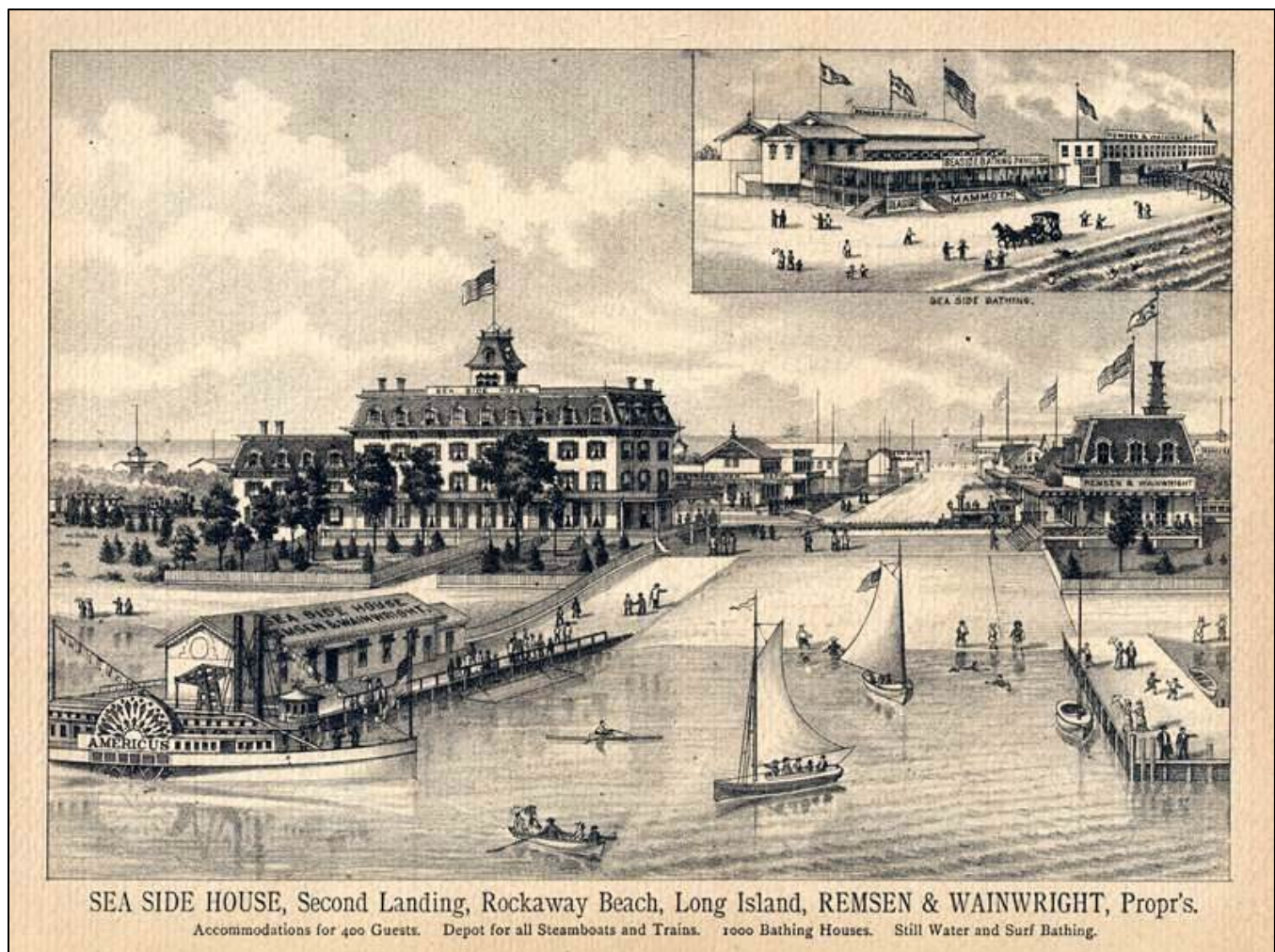


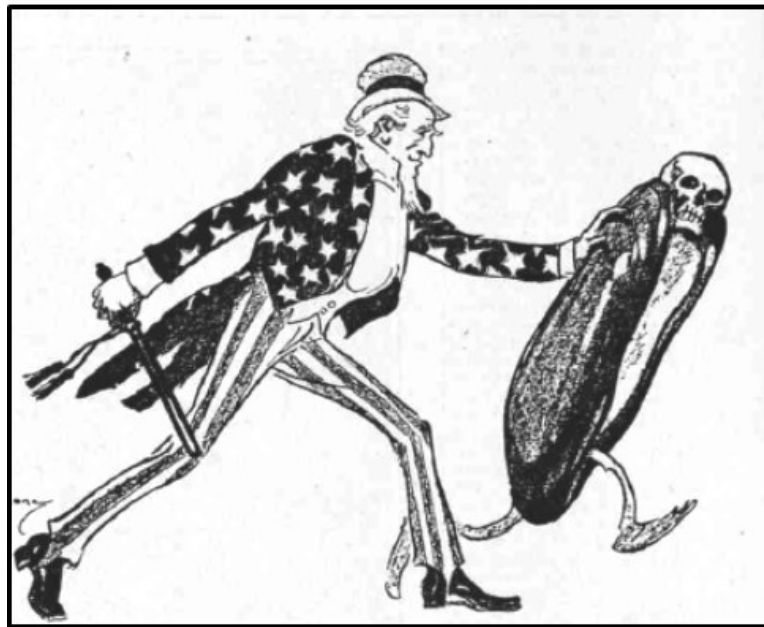
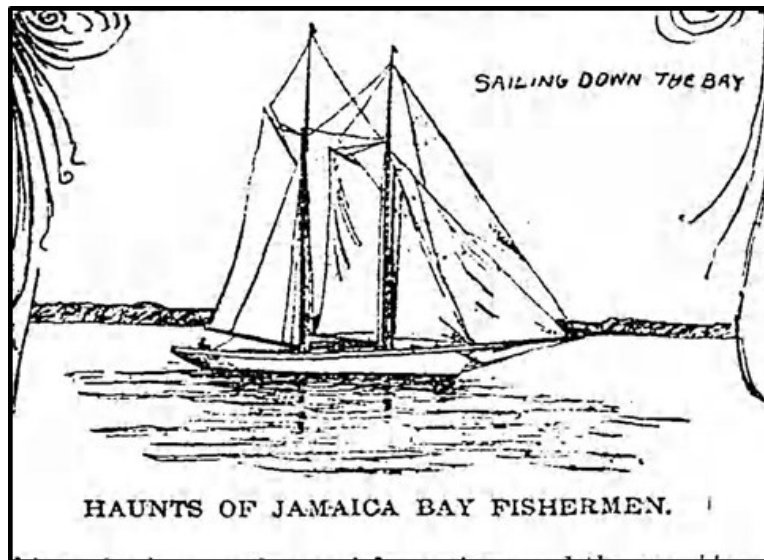


# The Great Transformation

## *Exploring Jamaica Bay in the Late 19th and Early 20th Centuries Through Newspaper Accounts*

Natural Resource Report NPS/NCBN/NRR—2018/1607





#### ON THIS PAGE

Top image: Haunts of Jamaica Bay Fishermen (source: Brooklyn Daily Eagle, 25 August 1895), Bottom image: How They Tracked Down the Typhoid Oysters (source: The Salt Lake Tribune, 13 February 1913).

#### ON THE COVER

Cover image: Sea Side House, Second Landing, Rockaway Beach, Long Island, as viewed from bay side (source: Ephemeral New York, <https://ephemeralnewyork.wordpress.com>, circa 1900)

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# **The Great Transformation**

## *Exploring Jamaica Bay in the Late 19th and Early 20th Centuries Through Newspaper Accounts*

Natural Resource Report NPS/NCBN/NRR—2018/1607

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Natural Resource Stewardship and Science  
Fort Collins, Colorado

The National Park Service, Natural Resource Stewardship and Science office in Fort Collins, Colorado, publishes a range of reports that address natural resource topics. These reports are of interest and applicability to a broad audience in the National Park Service and others in natural resource management, including scientists, conservation and environmental constituencies, and the public.

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All manuscripts in the series receive the appropriate level of peer review to ensure that the information is scientifically credible, technically accurate, appropriately written for the intended audience, and designed and published in a professional manner.

This report received informal peer review by subject-matter experts who were not directly involved in the collection, analysis, or reporting of the data.

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## Abstract

Significant shifts in the societal usages of Jamaica Bay occurred from the late 19<sup>th</sup> through early 20<sup>th</sup> Centuries, documented in numerous newspaper accounts from those times. From becoming one of America's first exurban recreational areas with uplands with gentlemen farms and lowland marshes and open water for day visitors, to later serving as a depository for wastes of a burgeoning city, these shifts had profound repercussions on the environment of the bay.

Among the primary findings: Given its proximity to New York City and Brooklyn, Jamaica Bay became a major recreational fishing area, with thousands of anglers traveling by trains on weekends to rent skiffs at key locations. Small numbers of commercial fishermen also worked the bay, but there were heated, long-term conflicts between anglers and netters until netting was banned in 1898. Hunters made extensive use of the bay and areas immediately inland, including for what may be considered songbirds, but with the areas hunted shifting eastward as New York and Brooklyn became more heavily settled. Shell fishing in the bay was regionally important, with oyster harvesting heavily reliant on culturing, but with conflicts developing over bottom leases between local residents and outsiders. Recreational boaters made heavy use of the bay, including for nautical parades and regatta races of various craft—often among the numerous yacht clubs—that drew large numbers of spectators. Beach going, both on the ocean and bay sides of the Rockaway Peninsula became hugely popular in the late 1800s, fostered by improved railroad transportation and the development of large hotels and resorts, some more than a thousand feet in length. Infrastructure development, such as all-season roads and railways, helped bring the rapidly growing cities of New York and Brooklyn closer to the bay, with the construction of a railroad across the waters to the Rockaways being the most significant. Residential development spread in bands from west to east during the early 20<sup>th</sup> across the bay's northern shoreline.

With increasing population the quality of fresh waters surrounding and draining into the bay declined steadily, with accounts by the 1890s of rank pollution in some sections already present. Disease outbreaks in the region became common in the 1890s, with typhoid linked to the consumption of Jamaica Bay oysters. As the value of submerged lands for leases with oystermen diminished with the collapse of the industry, the drive to reclaim the wetlands of the bay accelerated. The selling of lots for real estate development and resulting property taxes were a significant source of revenue for local towns and later for the City of New York. Various schemes were proposed to connect the bay to other water bodies and to develop it as a deep-water port, but the primary actual infrastructural change was the building of what is now known as JFK Airport.



## **Acknowledgments**

We would like to thank Joy Cytryn of the CUNY Graduate Center for her assistance with GIS and map development, and archival research; and Eric Roginek of Queens College for his assistance in archival research.



## List of Source Abbreviations

BDE	Brooklyn Daily Eagle
BF	Brooklyn Farmer
BL	Brooklyn Life
CC	Colfax Chronicle
DPL	Daily Public Ledger
ECH	Essex County Herald
FS	Forest and Stream
LADH	Los Angeles Daily Herald
NYDT	New York Daily Tribune
NYH	New York Herald
NYTR	New York Tribune
PD	Pittsburgh Dispatch
RTD	Richmond-Times Dispatch
RT	Roanoke Times
SLT	Salt Lake Tribune
SM	Shields' Magazine
TA	The Appeal
TC	The Columbian
TET	The Evening Times
TEW	The Evening World
TNYT	The New York Times
TS	The Sun
TW	The Wave
TSNYH	The Sun and New York Herald
UO	United Opinion
WS	Washington Standard
WDE	Wichita Daily Eagle





# Introduction

The mid-1800s to early 1900s was a time of great changes in the New York City region, transformations that were reflected in society's relationships with Jamaica Bay. These include the consolidation of villages and towns along the bay, with many becoming part of Brooklyn, followed by the merger of Brooklyn and New York City as the latter in 1898. Over this period Jamaica Bay passed from a lightly settled and still largely wild estuary that supported provisioning of fish and game, to a major recreational amenity for the growing population of the region, to a less regarded receptacle for waste and contaminants.

Although limited historical information on Jamaica Bay has been published (e.g., Black 1981; Hendrick 2006; Sanderson et al. 2013), until now no one had mined its extensive coverage in newspapers and other periodicals. Over the era in this report, the New York City region had a wealth of publications that provided regular news about Jamaica Bay, such as the Brooklyn Daily Eagle, The Sun, and the New York Daily Tribune, among many others.

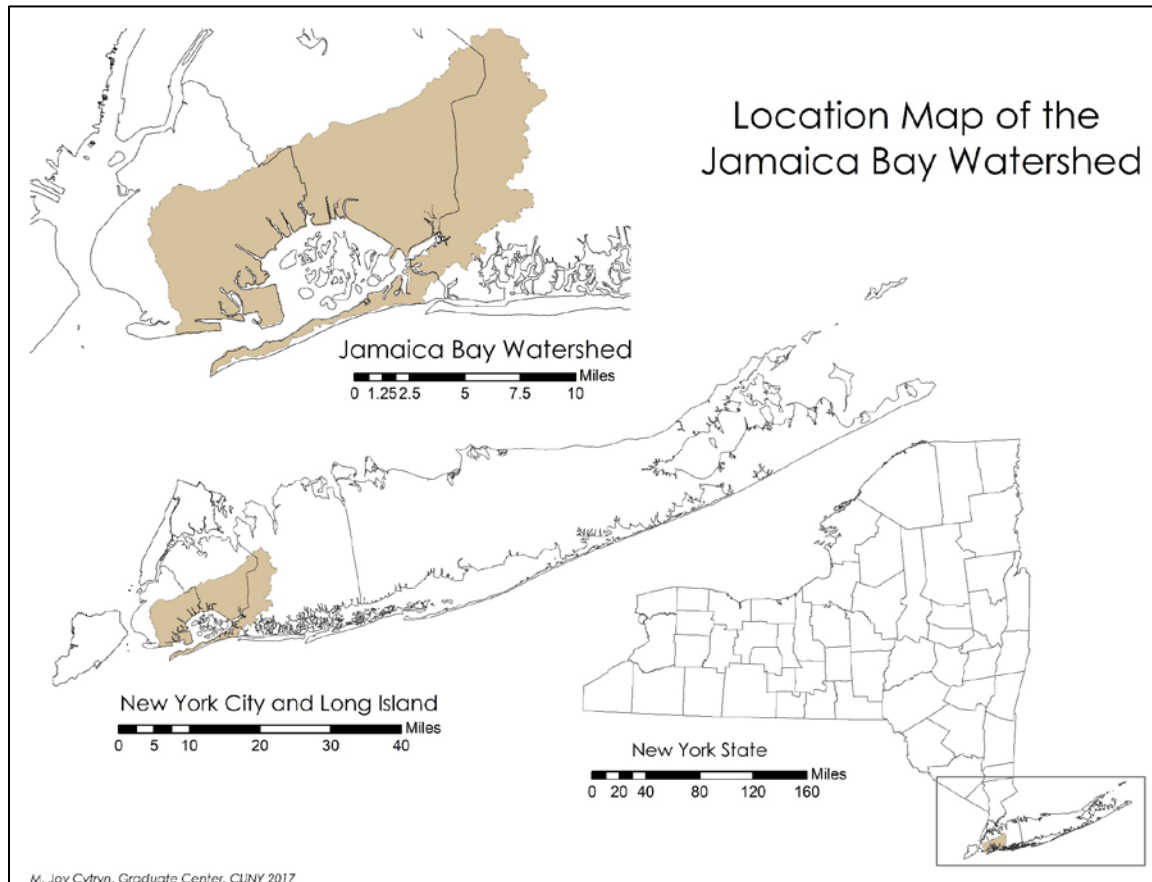
Today, the archives of these newspapers are available on-line, and they are searchable using key words. With a graduate student (Eric Roginek, Queens College) we performed an exhaustive search of these sources using a large number of terms (e.g., weakfish, oysters, storms, farms, resorts) applied through several rounds, which yielded many articles that incorporated them. (An excellent search engine that draws from many New York State newspapers simultaneously is NYS Historic Newspapers (<http://nyshistoricnewspapers.org>).

We then organized the articles topically, and then reviewed each article to determine if it contained relevant environmental information on the bay. For the articles selected for inclusion, we then condensed and synthesized material into topical narratives representing relationships between society and the bay. Findings are presented chronologically within topical sections where advantageous. To assist the reader, text presented in square brackets signifies our interpretations or provides definitions of possibly unclear terms and concepts. Estimates in 2017 equivalents of dollar amounts cited are derived from the website Measuring Worth (<https://www.measuringworth.com>) using its Purchasing Power Calculator option.

To take advantage of the digital archives so that anyone can easily access the full version of any cited article, we embedded its hyperlink in our text. For this reason, this document might most profitably be read on-line. However, to accommodate readers of a paper version, sufficient information to download the article is included following the hyperlink.

