

NEW YORK CITY 2015



BEACH SURVEILLANCE AND
MONITORING PROGRAM

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SECTION 1

INTRODUCTION

In accordance with the New York City Administrative Code §18-131 (c) (4), this annual report summarizes the 2015 New York City Beach Surveillance and Monitoring Program for beaches permitted by the Department of Health and Mental Hygiene (DOHMH or the “Department”). This law requires that the Commissioner of Health and Mental Hygiene “forward a combined report of the dates and results of all inspections of all beaches and the dates and reasons for any warning (previously referred to as Advisory) or closure, and such other information deemed appropriate by the Commissioner of Health and Mental Hygiene, for the Friday proceeding the last Monday of May until the Friday after the first Monday of September of each year, to the Mayor, the Public Advocate and the Speaker of the Council.

”Under both Article 167 of the New York City Health Code (Article 167) and Subpart 6-2 of the New York State Sanitary Code (Subpart 6-2), the Department monitors and conducts surveillance of permitted beaches in the City of New York. The Department administers the Beach Surveillance and Monitoring Program for all beaches operating within the city limits and with a permit issued by the Department. The Program responsibilities include: 1) beach monitoring and surveillance; 2) public notification and communication, and 3) conducting annual safety inspections.

The City’s beaches function as an important recreational and quality-of-life resource for City residents and neighboring communities. As shown in Figure 1 (page 2) and Table 1 (page 3) there are eight public and sixteen private permitted beaches within New York City limits.

Also this year, New York City Public Beaches remained open an additional week for the 2015 beach season. All Public Beaches with the exception of Wolfe’s Pond and Cedar Grove beaches in Staten Island remained open until September 13th, a week later than the traditional Labor Day weekend unofficial end to summer.

FIGURE 1: NEW YORK CITY PERMITTED BEACHES



TABLE 1: NEW YORK CITY PERMITTED BEACHES AND WATER BODY IDENTIFICATION

Borough	Beaches	Water Body
Brooklyn	<i>Public:</i> Coney Island, Manhattan <i>Private:</i> Seagate, Kiddie Gerritsen, Kingsborough	Lower New York Harbor
Bronx	<i>Public:</i> Orchard Beach <i>Private:</i> American Turner, Danish American, Manheim, Whitecross Fishing, Morris Yacht Club, Schuyler Hill, Trinity Danish, Locust Point Yacht Club, West Fordham Street	Eastchester Bay, Western Long Island Sound
Queens	<i>Public:</i> Rockaway <i>Private:</i> Breezy Point	Atlantic Ocean Coastline
	<i>Private:</i> Douglaston Manor, Whitestone Booster Civic Association	Western Long Island Sound
Staten Island	<i>Public:</i> South Beach, Midland, Cedar Grove, Wolfe’s Pond Park <i>Private:</i> Staten Island YMCA	Lower New York Bay

1.1 Public Risk Communication

The Department continued to improve the Program’s Public Notification and Risk Communication efforts during the 2015 beach season. Easy to interpret signs shown in Figure 2 that were developed and implemented during the 2014 season, were used for beach closures and warnings in 2015.

FIGURE 2: BEACH WARNING AND CLOSED SIGNS



The free texting service called “Know Before You Go”, which was introduced in 2014, was reprised for the 2015 beach season. The service enables subscribers to make informed decisions before they went to the beach by checking if the beach was open or closed or if there were any warnings due to wet weather conditions or water quality concerns. Subscribers simply text “BEACH” to 877-877 to get updates on the beach status of any of the eight public beaches in New York City. This tool also can be used by the Department to deliver safety related messages such as warnings for high RIP currents and when beaches open and close for the season.

In 2015, DOHMH expanded its outreach to include a Spanish language subscriber campaign. Spanish and English promotion ads were included as part of the DOHMH advertising campaign, which included social media marketing as shown in Figure 3. By the close of the beach season, there were over 5200 subscribers to “Know Before You Go.”

FIGURE 3: KNOW BEFORE YOU GO TEXTING PROGRAM



SECTION 2

BACKGROUND INFORMATION

This chapter provides background information on the New York City Beach Surveillance and Monitoring Program. The topics of discussion include, bacteriological water quality criteria, pre-emptive rainfall thresholds, beach classifications, procedures and protocols for monitoring and surveillance, public notification and risk communication and safety inspections.

2.1 Water Quality Criteria

Under the New York State Sanitary Code §6-2.15, Article §167.13 of the New York City Health Code and the Federal Beaches Environmental Assessment and Coastal Health Act of 2000 (BEACH) Act, Enterococci is the indicator organism mandated for evaluating the microbiological quality of marine (saline) recreational beach water.

Under the New York State Sanitary Code and the New York City Health Code, Enterococci concentrations for a single sample shall not exceed 104 Colony Forming Units (CFU's) per 100 mL (61 CFU's per 100 ml for fresh water), and the Enterococci geometric mean shall not exceed 35 CFU's per 100 mL (33 CFU's per 100 ml for fresh water) for a series of five or more samples collected during a 30-day period. The geometric mean and single sample maximum is determined by analyzing samples for the presence and quantification of Enterococci using EPA method 1600.

