NYC Environmental Protection

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June 9, 2021

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 May 2021

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

Enclosed, please find the New York City Water Quality report for the month of **May 2021**. There was no well pumpage to distribution in the Groundwater System this month. Croton water was feeding into distribution for the month of May. 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 December 1, 2020 to May 31, 2021. The six month running percentage of samples collected with fecal coliform concentrations >20 CFU/100 mL was 0.00% 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 1.5 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 values for Catskill/Delaware System entry points from site 1S03 (Tunnel 1) was 0.30 mg/L, 1S03A (Tunnel 2) was 0.69 mg/L, and 1S03B (Tunnel 3) was 0.58 mg/L.

The Croton Filtration Plant was online and continuously feeding the Croton Low Service for the month of May. The Croton High Service entry point was online until May 27, 2021 at 8:38 AM. When the High Service pump is off, distribution Tunnel 3 water intermittently was back feeding through the High Service tunnel to the Low Service entry point. The minimum daily free chlorine residual value for Croton entry points from site 1SCL1 (Low Service) was 0.43 mg/L and 1SCH3 (High Service) was 0.36 mg/L.

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 0.01 mg/L except for one sample that equaled 0.00 mg/L.

A total of 1301 distribution samples were tested for free chlorine residual during the month. For all monthly distribution sites free chlorine residual ranged from 0.00 to 0.95 mg/L and averaged 0.50 mg/L.

5. *Trihalomethane Monitoring / HAA5 Monitoring* (Section 141.71(b)(6)):
Requirements met. The System's TTHM System-Wide Running Average (RAA) for the second quarter of 2021 was 38 µg/L, and the Locational Running Annual Averages (LRAA) ranged from 27 µg/L to 49 µg/L. These values meet the MCL of 80 µg/L for RAA and LRAA. TTHM quarterly results averaged 36 µg/L.

The System's HAA5 RAA for the second quarter of 2021 was 41 µg/L, and the LRAA ranged from 20 µg/L to 52 µg/L. These values meet the MCL of 60 µg/L for RAA and LRAA. HAA5 quarterly results averaged 46 µg/L.

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 838 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, six (6) samples tested positive for total coliform and negative for *E. coli*.

- A sample collected on 5/26/2021 from Site 51850 (sample station in front of 67 Hill Street, Staten Island) was positive for total coliform. Resampling on 5/28/2021 was coliform negative at all locations.
- A sample collected on 5/29/2021 from Site 24450 (sample station in front of 887 Brooklyn Avenue, Brooklyn) was positive for total coliform. Resampling on 5/31/2021 was coliform negative at all locations.
- A sample collected on 5/30/2021 from Site 29850 (sample station in front of 1425 Pennsylvania Avenue, Brooklyn) was positive for total coliform. Resampling on 6/1/2021 was coliform negative at all locations.
- A sample collected on 5/31/2021 from Site 24650 (sample station, north side Linden Boulevard, first sample station east of Bristol Street, Brooklyn) was positive for total coliform. Resampling on 6/2/2021 was coliform negative at all locations.
- A sample collected on 5/31/2021 from Site 25950 (sample station in front of 2187 Flatbush Avenue, Brooklyn) was positive for total coliform. Resampling on 6/2/2021 was coliform negative at all locations.
- A sample collected on 5/31/2021 from Site 34050 (sample station in front of 611 West 181 Street, Manhattan) was positive for total coliform. Resampling on 6/2/2021 was coliform negative at all locations.

Revised March 2021 coliform reports are included with this submission to reflect the health departments' approval to invalidate, due to laboratory contamination, the six (6) previously reported positive total coliform results for compliance samples collected on March 9, 2021, at sites 10150, 26750, 27550, 27850, 29050, 29450.

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, resulted in all samples being negative for total coliform and *E. coli*.

The analyses of 463 distribution Operational samples resulted in three (3) samples testing positive for total coliform. No *E. coli* were detected.

The analyses of 248 Pre-Finished samples resulted in five (5) samples testing positive for total coliform. No *E. coli* were detected.

The analyses of 414 Autosampler Pre-finished samples resulted in ten (10) samples testing positive for total coliform. No *E. coli* were detected.

Please note: revised coliform reports for March 2021 are provided as electronic files with this month's report. The Departments of Health approved DEP's request to invalidate, due to laboratory contamination, 16 of the 17 positive coliform samples collected on March 9, 2021, and previously reported in the March 2021 Water Quality Report. The previously reported and invalidated coliform positive results of samples collected on March 9, 2021, consisted of six (6) compliance sites (10150, 26750, 27550, 27850, 29050, 29450), one (1) Entry Point (1S03A SUB), six (6) operational sites (32400, 35800, 36100, 36500, 20900, 27000), and three (3) Hillview autosampler samples.

8. *Distribution Turbidity Monitoring:*
For distribution sites, turbidity ranged from <0.10 to 2.24 NTU and averaged 0.80 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 for the month. Daily analyses of entry point samples (151 samples in total), produced monthly average color values of 7 units for sites 1S03 (Tunnel 1), 1S03A (Tunnel 2), 1S03B (Tunnel 3), and 4 units for sites 1SCL1 (Croton Low Service) and 1SCH3 (Croton High Service).

10. *Volatile Organic/TTHM/HAA5 Monitoring:*
Monthly Results: Twenty-one (21) distribution and five (5) entry point samples were collected for volatile organic contaminant (VOC) analysis. All VOC samples from distribution sites and entry points were below detection. Twenty-one (21) TTHM distribution samples were collected ranging from 11 µg/L to 46 µg/L. Five (5) TTHM entry point samples were collected ranging from 6.0 µg/L to 45 µg/L. Twenty-one (21) HAA5 distribution samples were collected ranging from 8.6 µg/L to 65 µg/L. Five (5) HAA5 entry point samples were collected ranging from 7.4 µg/L to 61 µg/L.