A set of graphics and maps were selected or constructed to supplement the narrative discussion. The graphics (i.e., period photographs and drawings) highlight the significant aspects of daily life in the bay during the period. The maps illustrate critical spatial conditions and processes in the bay. The maps were developed while working with a geographic information specialist (Joy Cytryn, Graduate Center, The City University of New York) and in some cases represent the first instance that some of these data have been presented in map form.

We believe the period of Jamaica Bay's great transformation is critical to understanding its condition today. Over this span and on a daily basis, newspapers chronicled human interactions with the bay, from individual connections to observations of broad social forces. Mining such (often detailed) accounts provides largely unfiltered perceptions of the bay from those times, snapshots that color our vague retrospective awareness of history. Our study exhumes some of this information. However, for no topic was our coverage exhaustive—we hope that others will delve more deeply through such sources to write more definitive accounts of the many individual elements of Jamaica Bay's dynamic environmental history.

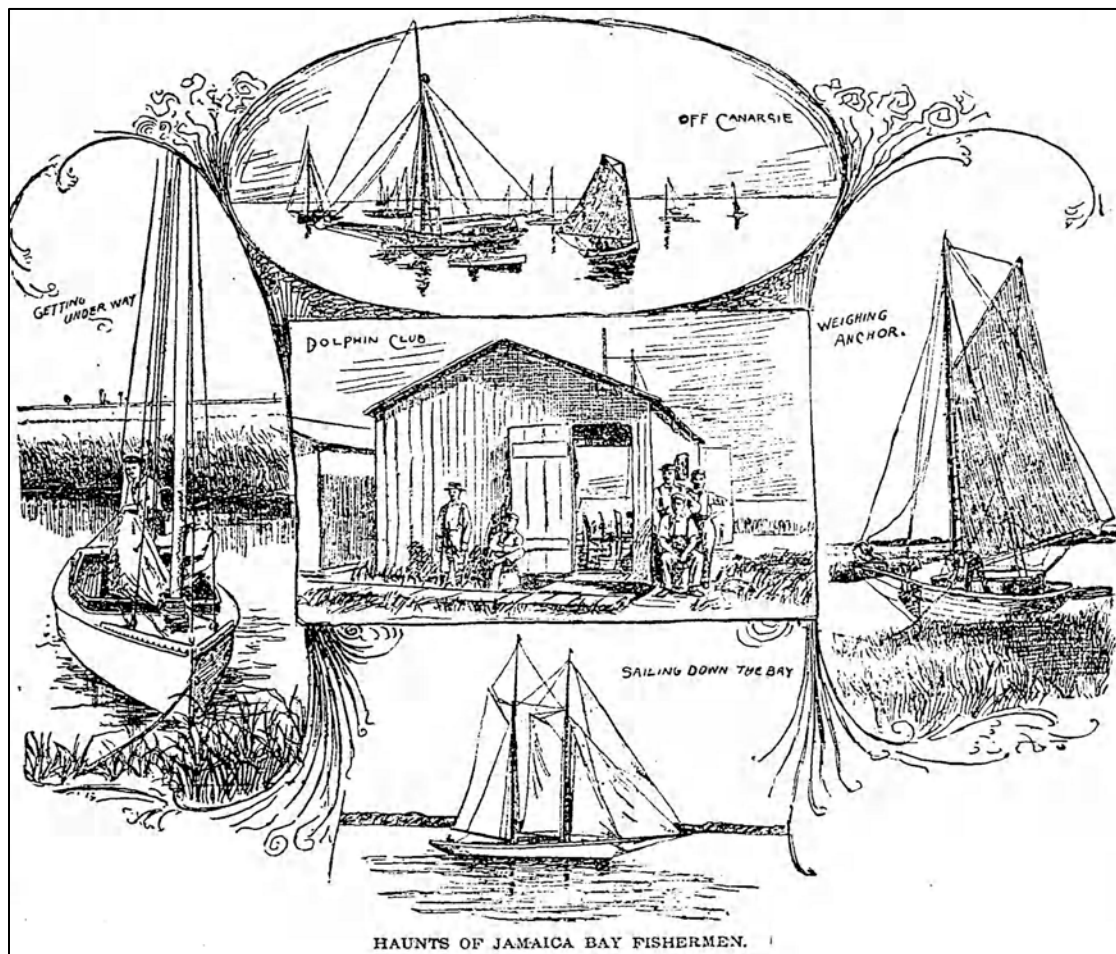


**Figure 1.** Location map of the Jamaica Bay watershed, New York.

## Hook & Line Fishing

*“ . . . great catches of the finny beauties hereabouts.”*

Angling has long been a major source of provisioning and recreational enjoyment on the waters of Jamaica Bay (Figure 1). Newspaper accounts from the Brooklyn Daily Eagle attest to enormous levels of fishing activity in the late 1800s and early 1900s (Figure 2). The sheer numbers of anglers that fished the bay are reflected in “How Hundreds of Men Spent Sunday on Jamaica Bay” ([How Hundreds of Men Spent Sunday on Jamaica Bay](#); BDE 20 Jun 1892). “Train load after train load of passengers were carried from the Twenty-sixth ward station during the day. All the early trains carried nothing but fishermen, bound for Jamaica bay, to sit for hours under a broiling sun if only to get a nibble now and then.” As soon as these early trains reached the landings there was a rush for boats. Judge Schiellem’s livery of 100 boats nearest the station was emptied by 8AM. It was estimated that the combination of rented skiffs and private vessels totaled a thousand between Canarsie and Rockaway Beach. In the end, the average fisherman was said to have met with pretty good luck, judging from the stringers of sea bass and fluke.



**Figure 2.** Haunts of Jamaica Bay, New York fishermen. (source: Brooklyn Daily Eagle, 25 August 1895 - <https://bklyn.newspapers.com/image/50412652/?terms=Canarsie%2Bchannel>)

Readers of newspapers looked to them for advice on where to go fishing. For example, “to the editor of the Sun: Is it too much to ask you to inform a reader of your paper where in the vicinity of New York city good fishing grounds are at present? Canarsie, Rockaway, Jamaica Bay, etc. are played out now.” The letter author then proceeds to confirm that the fish have migrated away and the striped bass is the last one to stay in bay locations and to detail anecdotes of fish caught in nearby areas ([Where to Fish](#); TS 20 Nov 1887). Sections of newspapers were titled “Points for Fishermen” ([Points for Fishermen](#); TEW 2 Jul 1888) and included recommendations on where to fish for various fishes.

Colorful language was often used to describe the fishing. One column from 12 April 1892 ([What the Anglers are Doing](#); BDE) on regional fishing activity referred to “. . . fine fishing and great catches of the finny beauties hereabouts.” And that flounder and tomcod were biting “savagely” at Canarsie and other resorts at Jamaica Bay.

A feature article from July 1885 chronicled Jamaica Bay angling at that time ([Fishing in Jamaica](#); TS 19 Jul 1885). It noted that when the train stopped at the Broad Channel station a good many people got off, to accommodations that included two hotels and “no end of people who assert that they have boats to let and fishing tackle and bait to sell.” A fleet of square-sterned and flat-bottomed boats would assemble near the railroad trestle while, a half mile to the east another fleet double its size would form. A Captain Dubois noted that the latter was fishing a productive area known as the Cinder Grounds.

The Captain said that the anglers were catching weakfish, blackfish, and sea bass, though the season was just beginning for the weakfish. And that one recent catch of 40 blackfish and 12 weakfish was made in two hours. He added that a 10 pound sheepshead (Figure 3) had been caught but that they aren’t plentiful yet and that it takes a man that knows how to catch sheepshead to catch them.

[Sheepshead fish are at the far northern extent of their range in New York. They were extremely rare in New York waters after the early 1900s but are now being seen more often, including in Jamaica Bay]. Then he predicted that weakfish would flood the bay the following week. When asked how he knew that, he replied because the bluefish had got up the beach as far as Seabright, New Jersey, and that when the bluefish come they always drive the weakfish ahead of them.



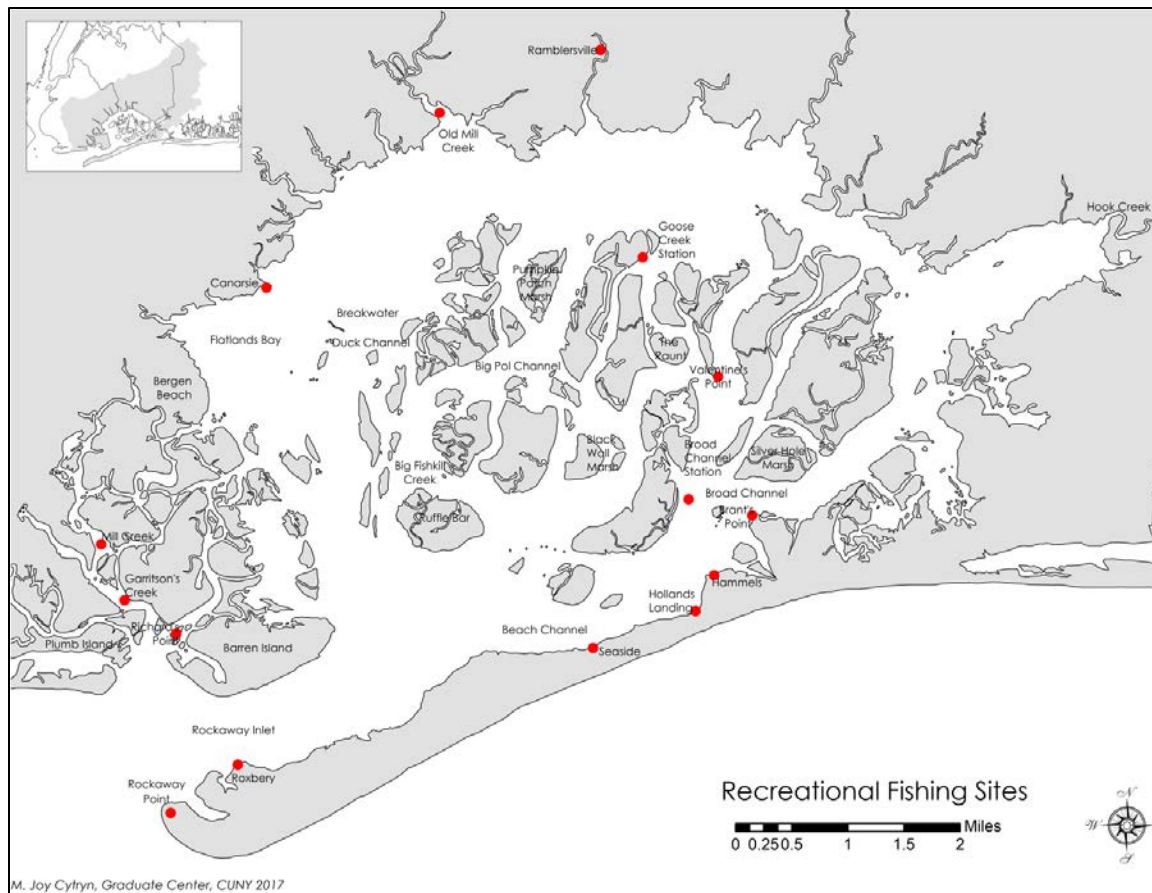


**Figure 3.** “Sheepshead” lithograph from the Fish from American Waters series for Allen & Ginter Cigarettes Brands. (source: Bowery Boys History - <http://www.boweryboyshistory.com/2014/02/no-sheep-in-sheepshead-bay-but-lots-of.html>)

When asked about other species, the Captain said they get striped bass at the end of August. To do so they paddle along the edge of the grass beds when the blue crabs go soft because at that time the stripers are looking for soft crabs. He said a few people clean the skates but that most hang them with their backs to a stanchion and then put cigar butts in their mouths, which “makes them look exactly like old men, with long pinky-white noses.”

Captain Dubois added that the best strings of fish are taken in the dark when lit by a lantern, including by a fellow who caught 213 fish, mostly weakfish, by the railroad trestle one night. At night men also jacked for eels [jacking is a term for spearing] using a light held off the bow of the boat so they could see the bottom.

In addition to the primary locations (Figure 4) mentioned where outfitters serviced anglers each day, there were many lesser-known fishing locations ([A Day With the Blue Fish](#); BDE 25 Aug 1895). These included tiny islands, some of which were fitted up with little houses, sometimes fashioned from the wrecks of old vessels. Dutch Island had such a shelter made from a schooner and owned by a well-known and respected local called Old Hank with deep knowledge of the waters. At a location called Pumpkin Patch, another bayman, Captain Charles Davenport presided over a small fishing hut with numerous bunks and a “forward deck” strung with hammocks. At Ramblersville, near Aqueduct, there was a string of small weather-beaten fishing huts along the shore that were used by city people seeking a more informal experience than recreating at the commercial resorts.



**Figure 4.** Recreational fishing sites of Jamaica Bay, New York.

Winter flounder were a primary target of Jamaica Bay anglers in both spring and fall. In 1898, flounder fishing began unusually early in the season because of favorable weather ([Flounders in Jamaica Bay](#); BDE). On March 3<sup>rd</sup>, it was reported that several fishermen a few days earlier reported catching as many as 30 large winter flounder apiece. And that crabs are also plentiful along the edges of the creek and were being eagerly sought inasmuch as they were fat and still benumbed, making their capture easy.

An article in April 1920 bemoaned the end of a tradition where the first angler who brought in a flounder in spring to Sehy's, Paschke's, or Schwind's at the Raunt was given a bottle of wine; the same was done at Moehren's, Goose Creek, and at other places on the trestle ([No More Wine for First Flounder](#); TSNYH 12 Apr1920). An indication of their former abundance is individual catches among nine fisherman reported in November 1917 from a source at the Raunt ([Flounders Bite in Jamaica Bay](#); TS 10 Nov 1917). The lowest landing of flounder was 14, but the highest catches were 50, 60, 62, and 89. Some of the finest catches of flounder were said to have been made at the Rockaway oyster beds opposite Hazard's Creek in Broad Channel. It also mentioned that trains to the flounder grounds stop at Ozone Park, Aqueduct, Goose Creek (Figure 5), the Raunt, Hammel's, Holland, and Seaside ([What the Anglers are Doing](#); BDE 12 Apr1892).



**Figure 5.** Goose Creek, Jamaica Bay, New York, no date. (source: <http://www.loc.gov/pictures/collection/ggbain/item/ggb2004001989/>)

The heavy fishing pressure made winter flounder the target of grass roots conservation ([A Bunch of Fishing Notes](#); TS 26 Sep 1917). Small flounder too small to take home without shame were instead thrown back into the water. These little flounder were called “Sam Halls” after S.S. Hall of the United Anglers League, who started the movement [little flounder were also commonly called “postage stamps” throughout the New York City region].

Porgy also were a staple of the bay’s fishery, though more so for those who were then viewed as the underclass. An 1898 story in *The Sun* ([Porgies in Jamaica Bay](#); TS 31 Jul 1898) led with “Porgies are running in Jamaica Bay.” And that “The fact will not be of interest to men who angle for game fish, but it will attract the attention of thousands of clerks, barbers, and German saloon keepers, who like to sit for hours in a boat under a glaring, hot sun and angle for these toothsome pan fish. “

The porgy was also treated as a serious game fish as a source of humor, based around a “well-known political orator” Col. Shackleford of Georgia. Shackleford created a “tremendous sensation” with his display of three small porgies documenting their appearance in the bay, and is overwhelmed with questions about his catch. His reply included location, fishing tackle used, bait, all the items in a copious lunch, alcoholic beverages, and a detailed account of the actual landing of a four-ounce porgy.

More staid observations were that whereas porgy reach five pounds outside of the bay on Romer Shoals, specimens from the bay rarely exceeded a pound. And that an effective method for making large catches was to bait the fishing area the night before the fishing took place.

The article also discussed the fishery for weakfish, a more specialized and expensive pursuit. Large quantities of expensive local shrimp for chum were required, as was sheer luck in encountering a school of weakfish, which “happens, perhaps once in a season for experienced fisherman.” It was noted, however, that some wealthy residents of the Rockaways employ experienced baymen to pilot them to the good spots, and “by a liberal expenditure of time and money, manage to make some very fine catches.”

Goose Creek was described as a “piscatorial paradise” ([Goose Creek](#); BDE 27 Aug 1899) at a time when, according to this article, the abundance of fish in Jamaica Bay had declined. It noted that the bay “was once full of fish, but of late years, it has been necessary to go outside and try for bluefish, as the supply of different species in the bay was exhausted except at a few spots.” Goose Creek was one of these, a place where fish “swim over from other parts of the bay every summer in time to get caught by the Brooklyn baiters.” The article claims that on a Sunday in August more than a thousand anglers were plying Goose Creek from rowboats.

Goose Creek was the center of some half-hundred little club houses that stood on stilts that extended, in spots, from Aqueduct to Rockaway. These structures were owned by Brooklyn- and Manhattan-based fishing clubs and were organized by what was then a new and novel plan. Instead of being available all the time to all members, clubhouses were allotted to individual members and their families for stated periods during the summer so that they could enjoy their stays in private. There was a cluster of these cottages near the Goose Creek Station of the Long Island Railroad. Farther up the line at Ramblersville there was a long line of clubhouses called Squattersville. This community was described as “very gay” and a kind of a little Venice where the residents visit each other in boats. All of the summer population was said to fish, rising early to catch breakfast. Then they fished all day “as if they are working for a living.” Many businessmen rowed to the Goose Creek train station in the morning to travel to the city, and then rowed back to their cottages trolling for striped bass on the way, keeping their families supplied.

