	1	0	--	0	0.0%
Brooklyn	70	206	206	143	5	0	--	0	0.0%
Manhattan	57	172	172	122	5	0	--	0	0.0%
Queens †	79	233	233	167	30	0	--	0	0.0%
Staten Island	29	85	85	63	9	0	--	0	0.0%
Ground Water Supply †	-	-	-	-	-	-	--	-	-
Total	281	831	831	588	50	0	--	0	0.0%

* Free chlorine residual is determined by Hach DPD Method (analyte is not ELAP certified).
** Heterotrophic plate count is determined by method SM 9215 B, PCA medium, 35°C, 48hrs. HPC result ≤ 500 CFU/mL is equivalent to a measurable FCR.
*** No more than 5 % of FCR samples shall be undetectable in any 2 consecutive months.

† There was no groundwater sample this month because no well was in operation to distribution.

Supervisor: _____ Date: 11/04/2020

Director: _____ Date: 11/06/2020

MICROBIOLOGICAL MONITORING

REPORT

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY, DISTRIBUTION LAB (NYSDOH ELAP #10770; USEPA #NY01351)

Coliform Monitoring Results at Sample Sites near the First Service Connection When Source Water Turbidity Exceeds 1.49 NTU

October 2020

Source water		Distribution site near first service connection			
Date Turb>1.49 NTU	System	Sample Date	Sample Site	Coliform *	E.coli *

No official four-hour turbidity readings from Cat-Del source water were greater than 1.5 NTU this month.

*** As determined by Colilert Quanti-Tray-18 Method (SM 9223B). Results expressed in "MPN /100mL."**

DISTRIBUTION TURBIDITY MONITORING

REPORT

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY, DISTRIBUTION LAB (NYSDOH ELAP #10770; USEPA #NY01351)

Turbidity (NTU) Distribution Samples

October 2020

All Distribution Sites			
Samples	Min	Max	Average
1237	0.10	1.65	0.67

Analytical Method SM 2130 B

SAMPLE NUMBER	SAMPLE DATE	SAMPLE SITE	LOCATION TYPE	TURBIDITY	COMMENT
29313	10/11/20	40450	Reg Stop	1.65	Max
31206	10/28/20	3SC26	Reg Stop	0.10	Min

The monthly average of all distribution samples is not to exceed 5 NTU.

COLOR MONITORING

REPORT

NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY DISTRIBUTION LABORATORY (NYSDOH ELAP #10770; USEPA #NY01351)

Color (U) for Distribution Entry Points

October 2020

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Catskill/Delaware 1S03 (Tunnel 1)	7	7	7	6	6	7	7	7	6	6	8	6	7	6	6	6	6	8	6	7	6	7	6	7	7	7	7	7	7	6	7
Catskill/Delaware 1S03A (Tunnel 2)	6	8	7	6	6	8	7	7	6	6	8	8	7	6	6	7	7	8	7	6	7	8	6	7	9	7	7	7	7	6	7
Catskill/Delaware 1S03B (Tunnel 3)	7	7	7	7	6	7	7	7	7	7	8	7	7	6	7	6	6	8	6	7	6	8	7	7	6	6	7	7	7	6	6
Croton System 1SCL1 [a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	4	4
Croton System 1SCH3 [b]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Analytical Method SM 2120 B. Apparent color.

The average of two consecutive samples from the same site is not to exceed the MCL of 15 color units.

[a] Croton System online as of 10/27/20 at 1SCL1.

[b] Croton System offline as of 12/4/19 at 1SCH3.

Entry Point	Samples	Minimum	Maximum	Average
Catskill/Delaware 1S03 (Tunnel 1)	31	6	8	7
Catskill/Delaware 1S03A (Tunnel 2)	31	6	9	7
Catskill/Delaware 1S03B (Tunnel 3)	31	6	8	7
Croton System 1SCL1 [a]	5	4	4	4
Croton System 1SCH3 [b]	-	-	-	-

Supervisor _____ Date 11/06/2020

Director _____ Date 11/6/2020

FLUORIDE MONITORING

REPORT

NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY DISTRIBUTION LABORATORY (NYSDOH ELAP #10770; USEPA #NY01351)

Fluoride (mg/L) for Distribution Entry Points

October 2020

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Catskill/Delaware 1S03 (Tunnel 1)	0.72	0.73	0.74	0.72	0.74	0.72	0.73	0.73	0.74	0.74	0.74	0.74	0.74	0.74	0.73	0.72	0.74	0.73	0.73	0.71	0.74	0.72	0.72	0.72	0.72	0.69	0.72	0.73	0.72	0.73	0.73
Catskill/Delaware 1S03A (Tunnel 2)	0.72	0.73	0.73	0.72	0.73	0.73	0.74	0.73	0.75	0.74	0.73	0.74	0.74	0.74	0.72	0.73	0.74	0.73	0.73	0.70	0.74	0.73	0.73	0.73	0.72	0.70	0.72	0.73	0.72	0.73	0.73
Catskill/Delaware 1S03B (Tunnel 3)	0.73	0.73	0.74	0.72	0.74	0.72	0.74	0.73	0.74	0.74	0.74	0.74	0.74	0.75	0.72	0.72	0.74	0.74	0.73	0.71	0.74	0.72	0.73	0.72	0.72	0.70	0.72	0.73	0.72	0.72	0.72
Croton System 1SCL1 [a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.35	0.58	0.61	0.64	0.65
Croton System 1SCH3 [b]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Analytical Method SM 4500 F C (97)

The average of two consecutive samples from the same distribution entry point site is not to exceed the MCL of 2.2 ppm.

[a] Croton System online as of 10/27/20 at 1SCL1.

[b] Croton System offline as of 12/4/19 at 1SCH3.

Entry Point	Samples	Minimum	Maximum	Average
Catskill/Delaware 1S03 (Tunnel 1)	31	0.69	0.74	0.73
Catskill/Delaware 1S03A (Tunnel 2)	31	0.70	0.75	0.73
Catskill/Delaware 1S03B (Tunnel 3)	31	0.70	0.75	0.73
Croton System 1SCL1 [a]	5	0.35	0.65	0.57
Croton System 1SCH3 [b]	-	-	-	-

Supervisor _____ Date 11/06/2020

Director _____ Date 11/6/2020