11. *Semivolatile and Other Organic Chemicals/parameters:*
EPA Method 525.3 monitoring for 112 compounds of specified and unspecified organic parameters was conducted on May 24, 2021 at the three (3) Catskill/Delaware entry points (1S07, 1S03A, and 1S03B), Croton Low Service entry point (1SCL1), Croton High Service entry point (1SCH3), and six (6) distribution points. All semi-volatile organic contaminant samples were below detection limits.

12. *Fluoride Monitoring:*
Daily analyses of entry point samples (151 samples in total), produced monthly average fluoride levels of 0.71 mg/L for site 1S03 (Tunnel 1), 0.72 mg/L for sites 1S03A (Tunnel 2) and 1S03B (Tunnel 3), 0.73 mg/L for site 1SCL1 (Croton Low Service), and 0.78 mg/L for site 1SCH3 (Croton High 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:
Third quarter monitoring for perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA), and 1,4-Dioxane for the Catskill/Delaware System entry point sites 1S03 (Tunnel 1), 1S03A (Tunnel 2) and 1S03B (Tunnel 3), and the Croton entry point sites 1SCL1 (Low Service) was conducted on May 6, 2021. All results were ND except for PFOA, which was detected at site 1SCL1 at a concentration of 2.2 ppt. Resampling at site 1SCL1 was conducted on May 25, 2021, and results are pending. Available contract laboratory data reports are included as electronic files with this report.

Please feel free to contact me at (718) 595-5367 or sfreud@dep.nyc.gov if you would like to discuss any of this information in greater detail.

Sincerely,

Salomé Freud

Salome Freud
Deputy Director of Water Quality & Innovation

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

TABLE OF CONTENTS FOR DATA FILES

May 2021 Monthly Water Quality Report

Microbiological Reports:	
Summary of Coliform Compliance Samples	*(NYC_Micro_Summary_Compliance_202105.xls)*
Revised Summary of Coliform Compliance Samples for March 2021	*(NYC_Micro_Summary_Compliance_202103_rev.xls)*
Coliform Positive Compliance Samples	*(NYC_Micro_Compliance_Positives_202105.xls)*
Revised Coliform Positive Compliance Samples for March 2021	*(NYC_Micro_Compliance_Positives_202103_rev.xls)*
Coliform Resample for Positive Compliance Samples	*(NYC_Micro_Compliance_Resamples_202105.xls)*
Revised Coliform Resample for Positive Compliance Samples for March 2021	*(NYC_Micro_Compliance_Resamples_202103_rev.xls)*
Summary of Coliform Operational Samples	*(NYC_Micro_Summary_Operational_202105.xls)*
Revised Summary of Coliform Operational Samples for March 2021	*(NYC_Micro_Summary_Operational_202103_rev.xls)*
	(NYC_Micro_Operational_202105.pdf)
Coliform Positive Operational Samples	*(NYC_Micro_Operational_Positives_202105.xls)*
Revised Coliform Positive Operational Samples for March 2021	*(NYC_Micro_Operational_Positives_202103_rev.xls)*
	(NYC_Micro_Operational_202105.pdf)
Coliform Resample for Positive Distribution Operational Samples	*(NYC_Micro_Operational_Resamples_202105.xls)*
Revisec Coliform Resample for Positive Distribution Operational Samples for March 2021	*(NYC_Micro_Operational_Resamples_202103_rev.xls)*
	(NYC_Micro_Operational_202105.pdf)
Distribution Coliform Monitoring when Source Water Turbidity exceeds 1.49 NTU	*(NYC_EP_Coliform_For_Source_Turb_GT_149_202105.snp)*
All Microbiological Results	*(NYC_Monthly_Alldata_202105.xls\Micro)*
Free Chlorine Residual (FCR) Reports:	
Entry Point FCR On-Line Monitoring Results	*(Entry_Shaft_Cl2_Online_202105_Fig.pdf)*
	(Croton_Entry_Shaft_Cl2_Online_202105_Fig.pdf)
Daily Minimum FCR at Entry Points	*(Entry_Shaft_Cl2_Online_202105_Tbl.pdf)*
	(Croton_Entry_Shaft_Cl2_Online_202105_Tbl.pdf)
FCR and Heterotrophic Plate Count (HPC) Compliance Samples	*(NYC_Micro_Summary_FCR_&_HPC_Compliance_202105.xls)*
FCR and HPC of Operational Samples	*(NYC_Micro_Summary_FCR_&_HPC_Operational_202105.xls)*
	(NYC_Micro_Operational_202105.pdf)
Summary of FCR of Distribution Samples (Monthly)	*(NYC_FCR_Monthly_Summary_202105.xls)*
FCR of all Distribution Sites	*(NYC_FCR_Monthly_Alldata_202105.xls)*
Turbidity Reports:	
Summary of Turbidity of Distribution Samples	*(NYC_Turbidity_Monthly_Summary_202105.xls)*
Turbidity of all Distribution Sites	*(NYC_Turbidity_Monthly_Alldata_202105.xls)*
Color Reports:	
Color for Entry Point Samples	*(Entry_Point_Color_Monthly_202105.xls)*
Fluoridation Reports:	
Summary of Fluoride Levels of Distribution Samples	*(NYC_Fluoride_Monthly_Summary_202105.xls)*
Fluoride Daily Entry Point Report for Surface Water Systems	*(Entry_Point_Fluoride_Monthly_202105.xls)*
Fluoride of all Distribution Sites	*(NYC_Fluoride_ Monthly_Alldata_202105.xls)*
Volatile Organic Contaminant (VOC) and Disinfection By-products (DBP) Reports:	
Total Trihalomethanes (TTHM) & VOC Monthly Report	*(NYC_TTHM_&_VOC_Rpt_202105.xls)*
Semivolatiles of EPA Method 525 Monthly Report	*(NYC_SOC_Rpt_202105.xls)*
Summary of EPA DBP Quarterly Report	*(NYC_DBP_Qrtrly_Rpt_2021Q2.xls)*
Haloacetic Acids (HAA5) Monthly Report	*(NYC_HAA5_Monthly_Rpt_202105.xls)*
Perfluorotridecanoic acid (PFC) & 1,4Dioxane Sampling Reports from EEA Lab	*(933830_PFC_1,4-Dioxane_Sample_20210506.pdf)*
Summary of EPA Organic Method Reports	*(NYC_VOC_HAA5_525_Rpt_202105.pdf)*
Inorganic (IOC), Specified Organic (SOC), Metals Monitoring:	
All parameters for May 2021	*(NYC_Monthly_Alldata_202105.xls)*
Revised IOC Monthly for March 2021	*(NYC_Monthly_Alldata_202103_rev.xls/Micro_rev)*