Despite its distance from New York, the Wichita Daily Eagle covered shark fishing in Jamaica Bay ([Bitten by a Shark](#); WDE 12 Mar 1899). Two friends rowed from Brant’s Point one evening and caught porgies while also trying for weakfish, but were disappointed by strikes from sharks, which were thought to have driven the weakfish away. “Angered by these depredations of these hyenas of the sea,” they rigged up for sharks the next morning, using their porgies for chum and bait. There were two methods used for shark fishing then, conventional rod and reel, which could handle specimens to six feet and 150 pounds, and the “brute force” approach with rope which could handle much larger sharks. In fact, the article reported landings of sharks of up to 10 or 12 feet and 300 to 500 pounds from inshore waters such as Great South Bay, outer New York Harbor, Shrewsbury River, the Kills, and Newark Bay.



The friends rowed from Brant's Point to a deep area north of the railroad bridge near Edgemere's Hotel—an area where sharks are known to frequent. The article notes that only a short time before a swift current ran from the ocean into the bay and, aided by a raging surf, scoured an inlet that threatened the hotel, a cut that closed seaward at “great expense and with no little trouble.” [The entire barrier beach along Long Island's South Shore has a history of temporary inlets that formed after storms and then closed naturally or by remedial filling].

The anglers chummed with porgies and soon had a number of sharks giving “unmistakable evidence of their presence by showing their dorsal fins and making a great commotion.” The narrator soon hooked up and a “battle royal” ensued, with the fish making “a wild dash for liberty,” pulling line off the reel at lightning speed for 100 yards before being fought back to the boat, only to make another run. Though almost himself exhausted, the fisherman eventually brought alongside a “fine fellow of about four and a half feet in length, gracefully built, but ugly and vicious looking.” Then the shark was brought into the boat by grabbing his tail, whereupon he thrashed wildly, being only partially subdued by thrusting an oar down his throat. Soon the heat and sun slowed the shark down enough so that his belly could be slit to bleed to death. This revealed the shark's recent diet, which included four eels, a hermit crab, hardshell clams, and a number of toadfish, searobin, bass, and cunners. The sport continued with shark after shark being hooked (with some lost) before a four-footer that had been boated in a tangle arced his body in a letter O and badly lacerated the narrator's hand, ending the trip in favor of medical assistance.

In an article four years earlier ([Fishing in Jamaica Bay](#); TS 19 Jul 1895) Captain Dubois told of how an Alderman Weller noticed a shark near the railroad trestle one day and set about trying to catch it. He baited his hook with a bluefish and tied one end of a float to it twenty feet from the chain leader. He then made the end fast to a stake and just three minutes later the shark struck, with the float (which was a short section of telephone pole) dipping under. The shark fought gamely, both sounding and “throwing himself out of the water and shaking his head like a dog. Half a dozen of us went to his assistance. Fun? If you ever want to do a good day's work in half an hour, take a hand in landing a six foot shark.”

The presence of sharks in Jamaica Bay was considered to be offputting to bluefish. In July 1903 a strong run of bluefish on the Canarsie Grounds was welcomed inasmuch as weakfishing was not so good, owing it was said to a cold June ([The Run of Bluefish](#); TS 19 Jul 1903). Good bluefishing from an anchored boat was predicted for a week or two unless the bluefish were driven from the bay by sharks, which “have made their appearance in considerable numbers.” In July 1909 three Brooklyn dentists who were fishing for weakfish and bluefish halfway to Rockaway Beach from Broad Channel reported they instead caught three sharks from about three feet to more than five feet long ([Dentists Got Sharks](#); NYTR 25 Jul 1909). The dentists kept the teeth to prove it.

For a period, angling on Sundays was another controversial topic for Jamaica Bay ([No Sunday Fishing on Jamaica Bay](#); 14 Apr 1892; [Sunday Fishing in Jamaica Bay](#); FS 12 May 1892). Despite the Penal Code of New York forbidding fishing on Sunday, “Thousands of the working classes of New York City—tens of thousands of them—go fishing on Sunday in the summer season.” With netting banned, netters retaliated against recreational fishermen (who had lobbied for the netting ban)

and put in force the Sunday fishing ban by having some anglers arrested. The enforcement of this law was not due to awakened public sentiment but rather to spite.

An amendment was offered in the New York State Assembly in March 1892 by a legislator who believed that if Sunday fishing was banned in the rest of the state, he didn't see why it should be allowed in Jamaica Bay ([Jamaica Bay Sunday Fishing](#); TEW 8 Mar 1892). However, another Assemblyman presented a petition signed by 26,000 people in favor of Sunday fishing on Jamaica Bay. Another member argued that Sunday was the only day the poor people of New York and Brooklyn had for recreation and if they were permitted this innocent pastime, it would keep them out of the saloons and streets. The amendment was then lost by a vote of ayes 48 and noes 52.

Following that defeat, hook and line fishermen armed an Assemblyman with a petition with 60,000 signatures. The Legislature refused to make Sunday fishing in all waters of the state legal but after much discussion adopted an amendment in April 1892 to allow fishing on Sunday in Jamaica Bay ([No Sunday Fishing on Jamaica Bay](#); TEW 14 Apr 1892)

The continuing popularity of fishing in Jamaica Bay at the turn of the Century was evidenced in [News for the Fisherman](#) (BDE 10 Jun 1900). The article stated there were good hauls made both in Jamaica Bay and the outside fishing grounds, such as the wrecks of the *Iberia* and the *Indian*. It claimed that the late trains on Saturday nights are crowded with fishermen who get out on the water before daybreak the next morning. And that the proprietors of fishing resorts along the trestle are prepared for the crowd of fishermen that was expected the following day. That popularity was also remarked upon earlier that season, in early April ([Flatfish in Jamaica Bay](#); BDE 9 Apr 1900) when unseasonably warm weather resulted in large catches of winter flounder averaging about one and one-half pounds. Their presence was expected to draw many hundreds of anglers the next day, a Tuesday.

An article about fluke [summer flounder] provided a sense of the scale of angling in Jamaica Bay at the turn of the Century ([A Few Facts About the Flopping Fluke](#); BDE 1 Jun 1902). It described thousands of butchers, bakers, barbers, and shopkeepers coming to the bay every Saturday, mainly by railroad. Hundreds of them fished from piers (Figure 6), but most hired boats. One elderly Canarsie resident estimated that between 600 and 700 boats were let each Saturday and Sunday in season from Canarsie alone (with 9 of 10 seeking fluke). If all of the other depots of supply were considered, including Broad Channel, Beach Channel, Hammel's, Hallord's, Seaside, Rockaway Park, and others, it was believed that the fishing boats in commission during the summer easily reached 5,000.



**Figure 6.** Fishing off the front porch of a house in Broad Channel, Queens, New York, c. 1910 - 1915. (source: Flickr Commons project, 2013 <http://www.loc.gov/pictures/item/ggb2005019846/resource/>)

The article also mentioned class distinctions among anglers. A Dr. Charles Cooper is quoted saying that on that day, there may be 50 or 100 men who fish “with some pretense to art,” i.e., who have high priced tackle and expensive bait, compared with men who fish with, for instance, a carpenter’s plumb line and bob. And that the latter laugh at the former, who sit out on the water all day for weakfish without a bite while they land plenty of fluke. And sizeable ones too; the majority running two to five pounds with some ranging to 12 pounds.

Another report from 1902 ([Good Fishing in Jamaica Bay](#); BDE 29 Aug 1902) indicated good catches, including average landings per skiff off the Cinders and in the big channel of 25 large weakfish. A large party on a sloop yacht landed 167 big fluke. One angler caught 200 snapper blues in a “very short time.” That year was strong for the highly variable Lafayettes, which were abundant at Ruffle Bar. [The colloquial name, “Lafayette,” honors the Marquis de Lafayette, whose visit to New York City in 1824, to be lauded for his role in the American Revolution, coincided with unusually large numbers of these small fish in New York Harbor. Elsewhere they are known as spot. They are a small member of the drum family that also includes black drum, northern kingfish, croaker, weakfish, and silver perch, all of which have been seen in Jamaica Bay. They are called drum because of their specialized swim bladders that serve as sound-producing organs, hence the family name.]

A comical description of weakfishing at Canarsie from 1902 provided much detail on the fishery ([Joys of Weakfishing out in Jamaica Bay](#); BDE 25 May 1902). Canarsie is mocked, but with affection: “Bless her old heart! Enshrined in swamp land, redolent of the sizzling frankfurter, odorous of soft shelled crab, reeking with beer—except on Sunday when the Puritanical hand of prohibition has been laid on even the family entrance. Cosmopolitan old Canarsie! When the weary mechanic seeks a little surcease of toil, when the stridulous merry-go-round sings ‘Shall We Gather at the River?’ when the hard shell clam and the peanut vie with each other in producing dyspepsia! Famous old Canarsie! Known in song and in story as the place where the stocking eel-pot was invented; the Mecca of a thousand fishing parties and clam chowders, the abiding place of a hundred excellent fish liars; in whose waters lurk eels a yard long, whose skins make wading trousers for lusty clam diggers; where the devil crabs are so highly educated that they pick the blood-worm from the hook and then come up the line, hand over hand, to tumble into the boat and look for the bait box!”

The writer then suggests that on or about the end of June weakfish will show in schools, some of half an acre, “ravenous from their long sojourn in the ocean.” After many recommendations on tackle, it was suggested that the fisherman take a Douglass Street or Hamburg Avenue car from the (Brooklyn) Bridge, which is described as a pleasant ride of about an hour through rolling meadows. The hiring of a guide is recommended; for \$3 [~86 USD in 2017] an angler would furnish the services, the boat, the bait, the chum, and the landing net. A guided day’s fishing meant two tides, which were defined as an hour before the high water an hour after the tide has turned, including the intervening slack water. The guide did all the rowing, baiting of the hook, and chumming.

Alternatively, anglers could rent their own boat for 50 cents [~14 USD in 2017], and 75 cents on Sunday. At least one quart of shrimp for chumming was considered necessary. Blood-worms were considered a prime bait and a quart cost one dollar, the high cost due to the hard work of digging them on the bars of the bay at low tide.

Several articles mentioned that the late incoming tide was the best for weakfishing, though sometimes the early outgoing could also be good (e.g., [Weakfish in Local Bays](#); TS 24 Jun 1917). But opinions on time and tide varied. One Captain wrote to a fishing newspaper columnist stating that in Jamaica Bay, weakfish do not bite when high tide occurs around nightfall ([About Fish and Fishermen](#); TEW 6 Sep 1921); an observation that did not match the columnist’s experiences not far away, at Staten Island.

Favored spots for weakfish included Dugout, Lucky Spot, Deep Water, Breakwater, False Channel, Big and Little Fishkill, Yankee Channel, Bend, Barren Island, Duck Creek, Mill Creek, Cellars, Roger’s Drain, Garrison’s Creek, Valentine’s Point, Black Wall, and Richards Point ([Weakfish in Local Bays](#); TS 24 Jun 1917) and Beach Channel, Broad Channel, the Raunt, the Fish Kill, the Black Wall ([Joys of Weakfishing out in Jamaica Bay](#); BDE 25 May 1902). Two other locations were named after their bottoms, Pumpkin Patch, and the Cinders. Later in the season at the Pumpkin Patch grounds it was possible to view the bottom of the channel covered with “innumerable patches of bright yellow, resembling one dimension of a pumpkin.” The patches were said to be of various sizes and to cover the bottom like a carpet, and they were believed to harbor prey attractive to weakfish.

[The patches may have been redbear sponge *Microciona prolifera*]. The bottom of the Cinders were said to superficially resemble the refuse from a steamship's boiler room, but really were "a species of vegetable resembling coral of a gritty character which crumbles easily in the hand." Certain species of marine life attractive to weakfish clung to the sharp angles of this growth. The writer also noted that weakfish were also found over mussel beds.

Weakfishing was strong in 1910. A newspaper reported in late June ([Of Interest to Fishermen](#); BDE 25 Jun 1910) that weakfishing is at its height in the bay and that they are biting well all over. Catches from the Pumpkin Patch on the flood tide were as high as 34. Catches at the Raunt ran to as high as 25 a man. They were also being caught at locations known as Valentine's Point, the Shell Heap, the Bottles, and at Goose Creek at the Bend and Butt's Draw. Another perspective on weakfish catches was offered in an interview in September 1892 with an angler widely considered to be the best in the bay, A. Val Woodruff ([The Best Fisherman](#); BDE 11 Sep 1892). Although Mr. Woodruff said that weakfish that year "ran large, but scarce," he had landed 141 that season while fishing an average of once a week. They ran to six pounds, with very few under two pounds.

In August 1916, The Sun was suggesting fishing in Jamaica Bay ("only three-quarters of an hour from Broadway") to escape the heat ([Weakfish Biting in Channels of Jamaica Bay; Shore Bird Season Opens on Wednesday in 30 States](#); TS 13 Aug 1916). The article suggests that unless you know the grounds, a guide is needed. These men were said to be sportsmen bronzed with the sea and sunshine, usually wiry, and clean of body and mind. They were available at many sites around the bay, including Canarsie, Goose Creek, Raunt, Broad Channel, Shad Creek, Grassy Point, Hammel, Seaside, Old Mill, Hook Creek, and Springfield. Also in 1916 an angler reported in July that weakfish were not biting that well because they were filling up on the many tiny menhaden in the eastern part of Jamaica Bay, the most he had seen in years ([Young Menhaden in Jamaica Bay](#); TS 19 Jul 1916). [Menhaden, a member of the herring family, can occur in extraordinary numbers some years and are heavily consumed by game fish such as striped bass, bluefish, and weakfish.]

Weakfish appeared late in spring 1917 ([Weakfish Latest Since 1906](#); TS 19 Jul 1917). Joe Sehy of the Raunt told a reporter for an article appearing on May 25<sup>th</sup> that "Flounders, eels, and blackfish are biting in Jamaica Bay, but where, oh, where is the first weakfish"? Mr. Sehy would award a bottle of champagne to whoever caught the first weakfish of the season. His records showed considerable variability in these dates in previous years: 1908 – May 4<sup>th</sup>, 1909 – May 9<sup>th</sup>, 1910 – May 11<sup>th</sup>, 1911 – May 16<sup>th</sup>, 1912 – May 21<sup>st</sup>, 1913 – May 8<sup>th</sup>, 1914 – May 21<sup>st</sup>, 1915 – May 16<sup>th</sup>, 1916 – May 22<sup>nd</sup>.

Weakfishing appears to have affected the ecology of Jamaica Bay through the intense harvest of grass shrimp for bait and chum ([Scrappy Little Snapper Biting; Shrimp in Need of Conservation](#); TS 2 Sep 1917). August Roth of the Cotton Thread Fishing Club was said for several years to have advocated for conservation of shrimp, noting that in May and June, shrimp are numerous and easily caught, but that the fine meshed nets used also catch half-grown and baby shrimp, together with full-grown shrimp. The shrimp became so depleted that only by the expenditure of much labor and time by experts could a quart of shrimp be gathered. Roth noted the high demand for shrimp, and questioned why amateurs need to use from 6 to 12 quarts per tide and professionals, who can make a quart more effective than the amateur's two quarts, use no more than 2 or 3 quarts per tide? In



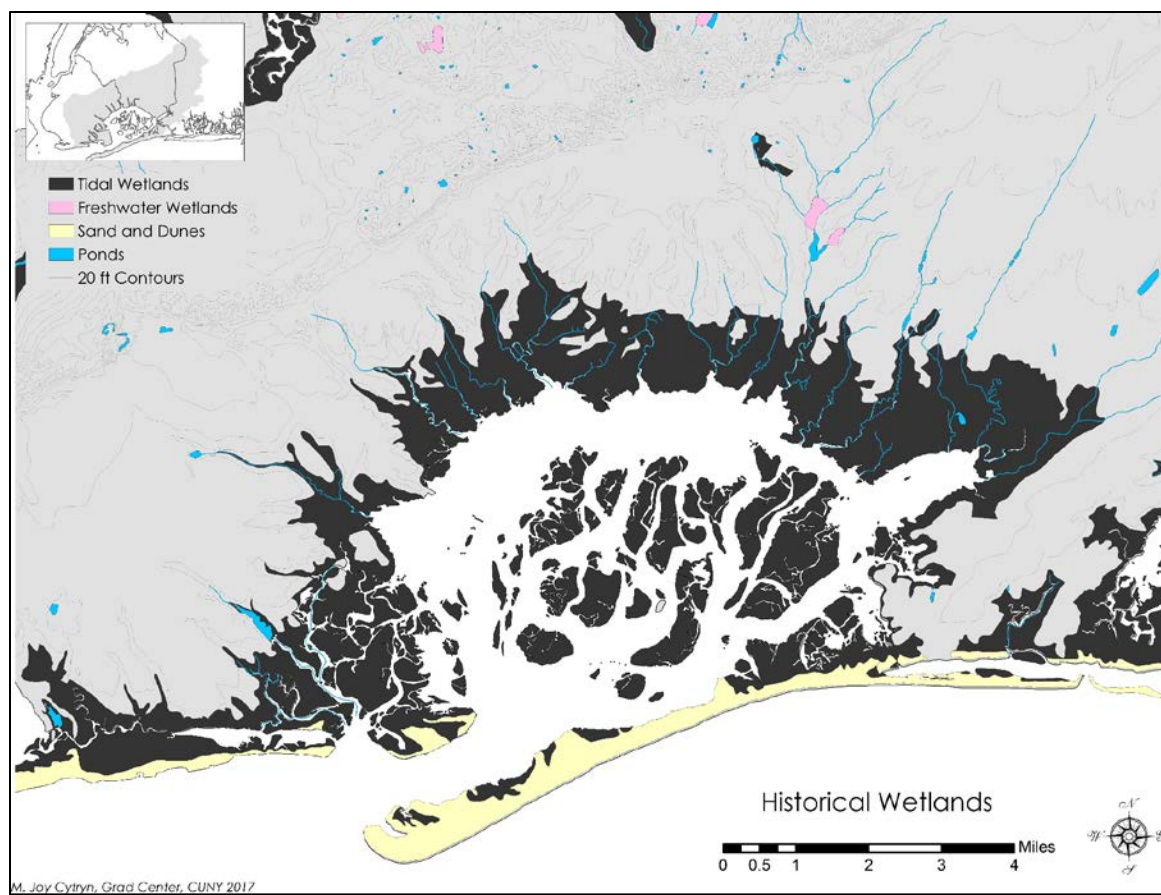
August 1917 ([Fishing Conditions in Jamaica Bay](#); TS 21 Aug) many an angler had to give up a try for weakfish after he had traveled to Canarsie or Bergen Beach because of a lack of shrimp, though some were available at the Raunt and Goose Creek.