In November, 2012, the Environmental Protection Agency (EPA) released the revised Recreational Water Criteria (RWQC). The revised criteria uses a geometric mean and a statistical threshold value to indicate whether the water quality is protective of the designated use of primary contact recreation. The 2012 revised criteria for marine waters are a 30-day geometric mean of 30 Enterococci (CFU/100 mL) and a statistical threshold value of 110 Enterococci (CFU/100 mL)(the statistical threshold value is calculated as no more than 10% of samples within 30 days shall exceed the criteria). In addition to the revised criteria, the EPA introduced a Beach Action Value (BAV) of 60 Enterococci (CFU/100 mL) to be used as a notification threshold for beach management; there is no longer a single sample maximum in the EPA criteria document. The revised recreational criteria is scheduled to be implemented by 2017.

2.2 Rainfall Events

Pre-emptive rainfall thresholds have been developed for New York City Beaches through statistical modeling of historical data. These preemptive thresholds are used as a management tool to provide a quick and reliable indication of water quality conditions. When threshold levels of precipitation have been exceeded there is very a high probability for elevated levels of

harmful bacteria due to CSO's and stormwater runoff. Untreated sewage bypasses and excess stormwater runoff can potentially pose a public health threat in nearby beach water bodies. When rainfall intensities meet the pre-emptive thresholds, as defined in Table 2 (page 8) a public notification or a warning will take effect for the predetermined duration.

TABLE 2: NEW YORK CITY PRE-EMPTIVE RAINFALL THRESHOLDS

Beach (Borough)	Rainfall Event Limit	Duration of Warning
South Beach, Midland Beach, Cedar Grove, Staten Island YMCA (Staten Island), Manhattan Beach, Kingsborough Community College (Brooklyn)	1.5 – 2.5 inches	12 hours
	> 2.5 inches	24 hours
Orchard Beach (Brooklyn)	> 2.5 inches	24 hours
Coney Island (Brooklyn)	> 2.5 inches	12 hours
Gerritsen Beach (Brooklyn) Whitestone Booster (Queens)	0.3 - 0.6 inches	18 hours
	> 0.6 inches	40 hours
American Turner, Danish American , Manheim, White Cross, Morris Yacht, Schuyler Hill, Trinity Danish, Locust Point Yacht Club, West Fordham Street Association (Bronx)	0.6 – 2.5 inches	36 hours
	> 2.5 inches	48 hours
Douglaston Manor (Queens)	0.3 – 0.6 inches	30 hours
	0.6 – 2.5 inches	60 hours
	> 2.5 inches	72 hours

2.3 Beach Classifications

There are three swimming classifications for New York City beaches which are determined by assessing water quality, rainfall and pollution events, on-site sanitary surveys, and/or historical information. Beaches except those specifically restricted under Article §167.05 are classified as follows:

Class A: Open for Swimming and Wading. Beaches may be classified as open and approved for swimming and wading when all of the following conditions are met:

1. Beach water quality is in accordance with standards defined under Article §167.13.
2. Sanitary and safety surveys are satisfactory in accordance with Article §167.25.

3. The epidemiological history is satisfactory to the Department. No repeated complaints/reports of illness/injury received from the public or from owners/operators of city beaches.

Class B: Warning – Not Recommended for Swimming and Wading. Beaches may be classified as “Not Recommended for Swimming and Wading” when one or more of the following conditions exists:

1. When rainfall events exceed the pre-emptive rainfall thresholds, when naturally occurring organisms or human influences may cause a continuous or reoccurring degradation of water quality that would put public health at risk;
2. When a water quality sample exceeds the water quality standard or a beach notification threshold. The notification should remain in effect until resampling indicates that the beach water quality standard and/or notification thresholds are being met.
3. When an on-site sanitary survey or investigation reveals the presence of floatable debris, medical/infectious waste or toxic contaminants, petroleum products and/or other contamination on the beach; or
4. When there is evidence of sewage and wastewater discharge.

Class C: Closed – Temporarily Restricted for Swimming and Wading: Beaches may be classified as “Temporarily Restricted for Swimming and Wading” when one or more of the following conditions exists:

1. Sampling by bacteriological testing that finds beach water quality exceeding the statutory water quality standard for marine water beaches;
2. Epidemiological data indicates a significant incidence of related illnesses or repeated complaints/reports of illness/injury received from beach patrons;
3. A sanitary and safety survey or an investigation reveals the presence of potentially hazardous amounts of floatable debris, medical/infectious waste, toxic contaminants, petroleum products or other contaminants on the beach, or there is evidence of sewage and wastewater discharges in sufficient quantities that will adversely affect the quality of the beach water; or
4. Any other environmental factors determined to be a public health or safety hazard by the Department.

2.4 Beach Monitoring and Surveillance

Starting one month before the beach season, the Department monitors and samples each beach on a weekly basis with the exception of the Rockaway and Breezy Point beaches, which are sampled bi-weekly. In addition to routine water quality monitoring, the Department monitors on a daily basis the regional wet weather conditions and occasional Waste Water

Treatment Plant (WWTP) bypasses, operational upsets and spills through interagency communication and cooperation. This information can be used to assess and make beach status determinations.

During a sample event, a routine on-site sanitary survey inspection is performed to identify any existing and/or potential sources of pollution that are likely to affect beach water quality. Water samples are collected at knee-depth (18 inches) in three feet of water, from the center left and right of the beach. At larger beaches, such as Coney Island and Rockaway, samples are taken from multiple locations to ensure adequate representation and reliable results. The collected samples are delivered to the Department's Public Health Laboratory for analysis. The analytical turnaround time for Enterococci is 24 hours.