RAW WATER FECAL COLIFORM CONCENTRATIONS
(FAD Requirement)

NYCDEP Division of Watershed Water Quality Operations

Catskill/Delaware System Raw Water Fecal Coliform Compliance Report

Environmental Protection

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: 03/19 To: 05/21**

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
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
11-20	30	0	0.00	1.09
12-20	31	0	0.00	1.09
1-21	31	0	0.00	1.09
2-21	28	0	0.00	0.55
3-21	31	0	0.00	0.00
4-21	30	0	0.00	0.00
5-21	31	0	0.00	0.00

DW Robinson 6/3/21

Reported by: David Robinson, Deputy Chief, Hawthorne Water Quality Operations 6/2/2021

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 06/02/2021 1:00 pm

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: May, 2021**

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)
5/1/21	0.65	0.70	0.80	0.75	0.70	0.75	E3	<1
5/2/21	0.75	0.75	0.75	0.85	0.90	0.85	E2	<1
5/3/21	0.85	1.1	0.75	0.80	0.80	0.80	<1	<1
5/4/21	0.80	0.80	0.80	0.75	0.85	0.85	E5	<1
5/5/21	0.85	0.80	0.80	0.80	0.80	0.85	E5	<1
5/6/21	0.75	0.80	0.85	0.70	0.70	0.65	E8	<1
5/7/21	0.70	0.70	0.70	0.75	0.85	0.80	E8	<1
5/8/21	0.85	0.80	0.75	0.65	0.70	0.65	E6	<1
5/9/21	0.70	0.70	0.70	0.70	0.75	0.75	E6	<1
5/10/21	0.80	0.70	0.70	0.70	0.65	0.65	E18	E1
5/11/21	0.70	0.70	0.70	0.80	0.80	0.85	E20	<1
5/12/21	0.80	0.80	0.80	0.75	0.75	0.75	E6	E2
5/13/21	0.75	0.70	0.75	0.90	0.70	0.70	E4	<1
5/14/21	0.75	0.80	0.80	0.80	0.75	0.80	E5	<1
5/15/21	0.80	0.75	0.80	0.85	0.85	0.75	E16	<1
5/16/21	0.80	0.75	0.85	0.80	0.80	0.90	E3	<1
5/17/21	0.85	0.85	0.85	0.80	0.90	1.0	E12	<1
5/18/21	0.85	0.90	0.85	0.80	0.90	0.85	E5	<1
5/19/21	0.85	0.80	0.85	1.0	0.95	0.90	E11	E2
5/20/21	1.0	1.0	1.0	0.75	0.85	0.90	E8	E1
5/21/21	0.85	0.95	0.95	0.95	0.85	0.90	E12	<1
5/22/21	0.95	0.90	0.85	0.85	0.85	0.85	E7	<1
5/23/21	0.90	0.85	0.85	0.90	0.95	0.90	E13	E1
5/24/21	0.90	0.90	0.90	1.4	1.5	1.3	E19	E3
5/25/21	1.3	1.4	1.3	1.2	1.3	1.4	E18	E2
5/26/21	1.2	1.4	1.3	1.4	1.2	1.3	E11	E2
5/27/21	1.3	1.2	1.3	1.3	1.4	1.5	E9	E1
5/28/21	1.3	1.3	1.3	1.1	0.90	1.1	E12	<1
5/29/21	0.95	0.85	0.90	1.1	1.0	1.0	>=40	E12
5/30/21	0.95	0.95	0.95	0.95	0.95	1.0	E35	E5
5/31/21	0.85	0.95	0.95	0.95	1.3	1.3	E60	E4

.: 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:

Dav. Robinson 6/3/21

Reported by: David Robinson, Deputy Chief, Hawthorne Water Quality Operations 6/2/2021

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.

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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: May 2021

Date/Time	Site	Analytes Affected	Qualifier
5/11/21 09:54	DEL18DT	Total Coliform	QC blank contamination