Some anglers and sportsmen of New York and Brooklyn erected fishing shanties for their use on unappropriated State land. In 1897 they learned they were to be evicted shortly ([New York and Brooklyn Fishermen Likely to be Evicted](#); TS 16 Jul 1897). The State Engineer has just sold to Edward E. Graves of Brooklyn a plot of six and a half acres of this land for \$300 [~8960 USD in 2017]. It was understood that many of the camps of these amateur sportsmen stood on the land included in this purchase, and that the buyer would either compel them to pay rental or move away.

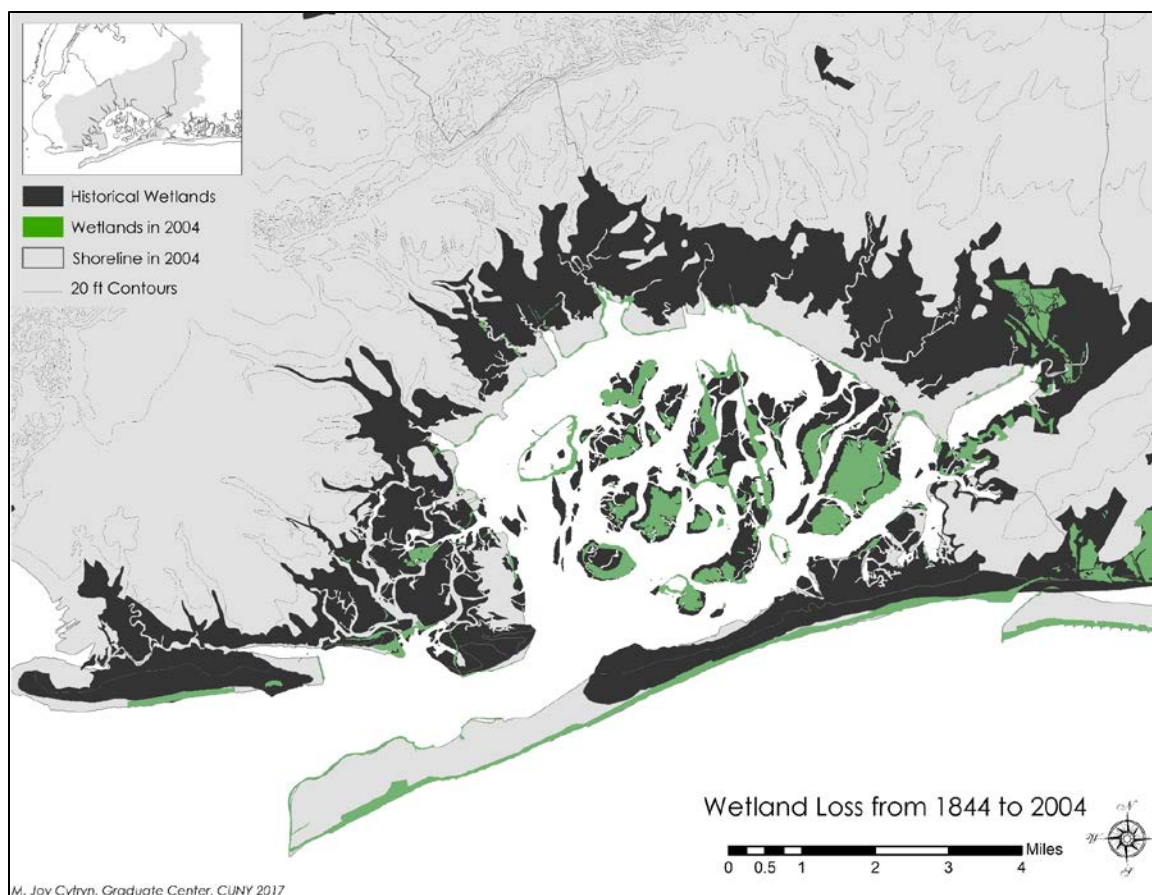
The economics of personal fishing bungalows were considered in [Snug Homes of The Anglers](#) (TS 16 Aug In 1908); one notable structure cost \$5,000 [~135,000 in USD in 2017) and had brass beds and a telephone. But it was said that a fisherman could rent a lot for \$30 [~807 USD in 2017] per year and build a suitable shelter on it for about three times that. And that a four-room house would rent for about \$75 [~2020 USD in 2017] annually. Most fishing occurred on Sundays and holidays, with some of the fishermen maintaining what were considered expensive retreats for only 4 or 5 visits per season. Yet fishing intensity on the bay was sometimes great; the article stated that at times there are a hundred boats anchored in the same channel so close together that it is possible to step from boat to boat.

Anglers also united to form clubs. The winners of the Cotton Thread Fishing Club's 1917 summer fishing contest were reported in November ([Cotton Thread Prize Winners](#); TS 1 Nov). A total of 1,054 fish were landed on Clark's 24 cotton thread or finer thread known as No. 100. [At that time fishing line was often made from cotton and referred to as "thread."] It noted that in Jamaica Bay waters the club also took striped bass, weakfish, kingfish, croaker, blackfish, eels, and flounders that went uncounted. Another angler using cotton thread but who was not a club member caught a 30-pound stingray at Middle Ground in Jamaica Bay.

Fishing in Jamaica Bay was viewed as having deteriorated by 1917. The author of [A Bunch of Fishing Notes](#) (TS 26 Sep 1917) asked if, after all, the scarcity of fish in the waters around New York due in great measure to boats and the oil from boats. And "Was not fishing in Jamaica Bay and Princess Bay ten times better before the fleets of motor boats began to monopolize those two bays than it is now? Cannot you catch plenty of fish in bays along the coast where there are few motor boats? Sure you can." In late July, 1918 it was reported that angling "is not up to the mark" ([Angling Efficiency with Cotton Thread](#); TS 31 Jul 1918). This was attributed to the bay "purging," a condition said to last two to three weeks in which the vegetable matter of the bay decays (Figures 7 & 8).



**Figure 7.** Historical wetlands of Jamaica Bay, New York.



**Figure 8.** Wetland loss from 1844 to 2004 in Jamaica Bay, New York.

In [Expects Good Flounder Fishing in Jamaica Bay this Spring](#) (NYH 12 Mar 1922), Charlie Noehren of Goose Creek spoke of the conditions and value of the bay. “Every now and then statements are made that the fishing In Jamaica Bay is done, and along comes a season of weakfish or fluke or both that even eclipses seasons of the past. This great body of water is bound to be refuge for fish until kingdom come and we will have our good and our poor seasons just as we have had them in the past. It is the most accessible grounds for Brooklyn and New York anglers, for a man can be at his desk at 1 o'clock and be fishing comfortably In Jamaica Bay at 2, from most sections of the city.”

Mr. Noehren predicted that flounder should be plentiful that coming season. And that there would be plenty of food in the bay, and because the ships were out and no more oil was being spilled about, the food would not be tainted or flavored with oil. He said that last October he took hold of the cables on his boat that were tied to a float only to find them thickly coated with tar oil, which adhered to his hands. And that this was been the experience of many boat liveries on Jamaica Bay.

In early September 1922, fishermen at Broad Channel, Rockaway Point and Rockaway Beach found that winter flounder showed up earlier than usual ([Flounders and Crabs make Good Sport at Jamaica Bay](#); BDE 3 Sep 1922). Though these specimens were small, schools of larger flounder were expected to arrive shortly. The article also noted that weakfishing was spoiled that week by large



numbers of 1 to 1½ inch “cinder worms” [a life stage of the polychaete worm *Alitta succinea*] believed to have been brought to the surface by recent storms from the cinder beds at Rockaway Point. The weakfish feed on them “and thus refuse to take the hook of the angler irrespective of what kind of bait he may use.” Also in September it was noted that snappers [juvenile bluefish] continue to run better than any other species. And that Rockaway girls have taken great interest in snapper fishing, its being not an uncommon sight to see 10 or more “flappers” [Flappers were a generation of young Western women in the 1920s who wore short skirts, bobbed their hair, listened to jazz, and flaunted their disdain for what was then considered acceptable behavior] fishing for the small fish from rowboats and launches ([Anglers at Jamaica Bay Await “Cool Water” Fish](#); BDE 10 Sep 1922).

Winter flounder abundance remained a conservation concern ([Rod and Gun](#); BDE 5 Mar 1935). In March 1935, the Brooklyn Daily Eagle reported that 3,500,000 flounder were to be stocked in Jamaica Bay, noting that in the past, they had been released as tiny, helpless fry. A well informed angler with the Beach Haven Tuna Club argued against the stocking because of the bay’s pollution and because prior stocking had not resulted in a noticeable increase in flounder, except perhaps in the previous two years. However, anglers were upset with what they considered to be a low number to be stocked and bombarded their Congressman with complaints ([Jamaica Bay Wins 15 Million Fish](#); BDE 12 Mar 1935). Congressman Brunner telegrammed the Rockaway Chamber of Commerce that the number would be raised to 15 million, leaving fishermen “overjoyed.”

No fish community remains constant and, over the decades, notable appearances of fish species or individuals occurred in Jamaica Bay. In September 1868 Spanish mackerel made an appearance in Jamaica Bay ([Long Island Intelligence](#); NYH 6 Sep 1868). This was consistent with the observation that more of that species were being seen in Long Island waters than ever before. [Spanish mackerel often occur in low numbers in nearshore waters of Long Island’s South Shore, but rarely in high abundance.]

Lafayettes continued to appear sporadically. In 1920 they showed up early in Jamaica Bay, arriving in May instead of July ([Lafayettes Are in the Local Waters](#); TSNYH 31 May 1920). The article noted that they were large and followed another strong year for lafayettes. [The species is often absent from New York waters, only to appear for a year or two in “incredible” numbers, as occurred in 1908. When present, it usually remains in the region until October.]

In 1920, a great inshore run of cod [normally a deep water species] occurred, including in Jamaica Bay, with one even being caught in Flatlands Bay at a depth of fifteen feet ([Codfish Really Here at Last](#); NYH 22 Oct 1920). No similar run has occurred since but fair night fishing off Coney Island Pier sometimes was enjoyed. Another codlike species usually uncommon in the bay is ling [squirrel hake]; however, the year before two men fishing in Jamaica Bay near Bergen Beach, caught 31 ling, and on a second trip landed 49 of the same species ([Ling in Jamaica Bay](#); TS 19 Nov 1919).

An angler fishing Jamaica Bay in September 1909 ([Fishy Story](#); TET 8 Sep 1909) reeled in what he thought was “the grandfather of all flukes” when “the great kite-shaped monster, which seemed as large as a man, writhed and flopped in the bottom of the boat, upsetting everything and striking out for the fisherman with its long tail.” The stingray’s tail curled around the angler’s leg and as he tried

to step away, the fish's four-inch poison barb cut through his shoe and spiked his foot. His party raced back to the dock, by which time the victim had fainted from loss of blood.

## Commercial Fishing

*“Good fish too; good enough for an emperor to eat.”*

Although commercial fishing in Jamaica Bay presumably had occurred since not long after colonists settled along it, most newspaper coverage of commercial fishing was about conflicts with hook and line fishermen and the allocation of privileges to local residents.

In [Interesting to Sportsmen](#); NYH 1 May 1869), protectionism of local resources for residents was sought when it was announced that “The Trustees of Jamaica have passed resolutions that no one who is not a resident in the town of Jamaica shall set any eel pots, catch any fish, crabs or lobsters in the waters of the town under a penalty of \$12.50 [~227 USD in 2017] for each offence; or shall go into partnership with any non-resident to do the same. And that no non-resident shall be permitted to plant any oysters or clams in Jamaica bay, thereby injuring the people of the town, under a penalty of twenty-five dollars for each offence; and no resident shall enter into partnership with a non-residence for this purpose under a penalty of \$100 [~1820 USD in 2017] for each offence, and all non-residents having clams or oysters planted in the bay are directed to remove them before the 1st of May, as after that date they will be considered as the property of the people of Jamaica.”

Ongoing frustration by anglers with commercial netting was shown in July 1888 ([Points for Fishermen](#); TEW 2 Jul 1888) when it was stated “Rockaway Inlet, too, there is good run on weakfish. A capital point for this is at Polywog Clubhouse on Broad Channel, Jamaica Bay. There have been some piles driven there preventing net fishing, and the line men have a chance.”

In April 1890 an article ([Clear the Bay of Seines](#); TS 14 Apr 1890) considered the frustration of hook and line fishermen with the failure to date of the New York State Legislature to pass the Stadler Bill to end commercial net seining of Jamaica Bay. Meetings were held by hook and line fishermen each Sunday at Bressel’s Exchange in the Rockaways, and they were heated, reflecting the opposing positions of Senator Stadler and Senator Hawkins, who opposed the bill. It was noted that although the bill interested the fishermen, not as much as the boat owners who can rent their boats for \$3 per day [~82 USD in 2017], but whose boats were said to be sitting idle because of the poor fishing attributed to the netters.

The men at one of these meetings said that some were sympathetic to the netters need to make a living, but one of them stated there were only eight netters to be concerned with. He then complained about how they were keeping all the fish away from the line fishermen “by purse and other infernal nets.” An old man stood to speak and with quivering voice, recounted how good the fishing was in earlier times. “Years ago Jamaica Bay was the best fishing place around New York. All you had to do was to throw a handline overboard with a bit of sandworm on it when you’d get a whopping big five-pound sheepshead. Just as soon as the boatmen got in there work nobody could catch sheepshead or bluefish, and weakfish.” And that “I belong to the Jamaica Bay Club and what did I get as the result of last summer’s fishing? One weakfish and ten eels.” Another angler spoke to the waste that occurs, how sometimes the netters catches are so large that some of it isn’t sold, and is ground into fertilizer. “Good fish too; good enough for an emperor to eat.”

The Chairman then announced that a scheme had been proposed for the organization of the anglers around Jamaica Bay into a fish protective association under the name of the Jamaica Bay Association for the Protection of Fish and Game. By a unanimous vote the association was established.

New York State Senator Stadler secured the passage of a bill by the Legislature making unlawful the taking of fish in the waters of Jamaica Bay other than by hook and line ([No More Nets in Jamaica Bay](#); TEW 21 May 1890). The impetus for this bill was the petitioner's belief that very little fish that were netted reached the market and that tons of gamefish were instead being used for fertilizer. Governor Hill agreed with the goals of the legislation but did not sign the bill because he believed it unconstitutional ([The Saxton Bill](#); TC 28 Mar 1890), but stated he would sign if ruled constitutional by the court of appeals. A senator claimed that the people of Long Island supported the bill, with the exception of eight men, who by their nets were destroying fishing in Jamaica Bay. Another senator, who opposed the bill, said that it pitted the rich against the poor and the few against the many and that fish is a natural food of men and should not be regulated in the proposed manner. Governor Hill did sign the bill on June 7th, 1890.

Later that spring in June ([Jamaica Bay Fishermen](#); TS 23 Jun 1890) it was reported that the seiners had practically stopped fishing while they waited for the law's constitutionality to be decided upon, even though they had earlier vowed to continue fishing even with a ban. However, it also mentioned a factor in their behavior may have been that the two hauls that were made were so bereft of fish.

