



NEW YORK CITY 2022

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 2022 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 Health Commissioner “forward a combined report of the dates and results of all inspections of all beaches and the dates and reasons for any warning 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.”

With the principal goal of protecting ocean beachgoers from potential health and safety hazards, the Department closely monitors and conducts surveillance of permitted beaches in New York City. Under the regulatory directive and authority of 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 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) safety inspections.

The city’s beaches function as an important recreational resource for city residents and neighboring communities. As shown in Figure 1 (page 2) and Table 1 (page 3), there are eight public beaches operated by the Department of Parks and Recreation (the Parks Department) and 17 privately operated beaches and 1 privately operated freshwater lake within New York City limits.

This year, despite the continuing impact of the COVID-19 pandemic, Parks Department beaches were open from May 28, 2022, Memorial Day weekend, through September 11, 2022.

FIGURE 1: NEW YORK CITY PERMITTED BEACHES



 = Public Beach (NYC Dept. Parks and Recreation)

TABLE 1: New York City Permitted Beaches and Water Body Identification

Borough	Beaches	Water Body
Brooklyn	<i>Public:</i> Coney Island, Manhattan Beach <i>Private:</i> Sea Gate 42 nd *, Sea Gate Beach Club*, Gerritsen/Kiddie Beach, Kingsborough Community College	Lower New York Harbor
Bronx	<i>Public:</i> Orchard Beach <i>Private:</i> American Turner, Danish American Beach Club, Manhem Club (The Strand), White Cross Fishing Club, Morris Yacht Club, Schuyler Hill Civic Association, Trinity Danish, Locust Point Yacht Club, West Fordham Street Association	Eastchester Bay, Western Long Island Sound
Queens	<i>Public:</i> Rockaway Beach <i>Private:</i> Breezy Point 291**, Breezy Point Reid**	Atlantic Ocean
	<i>Private:</i> Douglaston Manor, Whitestone Booster Civic Association	Western Long Island Sound
Staten Island	<i>Public:</i> South Beach, Midland Beach, Cedar Grove Beach, Wolfe’s Pond Beach	Lower New York Bay
	<i>Private:</i> Staten Island YMCA	Private Freshwater Lake

*Sea Gate 42nd and Sea Gate Beach Club operate under one permit; DOHMH performs water quality sampling at both locations.

**Breezy Point 291 and Breezy Point Reid operate under one permit; DOHMH performs water quality sampling at both locations.

1.1 Public Risk Communication

The Department continued public notification and risk communication during the beach season, using easy-to-interpret signs shown in Figure 2 for beach closures and warnings in 2022.

FIGURE 2: BEACH WARNING AND CLOSED SIGNS



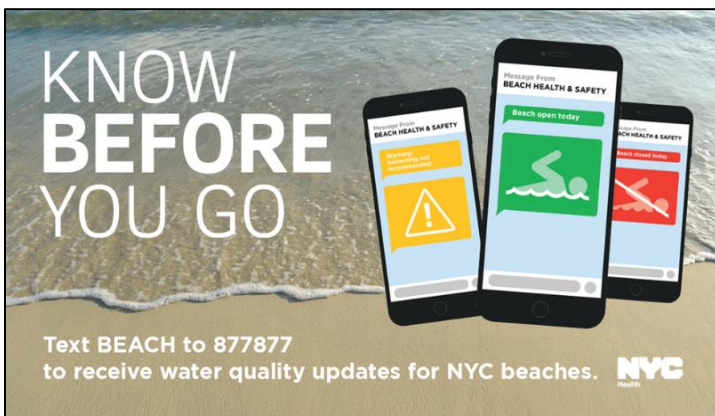
“Know Before You Go”, a free texting service introduced in 2014, was continued for the 2022 beach season. The service enables subscribers to make informed decisions before they go to a public beach. Through this service, users can check whether the beach is open or closed or if there are any warnings due to wet weather conditions or water quality concerns. Subscribers

simply text “BEACH” to 877-877 to learn the status of any of the eight public beaches in New York City. This tool also can be used by the Department to deliver notifications of high priority water quality warnings or closures, as well as safety-related messages, such as warnings for high rip currents, closures for extreme weather, and whether beaches are open or closed during the season. For example, DOHMH issued the following notification to all enrolled users:

NYC Beach: Beaches open for swimming May 28! For beach status, reply with a beach name or with "LOOK" to find a beach near you, or go to maps.nyc.gov/beach

In 2022 the Department did not conduct any paid campaign promotions for the “Know Before You Go” service. At the end of the 2021 season, the texting service had 15,016 English-language subscribers and 615 Spanish-language subscribers. By the close of the 2022 beach season, there were 14,240 English-language subscribers and 626 Spanish-language subscribers.

FIGURE 3: KNOW BEFORE YOU GO TEXTING PROGRAM



SECTION 2

BACKGROUND INFORMATION

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), enterococci, bacteria that live in the intestinal tracks of warm-blooded animals, are 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 of saline water may not exceed 104 enterococci per 100 milliliter (mL) (61 enterococci per 100 mL for freshwater), and the geometric mean of five or more samples during a 30-day period may not exceed 35 enterococci per 100 mL (33 enterococci per 100 mL for freshwater). The geometric mean and single sample maximum are determined by analyzing samples for the presence and quantification of enterococci using the IDEXX Enterolert test method, a New York State ELAP certified method, as described in Standard Methods for the Examination of Water and Wastewater SM-9230D-2013. Water quality is measured in most probable number per 100 mL of water (MPN/100mL), an estimate of the number of bacteria in a water sample.