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

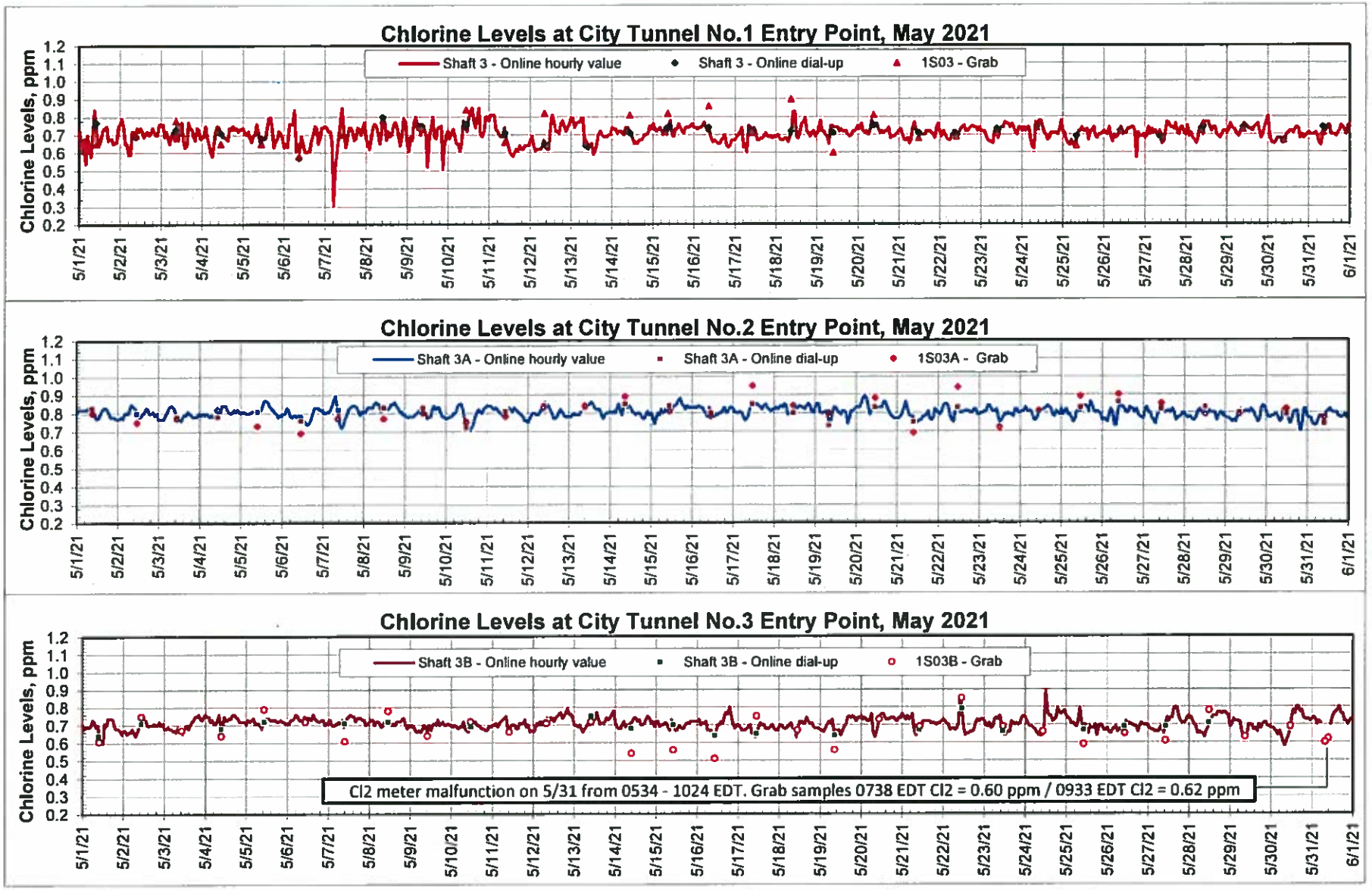
Daily Minimum Chlorine Readings Recorded at Tunnel Entry Shafts for Catskill/Delaware System

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
05/01/21	0.54		05/01/21	0.76		05/01/21	0.61	
05/02/21	0.58		05/02/21	0.77		05/02/21	0.64	
05/03/21	0.59		05/03/21	0.76		05/03/21	0.62	
05/04/21	0.58		05/04/21	0.77		05/04/21	0.68	
05/05/21	0.54		05/05/21	0.77		05/05/21	0.68	
05/06/21	0.54		05/06/21	0.73		05/06/21	0.69	
05/07/21	0.30		05/07/21	0.71		05/07/21	0.69	
05/08/21	0.59		05/08/21	0.78		05/08/21	0.68	
05/09/21	0.45		05/09/21	0.77		05/09/21	0.65	
05/10/21	0.58		05/10/21	0.70		05/10/21	0.65	
05/11/21	0.56		05/11/21	0.74		05/11/21	0.63	
05/12/21	0.59		05/12/21	0.77		05/12/21	0.67	
05/13/21	0.59		05/13/21	0.76		05/13/21	0.66	
05/14/21	0.65		05/14/21	0.76		05/14/21	0.68	
05/15/21	0.67		05/15/21	0.74		05/15/21	0.64	
05/16/21	0.60		05/16/21	0.76		05/16/21	0.62	
05/17/21	0.59		05/17/21	0.75		05/17/21	0.60	
05/18/21	0.65		05/18/21	0.79		05/18/21	0.63	
05/19/21	0.65		05/19/21	0.72		05/19/21	0.62	
05/20/21	0.67		05/20/21	0.76		05/20/21	0.62	
05/21/21	0.63		05/21/21	0.72		05/21/21	0.62	
05/22/21	0.67		05/22/21	0.75		05/22/21	0.64	
05/23/21	0.64		05/23/21	0.72		05/23/21	0.62	
05/24/21	0.60		05/24/21	0.75		05/24/21	0.62	
05/25/21	0.62		05/25/21	0.74		05/25/21	0.65	
05/26/21	0.43		05/26/21	0.71		05/26/21	0.64	
05/27/21	0.53		05/27/21	0.73		05/27/21	0.65	
05/28/21	0.59		05/28/21	0.74		05/28/21	0.61	
05/29/21	0.67		05/29/21	0.75		05/29/21	0.61	
05/30/21	0.61		05/30/21	0.69		05/30/21	0.58	
05/31/21	0.62		05/31/21	0.72		05/31/21	0.60	

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

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 above 0.2 ppm at all times.

Since 3/14/2021 grab and online dial-up readings were recorded in Eastern Daylight Time.