The water quality of the samples analyzed is reviewed and assessed for conformance to applicable standards. If the regulatory limit for Enterococci is exceeded or conditions exist that may pose a threat to the health and/or safety of the public, the Department initiates one of the following actions: conducts immediate re-sampling; issues a warning and conduct re-sampling; and/or closes the beach and conduct re-sampling. The determining factors for additional sampling may include: proximity to suspected pollution sources; extent of pollution; beach use; historical water quality data; and other health risk factors.

2.5 Public Notification and Risk Communication

When beach status changes based upon evaluation and assessment of beach water quality as specified above, the Department notifies the public through on-site beach signage, website postings, 311 non-emergency government service hotline, Notify NYC (via Twitter, RSS feed, e-mail, and SMS), "Know Before You Go" texting service, and Department press releases when necessary. Beach operators are notified by phone, email and/or text as to the necessary on-site postings. The specific notification procedures and requirements for each of the above conditions are as follows:

On-Site Signage: When notified by the Department, the permittee is required to post or remove the warning or closure signs in designated areas visible to beach users such as beach entrances, bulletin boards, or the general vicinity of the common swimming areas.

"Know Before You Go" Texting Service: Subscribers send a text using "BEACH" to 877-877 to get updates on beach status for any of the eight public beaches in New York City.

Website Postings: The Department has developed an easily accessible website updated with location and information for all permitted beaches: www.nyc.gov/health/beach. The website contains background information on the beach program, explains the causes and sources of surface water pollution, and summarizes the beach classification system, including the different

types of warnings. A list of City beaches by borough, along with their respective status (Open, Closed, or Warning) and sample results are promptly updated on the website. Beach warnings or closures are also posted under the “NYC Right Now” link on the City website, www.nyc.gov, during the beach season. The public can report swimming related illnesses through the website.

Notify NYC: When notified by the Department of status changes relating to public beaches the Office of Emergency Management will send members of the public who have signed up to Notify NYC status information via Twitter, RSS feed, e-mail and SMS.

311: The 311 telephone operators monitor the Department’s website for updates on warning or closure information, as described above, and convey that information to 311 callers. The public can also report a swimming related illness via 311.

NYC Press Release: Press releases are disseminated to various types of media (newspaper, radio, website, television) as well as elected officials.

2.6 Inspections

The Department conducts annual safety inspections and complaint inspections at bathing beaches to assure that (1) all staff, especially lifeguards and supervisors, have proper certificates and coverage including CPR certification, (2) all required life-saving equipment is available, including rescue tubes, spine boards, first aid kits, and resuscitation equipment, (3) there is proper signage posted on site. Direct observations of conditions are supplemented by interviews with lifeguards and other personnel. The inspections also evaluate beach facility hygiene.

SECTION 3

FINDINGS

3.1 Water Quality and Illness Reporting

Routine water quality monitoring and sample collection was performed at all twenty-three permitted beaches. Approximately 1620 samples were collected and analyzed from these beaches between April and September 2015. There was no recreational water illness complaint reported to the Department during the season.

Water quality sample results showing the 30-Day geometric mean and daily averages are listed in Appendix A, Table A1-1 to Table A1-4 2015 Water Quality Results (pages 14 to 17), and exceedances are listed in Appendix A (Table A2-1, Table A2-2 and Table A2-3): 2015 Sample Results and Exceedances (pages 18 to 20). Warnings and Closures issued by the Department throughout the season are shown in Appendix B (pages 21 to 23).

For private beaches, Douglaston Manor and White Cross Fishing had the highest exceedance rates (21.7% each), while Breezy Point Reid Avenue and Schuyler Hill Civic Association had no exceedances. Unusual early season die-offs of bait fish due to hypoxic conditions may have contributed to deteriorated water quality in the western long island sound throughout June and early July. Also Bronx private beaches are located in the western terminus of the Long Island Sound which has a complex hydrodynamic system. Long retention times, complex water circulation and mixing patterns and seasonal tidal variations can produce poor mixing in these waters and may contribute to deteriorated water quality.

During the 2015 beach season Cedar Grove beach in Staten Island had the highest percentage exceedance rate for all public beaches (13.9%) while Rockaway Beach and Manhattan Beach had no exceedances

3.2 Public Notification for Warnings and Closures

There are 17 private beaches of which 15 were issued at least one swimming advisory warning or closure notice. Of the private Beaches that exceeded water quality standards there were 327 warning days (41 of which were as a result of wet weather conditions) and 16 closure days. The length of the notifications ranged from 2 to 28 days. Five (5) out of 8 Public Beaches had no closure days and a total of 16 warning days; the longest extent of the notifications was 2 days. The specific warning and closure dates for each beach are shown in Appendix B: 2015 Warnings and Closures (pages 21 to 23).

3.3 Inspections

During the 2015 beach season, a total of 55 inspections were conducted of both Public and Private beaches by the Department at 25 permitted facilities. Seven facilities were cited for either general or public health hazards at the time of inspection as detailed in Table C, Appendix C: 2015 Inspection Non-compliance Summary (page 24).