In November 2012, the Environmental Protection Agency (EPA) released revised Recreational Water Quality Criteria (RWQC). The revised criteria use a geometric mean and a statistical threshold value to indicate whether waters designated for primary contact recreation use are protective of human health. The 2012 revised criteria for marine waters are a 30-day geometric mean of 35 enterococci per 100 mL and a statistical threshold value of 130 enterococci per 100 mL; the statistical threshold value is one where no more than 10% of samples within 30 days shall exceed the criteria. The EPA also introduced a Beach Action Value (BAV) of 70 enterococci per 100 mL to be used as a precautionary notification threshold for beach management, replacing earlier guidance that provided single sample maximum values. These water quality criteria have been adopted by the New York State Department of Environmental Conservation (DEC) and became effective November 1, 2019. The New York State Department of Health (NYSDOH), however, has not yet promulgated equivalent bathing beach water quality standards in the State Sanitary Code, which is required before local beach programs can implement them.

EPA also published criteria and methods in the revised 2012 RWQC to detect and quantify *Enterococcus* spp. rapidly with quantitative polymerase chain reaction (qPCR) (EPA Methods 1609 and 1611). These are optional methods of analysis which may be used by beach managers to potentially inform same-day decision making. In 2019, the Department initiated a pilot project to assess qPCR sampling and analysis implementation for New York City beach surveillance and monitoring. The pilot continued through 2022, and the Department collected additional, paired samples from a selection of beaches throughout the season. These additional samples were analyzed with qPCR method 1609 with use of Bio Rad's QX 200 system, for comparison with the currently utilized IDEXX Enterolert method. Analysis is ongoing and DOHMH intends to continue this project to advance sampling protocols and assess feasibility of implementation in future seasons.

2.2 Rainfall Events

Preemptive rainfall thresholds have been developed for New York City beaches through statistical modeling of historical precipitation and water quality data. These thresholds are used as a management tool to provide a quick and reliable indication of water quality conditions. Because the majority of the city has combined stormwater and sewer conveyance systems, high levels of precipitation, greater than the rainfall thresholds, cause an excess of stormwater, which combines with the wastewater in the sewage systems. This combination can bypass the treatment system and flow into local waterbodies. This process, known as Combined Sewer Overflow (CSO), poses a public health threat to nearby beaches. When preemptive rainfall thresholds are met, as defined in Table 2, a public notification or warning takes effect for the predetermined duration.

TABLE 2: New York City Preemptive Rainfall Thresholds

Beach (Borough)	Rainfall Threshold (within 24 hours)	Duration of Warning
South Beach, Midland Beach, Cedar Grove Beach (Staten Island)	1.5 – 2.5 inches	12 hours
Manhattan Beach, Kingsborough Community College (Brooklyn)	> 2.5 inches	24 hours
Orchard Beach (Brooklyn)	> 2.5 inches	24 hours
Coney Island (Brooklyn)	> 2.5 inches	12 hours
Gerritsen/Kiddie Beach (Brooklyn)	0.3 - 0.6 inches	18 hours
Whitestone Booster Civic Association (Queens)	> 0.6 inches	40 hours
American Turner, Danish American Beach Club, Manhem Club (The Strand), White Cross Fishing Club, Morris Yacht Club, Schuyler Hill Civic Association, 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; onsite 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, i.e., no repeated complaints or 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,” resulting in notifications to the public that swimming should be avoided to prevent contracting a swimming-related illness, when *one or more* of the following conditions exists:

1. Rainfall events exceed the preemptive rainfall thresholds.
2. 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. An onsite sanitary survey or investigation reveals the presence of floatable debris, medical/infectious waste, toxic contaminants, petroleum products, other contamination, or 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.
4. Any other environmental factors determined to be a public health or safety hazard by the Department are present.

2.4 Beach Monitoring and Surveillance

Starting one month before the beach season, the Department monitors and samples each beach weekly, except for Rockaway and Breezy Point beaches, which are sampled biweekly. In addition to routine water quality monitoring, the Department monitors daily regional wet weather conditions and occasional wastewater treatment plant 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 onsite 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 representative points on the beach by wading into the water to a point where water depth is three feet and submerging the bottle to 18 inches below the water surface. At larger beaches, such as Coney Island and Rockaway Beach, samples are taken at more

locations to ensure adequate representation and reliable results. Sea Gate and Breezy Point are permitted beaches where samples are taken at two separate locations for representative results. The collected samples are delivered to the Department's Public Health Laboratory for analysis. The analytical and processing turnaround time for enterococci using the current Enterolert methods is at least 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 either conducts immediate re-sampling, issues a warning and conducts re-sampling, or closes the beach and conducts re-sampling. The determining factors for additional sampling may include proximity to suspected pollution sources, the 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, "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 onsite postings. The specific notification procedures and requirements are as follows:

Onsite 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, comfort stations or the general vicinity of the common swimming areas.

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

Website Postings: The Department has developed an easily accessible website with up-to-date 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. In 2021, the Department updated the map of city beaches to improve information delivery and ease-of-use. The map visually indicates the respective status (Open, Closed, or Warning) for all beaches and provides the most recent sample results, along with all year-to-date samples results for that beach.