New York City Department of Environmental Protection
Bureau of Water Supply

Daily Minimum Chlorine Readings Recorded at Croton Distribution Entry Points

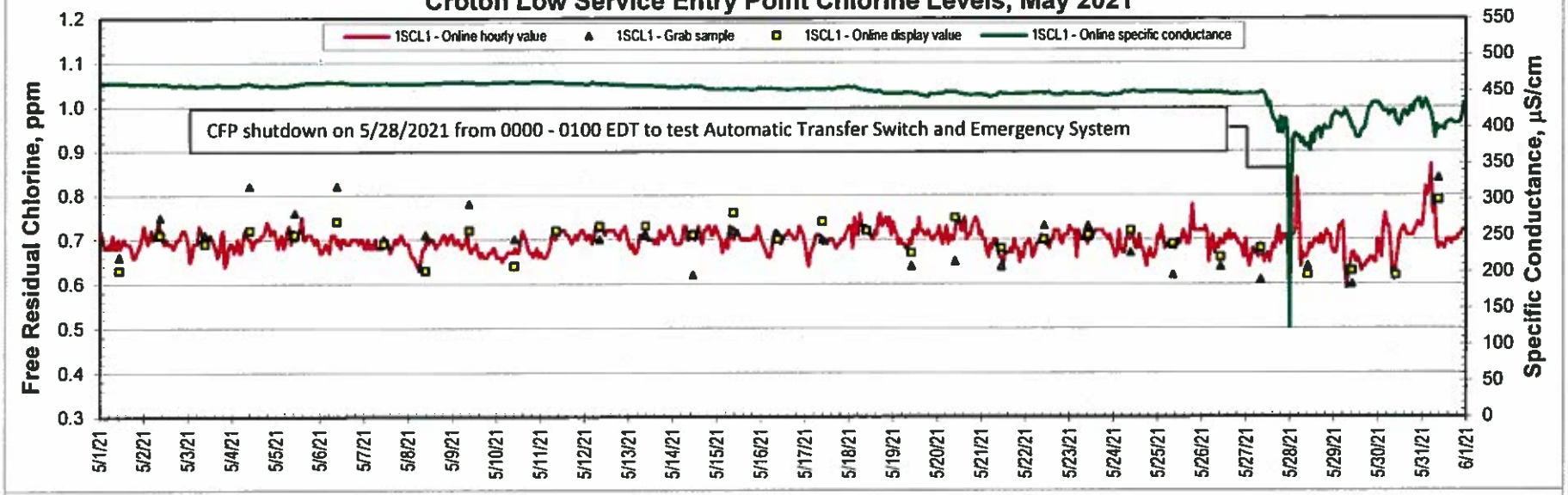
Low Service			High Service		
Date	MinCl_1SCL1	Remark 1	Date	MinCl_1SCH3	Remark 2
05/01/21	0.62		05/01/21	0.56	
05/02/21	0.58		05/02/21	0.54	
05/03/21	0.45		05/03/21	0.52	
05/04/21	0.63		05/04/21	0.43	
05/05/21	0.61		05/05/21	0.50	
05/06/21	0.63		05/06/21	0.50	
05/07/21	0.62		05/07/21	0.51	
05/08/21	0.58		05/08/21	0.50	
05/09/21	0.62		05/09/21	0.50	
05/10/21	0.53		05/10/21	0.41	
05/11/21	0.61		05/11/21	0.51	
05/12/21	0.64		05/12/21	0.49	
05/13/21	0.63		05/13/21	0.50	
05/14/21	0.63		05/14/21	0.49	
05/15/21	0.62		05/15/21	0.51	
05/16/21	0.60		05/16/21	0.52	
05/17/21	0.61		05/17/21	0.43	
05/18/21	0.58		05/18/21	0.53	
05/19/21	0.62		05/19/21	0.45	
05/20/21	0.62		05/20/21	0.41	
05/21/21	0.59		05/21/21	0.38	
05/22/21	0.62		05/22/21	0.36	
05/23/21	0.61		05/23/21	0.38	
05/24/21	0.61		05/24/21	0.38	
05/25/21	0.64		05/25/21	0.50	
05/26/21	0.56		05/26/21	0.48	
05/27/21	0.58		05/27/21	0.50	Croton water stopped feeding into High Service entry point at 0938 EDT on 5/27/2021
05/28/21	0.43		05/28/21		No Croton Water
05/29/21	0.56		05/29/21		
05/30/21	0.58		05/30/21		
05/31/21	0.62		05/31/21		

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 was determined by specific conductance greater than 150 µS/cm.

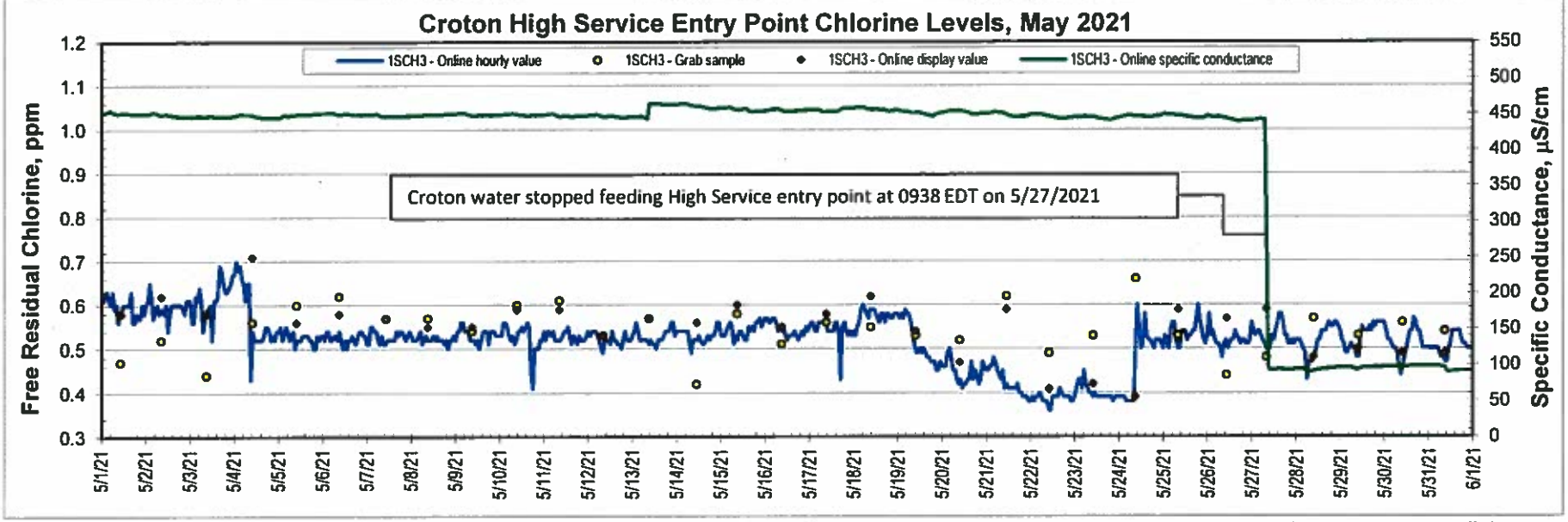
New York City Department of Environmental Protection
Bureau of Water Supply