APPENDIX A: 2015 WATER QUALITY RESULTS AND EXCEEDANCE

Table A1-1: Brooklyn Beaches Water Quality Results

Enterococci 30 Day Geometric Mean/Daily Average (Count/100ml)

Water Quality Standards: 30 day geomean limit: 35cfu/100ml, Daily average limit: 104cfu/100ml

Date of Week Ending	CONEY ISLAND BEACH		MANHATTAN BEACH		GERRITSEN/ KIDDIE BEACH		KINGSBOROUGH COMMUNITY COLLEGE		SEA GATE 42ND		SEA GATE BEACH CLUB	
	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily
5/23/2015	7	5	7	4	17	16	10	8	6	4	9	4
5/30/2015	6	4	5	4	11	4	6	4	4	4	4	4
6/6/2015	5	4	5	8	18	69	10	121	5	11	7	40
6/13/2015	5	14	6	21	13	8	11	9	5	4	7	4
6/20/2015	5	4	7	12	19	89	15	28	5	5	6	4
6/27/2015	5	5	7	4	15	4	15	9	10	4	6	4
7/4/2015	5	5	7	4	18	15	16	7	10	5	6	4
7/11/2015	5	4	6	4	11	7	10	8	9	5	4	4
7/18/2015	7	4	6	16	12	12	8	5	9	5	4	4
7/25/2015	7	4	5	5	6	4	7	23	10	7	4	4
8/1/2015	9	26	7	12	9	31	7	7	6	16	4	4
8/8/2015	9	5	9	23	9	11	13	107	6	4	4	4
8/15/2015	11	26	9	4	8	4	11	5	10	72	5	9
8/22/2015	7	4	8	7	8	11	13	15	11	9	5	4
8/29/2015	7	4	7	4	9	7	14	21	13	41	5	8
9/5/2015	6	6	7	8	6	4	20	53	11	5	5	4
9/12/2015	6	4	5	4	5	4	14	16	11	4	6	12

Table A1-2: Bronx Beaches Water Quality Results

Enterococci 30 Day Geometric Mean/Daily Average (Count/100ml)

Water Quality Standards: 30 day geomean limit: 35cfu/100ml, Daily average limit: 104cfu/100ml

Date of Week Ending	ORCHARD BEACH		AMERICAN TURNER		DANISH AMERICAN BEACH CLUB		LOCUST POINT YACHT CLUB		MANHEM CLUB		MORRIS YACHT AND BEACH CLUB		SCHUYLER HILL CIVIC ASSOCIATION		TRINITY DANISH		WEST FORDHAM STREET ASSOCIATION		WHITE CROSS FISHING CLUB	
	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily
5/23/2015	4	5	17	89	11	35	13	31	9	23	5	7	8	47	10	53	9	4	23	94
5/30/2015	4	4	12	4	9	4	7	8	7	4	5	12	7	4	7	4	4	4	27	29
6/6/2015	4	4	25	1087	17	973	13	264	16	973	9	85	11	51	19	873	6	47	36	1180
6/13/2015	4	4	30	16	26	41	13	4	20	12	10	11	12	9	22	8	12	84	41	11
6/20/2015	5	23	64	200	46	70	18	21	37	84	13	16	18	35	59	573	15	12	101	373
6/27/2015	5	4	40	9	34	7	12	4	27	4	13	12	11	4	41	9	35	320	57	7
7/4/2015	5	4	80	183	54	167	13	9	28	5	14	9	12	5	54	23	49	32	73	122
7/11/2015	6	8	30	9	21	7	10	31	9	4	7	4	8	11	29	43	30	4	29	13
7/18/2015	8	20	27	11	14	7	14	24	9	11	6	4	8	4	27	5	27	49	47	121
7/25/2015	6	4	13	5	9	7	10	4	6	9	6	4	6	8	14	17	21	4	20	4
8/1/2015	6	5	19	56	8	4	11	7	6	4	5	4	6	4	12	4	10	7	35	103
8/8/2015	6	4	10	8	7	27	13	23	7	21	4	4	8	27	11	13	9	19	25	24
8/15/2015	6	9	11	12	9	15	10	9	9	8	4	7	6	4	8	8	10	9	22	5
8/22/2015	5	4	10	7	8	4	7	4	7	4	4	5	6	4	7	4	6	4	11	4
8/29/2015	8	4	10	4	7	4	7	4	7	5	7	40	6	4	7	23	6	4	13	9
9/5/2015	8	5	7	12	7	4	7	9	7	7	7	4	6	5	9	12	6	5	8	12
9/12/2015	8	7	7	7	5	5	5	4	6	8	11	59	4	4	8	4	5	7	7	8
9/19/2015											11	4					6	41	7	8
9/26/2015											11	7					6	4	7	4

Table A1-3: Queens Beaches Water Quality Results

Enterococci 30 Day Geometric Mean/Daily Average (Count/100ml)

Water Quality Standards- 30 day geomean limit: 35cfu/100ml, Daily Average limit: 104cfu/100ml

Date of Week Ending	ROCKAWAY BEACH*		BREEZY POINT 219		BREEZY POINT Reid Ave		WHITESTONE BOOSTER CIVIC ASSOCIATION		DOUGLASTON MANOR ASSOCIATION	
	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily
5/23/2015							8	4	32	360
5/30/2015	8	4	6	4	4	4	4	4	17	33
6/6/2015							10	347	52	1467
6/13/2015	4	4	5	4	4	4	10	5	80	40
6/20/2015							14	23	140	105
6/27/2015	4	4	4	4	4	4	15	7	70	12
7/4/2015							15	4	49	5
7/11/2015	4	4	4	4	4	4	7	7	15	4
7/18/2015							8	23	18	87
7/25/2015	4	4	4	4	4	4	6	11	11	16
8/1/2015							6	4	12	16
8/8/2015	4	4	6	12	5	8	7	13	15	15
8/15/2015							12	80	33	243
8/22/2015	4	4	6	4	5	4	11	8	27	32
8/29/2015							10	4	27	13
9/5/2015	5	10	18	120	5	4	13	16	35	56
9/12/2015									31	8
9/19/2015									15	7
9/26/2015									4	4

*Note: Rockaway and Breezy Point Beaches are routinely sampled bi-weekly.