By this time the Protective Association had grown to about one hundred members. It was proposed by some of its members that two private detectives should go to dwell in Canarsie where the seiners lived, don fishermen's clothing, and watch for violations of the law; however, that course of action had not yet been decided upon.

Soon after, in late June ([To Police Jamaica Bay](#); TS 28 Jun 1890) the Protective Association proposed a more extensive policing effort inasmuch as seiners were again seen working, at times near the breakwater and inlet where they could catch schools of fish moving in to the bay with the rising tide. At their meeting it was unanimously decided that they would ask the secretary of New York State to appoint five bay constables. This was to be requested because it was believed that existing law enforcement officers were reluctant to make arrests, especially those living where the net fishermen reside. The special state constables would be paid by the Protective Association in proportion to the arrests made and convictions obtained. At that time some of the prospective constables had been selected for recommendation to the Secretary of State and it was expected they would soon be commissioned.

In September, 1890 it was reported that the net fishermen on Jamaica Bay continue to cast their seines notwithstanding the prohibition by the Stadler law ([Fishing Never Better](#); TS 7 Sep 1890). And that "It will rejoice the legion of rod and line men who go to that great water park that the seining will soon be put a stop to. It will be remembered that to carry out the law the Jamaica Bay Fish and Game Protective Association was formed and that arrests of seine men followed but the local sentiment at Canarsie where the seiners live was so strongly in favor of the 'poor fishermen'

that no convictions could be obtained, and this notwithstanding special state constables were employed and paid.”

“Meanwhile, however, the regular fish and game inspectors of the State Game and Fish Commission have been at work on another tack. They have proceeded to get evidence against the seiners for the purpose of bringing civil suits against them in another county, probably in New York county, inasmuch as the waters of Jamaica Bay wash both Kings and Queens counties. The inspectors have used a tug and have cruised around the lower channel where the netters hid themselves by night, and so well do the sympathizers of the seiners in Canarsie know the inspectors that they have been hissed and hooted at. It has been said on very good evidence that there have been open threats of shooting the diligent inspectors.” In one haul of seines on August 29<sup>th</sup> they found that 750 pounds of weakfish and striped bass were taken.

The legalities of netting fish became muddled later in 1890 when the “piscatorial pirates” of Jamaica Bay were said to be coolly ignoring the new netting ban ([Piscatorial Pirates](#); BDE 22 Aug 1890). This was done under an interpretation of the law by a Canarsie justice who decided that the legislature, in passing a prohibitive law, did not mean the Jamaica Bay bordering on the town of Flatlands, but some other Jamaica Bay. Consequently, the offending fishermen who were detected in illegal acts were discharged. And citizens who attempted to enforce the new regulations were instead sued by the netters!

Other tacks became necessary: “The Jamaica Bay Fish and Game Protective Association meeting no success in having seine fishermen arrested and arraigned before a Police Justice owing to the Justices empathy for the netters, has started a new scheme. It will have the netters arrested and held for the action of the Grand Jury in one of the higher courts.” ([With all the Fishermen](#); TS 28 Sep 1890).

The regulators attempted to catch the illegal netters. As reported in [A Vain Cruise for the Seiners](#); 12 Jul 1890), Robert Brown Jr., a New York State fish and game protector sailed in June in a tugboat with eight men sworn in as deputy sheriffs. The seiners threatened to fight to the death if the police boat apprehended them, but the seiners vacated the area they had been fishing, probably because of a tip. However, in September 1890 ([With all the Fishermen](#); TS 28 Sep 1890) Game Protector Brown reported he was on duty about a month at Broad Channel and had secured sufficient evidence against eight seine fishermen from Canarsie for violating the Stadler law to warrant bringing civil suits.

In March 1891 Game Protector Robert Brown reported at the monthly meeting of the State Fish Commissioners that actions had begun in the Richmond County Supreme Court against the eight Canarsie netters accused of violating the Stadler Law passed the spring before ([The State Fish Commission](#); TS 11 Mar 1891). Most of the netters had been arrested by state constables and arraigned before Canarsie Police Justices, but local sentiment was so much in favor of the net fishermen that there had been no case of conviction. The State Protector then brought a civil suit which was to be tried at Richmond, Staten Island. If convicted, the fishermen could each be fined \$100 [~2720 USD in 2017] or imprisoned for 60 days, or both, at the discretion of the judge.

At the monthly meeting of the State Fish Commissioners in May 1891, the Chief State Fish and Game Protector reported on law enforcement in Jamaica Bay, stating that seiners who defied the Stadler Law will soon be arraigned in the County Court in Richmond County to plead ([Offences Against the Game Laws](#); TS 13 May 1891). Game Protector Robert Brown informed the commissioners that he had been 25 days traveling 756 miles, and had spent \$32.50 [~884 USD in 2017] to subpoena witnesses for the netter's trial.

In July 1891 Robert Brown sailed into Canarsie Inlet and announced he was looking for law breakers ([Vorris's Net Seized](#); 20 Jul 1891). Nonetheless, Charles Vorris put out after dark to set his net for the night. Brown approached them around 5AM when they were retrieving the net and asked for them to surrender it to the State of New York. After a tug of war a fog came up, confusing things, and Vorris relented, realizing the net would be taken back to Canarsie and it would save him the trouble of landing it anyway. Brown instead took it to Tottenville, Staten Island, where he lived, finding that it was a 120-fathom net worth about \$125 [~3200 USD in 2017]. Vorris argued that he actually had been fishing in Flatland Bay and that he had been fishing in the same place the year before and he was acquitted. But Brown would not release the net to Vorris until the violation was reported to the Fish Commissioners.

Despite the seizure of the net, the Canarsie netters continued to fish and claimed they would continue. They were said to earn about \$20 [~544 USD in 2017] per man weekly.

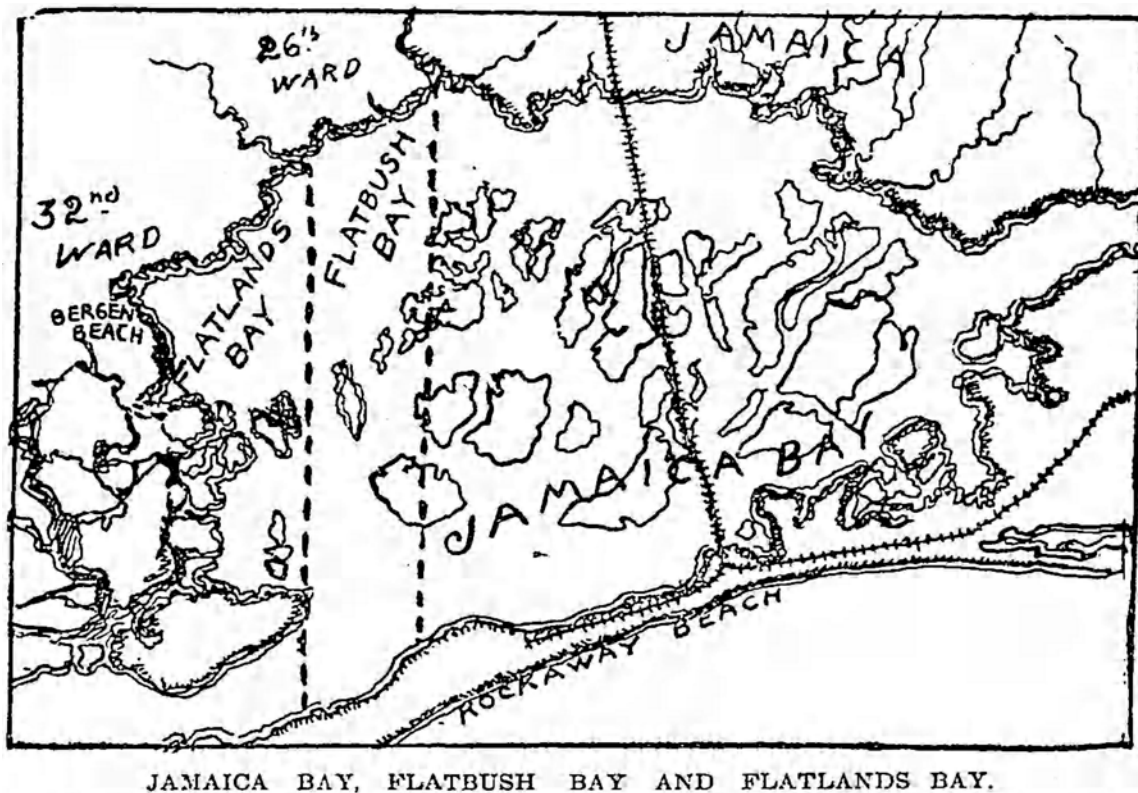
In September 1891, it was noted ([Eight Arrests on Jamaica Bay](#); TS 21 Sep 1891) that the "annual row" between the net fishermen and the line fishermen in Jamaica Bay is on again. Every year around this time this time it was said that the game constable of Rockaway Beach gets tired of seeing the net fishermen of Far Rockaway come down to Rockaway Inlet and spoil the fun for the line fishermen who make business for the Rockaway Beach boat owners. He arrests a few of the net men and a Justice of the Peace fines them \$25 [~680 USD in 2017] apiece.

This season's row began when the Rockaway game constable captured two net fishers at the head of Jamaica Bay. They paid their fines, and then sought revenge. In response, the net men went on the warpath. Sunday was the great day of all days for line fishing at Rockaway, but the article noted there is an "ancient law" which says that the Sabbath Is not for line fishing. So the game constable for Far Rockaway would sail down the Inlet in his catboat and bring "sorrow and expenses to the linefishermen and wrath to the boat owners." The game constable of Far Rockaway assisted them by arresting seven men and a boy who constituted the crews of two fishing boats. The reporter predicted that if anything were to happen to net fishermen during the week there would likely "be fun" on Jamaica Bay next Sunday inasmuch as there are between 1,200 and 1,500 men, women, and boys fishing on the bay each Sunday. And that if the game constables were active, they could arrest enough people to fill a town.

Meanwhile the netters continued to fish. A short report stated that Captain Richard Wanzer of Canarsie, the leader of the commercial fishermen, netted the largest catch of weakfish and bluefish of the season, amounting to 1,800 pounds ([The Finny Tribe at Canarsie](#); BDE 7 Jul 1892). The fish averaged from 4 pounds to 7 pounds.



The baymen later tested the netting ban ([Fisherman on their Mettle](#); BDE 12 Jul 1896). In July 1896, four Canarsie netters, including Richard Wanzer, who were arrested after seining one morning engaged a lawyer to test the constitutionality of the netting ban. Indeed, part of their argument was that there is a “Flatlands Bay” that is distinct from Jamaica Bay, both of which border an intervening “Flatbush Bay” (Figure 9). Baymen were again arrested in August 1897 while seining in what they considered to be Flatlands Bay; this occurred after a Police Justice concluded that they were fishing in Flatlands Bay, not Jamaica Bay. The case greatly angered residents of Canarsie where it was stated that the majority of people make their living from the bay. Richard Wanzer described the arrests as “practically persecution” and expressed a desire to bring the case to the Supreme Court.



**Figure 9.** [Limits of Jamaica Bay](#), New York. (source: Brooklyn Daily Eagle, 10 August 1897.) Canarsie is located in the 26<sup>th</sup> Ward. <https://bklyn.newspapers.com/image/50370832/>.

The controversy as to where Flatlands Bay ends and Jamaica Bay begins was reviewed in the Flatbush Court in September ([A Question of Boundaries](#); TS 9 Sep 1897) when the four fishermen were tried for seine fishing in Jamaica Bay. The men admitted using seine nets, but claimed that they were on Flatlands Bay. State Game and Fish Protector Wyckoff, the complainant, said the men were on Jamaica Bay 100 yards beyond the line. Justice Steers found the men guilty. They said they would appeal.

At the retrial of the baymen the game commission counsel presented a map certified by the War Department in Washington giving Jamaica Bay as the name for all the waters around Canarsie ([Good News For Canarsie](#); TS 12 Jul 1897; [Limits of Jamaica Bay](#); BDE 10 Aug 1897). Then Mr. Hughes,

the fishermen's lawyer argued that the map did not show the correct names of the nearby waters to Jamaica Bay that had been established since 1600 and that had not been changed by legislature or Congress or any other legal body. A city surveyor was put on the stand and showed old maps that placed the fishermen in Flatlands Bay and not Jamaica Bay when they were arrested, and that there was a Canarsie Bay, a Flatbush Bay, and a South Bay too.

The judge was impressed with the baymen's arguments and the case was decided in their favor. In response, a State Senator introduced a bill in January 1898 ([Fishing in Jamaica Bay](#); BDE 25 Jan 1898) prohibiting netting in Jamaica Bay, Grassy Bay, and Flatlands Bay. It passed in February 1898 ([Senator Murphy Censured](#); BDE 15 Feb 1898).

In 1907 a raid on the net fishermen was conducted by the state fish and game warden, with the investigative assistance of the Brooklyn Branch of the Protective League of Saltwater Fishermen, part of a war the League was leading against netting in the bay. Richard Wanzer was fined \$60 [~1580 USD in 2017] for pulling his net, a fine that "put a damper on the zeal of the net fishermen." ([Will Prosecute Net Fishermen](#); SM Jul 1907). The collecting of evidence against the netters was tedious and slow because violators worked secretly and always under the cover of darkness. It also was hampered by the attitudes of anglers and proprietors of fishing resorts, who appeared to be afraid of the netters.

The extensive angling on Jamaica Bay necessitated a ready supply of bait. This was supplied, in part, by commercial wormers, i.e., men who dug bloodworms on mudflats accessible by boat from Canarsie ([Digging Worms their Life Work](#); TA 27 Sep 1919). They numbered about 50, and most were youthful. Raking was done in all weather, dependent on the tide, using a short handled rake. Their catches earned them fifteen cents [~2.08 USD in 2017] per dozen, a rate that had been achieved with a recent strike. The worms were then sold to anglers by purveyors for forty cents [~5.55 USD in 2017] per dozen.

The wormers were reported to be a "jolly lot," despite their complaints about the biting "greenhead flies." They were said to live in houses, sometimes homemade that are "not a conspicuous example of architecture." The wormers also were a lively part of "country store night" on Fridays—a Canarsie tradition, which included a good deal of dancing.



## Other Marine Creatures

*“A whale . . . insisted on expiring at Rockaway Beach.”*

In addition to finfish, blue crabs were caught recreationally all around New York, Brooklyn, and Long Island, including Jamaica Bay, often with the simple approach of a piece of “more or less fresh but stout meat” on the end of a stick or string and a crab net ([Fishing on Long Island](#); BDE 19 Jun 1898). They also could be raked from a boat poled over a soft bottom but this was usually done by commercial fishermen.

In 1919 blue crabs showed strongly in the bay ([Jamaica Bay Alive With Crabs](#); TS 11 May 1919). According to Charlie Noehren, it was looking like the greatest crab season in many a year. He said “The bay is simply alive with half grown crabs, and all of them wintered well and were not disturbed by anchor ice [ice that forms underwater on the bay bottom]. The abundance of blue crabs was presaged two years before when fishing guides said that they catch any quantity of them when they are after shrimp ([Rod and Gun News](#); TS 24 Aug 1917). The baymen said that adult crabs were scarce in 1917 but predicted that if a mild winter followed, “it will be the greatest crab year Jamaica Bay has ever known.”

In 1905 ([Latest News](#); DPL 14 Oct 1905) it was reported that Mrs. Edward Morrison while fishing for weakfish at Rockaway Inlet, caught a turtle weighing 575 pounds, and that it had a big lump on its back known as a “pearl barnacle” that is 100 years old and is worth \$500 [~14,100 USD in 2017]. [There is no description of how this capture occurred. If true, then the size of the turtle indicates it was a leatherback turtle. Pearl barnacles are found on whales and sea turtles].

In 1899, a porpoise was captured by two men in Jamaica Bay ( [Local News](#); TW 28 Oct 1899). They towed it to Warner’s Dock at the foot of Elbert Avenue, where it was weighed and found to be 300 pounds. The “monster” was viewed by a large crowd.

Though not subject to directed harvest near Jamaica Bay, cetaceans were sometimes seen off the Rockaways, occasionally as dead or dying specimens that washed up on the beach (Figure 10). One was utilized opportunistically ([Long Island Items](#); JF 29 Sep 1870). The account stated “On Sunday morning last a large white whale was seen from the beach at Rockaway, making for the sand-bar. He came on under full headway until he went plump over the bar, and stuck helplessly in the shallow water, between it and the beach. He was soon secured and killed, and was found to be thirty-nine feet long, and ten feet high.” It was estimated that the carcass would yield over ten barrels of oil.