Notify NYC: When notified by the Department of status changes relating to public beaches, the Office of Emergency Management will share this information with members of the public who have signed up for 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; and (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 cleanliness.

SECTION 3

FINDINGS

3.1 Water Quality and Illness Reporting

Routine water quality monitoring and sample collection was performed at 25 permitted beaches and one permitted freshwater lake. Between April and September 2022, the beach monitoring program has returned to its pre-COVID-19 sampling plan and collected over 1,300 samples. In 2022, the Department did not receive any specific beach water quality or illness complaints.

Water quality sample results, including 30-day geometric mean and daily averages and any associated criteria exceedances can be found in Appendix A (pages 12 to 17). Warnings and closures issued by the Department throughout the season are summarized in Appendix B (pages 18 to 21).

Among private beaches, Douglaston Manor had the highest single sample exceedance rate (46%), followed by White Cross Fishing (41%), while all other private beaches had an average exceedance rate of 14%. Among public beaches, Wolfe's Pond Beach had the highest single sample exceedance rate (28%), while all other public beaches had an average exceedance rate of 7%.

3.2 Public Notification for Warnings and Closures

Out of the eight public beaches, five were issued at least one swimming advisory warning notice during the 2022 bathing season due to a rainfall event or water quality exceedance. This resulted in a total of 76 warning days ranging in length from 1 to 35 days. There were a total of 8 closure days due to water quality exceedances or shark sightings. The length of each beach closure ranged from 1 to 4 days. Sharks were sighted at Rockaway Beach in mid-July, accounting for 2 of the 8 closure days.

Of the 17 private beaches in NYC, 16 were open in 2022. Twelve (12) were issued at least one swimming advisory warning notice during the bathing season. There was a total of 517 warning days with lengths ranging from 1 to 29 days. American Turner had the largest total number of warning days with a total of 63. Across all private beaches there were a total of 238 closure days due to water quality exceedances. Douglaston Manor had the largest number of closure days with a total of 49. The length of each beach closure ranged from 1 to 22 days. Public notification details can be found in Appendix B (pages 18 to 21).

3.3 Inspections

During the 2022 beach season, inspections of all open 24 public and private beaches were successfully conducted by the Department. Two beaches were cited for violations at the time of inspection as indicated in Appendix C. Disrepair of parts of the boardwalk was observed during the inspection of Coney Island Beach. Additionally, a current bathing beach permit was not provided at Gerritsen/Kiddie Beach, however Gerritsen/Kiddie representatives subsequently renewed the permit to resolve the issue.

APPENDIX A: 2022 WATER QUALITY RESULTS AND EXCEEDANCE

Table A1-1: Brooklyn Beaches Water Quality Results

Enterococci 30 Day Geometric Mean/Daily Average (MPN/100mL)

Water Quality Standards: 30 day geomean limit: 35 MPN/100mL, Daily average limit: 104 MPN/100mL

Date of Week Ending	CONEY ISLAND BEACH (public)		MANHATTAN BEACH (public)		GERRITSEN/ KIDDIE BEACH (private)		KINGSBOROUGH COMMUNITY COLLEGE** (private)		SEA GATE 42 ND (private)		SEA GATE BEACH CLUB (private)	
	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily
5/7/2022	14	15	47	187	94	106	13	13	10	10	10	10
5/14/2022	20	35	78	146	30	10			19	38	16	27
5/21/2022	16	10	99	173	81	668			15	10	15	13
5/28/2022	15	15	87	83	48	10			14	10	13	10
6/4/2022	15	13	62	17	35	10			13	10	13	10
6/11/2022	16	37	45	10	22	10			14	17	14	17
6/18/2022	13	12	35	55	31	94			11	10	12	13
6/25/2022*	14	10	20	10	14	10			11	10	11	10
7/2/2022	14	13	19	49	14	13			11	13	11	10
7/9/2022	14	15	19	17	14	10			11	10	12	13
7/16/2022	13	12	21	20	14	10			11	13	11	13
7/23/2022	13	10	17	13	12	24			12	20	12	17
7/30/2022	12	15	20	28	12	10			12	10	14	24
8/6/2022	13	33	18	51	23	405			13	20	15	13
8/13/2022	13	13	19	20	23	10			17	34	21	79
8/20/2022	13	12	17	13	26	17			16	10	21	13
8/27/2022	14	17	20	31	35	103			21	70	24	34
9/3/2022	18	76	17	10	41	24			31	72	22	17
9/10/2022	19	48	24	145								

Table A1-2: Bronx Beaches Water Quality Results

* Mid-week sample result on 6/25/2022 at Coney Island Beach resulted in water quality concerns, see appendix B for description.

** Kingsborough Community College did not open for the 2022 season.

Values highlighted in red indicate exceedance of recreational water quality criteria.