Table A1-4: Staten Island Beaches Water Quality Results

Enterococci 30 Day Geometric Mean/Daily Average (Count/100ml)

Water Quality Standards- 30 day Geomean limit: 35cfu/100ml, Daily Average limit: 104cfu/100ml

Fresh Water Standards- 30 day Geomean limit: 33cfu/100ml, Daily Average limit: 61cfu/100ml

Date of Week Ending	SOUTH BEACH		MIDLAND BEACH		CEDAR GROVE BEACH		WOLFE'S POND BEACH	
	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily
5/23/2015	7	8	8	23	12	41	12	12
5/30/2015	4	4	5	4	6	4	5	4
6/6/2015	9	8	9	9	16	28	16	17
6/13/2015	9	4	9	4	25	69	16	4
6/20/2015	13	37	12	21	36	9	16	4
6/27/2015	11	4	10	4	26	4	14	4
7/4/2015	12	7	10	4	26	4	14	4
7/11/2015	8	13	5	4	14	5	4	4
7/18/2015	8	4	5	4	9	4	4	5
7/25/2015	6	12	4	4	4	4	4	4
8/1/2015	7	19	4	4	4	4	5	15
8/8/2015	8	19	5	11	8	4	5	4
8/15/2015	7	4	5	4	10	83	5	8
8/22/2015	11	12	5	5	11	9	5	4
8/29/2015	9	4	5	4	11	4	5	4
9/5/2015	8	4	5	4	11	4	4	4
9/12/2015	7	4	4	4	6	4	4	4

Table A2-1: 2015 Summary of Beach Samples and Exceedances

Beach	Sample Location	Total # of Samples	# of Sample exceed 104	% of Sample exceed 104
ALL Beaches TOTAL		1614	109	6.8%
Public Beaches TOTAL		623	29	4.7%
Private Beaches TOTAL		991	80	8.1%

Table A2-2: 2015 Public Beaches Samples and Exceedances

Beach	Sample Location		Total # of Samples	# of Sample exceed 104	% of Sample exceed 104 (Location)	% of Sample exceed 104 (Beach)
CEDAR GROVE	CEDAR GROVE	Left	24	3	12.5%	13.9%
	CEDAR GROVE	Center	24	3	12.5%	
	CEDAR GROVE	Right	24	4	16.7%	
CONEY ISLAND	CONEY ISLAND BR. 15TH - 6TH	Center	21	2	9.5%	5.3%
	CONEY ISLAND BR. 6TH - OCEAN PKWY	Center	24	2	8.3%	
	CONEY ISLAND OCEAN PKWY - WEST 8TH	Center	21	1	4.8%	
	CONEY ISLAND WEST 8TH - PIER	Center	21	1	4.8%	
	CONEY ISLAND WEST 16TH - WEST 27TH	Center	23	0	0.0%	
	CONEY ISLAND WEST 28TH - WEST 37TH	Center	23	1	4.3%	
MANHATTAN BEACH	MANHATTAN BEACH	Left	21	0	0.0%	0.0%
	MANHATTAN BEACH	Center	21	0	0.0%	
	MANHATTAN BEACH	Right	21	0	0.0%	
MIDLAND BEACH	MIDLAND BEACH	Left	22	0	0.0%	1.5%
	MIDLAND BEACH	Center	22	1	4.5%	
	MIDLAND BEACH	Right	22	0	0.0%	
ORCHARD BEACH	ORCHARD BEACH	Left	22	0	0.0%	3.0%
	ORCHARD BEACH	Center	22	1	4.5%	
	ORCHARD BEACH	Right	22	1	4.5%	
ROCKAWAY BEACH	ROCKAWAY BEACH 9TH - 13TH	Center	11	0	0.0%	0.0%
	ROCKAWAY BEACH 15TH - 22TH	Center	11	0	0.0%	
	ROCKAWAY BEACH 23RD - 59TH	Center	11	0	0.0%	
	ROCKAWAY BEACH 59TH - 80TH	Center	11	0	0.0%	
	ROCKAWAY BEACH 80TH - 95TH	Center	11	0	0.0%	
	ROCKAWAY BEACH 95TH - 116TH	Center	11	0	0.0%	
	ROCKAWAY BEACH 116TH - 126TH	Center	11	0	0.0%	
ROCKAWAY BEACH 126TH - 149TH	Center	11	0	0.0%		
SOUTH BEACH	SOUTH BEACH	Left	23	1	4.3%	4.3%
	SOUTH BEACH	Center	23	1	4.3%	
	SOUTH BEACH	Right	23	1	4.3%	
WOLFE'S POND BEACH	WOLFE'S POND BEACH	Left	22	2	9.1%	9.1%
	WOLFE'S POND BEACH	Center	22	2	9.1%	
	WOLFE'S POND BEACH	Right	22	2	9.1%	
Public Beaches (Locations) Total			623	29	4.7%	