Croton Distribution Entry Point Residual Chlorine Continuous Monitoring Results

Croton Low Service Entry Point Chlorine Levels, May 2021



Croton High Service Entry Point Chlorine Levels, May 2021



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 3/14/21, all grab and online display readings were recorded in Eastern Daylight Saving Time.

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

May 2021

All Distribution Sites			
Samples	Min	Max	Average
1301	0.00	0.95	0.50

Hach DPD Method (analyte is not ELAP certified)

SAMPLE NUMBER	SAMPLE DATE	SAMPLE SITE	LOCATION TYPE	RESIDUAL CHLORINE	COMMENT
15270	5/17/21	1S03A	Sub	0.95	Max
16188	5/26/21	29500	Reg Stop	0.95	Max
13970	5/5/21	19000	Reg Stop	0.00	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.

VOLATILE ORGANIC / THM / HAA MONITORING
(FAD Requirement)

REPORT

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

SUMMARY OF DISINFECTION BY-PRODUCTS ANALYSES (µg/L)

SECOND QUARTER, 2021

Site	Location	Sample Date	TTHM (µg/L) [a]				HAA5 (µg/L) [b]			
			Analysis Date	Result	LRAA	OEL	Analysis Date	Result	LRAA	OEL
15150	SS - IFO 1420 E/S Grand Concourse, 1st SS S/O E 171st St, 12"	5/4/21	5/4/21	30	33	26	5/6/21	32	33	31
18650	SS - N/S Dewey Ave, BTW Quincy & Swinton Aves, 12"	5/4/21	5/5/21	38	33	31	5/10/21	45	41	41
23450	SS - N/S Jefferson Avenue, 2nd SS W/O Lewis Avenue, 20"	5/4/21	5/5/21	37	36	33	5/11/21	51	41	44
24350	SS - W/S Brighton 11th Street, 2nd SS S/O Cass Place, 12"	5/4/21	5/4/21	40	39	35	5/5/21	65	48	54
31750	SS - IFO 427 N/S W 26th St, 2nd SS W/O 9th Ave, 12"	5/4/21	5/4/21	18	31	21	5/6/21	14	22	18
31850	SS - IFO 82 S/S Warren St, 2nd SS E/O Greenwich St, 12"	5/4/21	5/4/21	42	40	39	5/7/21	51	47	47
32350	SS - IFO 116 E/S Ave C, 2nd SS N/O E 7th St, 12"	5/4/21	5/4/21	21	33	22	5/6/21	18	23	18
33450	SS - IFO 135 N/S W 112th St, 2nd SS W/O St Nicholas Ave, 12"	5/4/21	5/4/21	13	27	16	5/10/21	11	21	13
33950	SS - N/S E 104th Street, 2nd SS E/O 3rd Avenue, 12"	5/4/21	5/5/21	18	30	19	5/10/21	12	20	13
37950	SS - IFO 325 N/S E 12th Street, 2nd SS E/O 2nd Ave, 12"	5/4/21	5/4/21	46	46	41	5/6/21	56	45	49
38250	SS - IFO 309 N/S E 87th St, 2nd SS W/O 1st Ave, 12"	5/4/21	5/4/21	43	41	39	5/10/21	56	47	48
39650	SS - IFO 229 N/S E 49th St, 2nd SS W/O 2nd Ave, 12"	5/4/21	5/5/21	40	42	38	5/10/21	55	49	48
44350	SS - IFO 21-55 N/S 34th Ave, 1st SS W/O 24th St, 12"	5/4/21	5/4/21	42	44	38	5/5/21	63	49	53
45250	SS - E/S Beach 58th St, 2nd SS N/O Beach Channel Drive, 12"	5/4/21	5/4/21	43	38	37	5/10/21	63	52	55
50250	SS - IFO 937 N/S Victory Blvd, 2nd SS E/O Cheshire Ave, 20"	5/4/21	5/4/21	38	34	34	5/8/21	62	52	53
50750	SS - E/S Woodhull Ave, 1st SS S/O Albourne Ave, 8"	5/4/21	5/4/21	43	44	39	5/10/21	53	42	47
50850	SS - IFO 512 W/S Arlene St, 1st SS N/O Dawson Ct, 12"	5/4/21	5/4/21	41	38	37	5/6/21	57	48	49
52050	SS - IFO 218 W/S Nicholas Ave, 1st SS S/O Charles Ave, 12"	5/4/21	5/4/21	42	42	38	5/6/21	61	52	54
58650	SS - IFO 510 W/S Main St, 2nd SS S/O Hylan Blvd, 12"	5/4/21	5/4/21	41	49	41	5/6/21	57	43	47
77650	SS - W/S 207th St, OPP 110-52 E/S 207th St, 6"	5/4/21	5/4/21	35	33	31	5/10/21	47	43	43

TTHM			HAA5
	13	QUARTERLY MINIMUM	11
	46	QUARTERLY MAXIMUM	65
	36	QUARTERLY AVERAGE	46
	38	SYSTEM-WIDE RAA	41

[a] : analyzed by EPA Method 524.3

[b] : analyzed by EPA Method 552.3

LRAA: The Locational Running Annual Average (LRAA) is calculated by taking the value of this quarter and the three previous consecutive quarters.