Water Quality Standards: 30 day geomean limit: 35 MPN/100mL, Daily average limit: 104 MPN/100mL

Date of Week Ending	ORCHARD BEACH (public)		AMERICAN TURNER (private)		DANISH AMERICAN BEACH CLUB (private)		LOCUST POINT YACHT CLUB (private)		MANHEM CLUB (private)		MORRIS YACHT AND BEACH CLUB (private)		SCHUYLER HILL CIVIC ASSOC. (private)		TRINITY DANISH (private)		WEST FORDHAM STREET ASSOC. (private)		WHITE CROSS FISHING CLUB (private)	
	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
5/7/2022	19	28	13	13	10	10	16	17	10	10	16	21	10	10	20	24	10	10	13	13
5/14/2022	15	13	13	13	17	31	15	17	13	21	14	13	10	10	17	17	10	10	14	17
5/21/2022	15	17	12	10	19	28	15	17	14	17	28	171	12	17	18	20	22	108	13	13
5/28/2022	16	21	20	105	34	208	14	13	20	61	22	10	11	10	24	57	30	99	18	49
6/4/2022	20	49	44	1175	63	755	17	46	42	932	19	10	20	225	41	782	29	28	36	560
6/11/2022	19	17	76	445	69	17	16	10	49	24	17	10	20	10	50	57	31	17	66	323
6/18/2022	22	31	111	83	87	105	16	17	76	157	20	27	27	50	84	204	31	10	125	396
6/25/2022	36	267	322	2070	151	370	16	24	102	71	13	17	26	13	166	988	26	53	333	1741
7/2/2022	35	13	258	42	139	387	18	20	131	202	19	67	26	10	144	30	17	10	480	620
7/9/2022	25	10	118	27	58	10	14	10	53	10	25	73	14	10	73	17	15	13	251	27
7/16/2022	23	10	83	46	63	23	16	20	55	27	30	24	18	61	92	307	19	52	187	101
7/23/2022	21	17	80	68	60	90	16	24	48	102	72	2005	19	57	83	121	53	1818	124	62
7/30/2022	15	68	45	120	34	20	21	57	34	13	73	17	25	63	54	53	76	307	87	749
8/6/2022*	16	20	40	24	24	27	18	10	23	55	53	13	26	13	53	31	133	162	49	20
8/13/2022	20	45	43	34	24	10	22	27	26	17	51	42	38	103	53	20	157	50	58	87
8/20/2022	27	58	34	10	23	28	20	10	26	35	43	10	29	10	34	20	116	10	40	10
8/27/2022*	25	31	40	192	26	151	17	10	24	55	15	10	21	10	48	710	43	13	51	204
9/3/2022	24	28	24	10	24	13	13	13	23	10	17	43	15	10	35	10	28	42	26	10
9/10/2022	47	978			24	24							18	27			33	403		
9/17/2022													25	366						
9/24/2022													25	10						

* Due to administrative error for samples collected week ending 8/6/22, daily and 30 day calculations here are presented based on corrected data.

** Mid-week sample result on 8/27/22 at Orchard Beach resulted in a water quality exceedance, see appendix B for description.

Values highlighted in red indicate exceedance of recreational water quality criteria.

Table A1-3: Queens Beaches Water Quality Results
Enterococci 30 Day Geometric Mean/Daily Average (MPN/100mL)
Water Quality Standards: 30 day geomean limit: 35 MPN/100mL, Daily Average limit: 104 MPN/100mL

Date of Week Ending	ROCKAWAY BEACH (Public)		BREEZY POINT 219 (Private)		BREEZY POINT Reid Ave (Private)		WHITESTONE BOOSTER CIVIC ASSOCIATION (Private)		DOUGLSTON MANOR ASSOCIATION (Private)	
	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily
5/7/2022							20	20	16	17
5/14/2022							52	357	13	10
5/21/2022	16	23	10	10	42	42	63	100	45	637
5/28/2022	13	10	10	10	20	10	46	20	67	571
6/4/2022							60	245	90	302
6/11/2022	12	10	10	10	16	10	52	10	82	10
6/18/2022							42	49	141	183
6/25/2022	10	10	10	10	10	10	50	271	76	34
7/2/2022							83	247	93	608
7/9/2022	10	10	10	10	10	10	48	10	74	93
7/16/2022							58	27	129	166
7/23/2022	10	10	10	10	10	10	73	408	217	2005
7/30/2022							72	215	297	133
8/6/2022*	10	10	17	52	10	10	56	93	203	104
8/13/2022							70	42	191	71
8/20/2022	10	10	17	10	10	10	86	89	147	50
8/27/2022							110	547	62	27
9/3/2022	10	11	17	10	17	10	63	13	47	35
9/10/2022									50	135

* Due to administrative error for Whitestone and Douglaston samples collected week ending 8/6/22, daily and 30 day calculations here are presented based on corrected data. Values highlighted in red indicate exceedance of recreational water quality criteria.

Table A1-4: Staten Island Beaches and Lake Water Quality Results
Enterococci 30 Day Geometric Mean/Daily Average (MPN/100mL)
Water Quality Standards: 30 day Geomean limit: 35 MPN/100mL, Daily Average limit: 104 MPN/100mL
Freshwater Standards: 30 day Geomean limit: 33 MPN/100mL, Daily Average limit: 61 MPN/100mL