Table A2-3: 2015 Private Beaches Samples and Exceedances

Beach	Sample Location		Total # of Samples	# of Sample exceed 104	% of Sample exceed 104 (Location)	% of Sample exceed 104 (Beach)
AMERICAN TURNER	AMERICAN TURNER	Left	21	3	14.3%	12.7%
	AMERICAN TURNER	Center	21	2	9.5%	
	AMERICAN TURNER	Right	21	3	14.3%	
BREEZY POINT 219	BREEZY POINT 219	Center	11	1	9.1%	9.1%
BREEZY POINT Reid Ave	BREEZY POINT Reid Ave	Center	11	0	0.0%	0.0%
DANISH AMERICAN BEACH CLUB	DANISH AMERICAN BEACH CLUB	Left	21	2	9.5%	7.9%
	DANISH AMERICAN BEACH CLUB	Center	21	2	9.5%	
	DANISH AMERICAN BEACH CLUB	Right	21	1	4.8%	
DOUGLSTON MANOR ASSOCIATION	DOUGLSTON MANOR ASSOCIATION	Left	23	5	21.7%	21.7%
	DOUGLSTON MANOR ASSOCIATION	Center	23	4	17.4%	
	DOUGLSTON MANOR ASSOCIATION	Right	23	6	26.1%	
GERRITSEN/KIDDIE BEACH	GERRITSEN/KIDDIE BEACH	Left	21	0	0.0%	1.6%
	GERRITSEN/KIDDIE BEACH	Center	21	1	4.8%	
	GERRITSEN/KIDDIE BEACH	Right	21	0	0.0%	
KINGSBOROUGH COMMUNITY COLLEGE	KINGSBOROUGH COMMUNITY COLLEGE	Left	21	1	4.8%	4.8%
	KINGSBOROUGH COMMUNITY COLLEGE	Center	21	1	4.8%	
	KINGSBOROUGH COMMUNITY COLLEGE	Right	21	1	4.8%	
LOCUST POINT YACHT CLUB	LOCUST POINT YACHT CLUB	Left	21	1	4.8%	4.8%
	LOCUST POINT YACHT CLUB	Center	21	2	9.5%	
	LOCUST POINT YACHT CLUB	Right	21	0	0.0%	
MANHEM CLUB	MANHEM CLUB	Left	21	1	4.8%	4.8%
	MANHEM CLUB	Center	21	1	4.8%	
	MANHEM CLUB	Right	21	1	4.8%	
MORRIS YACHT AND BEACH CLUB	MORRIS YACHT AND BEACH CLUB	Left	23	0	0.0%	1.4%
	MORRIS YACHT AND BEACH CLUB	Center	23	1	4.3%	
	MORRIS YACHT AND BEACH CLUB	Right	23	0	0.0%	
SCHUYLER HILL CIVIC ASSOCIATION	SCHUYLER HILL CIVIC ASSOCIATION	Left	21	0	0.0%	0.0%
	SCHUYLER HILL CIVIC ASSOCIATION	Center	21	0	0.0%	
	SCHUYLER HILL CIVIC ASSOCIATION	Right	21	0	0.0%	
SEA GATE 42ND	SEA GATE 42ND	Left	22	2	9.1%	6.1%
	SEA GATE 42ND	Center	22	1	4.5%	
	SEA GATE 42ND	Right	22	1	4.5%	
SEA GATE BEACH CLUB	SEA GATE BEACH CLUB	Left	21	1	4.8%	4.8%
	SEA GATE BEACH CLUB	Center	21	1	4.8%	
	SEA GATE BEACH CLUB	Right	21	1	4.8%	
TRINITY DANISH	TRINITY DANISH	Left	21	2	9.5%	9.5%
	TRINITY DANISH	Center	21	2	9.5%	
	TRINITY DANISH	Right	21	2	9.5%	
WEST FORDHAM STREET ASSOCIATION	WEST FORDHAM STREET ASSOCIATION	Left	23	3	13.0%	10.1%
	WEST FORDHAM STREET ASSOCIATION	Center	23	2	8.7%	
	WEST FORDHAM STREET ASSOCIATION	Right	23	2	8.7%	
WHITE CROSS FISHING CLUB	WHITE CROSS FISHING CLUB	Left	23	6	26.1%	21.7%
	WHITE CROSS FISHING CLUB	Center	23	5	21.7%	
	WHITE CROSS FISHING CLUB	Right	23	4	17.4%	
WHITESTONE BOOSTER CIVIC ASSOCIATION	WHITESTONE BOOSTER CIVIC ASSOCIATION	Left	20	2	10.0%	8.3%
	WHITESTONE BOOSTER CIVIC ASSOCIATION	Center	20	2	10.0%	
	WHITESTONE BOOSTER CIVIC ASSOCIATION	Right	20	1	5.0%	
Private Beaches (Locations) Total			991	80	8.1%	

APPENDIX B: 2015 WARNINGS AND CLOSURES

Table B-1: Summary of Beach Warnings and Closure

Beach	Types	Reason	Start Date	End Date	Beach Days	Notification Days	Total Notification Days		
							Warning	Closure	Total
NYC ALL Beaches	Warning or Closure	Enterococci Exceedance or Rainfall Event	5/23/15	9/13/15	2491	359	343	16	359