RAA: The System-wide Running Annual Average (RAA) is calculated by taking the average of the Quarterly Average of this quarter and the three previous consecutive quarters.

OEL: The Operational Evalution Level (OEL) is calculated by averaging 2 times this quarter's value and the two previous consecutive quarters.

Both the LRAA and the System-wide RAA is not to exceed 80 µg/L for TTHM and 60 µg/L for HAA5.

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

5/1/2021 to 5/31/2021

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	137	137	0	0	0.0%
Brooklyn	70	206	206	4	0	1.9%
Manhattan	57	171	171	1	0	0.6%
Queens ***	79	230	230	0	0	0.0%
Staten Island	29	94	94	1	0	1.1%
Ground Water Supply ***	-	-	-	-	-	-
Total	281	838	838	6	0	0.7%

* 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: Rupa Agarwal Date: 06/04/21

Director: Date: 6/7/2021

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
5/1/2021 to 5/31/2021

Date	Time	Site Number	Boro	Location	Coliform *	E. coli *	Chlorine Residual (mg/L) **	Remarks
5/26/2021	8:23	51850	Staten Island	SS - IFO 67 N/S Hill St, 2nd SS W/O Tompkins Ave, 12 "	1.0	<1	0.25	To Be Resampled
5/29/2021	9:48	24450	Brooklyn	SS - E/S Brooklyn Ave, 2nd SS S/O Linden Blvd, IFO 887 Brooklyn Ave, 20 "	1.0	<1	0.47	To Be Resampled
5/30/2021	9:17	29850	Brooklyn	SS - IFO 1425 E/S Pennsylvania Ave, 2nd SS S/O Schroeders Ave, 20 "	8.7	<1	0.38	To Be Resampled
5/31/2021	9:41	24650	Brooklyn	SS - N/S Linden Blvd, 1st SS E/O Bristol St, 12 "	1.0	<1	0.21	To Be Resampled
5/31/2021	9:11	25950	Brooklyn	SS - E/S Flatbush Ave, 2nd SS N/O Ave R, IFO 2187 Flatbush Ave 16 "	3.1	<1	0.44	To Be Resampled
5/31/2021	9:52	34050	Manhattan	SS - IFO 611 N/S W 181st St, 1st SS W/O St Nicholas Ave, 12 "	2.0	<1	0.49	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: Rupe Agarwal Date: 06/04/21

Director: Date: 6/7/2021

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

5/1/2021 to 5/31/2021

Date	Time	Site Number	Boro	Location	Coliform *	E. coli *	Chlorine Residual (mg/L) **	Remarks
5/28/2021	8:49	51850	Staten Island	SS - N/S Hill St, 1st SS W/O Tompkins Ave IFO 51 Hill St	<1	<1	0.14	Upstream
5/28/2021	8:35	51850	Staten Island	SS - IFO 67 N/S Hill St, 2nd SS W/O Tompkins Ave, 12 "	<1	<1	0.14	Original Location
5/28/2021	8:20	51850	Staten Island	SS - N/S Hill St, 1st SS E/O Warren St, 12"	<1	<1	0.14	Downstream
5/31/2021	8:58	24450	Brooklyn	SS - E/S Brooklyn Ave, 1st SS S/O Linden Blvd, IFO 877 Brooklyn Ave	<1	<1	0.42	Upstream
5/31/2021	9:09	24450	Brooklyn	SS - E/S Brooklyn Ave, 2nd SS S/O Linden Blvd, IFO 887 Brooklyn Ave, 20 "	<1	<1	0.43	Original Location
5/31/2021	9:21	24450	Brooklyn	SS - E/S Brooklyn Ave, 1st SS N/O Church Ave, IFO 911 Brooklyn Ave	<1	<1	0.41	Downstream
6/1/2021	8:27	29850	Brooklyn	SS - E/S Pennsylvania Ave, 1st SS S/O Schroeders Ave	<1	<1	0.38	Upstream
6/1/2021	8:54	29850	Brooklyn	SS - IFO 1425 E/S Pennsylvania Ave, 2nd SS S/O Schroeders Ave, 20 "	<1	<1	0.38	Original Location
6/1/2021	9:07	29850	Brooklyn	SS - E/S Pennsylvania Ave, 3rd SS S/O Schroeders Ave	<1	<1	0.48	Downstream
6/2/2021	7:47	24650	Brooklyn	SS - N/S Linden Blvd, 1st SS W/O Rockaway Ave	<1	<1	0.14	Upstream
6/2/2021	8:00	24650	Brooklyn	SS - N/S Linden Blvd, 1st SS E/O Bristol St, 12 "	<1	<1	0.13	Original Location
6/2/2021	8:13	24650	Brooklyn	SS - N/S Linden Blvd, BTW Thomas Boyland & Bristol Sts	<1	<1	0.16	Downstream
6/2/2021	8:08	25950	Brooklyn	SS - E/S Flatbush Ave, 1st SS S/O Quentin Rd	<1	<1	0.23	Upstream
6/2/2021	8:26	25950	Brooklyn	SS - E/S Flatbush Ave, 2nd SS N/O Ave R, IFO 2187 Flatbush Ave 16 "	<1	<1	0.29	Original Location
6/2/2021	8:41	25950	Brooklyn	SS - E/S Flatbush Ave, 1st SS N/O Ave R	<1	<1	0.30	Downstream
6/2/2021	7:54	34050	Manhattan	SS - W/S St Nicholas Ave, BTW W 181st & W 182nd Sts	<1	<1	0.72	Upstream
6/2/2021	8:14	34050	Manhattan	SS - IFO 611 N/S W 181st St, 1st SS W/O St Nicholas Ave, 12 "	<1	<1	0.57	Original Location
6/2/2021	10:24	34050	Manhattan	Hydt - N/S of West 181st Street, 1st HT E/O Wadsworth Avenue	<1	<1	0.75	Hydrant ***

* 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).
*** Hydrant represents Downstream. No water at Downstream.