Date of Week Ending	SOUTH BEACH (Public)		MIDLAND BEACH (Public)		CEDAR GROVE BEACH (Public)		WOLFE'S POND BEACH (Public)		SI YMCA** (Private Freshwater Lake)	
	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily
5/7/2022	20	24	13	13	10	10	15	17	24	28
5/14/2022	26	46	22	67	22	49	14	13	33	46
5/21/2022	22	21	17	10	17	10	15	24	34	38
5/28/2022	18	10	15	10	15	10	14	10	30	24
6/4/2022	17	13	15	17	14	10	13	10		
6/11/2022	15	13	14	10	14	13	13	13		
6/18/2022*	19	103	17	10	11	17	25	68		
6/25/2022	17	10	16	10	11	10	22	13		
7/2/2022	19	20	16	10	11	10	22	10		
7/9/2022	19	13	15	10	11	10	26	31		
7/16/2022	19	13	15	10	11	10	28	24		
7/23/2022*	12	10	10	13	10	13	37	49		
7/30/2022	13	17	11	13	11	13	38	17		
8/6/2022	14	31	11	10	15	53	47	38		
8/13/2022	14	10	12	20	15	10	40	10		
8/20/2022*	14	13	13	13	17	24	59	351		
8/27/2022	14	13	13	13	16	10	34	20		
9/3/2022	15	24	14	61	18	32	80	85		
9/10/2022*	17	67	20	57	34	45	144	419		

* Mid-week sample on result 6/18/22 at Midland and 6/18/22, 7/23/22, 8/20/22 and 9/10/22 at Wolfe's Pond, and 9/10/22 at Cedar Grove beaches resulted in a water quality exceedance, see appendix B for description.

** Staten Island YMCA did not open for the 2022 season.

Values highlighted in red indicate exceedance of recreational water quality criteria.

Table A2-1: 2022 Summary of Beach Samples and Single-Sample Exceedances

Beach	Sample Location	Total # of Samples	# of Sample Exceed 104	% of Sample Exceed 104
ALL Beaches TOTAL		1358	216	15.91%
Public Beaches TOTAL		561	54	9.63%
Private Beaches TOTAL		797	162	20.33%

Table A2-2: 2022 Public Beaches Samples and Single-Sample 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	20	0	0.00%	1.67%
	CEDAR GROVE	Center	20	0	0.00%	
	CEDAR GROVE	Right	20	1	5.00%	
CONEY ISLAND	CONEY ISLAND BR. 15TH - 6TH	Center	20	0	0.00%	5.00%
	CONEY ISLAND BR. 6TH - OCEAN PKWY	Center	20	0	0.00%	
	CONEY ISLAND OCEAN PKWY - WEST 8TH	Center	20	0	0.00%	
	CONEY ISLAND WEST 8TH - PIER	Center	20	3	14.29%	
	CONEY ISLAND WEST 16TH - WEST 27TH	Center	20	3	15.00%	
	CONEY ISLAND WEST 28TH - WEST 37TH	Center	20	0	0.00%	
MANHATTAN BEACH	MANHATTAN BEACH	Left	20	3	15.00%	18.33%
	MANHATTAN BEACH	Center	20	5	25.00%	
	MANHATTAN BEACH	Right	20	3	15.00%	
MIDLAND BEACH	MIDLAND BEACH	Left	20	2	10.00%	6.67%
	MIDLAND BEACH	Center	20	1	5.00%	
	MIDLAND BEACH	Right	20	1	5.00%	
ORCHARD BEACH	ORCHARD BEACH	Left	20	2	10.00%	13.33%
	ORCHARD BEACH	Center	20	3	15.00%	
	ORCHARD BEACH	Right	20	3	15.00%	
ROCKAWAY BEACH	ROCKAWAY BEACH 9TH - 13TH	Center	9	0	0.00%	0.00%
	ROCKAWAY BEACH 15TH - 22TH	Center	9	0	0.00%	
	ROCKAWAY BEACH 23RD - 59TH	Center	9	0	0.00%	
	ROCKAWAY BEACH 59TH - 80TH	Center	9	0	0.00%	
	ROCKAWAY BEACH 80TH - 95TH	Center	9	0	0.00%	
	ROCKAWAY BEACH 95TH - 116TH	Center	6	0	0.00%	
	ROCKAWAY BEACH 116TH - 126TH	Center	9	0	0.00%	
ROCKAWAY BEACH 126TH - 149TH	Center	9	0	0.00%		
SOUTH BEACH	SOUTH BEACH	Left	19	1	5.26%	5.26%
	SOUTH BEACH	Center	19	0	0.00%	
	SOUTH BEACH	Right	19	2	10.53%	
WOLFE'S POND BEACH	WOLFE'S POND BEACH	Left	25	7	28.00%	28.00%
	WOLFE'S POND BEACH	Center	25	6	24.00%	
	WOLFE'S POND BEACH	Right	25	8	32.00%	
Public Beaches (Locations) Total			561	54	9.63%	