**Figure 10.** Whale Washed Up & Roasted - c. 1800s - Rockaway Beach, New York. (source: Welcome to the Rockaways <http://www.farrockaway.com/carol/morp1800sRockaway.html>)

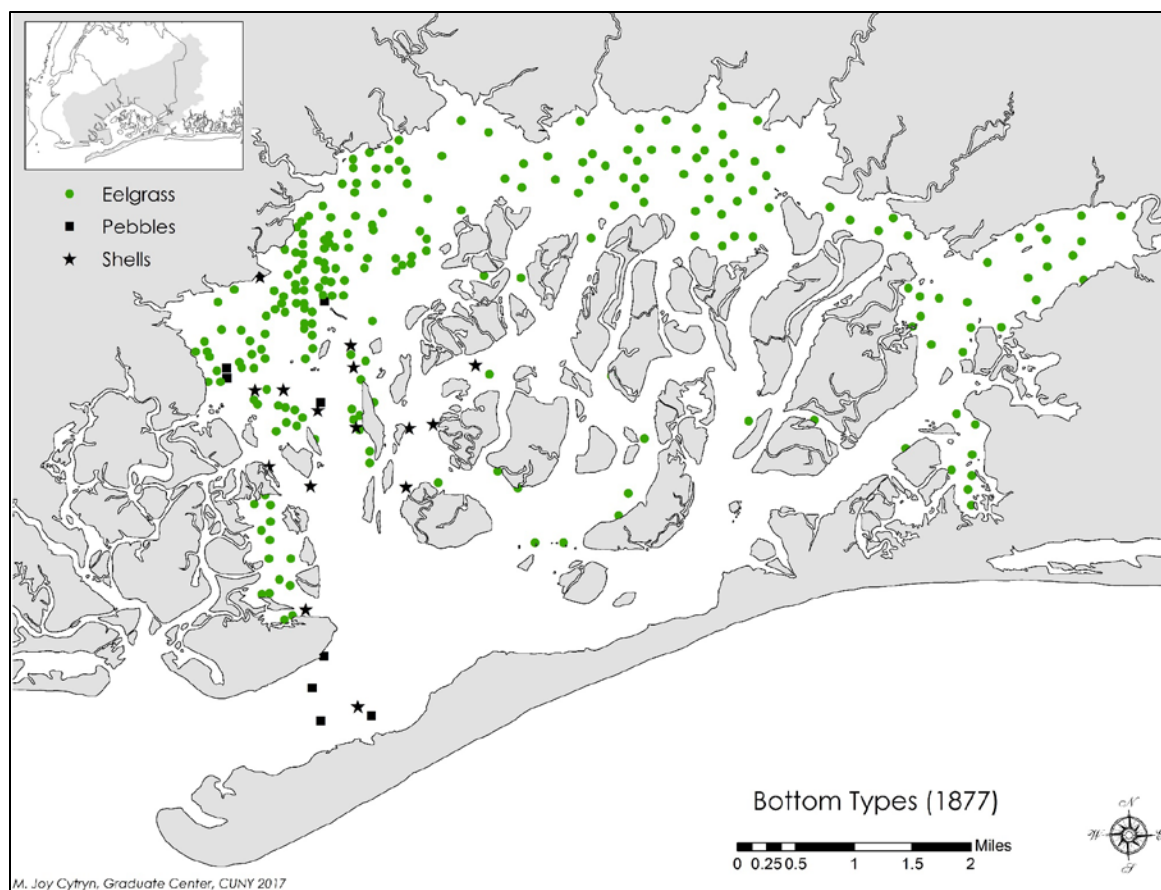
In 1917, a whale that “had the whole ocean to die in insisted on expiring at Rockaway Beach” the day before ([Whale Goes Ashore on Rockaway Beach](#); TS 14 Nov 1917). “The animal, which was only about ten feet long, slid on to the shore with the incoming tide, and after a few half hearted wiggles and hops passed away peacefully in the presence of a large and enthusiastic crowd which gathered after an imaginative resident yelled that a submarine was calling.” There was considerable argument over whether the creature was a man eater. In order to prevent it from coming to life and escaping to the ocean policemen tied it to stakes in the beach. Later, agents from the Department of Health came and trucked it away. It was said to be the first whale that had appeared on Rockaway Beach in several years.

## Presence of Eelgrass

*“ . . . disabled by eelgrass. ”*

There has been recent uncertainty about whether eelgrass had ever occurred in Jamaica Bay (Waldman 2008). Chris Pickerell of Cornell Cooperative Extension explored the question in several ways ([Eelgrass \(\*Zostera marina\*\) Restoration in Jamaica Bay: Initial Site Selection and Potential for Success](#)). He found no evidence of eelgrass in early herbarium collections or of seed coats in sediment cores. However, he did find written indication. This included an account of a regatta in which a launch named Tuscarora “became disabled by eelgrass catching in her screw” ([Jamaica Bay Regatta](#); BDE 3 Aug 1902). The race occurred along the inside of Rockaway Point, to the west of Arverne. Another newspaper article from two years earlier mentioned a shoreline modification project for the Nassau Beach and causeway that needed to cut through eelgrass and sand ([P.H.Flynn's Nassau Beach and Causeway](#); BDE 13 May 1900). Pickerell also noted that Grassy Bay likely received its name because of the presence of eelgrass.

We found additional anecdotal support for the historical presence of eelgrass. Information from hydrographic surveys of the bay in 1877 and 1878 showed it ringing the northern perimeter of the bay (Figure 11). Moreover, in July 1880 in an article about garbage disposal at Gravesend Bay it was noted that there is material that sometimes is mistaken for garbage, but that it was masses of eelgrass from Rockaway Inlet, “where it is carried out to sea to return on the tide.” ([Garbage](#); BDE 13 Jul 1880). Additionally, two men were drowned while bathing in Jamaica Bay by “being entangled in the long grass which covers the bottom of the bay” ([Condensed Dispatches](#); UO 8 Sep 1899). And many decades later, in 1947, it was reported that many old-timers at Jamaica Bay and Great South Bay have, for a number of years, lamented the disappearance of eelgrass—a prime food for waterfowl ([Rod and Gun](#); BDE 6 Feb 1947).



**Figure 11.** Bottom types of Jamaica Bay, New York (1877).

## Hunting

*“The bays at all shooting seasons were filled with ducks of half a dozen different kinds, meadow hens and spring and fall many geese were killed by the more expert gunners.”*

In an interview a knowledgeable but anonymous hunter from Brooklyn provided details about shooting birds in the region ([Brooklyn Sportsmen](#); BDE 8 May 1873). The hunter noted that it is well known to the sporting man that most of the migratory birds, such as woodcock, English snipe, yellow leg snipe, martin, plover, dewitchers [dowitchers], highhole [northern flicker], robins, meadow hens [bitterns], and more when flying southward in autumn follow the line of rivers and have regular feeding places along the route. Gunners who shoot for the market follow the woodcock from the extreme eastern end of Connecticut across the Sound, all down Long Island, until they cross Fort Hamilton, “at which place thousands upon thousands of birds cross in their flight for the warm climate-say from the first of September, when pigeons take flight, until the 15<sup>th</sup> of November when robins take their final leave.”

The hunter continued “In the Fall season I have seen, back of Greenwood, counting all along Fourth avenue down to Fort Hamilton, as many as two hundred gunners in quest of highhole and robin. The highhole comes in immense numbers and alight generally upon a dead limb of a tree, or upon a long pole set up in a tree at an angle of about forty degrees. The gunner generally gets in position under the pole so that he can rake it from end to end. The birds come in so thick in the time of the general flight that that I have seen as many as fifteen killed off of one pole.”

Further observations of the hunter were that the English snipe on its springtime trip northward generally “drop for a few days” on the salt meadows, “better known as the West Meadows,” a tract near New Utrecht. And that sometimes they drop on the water ponds along Fourth avenue from Greenwood Cemetery to Fort Hamilton, on the ponds between the Penitentiary and Atlantic avenue, and on the Carpet Grounds on the east side of the city. He suggests that English snipe not be shot in May because that is when they breed and each female killed “deprives us of a brood of young snipes.”

The hunting club at Rockaway (together with the Meadowbrook Club) was said to have evolved from the old Queens County Drag Hounds begun in 1877 ([Among the Clubs](#); BL 31 Aug 1895). Drag hunting replaces the pursuit of actual foxes by horse riding by the laying of a scent trail of animal meat and other sources. It was noted that the influx of settlers and the building of cottages is fast spoiling the hunting country of the Rockaway Club.

Jamaica Bay was part of a reach that was touted as having been a fine hunting ground in the late 1800's ([A Region for Sportsmen](#); BDE 19 Jun 1898). From Rockaway to South Oyster Bay there were “great stretches of wood unbroken,” except for an occasional road cut through. “Small game of every kind for spring and fall shooting abounded in these woods. In the fall the farmer's boy filled his game bag with quail, woodcock, and partridge and later on the farmer himself chased the rabbit and squirrel and largely supplied his family table with this game. The bays at all shooting seasons were filled with ducks of half a dozen different kinds, meadow hens and spring and fall many geese

were killed by the more expert gunners.” The article stated, however, that some of what was a veritable game preserve was now part of New York City and that large tracts of forest were now mere patches.

Hunting in New York City limits was still popular early in the 20<sup>th</sup> Century, though it was treated dismissively in [The Beginning of the Shooting and Hunting Season](#); BDE 24 Sep 1905). It claimed that in big cities there are always a considerable number of mostly foreigners or foreign born “. . . who take special joy in banging away at anything so soon as ‘the law is off.’ Thus in the vicinity New York and Brooklyn, the snipe in the vicinity of Canarsie, Rockaway and the north shore of Long Island come in for a tremendous cannonading at sunrise on the opening day.”

Duck hunting was still productive in Jamaica Bay in 1919 based on a report from that year’s Election Day [Election Day Gunners Bag Ducks](#); TS 5 Nov 1919). Black ducks, scoters, and broadbills were taken in large numbers over Great South and Jamaica bays. However, whereas hunters brought in fair sized bags in Great South Bay, killings of two, three, or four ducks were the rule In the Jamaica Bay district.

In 1922, hunting enthusiasts and nature lovers reported that skunk and raccoon were being observed less often than ever before, possibly due to mass extermination from trapping ([Skunk and Raccoon Decreasing Rapidly on Long Island](#); BDE 6 Apr 1922). Most of the raccoons taken that year were from between Flushing and Jamaica.

## Shellfishing

*“lime-cased lusciousness”*

In 1859, a bill was passed permitting planting of oysters and clams in Jamaica Bay ([Bills Passed](#); NYH 12 Apr 1859). Just a decade later there were conflicts between Connecticut and Long Island oystermen over the possession of oyster lands under bay waters ([The Long Island Bays](#); NYH 18 Mar 1871). Connecticut contended that all bays were public property, whereas the New Yorkers disagreed, citing prior legal acts. The article also acknowledges the importance of oysters to the residents of Long Island, including that “Jamaica and Hempstead bays and the Great South bay, together with many inlets, are devoted exclusively to the production of oysters and clams.” In fact, it was said that three-fourths of the inhabitants of Suffolk County made their living from the bays.

A common practice on Long Island and Jamaica Bay was to plant oysters and then pay little attention to them until it was time to harvest them; however, often half the expected yield would be missing. “Midnight theft” had become so commonplace that oystermen were compelled to stand guard all night. The article speculated that the man found dead at Rockaway with a gunshot wound in his breast was a victim of one of these sentinels while attempting to poach.

In 1871, because Jamaica Bay was partly controlled by non-residents of the bay region, a bill was passed making it unlawful for any person other than an inhabitant (and residents of Hempstead) to hold any lands under the waters, and such inhabitant must be a constant resident of the town for one year. The land to be taken was to be the exclusive property of such inhabitant, but must not have exceeded three acres. Any non-residents then holding oyster beds would be allowed to keep possession until January 1872, when their claims would have ceased. The article surmised that this bill would cause a general clearing out of the bay as numbers of New York dealers then held from 10 to 20 acres each.

In June 1871 a brief article noted that New Jersey oyster dealers have for a few years past received from the Ring [an organized crime group] the right to take oysters in Jamaica Bay and that they are now attempting to drive residents from land held by them for years ([Long Island](#); TS 5 Jun 1871). The residents discussed holding an “indignation meeting.” The Jersey men had got control of a portion of the bay by paying politicians a percentage for the rent of the land. Also, about 40 of them had moved to Hempstead to take advantage of the Jamaica non-resident exception to leasing oyster lands ([Long Island](#); BDE 16 Apr 1875).

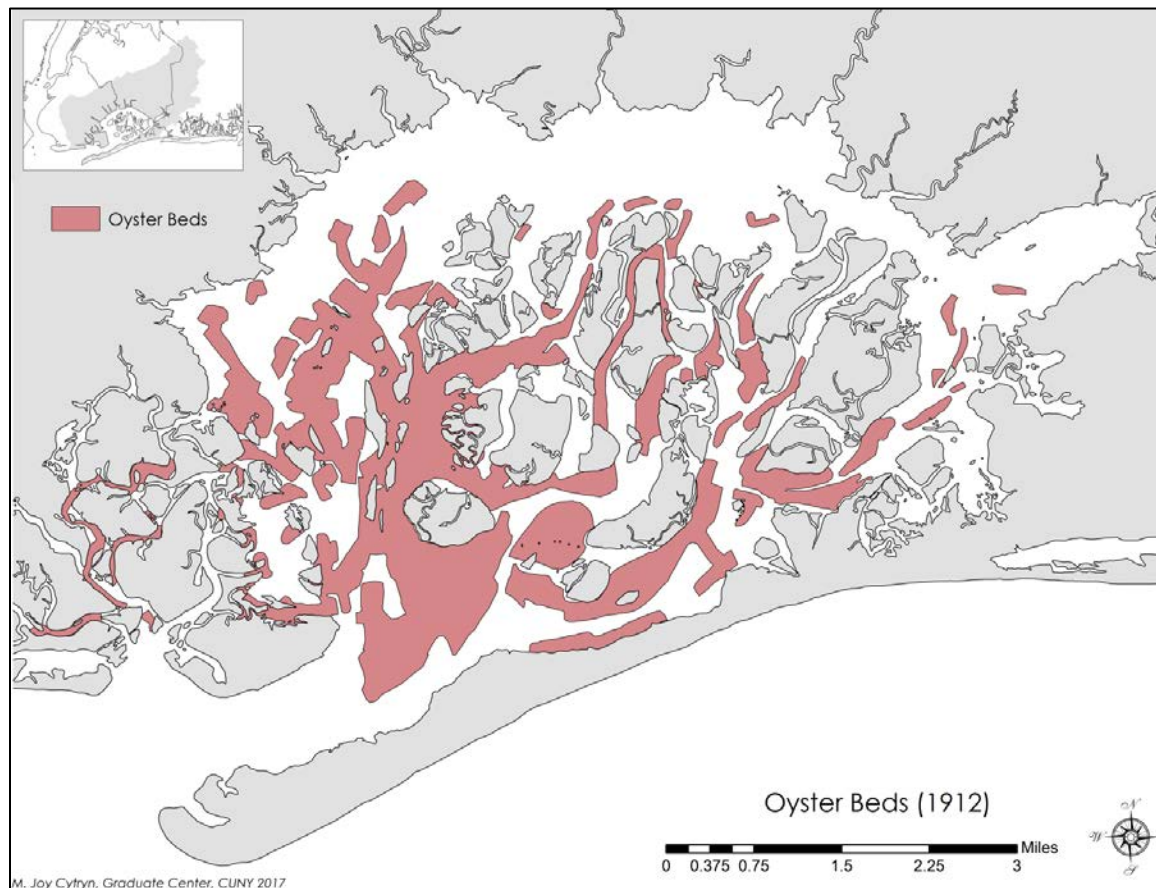
Despite plantings, oyster abundance was subject to the vagaries of nature and environment. A one-sentence report from early July 1872 stated that “There are three million dead oysters in Jamaica Bay, and they threaten New York with a pestilence,” though no cause was given ([Gatherings by the Wayside](#); WS 6 Jul 1872). Later oyster mortality was related to industrial pollutants ([Brief Mention](#); TS 23 Jan 1881).

An observer passing the schooner Mary Ann Eliza of Canarsie asked the skipper about the price of oysters and was told they would be “higher than all tarnation” this year because of the failure of seed



production in Long Island Sound ([Oysters Will Be High](#); PD 26 May 1891). The writer “left in mourning” while the skipper resumed his task of strewing the bed of Jamaica Bay with “lime-cased lusciousness.” [Refers to the bivalve’s calcium-based shells].

Concerns about non-residents leasing oyster lands were still evident in 1898 ([Non Residents Barred Out](#); BDE 13 Nov 1896). At a meeting of the Jamaica Town Board, Supervisor Dunton called attention to how poorly the law regarding residents passed in 1871 was being enforced. He said that out of nearly 150 who lease the lands, only 6 were taxpayers in Jamaica. He added that the lands were being rented at \$5 per acre [ $\sim$ 147 USD in 2017], which was based on an earlier time when farmers would harvest some oysters for home consumption. But that with oyster raising and selling having become a big business (Figure 12), many lessees were subletting their parcels to syndicates at high prices. He advocated a competitive bidding process that might bring \$4,000 to \$5,000 per year [ $\sim$ 118,000 – 147,000 USD in 2017] to Jamaica instead of \$400 or \$500 [ $\sim$ 11,800 – 14,700 USD in 2017]. However, the threat of typhoid soon loomed over the Jamaica Bay oyster industry, with it declining and ending early in the 20<sup>th</sup> Century. [Wild oysters have not recovered, despite recent attempts at planting artificial reefs. However, the legacy of the bay’s earlier oyster productivity can be seen as shells that line the bottom of areas such as Mill Basin (Waldman 2013)].