Supervisor: _____ Date: 06/08/21

Director: _____ Date: 6/9/2021

REVISED 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

3/1/2021 to 3/31/2021

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	137	136	0	0	0.0%
Brooklyn	70	216	211	0	0	0.0%
Manhattan	57	168	168	0	0	0.0%
Queens ***	79	230	230	0	0	0.0%
Staten Island	29	87	87	0	0	0.0%
Ground Water Supply ***	-	-	-	-	-	-
Total	281	838	832 †	0	0	0.0%

* 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.

† Six (6) results were invalidated due to lab contamination.

Supervisor: Patricia Gan Date: 06/09/2021

Director: Date: 6/9/2021

REVISED 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
3/1/2021 to 3/31/2021

Date	Time	Site Number	Boro	Location	Coliform *	E. coli *	Chlorine Residual (mg/L) **	Remarks
				No positive sample this month.				

* 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: Rupi Agarwal Date: 06/07/21

Director: Date: 6/7/2021

REVISED 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
3/1/2021 to 3/31/2021

Date	Time	Site Number	Boro	Location	Coliform *	E. coli *	Chlorine Residual (mg/L) **	Remarks
				No positive sample this month.				

* 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: Rupe Aggarwal Date: 06/07/21

Director: Date: 6/7/2021

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

May 2021

Source water		Distribution site near first service connection			
Date Turb >1.49 NTU	System	Sample Date	Sample Site	Coliform *	E.coli *
5/24/2021	DEL18	5/25/2021	16450	<1	<1
5/27/2021	DEL18	5/28/2021	11550	<1	<1

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

May 2021

All Distribution Sites			
Samples	Min	Max	Average
1301	<0.10	2.24	0.80

Analytical Method SM 2130 B

SAMPLE NUMBER	SAMPLE DATE	SAMPLE SITE	LOCATION TYPE	TURBIDITY	COMMENT
15698	5/21/21	41250	Reg Stop	2.24	Max
13750	5/3/21	1SCH3	Reg Stop	<0.10	Min
14913	5/13/21	1SCH3	Reg Stop	<0.10	Min
15008	5/14/21	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

May 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	5	6	7	7	6	6	6	6	6	6	7	7	6	7	6	7	7	7	6	7	7	6	6	7	8	7	7	7	7	7
Catskill/Delaware 1S03A (Tunnel 2)	7	6	6	7	7	6	7	6	6	6	6	6	7	7	7	6	7	7	6	7	7	7	6	7	7	7	7	8	7	6	7
Catskill/Delaware 1S03B (Tunnel 3)	6	6	6	7	6	6	7	7	6	6	7	7	7	6	7	6	7	7	7	7	7	7	6	6	6	7	7	8	7	6	7
Croton System 1SCL1 [a]	4	4	4	3	4	4	4	4	4	4	4	4	3	4	3	4	4	5	4	4	4	4	4	4	4	3	4	4	4	4	4
Croton System 1SCH3 [b]	4	4	4	3	4	4	4	4	4	4	4	4	3	4	3	4	3	4	4	4	4	4	4	4	4	3	4				

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 5/28/21 at 1SCH3.

Entry Point	Samples	Minimum	Maximum	Average
Catskill/Delaware 1S03 (Tunnel 1)	31	5	8	7
Catskill/Delaware 1S03A (Tunnel 2)	31	6	8	7
Catskill/Delaware 1S03B (Tunnel 3)	31	6	8	7
Croton System 1SCL1 [a]	31	3	5	4
Croton System 1SCH3 [b]	27	3	4	4

Supervisor _____ Date 06/03/2021

Director _____ Date 6/3/2021

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

May 2021

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)	0.74	0.71	0.73	0.73	0.75	0.74	0.74	0.75	0.73	0.73	0.73	0.72	0.73	0.72	0.73	0.73	0.71	0.69	0.68	0.66	0.67	0.66	0.69	0.68	0.70	0.73	0.73	0.72	0.72	0.72	0.68
Catskill/Delaware 1S03A (Tunnel 2)	0.74	0.71	0.73	0.74	0.75	0.74	0.75	0.74	0.72	0.74	0.72	0.73	0.73	0.73	0.74	0.73	0.69	0.69	0.67	0.64	0.67	0.67	0.70	0.70	0.71	0.73	0.74	0.72	0.72	0.74	0.64
Catskill/Delaware 1S03B (Tunnel 3)	0.74	0.70	0.72	0.74	0.75	0.75	0.74	0.74	0.72	0.75	0.74	0.74	0.73	0.73	0.74	0.73	0.70	0.69	0.68	0.67	0.67	0.68	0.69	0.70	0.71	0.73	0.73	0.72	0.72	0.73	0.66
Croton System 1SCL1 [a]	0.74	0.70	0.75	0.76	0.75	0.75	0.73	0.74	0.72	0.75	0.73	0.75	0.77	0.75	0.73	0.73	0.73	0.74	0.73	0.74	0.72	0.72	0.74	0.72	0.71	0.73	0.71	0.74	0.72	0.74	0.68
Croton System 1SCH3 [b]	0.77	0.73	0.75	0.79	0.81	0.82	0.80	0.77	0.77	0.79	0.76	0.79	0.79	0.77	0.79	0.79	0.78	0.79	0.77	0.79	0.79	0.76	0.79	0.75	0.79	0.79	0.79				

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 5/28/21 at 1SCH3.

Entry Point	Samples	Minimum	Maximum	Average
Catskill/Delaware 1S03 (Tunnel 1)	31	0.66	0.75	0.71
Catskill/Delaware 1S03A (Tunnel 2)	31	0.64	0.75	0.72
Catskill/Delaware 1S03B (Tunnel 3)	31	0.66	0.75	0.72
Croton System 1SCL1 [a]	31	0.68	0.77	0.73
Croton System 1SCH3 [b]	27	0.73	0.82	0.78

Supervisor _____ Date 06/03/2021

Director _____ Date 6/3/2021