Table A2-3: 2022 Private Beaches Samples and Single-Sample 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	18	5	27.78%	24.07%
	AMERICAN TURNER	Center	18	4	22.22%	
	AMERICAN TURNER	Right	18	4	22.22%	
BREEZY POINT 219	BREEZY POINT 219	Center	9	0	0.00%	0.00%
BREEZY POINT Reid	BREEZY POINT Reid Ave	Center	9	0	0.00%	0.00%
DANISH AMERICAN BEACH CLUB	DANISH AMERICAN BEACH CLUB	Left	19	5	26.32%	26.32%
	DANISH AMERICAN BEACH CLUB	Center	19	4	21.05%	
	DANISH AMERICAN BEACH CLUB	Right	19	6	31.58%	
DOUGLASTON MANOR ASSOCIATION	DOUGLASTON MANOR ASSOCIATION	Left	19	8	42.11%	45.61%
	DOUGLASTON MANOR ASSOCIATION	Center	19	10	52.63%	
	DOUGLASTON MANOR ASSOCIATION	Right	19	8	42.11%	
GERRITSEN/KIDDIE BEACH	GERRITSEN/KIDDIE BEACH	Left	18	3	16.67%	16.67%
	GERRITSEN/KIDDIE BEACH	Center	18	3	16.67%	
	GERRITSEN/KIDDIE BEACH	Right	18	3	16.67%	
KINGSBOROUGH COMMUNITY COLLEGE	KINGSBOROUGH COMMUNITY COLLEGE	Left	1	0	0.00%	0.00%
	KINGSBOROUGH COMMUNITY COLLEGE	Center	1	0	0.00%	
	KINGSBOROUGH COMMUNITY COLLEGE	Right	1	0	0.00%	
LOCUST POINT YACHT CLUB	LOCUST POINT YACHT CLUB	Left	18	0	0.00%	0.00%
	LOCUST POINT YACHT CLUB	Center	18	0	0.00%	
	LOCUST POINT YACHT CLUB	Right	18	0	0.00%	
MANHEM CLUB (THE STRAND)	MANHEM CLUB (THE STRAND)	Left	18	4	22.22%	18.52%
	MANHEM CLUB (THE STRAND)	Center	18	3	16.67%	
	MANHEM CLUB (THE STRAND)	Right	18	3	16.67%	
MORRIS YACHT AND BEACH CLUB	MORRIS YACHT AND BEACH CLUB	Left	19	2	10.53%	14.04%
	MORRIS YACHT AND BEACH CLUB	Center	19	4	21.05%	
	MORRIS YACHT AND BEACH CLUB	Right	19	2	10.53%	
SCHUYLER HILL CIVIC ASSOCIATION	SCHUYLER HILL CIVIC ASSOCIATION	Left	21	3	13.64%	14.29%
	SCHUYLER HILL CIVIC ASSOCIATION	Center	21	3	13.64%	
	SCHUYLER HILL CIVIC ASSOCIATION	Right	21	3	13.64%	
SEA GATE 42 ND	SEA GATE 42 ND	Left	18	1	5.56%	1.85%
	SEA GATE 42 ND	Center	18	0	0.00%	
	SEA GATE 42 ND	Right	18	0	0.00%	
SEA GATE BEACH CLUB	SEA GATE BEACH CLUB	Left	18	0	0.00%	0.00%
	SEA GATE BEACH CLUB	Center	18	0	0.00%	
	SEA GATE BEACH CLUB	Right	18	0	0.00%	
TRINITY DANISH	TRINITY DANISH	Left	18	5	27.78%	26.42%
	TRINITY DANISH	Center	17	4	22.22%	
	TRINITY DANISH	Right	18	5	27.78%	
WEST FORDHAM STREET ASSOCIATION	WEST FORDHAM STREET ASSOCIATION	Left	19	5	26.32%	28.07%
	WEST FORDHAM STREET ASSOCIATION	Center	19	6	31.58%	
	WEST FORDHAM STREET ASSOCIATION	Right	19	5	26.32%	
WHITE CROSS FISHING CLUB	WHITE CROSS FISHING CLUB	Left	18	9	50.00%	40.74%
	WHITE CROSS FISHING CLUB	Center	18	5	27.78%	
	WHITE CROSS FISHING CLUB	Right	18	8	44.44%	
WHITESTONE BOOSTER CIVIC ASSOCIATION	WHITESTONE BOOSTER CIVIC ASSOCIATION	Left	18	7	38.89%	35.19%
	WHITESTONE BOOSTER CIVIC ASSOCIATION	Center	18	6	33.33%	
	WHITESTONE BOOSTER CIVIC ASSOCIATION	Right	18	6	33.33%	
Private Beaches (Locations) Total			797	162	20.33%	

Table A2-4: 2022 Private Freshwater Lake Samples and Single-Sample Exceedances

Beach	Sample Location		Total # of Samples	# of Sample Exceed 61	% of Sample Exceed 61 (Location)	% of Sample Exceed 61 (Lake)
Staten Island YMCA	Staten Island YMCA	Left	4	0	0.00%	0.00%
	Staten Island YMCA	Center	4	0	0.00%	
	Staten Island YMCA	Right	4	0	0.00%	
Private Freshwater Lake (Locations) Total			12	0	0.00%	

APPENDIX B: 2022 WARNINGS AND CLOSURES

Table B-1: Summary of Beach Warnings and Closure

Beach	Types	Reason	Start Date	End Date	Beach Open Days	# of Beach-Specific Days	Notification (Beach Specific Days)		
							Warning	Closure	Total
NYC ALL Beaches (N=25)	Warning or Closure	Enterococci Exceedance, Rainfall Event or Shark Sighting	5/28/2022	9/11/2022	1,663	839	593	246	839

*One private beach did not open for 2022 season.