**Figure 12.** Oyster beds of Jamaica Bay, New York (1912).



Recreational clamming in Canarsie was described as a “queer pursuit” ([Treading for Clams](#); RT 21 Oct 1893). Near low tide, as the flats emerge, “strange bare legged human figures begin to pace the narrow mud strip.” Others arrive and eventually a dozen or more men and boys tread slowly while looking down and feeling for hard clams with their toes. With their straw hats and white or blue shirts flapping, they were said to form a picturesque procession until the rising tide drives them off the flats.

Such personal harvests were but a small fraction of the whole. Findings from the New York Shellfish Commissioner’s Annual Report were presented in an article in December 1895, providing a sense of scale of shellfish takes ([Shell Fish Commissioner Thompson’s Annual Report](#); BDE 13 Dec 1895). Overall, one and one-half million bushels of oysters and clams were removed from Long Island waters in 1895. For Canarsie, it was estimated that 139,100 bushels of oysters were harvested from initial plantings valued at \$150,000 [~4,420,000 USD in 2017]. One other Jamaica Bay site was listed, Launt Station, where 3,000 bushels of oysters were taken from an initial investment of \$1,000 [~29,500 USD in 2017]. No clam harvests were listed for Jamaica Bay. For comparison, the largest catch came from Patchogue where 495,000 bushels of oysters (and 25,000 bushels of clams) were landed. Individual harvests at Canarsie were also included; among more than 50 fishers landings ranged from 500 to 20,000 bushels. Additionally, a lengthy list was provided of small growers and dealers at Canarsie who had leased tracts from the state since August 1<sup>st</sup>. These were three-acre tracts, with a few exceptions of one or two acres each.

The “war” over the oyster and clam beds in Jamaica Bay was said to have reached the point in 1906 where the planters were arming themselves to protect their beds from poaching by the baymen ([War over Oyster Beds](#); NYT 21 Mar 1906) [“baymen is a term for men who made a living harvesting the living natural resources of the bay, including finfish, shellfish, bait, furs, etc.]. Several men had already been peppered with birdshot by the planters and one bayman was seriously injured by a gunshot wound in the leg.

A few of the oyster planters, however, were not in favor of such a radical method of protection. They engaged ex-District Attorney James Ridgway, of Brooklyn, as their counsel, and he advised them that they might recover from the city the value of the stolen shellfish. As a basis for such suits Mayor McClellan and Commissioner McAdoo were informed that the planters have property which is in need of protection. Mr. Ridgway further advised his clients when the beds are raided again to identify the thief and the quantity taken, and then begin action at once.

There also was an informal discussion of the situation before the Forest, Fish and Game Commission, at which Leander Faber, the special deputy Attorney General, presided. Attendees included ex-Judge B. Frank Wood, Shellfish Commissioner W. J. Tillotson of Canarsie and the Schemeelk brothers, who were extensive oyster planters. It developed that the baymen, who were arrested for raiding the beds were discharged in Special Sessions. Most of the planters leased the land under water for oyster beds from the State about twenty years before. Sometime around 1906, however, the title was brought in question. The Appellate Division ruled that the title of the lands under water does not vest in the State, but with the old town of Flatlands, under Colonial patents, and that the legislative grants

were not leasable. The baymen on learning this decision assumed that the oyster beds had become a sort of No Man's Land, and helped themselves extensively.

Although the men were discharged in Special Sessions under the ruling of the Appellate Division, ex-District Attorney Ridgway said the court had overlooked a decision of the Court of Appeals, that oysters and clams may be planted in public waters, and that such beds are the property of the planter, and that any one removing the shellfish from, such beds is guilty of larceny.

## Recreational Boating

*“... and her owners hope to resemble lightning.”*

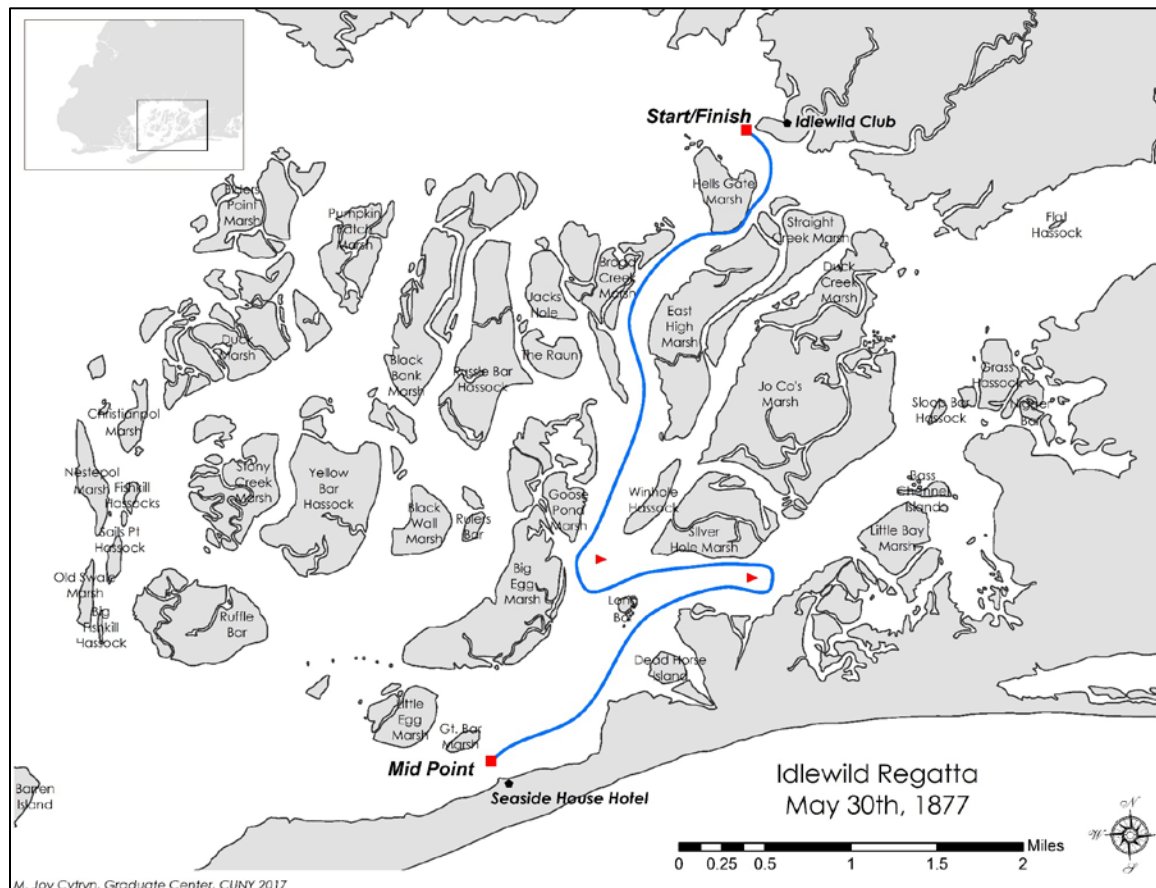
Sailing and sailboat racing were major recreational activities on Jamaica Bay in the late 1800s and early 1900s. Many sailboat owners joined clubs that organized races. After a race there could be additional merriment, such as a concert and a “hop” ([The Lottie R. Wins in Jamaica Bay](#); TS 25 Jul 1886).

The yacht races were full of pageantry for the participants and spectators, as described in this review of a day's races in 1888 ([Windward Club Races](#); TS 26 Aug 1888): “Windward Club Races A Big Fleet of Little Ones to Content in Jamaica Bay Next Sunday. The annual races of the Windward Club will be sailed over the usual ten-mile course in Jamaica Bay from Ruffle Bar Island, on Sept 2, 9, and 16. Prizes are offered for catboats owned and sailed In Jamaica Bay, with one minute per foot time allowance in two classes. Boats from 16 to 19 feet are reckoned in the second class, and boats 19 feet to 21 feet are in the first class. Conditions best two in three races. Four very handsome silver cups are offered by the club for the first and second boats in each class, the winner of the first prize in each also to win the challenge pennant now held by the Lady Glenmore and Florence, respectively. The bay offers unusual inducements for small craft and amateur sailors, and has a large number of each. The boats have a reputation of being as fast as they make 'em. Ruffle Bar Island is about the middle of Jamaica Bay, and as the contestants come from the shores around Far Rockaway, Rockaway Beach, and Canarsie, the course is looked upon as neutral water and where they can meet each other half way and tussle under the most favorable conditions. Heretofore the Canarsie fleet has carried off all the honors and prizes offered by the Windward Club until the monotony has become painful to the Rockaway both far and near. Rockaway has built new boats this year with which it proposes to dispute the Canarsie fleet's supremacy in the coming races, and pot lead or canvas will not be spared on either side of the bay.”

Furthermore, “the entries indicate a very large fleet at the starting line, and will tax even the good management of the ‘Windwards’ for which they are noted. Steamboats will leave Canarsie at 12 ½ o'clock each race day and accompany the boats over the course. The judges' boat will be the steam yacht Comet kindly placed at their disposal by the Bronson Brothers, proprietors of the Seaside House, Rockaway Beach. Owing to the size of the fleet and the probable closeness of the finish, it is requested that all visiting boats keep to leeward and from interfering with any of the contestants, all of which will by a number carried the peak.”

Upcoming races ([What is Going on Today](#); NYT 1 Sep 1886), locations where boats were moored, and information on their modification and usage were published in newspapers. Members of the Brooklyn Club had a number of their vessels at anchorage in Gowanus Bay, but Jamaica Bay also was used ([Brooklyn Club](#); NYH 18 Apr 1870). The competitiveness between and within clubs is sometimes apparent in these notices, such as in “The sloop Wrestler is reducing her spars and sails, and her owners hope to resemble lightning.”

Sailing regattas could draw large numbers of spectators, such as a competition hosted by the Idlewild Club in late May, 1877 ([Regatta of the Idlewild Club, of Jamaica](#); NYH 31 May 1877). The course ran through an imaginary line from Hell Gate [not the Hell Gate in the East River but rather the mouth of a marsh creek], to Broad Channel, then round a stakeboat at the junction of Hassock Creek, then to a stakeboat in Narrow Bay, then to a stakeboat opposite Hell Gate, then to a stakeboat off the Seaside House, and back to the starting point (Figure 13).



**Figure 13.** Idlewild Regatta, at Jamaica Bay, New York (May 30<sup>th</sup>, 1877).

Catboat races drew considerable interest. Detailed accounts of the competition in the Windward Club races were presented in the dailies (e.g., [Catboat Races in Jamaica Bay](#); TS 12 Sep 1887; [The Windward Club Races](#); TS 19 Sep 1887). The Windward Club races were conducted over a ten-mile course that began at Ruffle Bar Island near the middle of Jamaica Bay ([Windward Club Races](#); TS 26 Aug 1888). This was considered a neutral location, given that contestants were drawn from Far Rockaway, Rockaway, and Canarsie.

The Windward Club races (together with ball games at Ridgewood) were cited in a brief commentary about the growth of Sunday past-times on land and water at a cost to Sunday religious observance ([Another Holiday](#); TS 18 Sep 1888). The article stated “So as it was hereabouts, so was it elsewhere, as shown by dispatches from other cities. If the Puritans of old times had heard such news, they

would have raised their hands in pious horror.” The strong interest in the catboat races at that time was shown one day when 2,000 spectators watched the finish at the Canarsie Yacht Club among five catboat race participants ([Fast Yachts on Jamaica Bay](#); TS 5 Jul 1888). Firecrackers were set off as the boats came in and their times announced.

Rowing races also were held, sometimes with considerable publicity and interest. An upcoming double sculling [two rowers in one scull] contest was announced in August 1885 ([Hanian and Lee Go to Rockaway](#); TS 19 Aug 1885): Hanian and Lee will on Saturday row a race of three miles in Jamaica Bay for a purse of \$1000, \$800 [~20,600 USD in 2017] to go the winner and \$200 [~5150 USD in 2017] to the loser. Both men went down to the Seaside Hotel yesterday to get ready for the struggle. They met in Long Island City and superintended the loading of their shells on a baggage car. President Oakley had his private car brought out, and this, with a second parlor car were loaded with sporting men and friends who had been invited to a dinner at the Seaside Hotel. A brass band was on the train. At 11½ the train went away at double speed leaving behind it a trail of music and laughter. Another double sculling race the next month had a total prize of \$2500 [~64,400 USD in 2017], with \$1000 [~25,800 USD in 2017] to the winning pair ([The Coming Double Scull Race](#); TS 3 Sep 1885). The final race followed a trial heat the previous day.

Later, high speed power boat races were held on Jamaica Bay. In 1919, in a race held by the Rockaway Park Yacht Club only two of six contestants finished, the others breaking down ([Viking Wins Race](#); NYT 11 Aug 1919).

Theft of vessels in Jamaica Bay could be a problem. Several were stolen in one night, being cut from their moorings one night at Rockaway, with one recovered in Sheepshead Bay the next morning ([Boat Thieves in Jamaica Bay](#); NYT 11 Aug 1897).

Sailboats and motorcraft were also organized as large nautical parades. In July 1913, some 350 vessels assembled in Jamaica Bay for the first annual parade of the Waterway League of Greater New York and Long Island ([Great Boat Fleet on Parade](#); TS 28 Jul 1913). Squadrons came from as far as Newark Bay and Sandy Hook, NJ. The boats weighed anchor off the Jamaica Bay Yacht Club at 10 o'clock in the morning, while thousands watched from the north shore of Rockaway Beach. The fleet sailed in good order through the bay, visiting the Belle Harbor Yacht Club, the Bergen Beach Yacht Club, Diamond Yacht Club, Canarsie Yacht Club, and Old Mill Yacht Club, before disbanding off Rockaway Point.

Yacht Clubs Operating in Jamaica Bay 1870-1920 (Possibly incomplete. Source: collected by Authors):

1. Atlantic Yacht Club, Gravesend Bay, founded in 1866. Splintered from the Brooklyn Yacht Club. Originally located on Gowanus Bay. Moved to Jamaica Bay in the early 1880s.
2. Bayswater Yacht Club, Far Rockaway, NY, founded in 1889.
3. Belle Harbor Yacht Club, Belle Harbor, Rockaway Beach, founded in 1891, continues today. Splintered off from the Jamaica Bay Yacht Club <https://www.thebhyc.com/about-the-belle-harbor-yacht-club/club-history>.

4. Bergen Beach Yacht Club, Brooklyn, NY, Bergen Beach—Mill Basin on East Mill Basin.
5. Broad Channel Yacht Club—Channel Road, Far Rockaway.
6. Brooklyn Yacht Club, founded in 1857, first building was on Court Street, later moved to Bay Ridge.
7. Canarsie Yacht Club—founded in 1886.
8. Cedarhurst Club – Cedarhurst – Lawrence, eastern Jamaica Bay.
9. Gravesend Yacht Club, founded in 1893.
10. Grove Club, Wavecrest, Far Rockaway.
11. Hudson River Yacht Club—The Hudson River Yacht Club is now located at the Foot of Avenue U and Bergen Avenue.
12. Idlewild Yacht Club- early mention—1870s.
13. Jamaica Bay Yacht Club—long established. Hollands (Holland Station, current Broad Channel; Rockaway Beach, Long Island.
14. Knickerbocker Yacht Club, Port Morris, NY, founded in 1874 in Harlem River.
15. Old Mill Yacht Club—The Old Mill Yacht Club was organized in 1894 on Jamaica Bay. Charter of incorporation was issued by the State of New York on September 17th, 1896.
16. Rockaway Point Yacht Club.
17. Sheepshead Bay Yacht Club, established 1908; still exists.
18. Windward Yacht Club.

## Beachgoing & Resorts

*“ABSOLUTE ABSENCE OF CONVENTIONALITY AND FREEDOM FROM FASHION” –  
Newspaper headline, 1883*

Grand hotels were an important part of Jamaica Bay history and they were being built and visited during the latter 1800s (Figures 14 & 15). The Rockaway Beach Improvement Company possessed 119 acres on Jamaica Bay that, for instance, included a huge hotel (with a footprint of 1184 ft. by 275 ft.). The property overall included many other buildings, servant areas, and bathing pavilions ([The Rockaway Company's Debts](#); NYT 1 Sep 1881). The train provided a direct line to Rockaway Beach hotels ([Direct Line to Rockaway Beach](#); NYT 20 Jun 1883). Departures to Jamaica Bay from several locations toward New York City left every thirty minutes from point of origin to the beach, and hourly on return with the last train at 7:30pm. The season extended from April until October with the peak from late June through the summer ([Rockaway Beach](#); TS 2 Oct 1880) [fishing continued until at least early October, beyond swimming season].