Table B-2: Public Beaches Warnings and Closures

Beach	Types	Reason	Start Date	End Date	Beach Days	Notification Days	Total Notification Days		
							Warning	Closure	Total
CEDAR GROVE	Warning	Enterococci Exceedance	6/3/15	6/4/15	108	2	6	0	6
	Warning	Enterococci Exceedance	6/17/15	6/18/15		2			
	Warning	Enterococci Exceedance	8/5/15	8/6/15		2			
CONEY ISLAND					114	0	0	0	0
MANHATTAN BEACH					114	0	0	0	0
MIDLAND BEACH	Warning	Enterococci Exceedance	6/11/15	6/12/15	112	2	2	0	2
ORCHARD BEACH	Warning	Enterococci Exceedance	8/27/15	8/28/15	112	2	2	0	2
ROCKAWAY BEACH					114	0	0	0	0
SOUTH BEACH	Warning	Enterococci Exceedance	6/3/15	6/4/15	110	2	4	0	4
	Warning	Enterococci Exceedance	8/19/15	8/20/15		2			
WOLFE'S POND PARK	Warning	Enterococci Exceedance	6/3/15	6/4/15	112	2	2	0	2
Public Beaches TOTAL					896	16	16	0	16

Table B-3: Private Beaches Warnings and Closures

Beach	Types	Reason	Start Date	End Date	Beach Days	Notification Days	Total Notification Days		
							Warning	Closure	Total
AMERICAN TURNERS	Warning	Rainfall Event	6/1/15	6/2/15	78	2	29	7	36
	Warning	Enterococci Exceedance	6/4/15	6/10/15		7			
	Warning	Enterococci Exceedance	6/18/15	7/1/15		14			
	Closure	Confirmed Enterococci Exceedance	7/2/15	7/8/15		7			
	Warning	Rainfall Event	7/15/15	7/15/15		1			
	Warning	Rainfall Event	7/31/15	7/31/15		1			
	Warning	Rainfall Event	8/11/15	8/12/15		2			
	Warning	Rainfall Event	9/10/15	9/11/15		2			
BREEZY POINT 219	Warning	Enterococci Exceedance	9/4/15	9/13/15	104	0	10	0	10
BREEZY POINT REID					114	0	0	0	0
DANISH AMERICAN BEACH CLUB	Warning	Rainfall Event	6/1/15	6/2/15	90	2	24	0	24
	Warning	Enterococci Exceedance	6/4/15	6/10/15		7			
	Warning	Enterococci Exceedance	6/18/15	6/24/15		7			
	Warning	Rainfall Event	6/28/15	6/29/15		2			
	Warning	Rainfall Event	7/15/15	7/15/15		1			
	Warning	Rainfall Event	7/31/15	7/31/15		1			
	Warning	Rainfall Event	8/11/15	8/12/15		2			
	Warning	Rainfall Event	9/10/15	9/11/15		2			
DOUGLSTON HOMEOWNERS ASSOCIATION	Warning	Rainfall Event	6/1/15	6/3/15	60	3	54	0	54
	Warning	Enterococci Exceedance	6/11/15	7/8/15		28			
	Warning	Rainfall Event	7/15/15	7/16/15		2			
	Warning	Rainfall Event	7/31/15	8/1/15		2			
	Warning	Rainfall Event	8/11/15	8/13/15		3			
	Warning	Enterococci Exceedance	8/14/15	8/19/15		6			
	Warning	Enterococci Exceedance	9/3/15	9/10/15		8			
	Warning	Rainfall Event	9/11/15	9/12/15		2			
GERRITSEN/KIDDIE BEACH	Warning	Rainfall Event	6/1/15	6/1/15	103	1	11	0	11
	Warning	Rainfall Event	6/28/15	6/29/15		2			
	Warning	Rainfall Event	7/1/15	7/1/15		1			
	Warning	Rainfall Event	7/9/15	7/10/15		2			
	Warning	Rainfall Event	7/31/15	7/31/15		1			
	Warning	Rainfall Event	8/11/15	8/12/15		2			
	Warning	Rainfall Event	9/10/15	9/11/15		2			

Table B-3: Private Beaches Warnings and Closures (continued)

Beach	Types	Reason	Start Date	End Date	Beach Days	Notification Days	Total Notification Days		
							Warning	Closure	Total
KINGSBOROUGH COMMUNITY COLLEGE	Warning	Enterococci Exceedance	6/3/15	6/10/15	99	8	15	0	15
	Warning	Enterococci Exceedance	8/5/15	8/11/15		7			
LOCUST POINT YACHT CLUB	Warning	Rainfall Event	6/1/15	6/2/15	97	2	17	0	17
	Warning	Enterococci Exceedance	6/4/15	6/10/15		7			
	Warning	Rainfall Event	6/28/15	6/29/15		2			
	Warning	Rainfall Event	7/15/15	7/15/15		1			
	Warning	Rainfall Event	7/31/15	7/31/15		1			
	Warning	Rainfall Event	8/11/15	8/12/15		2			
	Warning	Rainfall Event	9/10/15	9/11/15		2			
MANHEM BEACH CLUB	Warning	Rainfall Event	6/1/15	6/2/15	90	2	24	0	24
	Warning	Enterococci Exceedance	6/4/15	6/10/15		7			
	Warning	Enterococci Exceedance	6/18/15	6/24/15		7			
	Warning	Rainfall Event	6/28/15	6/29/15		2			
	Warning	Rainfall Event	7/15/15	7/15/15		1			
	Warning	Rainfall Event	7/31/15	7/31/15		1			
	Warning	Rainfall Event	8/11/15	8/12/15		2			
	Warning	Rainfall Event	9/10/15	9/11/15		2			
MORRIS YACHT AND BEACH CLUB	Warning	Rainfall Event	6/1/15	6/2/15	104	2	10	0	10
	Warning	Rainfall Event	6/28/15	6/29/15		2			
	Warning	Rainfall Event	7/15/15	7/15/15		1			
	Warning	Rainfall Event	7/31/15	7/31/15		1			
	Warning	Rainfall Event	8/11/15	8/12/15		2			
	Warning	Rainfall Event	9/10/15	9/11/15		2			
SCHUYLER HILL CIVIC ASSOCIATION	Warning	Rainfall Event	6/1/15	6/2/15	104	2	10	0	10
	Warning	Rainfall Event	6/28/15	6/29/15		2			
	Warning	Rainfall Event	7/15/15	7/15/15		1			
	Warning	Rainfall Event	7/31/15	7/31/15		1			
	Warning	Rainfall Event	8/11/15	8/12/15		2			
	Warning	Rainfall Event	9/10/15	9/11/15		2			
SEAGATE 42nd	Closure	Confirmed Enterococci Exceedance	6/24/15	6/25/15	112	2	0	2	2
SEAGATE BEACH CLUB					114	0	0	0	0