Table B-2: Public Beaches Warnings and Closures

Beach	Types	Reason	Start Date	End Date	Beach Open Days	# of Beach-Specific Days	Notification (Beach Specific Days)		
							Warning	Closure	Total
CEDAR GROVE	Warning	Enterococci Exceedance	9/8/2022	9/9/2022	105	2	2	0	2
CONEY ISLAND					107	0	0	0	0
MANHATTAN BEACH	Warning	Enterococci Exceedance	5/28/2022	6/14/2022	87	18	20	0	20
	Warning	Enterococci Exceedance	9/8/2022	9/9/2022		2			
MIDLAND BEACH	Warning	Enterococci Exceedance	6/15/2022	6/16/2022	105	2	2	0	2
ROCKAWAY BEACH	Closure	Shark Sighting	7/19/2022	7/19/2022	105	1	0	2	2
	Closure	Shark Sighting	7/23/2022	7/23/2022		1			
ORCHARD BEACH*	Warning	Enterococci Exceedance	6/24/2022	6/29/2022	98	6	9	0	9
	Warning	Enterococci Exceedance	9/9/2022	9/11/2022		3			
SOUTH BEACH					107	0	0	0	0
WOLFE'S POND PARK	Warning	Enterococci Exceedance	6/15/2022	6/16/2022	58	2	43	6	49
	Warning	Enterococci Exceedance	7/20/2022	8/23/2022		35			
	Warning	Enterococci Exceedance	8/31/2022	9/1/2022		2			
	Closure	Enterococci Exceedance	9/2/2022	9/3/2022		2			
	Warning	Enterococci Exceedance	9/4/2022	9/7/2022		4			
	Closure	Enterococci Exceedance	9/8/2022	9/11/2022		4			
Public Beaches TOTAL					772	84	76	8	84

* Due to administrative error, an erroneous advisory was issued to Orchard beach (8/18/22-8/26/22) but has been removed from the corrected table presented here.

Table B-3: Private Beaches Warnings and Closures

Beach	Types	Reason	Start Date	End Date	Beach Open Days	# of Beach-Specific Days	Notification (Beach Specific Days)		
							Warning	Closure	Total
AMERICAN TURNER	Warning	Enterococci Exceedance	5/28/2022	6/2/2022	12	6	63	26	89
	Closure	Enterococci Exceedance	6/3/2022	6/15/2022		13			
	Warning	Enterococci Exceedance	6/16/2022	6/23/2022		8			
	Closure	Enterococci Exceedance	6/24/2022	6/29/2022		6			
	Warning	Enterococci Exceedance	6/30/2022	7/27/2022		28			
	Closure	Enterococci Exceedance	7/28/2022	8/3/2022		7			
	Warning	Enterococci Exceedance	8/4/2022	8/17/2022		14			
	Warning	Enterococci Exceedance	8/25/2022	8/31/2022		7			
BREEZY POINT 219					101	0	0	0	
BREEZY POINT REID					101	0	0	0	
DANISH AMERICAN BEACH CLUB	Warning	Enterococci Exceedance	5/28/2022	6/2/2022	36	6	43	28	71
	Closure	Enterococci Exceedance	6/3/2022	6/8/2022		6			
	Warning	Enterococci Exceedance	6/9/2022	6/15/2022		7			
	Closure	Enterococci Exceedance	6/16/2022	7/7/2022		22			
	Warning	Enterococci Exceedance	7/8/2022	7/27/2022		20			
	Warning	Rainfall Event	8/8/2022	8/8/2022		1			
	Warning	Enterococci Exceedance	8/25/2022	8/31/2022		7			
	Warning	Rainfall Event	9/6/2022	9/7/2022		2			
DOUGLSTON MANOR ASSOCIATION*	Closure	Enterococci Exceedance	5/28/2022	6/8/2022	0	12	58	49	107
	Warning	Enterococci Exceedance	6/9/2022	6/15/2022		7			
	Closure	Enterococci Exceedance	6/16/2022	6/23/2022		8			
	Warning	Enterococci Exceedance	6/24/2022	6/29/2022		6			
	Closure	Enterococci Exceedance	6/30/2022	7/7/2022		8			
	Warning	Enterococci Exceedance	7/8/2022	7/13/2022		6			
	Closure	Enterococci Exceedance	7/14/2022	8/3/2022		21			
	Warning	Enterococci Exceedance	8/4/2022	8/31/2022		28			
	Warning	Enterococci Exceedance	9/1/2022	9/5/2022		5			
	Warning	Rainfall Event	9/6/2022	9/8/2022		3			
	Warning	Enterococci Exceedance	9/9/2022	9/11/2022		3			
GERRITSEN/KIDDLE BEACH	Warning	Enterococci Exceedance	5/28/2022	6/7/2022	67	11	34	0	34
	Warning	Rainfall Event	6/9/2022	6/10/2022		2			
	Warning	Enterococci Exceedance	8/3/2022	8/9/2022		7			
	Warning	Rainfall Event	8/11/2022	8/11/2022		1			
	Warning	Enterococci Exceedance	8/24/2022	9/5/2022		13			
KINGSBOROUGH COMMUNITY COLLEGE	<i>Did not open for 2022 Season</i>				0	0	0	0	0

* Due to administrative error, an advisory was missed from Douglaston Manor (9/1/22-9/5/22) but has been inserted into the corrected table presented here.