Table B-3: Private Beaches Warnings and Closures (continued)

Beach	Types	Reason	Start Date	End Date	Beach Days	Notification Days	Total Notification Days		
							Warning	Closure	Total
TRINITY DANISH YOUNG PEOPLE'S SOCIETY	Warning	Rainfall Event	6/1/15	6/2/15	78	2	36	0	36
	Warning	Enterococci Exceedance	6/4/15	6/10/15		7			
	Warning	Enterococci Exceedance	6/18/15	7/8/15		21			
	Warning	Rainfall Event	7/15/15	7/15/15		1			
	Warning	Rainfall Event	7/31/15	7/31/15		1			
	Warning	Rainfall Event	8/11/15	8/12/15		2			
	Warning	Rainfall Event	9/10/15	9/11/15		2			
WEST FORDHAM STREET ASSOCIATION	Warning	Rainfall Event	6/1/15	6/2/15	92	2	22	0	22
	Warning	Enterococci Exceedance	6/25/15	7/8/15		14			
	Warning	Rainfall Event	7/15/15	7/15/15		1			
	Warning	Rainfall Event	7/31/15	7/31/15		1			
	Warning	Rainfall Event	8/11/15	8/12/15		2			
	Warning	Rainfall Event	9/10/15	9/11/15		2			
WHITE CROSS FISHING CLUB	Warning	Rainfall Event	6/1/15	6/2/15	58	2	49	7	56
	Warning	Enterococci Exceedance	6/4/15	7/1/15		28			
	Closure	Confirmed Enterococci Exceedance	7/2/15	7/8/15		7			
	Warning	Rainfall Event	7/15/15	7/15/15		1			
	Warning	Enterococci Exceedance	7/16/15	7/22/15		7			
	Warning	Enterococci Exceedance	7/30/15	8/5/15		7			
	Warning	Rainfall Event	8/11/15	8/12/15		2			
	Warning	Rainfall Event	9/10/15	9/11/15		2			
WHITESTONE BOOSTER CIVIC ASSOCIATION	Warning	Rainfall Event	6/1/15	6/2/15	98	2	16	0	16
	Warning	Enterococci Exceedance	6/4/15	6/10/15		7			
	Warning	Rainfall Event	7/1/15	7/1/15		1			
	Warning	Rainfall Event	7/15/15	7/15/15		1			
	Warning	Rainfall Event	7/31/15	7/31/15		1			
	Warning	Rainfall Event	8/11/15	8/12/15		2			
	Warning	Rainfall Event	9/10/15	9/11/15		2			
	Warning	Enterococci Exceedance	6/13/14	7/8/14		26			
Private Beaches TOTAL					1595	343	327	16	343

APPENDIX C: 2015 INSPECTION SUMMARY

Table C-1: Inspection Non-Compliance Summary *

Beach Name	Public Health Hazard Violations**		General Violations***				
	167.05(c)	167.09(13)	167.31(b) & 167.39(b)	167.31(d) & 167.39(b)(2)	167.31(e) & 167.39(a)	167.31(f) & 167.39(c)	167.09(13)
CONEY ISLAND BEACH		√	√		√		√
GERRITSEN/KIDDIE BEACH	√						
MANHATTAN			√				
ROCKAWAY BEACH		√	√				√
SEA GATE 42ND			√			√	
SOUTH BEACH				√			
WEST FORDHAM STREET ASSOCIATION				√			

* All other beaches were in full compliance of the regulations at the time of inspection

**** Public Health Hazard Violations:**

- §167.05(c) Operating a bathing beach with an expired permit
- §167.09(13) Any other condition determined to be a Public Health Hazard by the department
(e.g. "Danger Submerged Object" sign missing).

***** General Violations:**

- §167.31(b) & §167.39(b) Failure to provide adequate toilet and shower facilities
- §167.31(d) & §167.39(b)(2) Failure to provide liquid soap, paper towels or electric hand dryer
- §167.31(e) & §167.39(a) Failure to properly maintain the building structure free of cracks or open joints on the walls or floors
- §167.31(f) & 167.39(c) Failure to provide drinking water fountain or use of an unapproved or contaminated water supply source for potable water use.
- §167.09(13) Any other condition determined to be a Public Health Hazard by the department
(e.g. Boardwalk observed with missing and protruding planks and protruding screws causing a tripping hazard, railing in disrepair, or large pieces of lumber and construction material observed on beach).