Beach	Types	Reason	Start Date	End Date	Beach Open Days	# of Beach-Specific Days	Notification (Beach Specific Days)		
							Warning	Closure	Total
LOCUST POINT YACHT CLUB	Warning	Rainfall Event	6/2/2022	6/3/2022	95	2	6	0	6
	Warning	Rainfall Event	6/9/2022	6/10/2022		2			
	Warning	Rainfall Event	7/26/2022	7/26/2022		1			
	Warning	Rainfall Event	8/8/2022	8/8/2022		1			
MANHEM BEACH CLUB	Warning	Rainfall Event	6/2/2022	6/2/2022	44	1	41	16	57
	Warning	Enterococci Exceedance	6/3/2022	6/15/2022		13			
	Closure	Enterococci Exceedance	6/16/2022	6/23/2022		8			
	Warning	Enterococci Exceedance	6/24/2022	6/29/2022		6			
	Closure	Enterococci Exceedance	6/30/2022	7/7/2022		8			
	Warning	Enterococci Exceedance	7/8/2022	7/27/2022		20			
	Warning	Rainfall Event	8/8/2022	8/8/2022		1			
MORRIS YACHT AND BEACH CLUB	Warning	Rainfall Event	6/2/2022	6/3/2022	63	2	44	0	44
	Warning	Rainfall Event	6/9/2022	6/10/2022		2			
	Warning	Enterococci Exceedance	7/21/2022	8/3/2022		14			
	Warning	Enterococci Exceedance	8/4/2022	8/10/2022		7			
	Warning	Enterococci Exceedance	8/11/2022	8/24/2022		14			
	Warning	Rainfall Event	9/6/2022	9/7/2022		2			
	Warning	Enterococci Exceedance	9/9/2022	9/11/2022		3			
SCHUYLER HILL CIVIC ASSOCIATION	Warning	Rainfall Event	6/2/2022	6/2/2022	87	1	20	0	20
	Warning	Enterococci Exceedance	6/3/2022	6/8/2022		6			
	Warning	Rainfall Event	6/9/2022	6/10/2022		2			
	Warning	Rainfall Event	7/26/2022	7/26/2022		1			
	Warning	Rainfall Event	8/8/2022	8/8/2022		1			
	Warning	Enterococci Exceedance	8/11/2022	8/17/2022		7			
	Warning	Rainfall Event	9/6/2022	9/7/2022		2			
SEAGATE 42nd					101	0	0	0	0
SEAGATE BEACH CLUB					101	0	0	0	0
TRINITY DANISH YOUNG PEOPLE'S SOCIETY	Warning	Rainfall Event	6/2/2022	6/2/2022	17	1	56	28	84
	Warning	Enterococci Exceedance	6/3/2022	6/15/2022		13			
	Closure	Enterococci Exceedance	6/16/2022	6/29/2022		14			
	Warning	Enterococci Exceedance	6/30/2022	7/13/2022		14			
	Closure	Enterococci Exceedance	7/14/2022	7/27/2022		14			
	Warning	Enterococci Exceedance	7/28/2022	8/17/2022		21			
	Warning	Enterococci Exceedance	8/25/2022	8/31/2022		7			

* Due to administrative error, a closure was issued instead of an advisory at Morris Yacht Club (8/4/22-8/10/22) but has been corrected above.

Beach	Types	Reason	Start Date	End Date	Beach Open Days	# of Beach-Specific Days	Notification (Beach Specific Days)		
							Warning	Closure	Total
WEST FORDHAM STREET ASSOCIATION	Warning	Rainfall Event	6/2/2022	6/3/2022	56	2	44	7	51
	Warning	Rainfall Event	6/9/2022	6/10/2022		2			
	Warning	Enterococci Exceedance	7/21/2022	7/27/2022		7			
	Closure	Enterococci Exceedance	7/28/2022	8/3/2022		7			
	Warning	Enterococci Exceedance	8/04/2022	8/24/2022		21			
	Warning	Enterococci Exceedance	8/25/2022	8/31/2022		7			
	Warning	Rainfall Event	9/6/2022	9/7/2022		2			
	Warning	Enterococci Exceedance	9/9/2022	9/11/2022		3			
WHITE CROSS FISHING CLUB	Warning	Rainfall Event	6/2/2022	6/2/2022	10	1	48	43	91
	Warning	Enterococci Exceedance	6/3/2022	6/8/2022		6			
	Closure	Enterococci Exceedance	6/9/2022	7/7/2022		29			
	Warning	Enterococci Exceedance	7/8/2022	7/27/2022		20			
	Closure	Enterococci Exceedance	7/28/2022	8/3/2022		7			
	Warning	Enterococci Exceedance	8/4/2022	8/24/2022		21			
	Closure	Enterococci Exceedance	8/25/2022	8/31/2022		7			
WHITESTONE BOOSTER CIVIC ASSOCIATION	Warning	Enterococci Exceedance	5/28/2022	6/2/2022	0	6	60	41	101
	Closure	Enterococci Exceedance	6/3/2022	6/8/2022		6			
	Warning	Enterococci Exceedance	6/9/2022	6/23/2022		15			
	Closure	Enterococci Exceedance	6/24/2022	7/7/2022		14			
	Warning	Enterococci Exceedance	7/8/2022	7/20/2022		13			
	Closure	Enterococci Exceedance	7/21/2022	8/3/2022		14			
	Warning	Enterococci Exceedance	8/4/2022	8/24/2022		21			
	Closure	Enterococci Exceedance	8/25/2022	8/31/2022		7			
	Warning	Enterococci Exceedance	9/1/2022	9/5/2022		5			
Private Beaches TOTAL					891	755	517	238	755

APPENDIX C: 2022 INSPECTION SUMMARY

Table C-1: Inspection Non-Compliance Summary*

Beach Name	Public Health Hazard Violations**	General Violations***
	167.05(c)	167.09(a)(13)
CONEY ISLAND BEACH		√
GERRITSEN/KIDDIE BEACH	√	

*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.

***** General Violations:**

§167.09(a)(13) Numerous areas of boardwalk in disrepair (broken planks/nails).