**Figure 14.** New Colossal Hotel, 1889 Rockaway Beach, New York. (source: More Old Rockaway Photos <http://www.farrockaway.com/carol/morp1800sRockaway.html>)



COOLEST PLACE IN GREATER  
NEW YORK

# HOTEL HOWARD

HOWARD LANDING  
Jamaica Bay, Long Island

AMERICAN AND EUROPEAN PLANS  
AT CITY PRICES

All Modern Improvements, Electric Lights, and a  
Children's Playground of 200 Acres, including  
Baseball.

Bathing and Boating. Boats to Let.  
Bait Furnished.

THE FISHERMAN'S PARADISE

L. A. W.  
FISH DINNERS TO OUTING PARTIES A SPECIALTY

**To Cyclers:** We are officially an L. A. W. Hotel, eleven miles from the Fountain, and can be reached  
by way of Glenmore Avenue and South Road, or Jamaica Avenue and Woodhaven  
Avenue (Lane) to our 2-mile cycle path at Aqueduct Railroad Station to Hotel.

FREE FERRY FROM HOWARD LANDING  
(Flag Station), where Brooklyn Union L. trains pass frequently; also, L. I. R. R. trains from Long Island  
City and Flatbush Avenue stop if conductor is notified.

OPEN ALL WINTER

**Figure 15.** Advertisement for Hotel Howard, New York, 1899. (source:  
[http://www.farrockaway.com/carol/morpHotels\\_Inns3.html](http://www.farrockaway.com/carol/morpHotels_Inns3.html))

Time at the beach was a like a carnival of activities. One account of “Yesterday at the Rockaway” captured the moment and feeling: “The hotel people at Rockaway Beach expected a good day's business yesterday. All the hotels, pavilions and saloons bore a gala day appearance. While aproned waiters were at tables, ready to serve the expected guests. But the stiff northeast gale which blew across Jamaica Bay was not a great inducement for city folks to leave their homes. Nevertheless about a thousand people were attracted to the beach by the clear sky. The steamer Americus, carrying a large number of people from this city and Brooklyn, made a morning and afternoon trip. A band of music was on board and the excursionists were carefully protected from the cold breeze. The Long Island Railroad carried out a fair number. A few coming on the railroad, got off at Far Rockaway, but they took the next train for the beach. Many of the visitors were ladies. Many people walked to the different hotels, noticing the improvements. The saloons were well patronized, some of them doing a fair day's business. All the hotels at the beach and few at Far Rockaway have opened their bars and dining rooms. On the 1st of June they expect to fill up, and by the 20<sup>th</sup> of June the annual rush begins.” ([Yesterday at Rockaway](#); NYH 13 May 1878).

Rockaway's ocean surf was popular with beachgoers according to an article in June 1888 ([On Rockaway's Sands](#); TEW 25 Jun 1888). Though its focus was on railroad transportation problems to this area because of trestle work, it noted that 40,000 people had come to the beach to stroll and enjoy its unsurpassed bathing facilities,” while being refreshed by “old ocean.” Many also visited the numerous resorts, for amusement or refreshment. The writer also observed that “the beach this

season has taken a new hold of popular favor.” Many arrived by sea on the Grand Republic, the Sylvester, and the Hancox, which made many trips that day. One large contingent came from distant Newark, NJ, on the steamer Magenta.

A deeper look at recreation in Jamaica Bay was provided in an account of a day at the beach ([A Sunday at Rockaway](#); TEW 16 Jul 1888). Casual fun, and not formality, was emphasized. “When you wish to see the broad spirit of democracy applied to pleasure seeking go to Rockaway on a Sunday. For absolute absence of conventionality and freedom from fashion that strip of sea washed sand stands pre-eminent. Formality and exclusiveness have yet to find a foothold upon the beach, and the man who wants to study human nature will there find a fertile held of action.”

It continues “The Individual who would go to Rockaway to pose in purple and fine linen would doubtless discover that his elegant raiment counted for little, as the people there are too much immersed in their own enjoyment to pay any attention to an exhibition of personal adornment. Repose is not popular at Rockaway; there is, apparently, a pervading impression that the time is passing too quickly, and that as much fun as possible must be extracted from the fleeting hours This is not fashionable to be sure, but the people have an old-fashioned notion that the sea side is a place for pleasure and not for form.”

Beachgoers were said to come by the thousands, from Brooklyn, New York, and New Jersey, all bringing “. . . a large reserve fund of American good humor and a determination to make merry while they can . . .” There were many options for enjoyment: “One can bathe In the breakers of the Atlantic or swim in the still waters of Jamaica Bay; he can sail, row or fish, as fancy may dictate; he can catch crabs or eat them; he can dance with a pretty girl or make love while strolling along the sands. But he cannot take in all the sights in one visit, for they are too numerous.”

It was said that no other resort on the coast can present such a picture as Rockaway on a Sunday afternoon. A visitor approaching by boat or rail gained a view of the bay dotted with the small craft of fishermen, yachtsmen, and oarsmen. Along the bay side shore could be seen various hostelryes, boat house, and floats, and an occasional grove where “basket parties” were welcome. Upon arrival it was a short walk to the ocean side, but it took time to make the short journey because along the entire length of the avenue there were “devices to excite the curiosity and induce the expenditure of money,” that were “almost as varied as they were numerous.” Even the most stolid or blasé spectator was forced to stop occasionally.

Many considered the beach at Rockaway the finest in the world for bathing and that it was healthful for children (Figure 16). “The large number of bathers is a matter for remark. At certain points the water is almost as animated as the beach. Men, women and children are seemingly mingled in hopeless confusion among the waves, but closer inspection shows that there is no clashing of interests whatever. All are enjoying themselves with a zest that is characteristic of the place, and the crowds on the sands look on approvingly. Good humor prevails everywhere, and there is a sort of go-as-you-please air which is eloquent of the unconventionality of the resort. Liberty, however, seldom degenerates into license. In the pursuit of pleasure each seems to be so occupied in his own affair that he interferes with no one else. Indeed, the motto of the multitude seems to be ‘Eat, drink and be

merry, for tomorrow we work.’ People at Rockaway don’t think of dying, but as most of them are busily occupied for six days in the week they make the most of the opportunities to enjoy themselves on the seventh.”



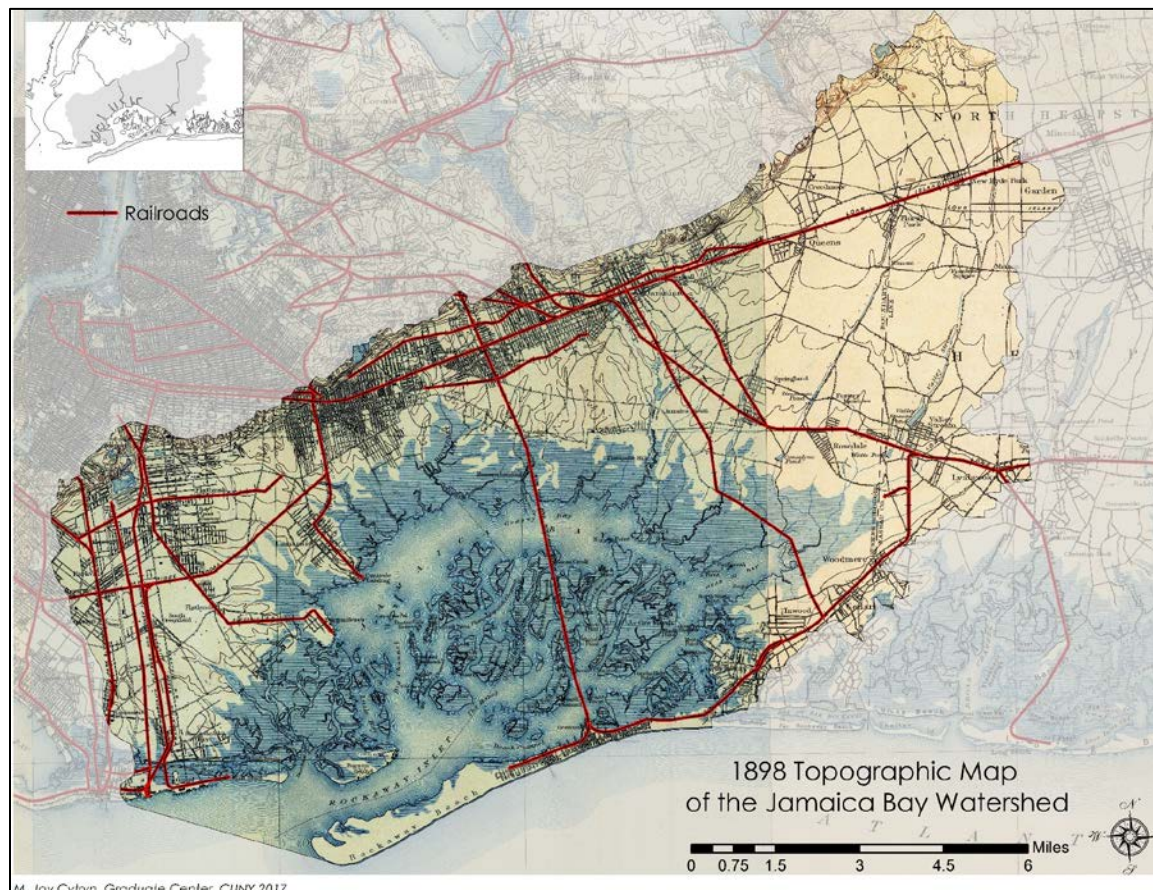
**Figure 16.** Children who stay in the city—Children who go to Rockaway, Advertising Card, c. 1900. (source: Library of Congress Prints and Photographs Division Washington, D.C. 20540 USA <http://www.loc.gov/pictures/resource/cph.3g02287/>)

The article stated that on the July Sunday in mention a police chief who made inquiries with the boat and rail operators said that there were no fewer than 55,000 people at the resort that day. All the well-known hotels facing the sea did a thriving business. Remsen Avenue was said to be like a fair, with its merry-go-rounds, rifle galleries, museums, switchback railroads, minstrel concerts, dance halls and Aunt Sallies [Aunt Sally is a traditional English game usually played in pub gardens and fairgrounds that dates back to the 17th Century in which players throw sticks or battens at a model of an old woman's head]. At Murray & Valentine’s new pavilion 375 couples danced at once. An athlete pulled himself to the roof of a building by holding on to a piece of leather with his teeth. At the Casino a clown swallowed fire and did “many other astonishing things.” Hundreds of people also swam on the bay side, where they could watch a sailing match held by the Canarsie Yacht Club.

A visitor to Rockaway in 1881 noted improvements in the amenities there ([Sunday Out of Town](#); NYT 6 Jun 1881). Greenery had been planted near hotels where there had been just barren sand. And a number of cottages had been built on the east end of the peninsula [what became the Breezy Point community]. Service on train lines was increased, with the line between Rockaway and Far Rockaway expected to have trains in both directions every few minutes. Nonetheless, the growing



crowds pushed the transit systems to capacity. Referring to the train schedule between Rockaway Beach and Fishing Grounds, it was stated that “Starting on 17 April of 1881, the train between Rockaway Beach and known ground would be several times a day” ([Rockaway Beach Excursions](#); TS 15 Apr 1881). The railroad across Jamaica Bay (Figure 17) significantly changed the accessibility of the Rockaways for summer recreation day users. The increased access was spurring investments made to develop a grand hotel on the Rockaways and summer cottages are being built ([Sunday Out of Town](#); NYT 6 Jun 1881).



**Figure 17.** 1898 topographic map of the Jamaica Bay watershed, New York.

In advance of the peak summer season of 1888 Rockaway Beach railroad company had been busily repairing the trestle over Jamaica Bay. The company would soon go up to its summer schedule with 130 trains to be run to and from Rockaway on Sundays ([Sunday Pleasure Seekers](#); TS 2 Jul 1888). On one summer day 40,000 people visited Rockaway Beach, however, ongoing repairs caused significant transportation delays which was problematic with over packed train cars during the hot summer day ([On Rockaway's Sands](#); TEW 25 Jun 1888). People suffered in the heat.

One writer waxed poetic about the summer charms of Far Rockaway ([Hot Weather Opportunities](#); TS 28 Jun 1891): HOT WEATHER OPPORTUNITIES. Places Near New York Where One Can Keep Cool and be Happy.

“Try Far Rockaway. Old humidity has but little show out there, and the mercury, though it soars to quite a respectable height of an afternoon, invariably takes a serious tumble by nightfall. Last Tuesday, when humidity held New York in its clutches, it looked for a bit that he world score a point or two at Far Rockaway. Neptune’s breezes, usually at hand to vanquish, had betaken themselves elsewhere, and success seemed easy. To the rescue, however, came Jamaica Bay, sending along a steady wind which immediately changed the complexion of affairs. By sunset Father Ocean, who had gotten wind of the enemy’s presence, hurried along such a prodigal supply of his matchless oxygen that the hostile besieger was completely routed. Blinds slammed, canvas flapped, and the wind blew almost a gale along the piazzas, through the windows, the transoms, and the corridors of the Tack-a-pou-sha Hotel. Next morning the atmosphere was as clear as a bell. Far, far out to sea the eye could reach; the inlet sparkled like a myriad of gems under the sun’s rays, and each characteristic of the countless craft rocking its waters could easily be noted from the mainland. The strip of sand separating the inlet from the ocean seemed scarcely more than a thread, so close appeared the great, dashing, white-crested waves.”

There was an odd occurrence in 1910 when the fish of Jamaica Bay were said to get the “jags” after a raid on alcohol in 20 Jamaica Bay hotels resulted in many thousands of gallons of whisky, wines, and liquors being dumped into the bay ([Jamaica Bay Fish Get “Jags”](#); CC 5 Mar 1910) [No reason was stated but this action may have stemmed from Sunday “Blue Laws.”]. It was reported that “Many of the fish apparently succumbed to the unusual temptation and enjoyed hilarious sprees, as hundreds of them were seen reeling around in the liquor-laden water or leaping out and otherwise comporting themselves in shocking disregard of the conventions and usages of good piscatorial society.”

## Extreme Weather

*“Jamaica Bay was lined with capsized boats.”*

Various storms became significant events in the bay during the study period. Without warning systems or the capacity to predict extreme weather, damage was often associated with squalls or other similar events. The storms recorded were mostly summer thunderstorms, or nor-easter type storms. Newspaper reports noted the impacts of extreme weather. For example, a large hailstorm originating in Paterson, New Jersey and ending in Jamaica Bay caused severe damage to property in New York City. The description indicates it may have been a tornado ([Scientific Convention at Cleveland, Ohio](#); TNYT 28 Jul 1853).

The storms typically seemed to cause substantial widespread but generally light to moderate damage. Losses seemed to be most significant on boats in the bay and grand hotels in the area, especially on the Rockaways, where storms seemed to be most significant and frequent. Storms would occasionally undercut the foundation of hotels and other structures built on sands or marshland. For example an 1885 storm, considered one of the most severe events in some time, swept over Jamaica Bay. Miller’s Hotel at Broad Channel was in danger of falling because the land underneath sank at least a foot ([A Great Storm](#); BDE 16 Feb 1885).

In 1887, a storm swept across Jamaica Bay and caused a large amount of damage to the area ([A Wild Time At Rockaway Beach](#); TS 18 Jul 1887). A massive September 1889 storm (possibly a tropical storm or hurricane) caused enormous loss of property, submerging the West End, Manhattan, and Oriental hotels and the railway running between Rockaway Beach, Arverne and Far Rockaway. The bridge connecting Arverne and Rockaway Beach was swept away and all small islands in Jamaica Bay were covered with water ([Wind and Tide](#); LADH 11 Sep 1889).

In 1893, a storm left a swath of capsized boats along Jamaica Bay. The storm also did some significant damage to the hotels on the Rockaways ([Storm Breaks Up a Ball](#); TS 25 Aug 1893). In 1912, a severe rainstorm overturned a boat at Hasset’s Creek and a man died ([Lost in Jamaica Bay](#); TS 25 Mar 1912).

Extreme frosts or other cold events were also a weather hazard. On 2 February 1881, Jamaica Bay was described as one vast sheet of ice and that there was fear that great damage would be done to the oysters in areas of low water; one frozen oyster bed was estimated as a \$5,000 loss [~121,000 USD in 2017]. The railroad across Jamaica Bay was also in danger from ice carrying off its pilings ([Extreme Cold](#); BDE 2 Feb 1881). In 1887, three hunters in boats and later that day two other boating men were killed when their skiff was hit and trapped by ice blocks in the middle of the bay, resulting in their freezing to death ([Probably Frozen to Death](#); ECH 7 Jan 1887).

A mid-April 1894 snowstorm that was likened to the Great Blizzard of 1888 did considerable damage to the oyster huts and boathouses along Jamaica Bay ([Like the Great Blizzard](#); TS 12 Apr 1894). It also flooded the railroad tracks between Arverne and Far Rockaway were flooded; men were posted along it for the midnight ebb tide to see if the flow would carry away Norton’s Bridge

and undermine the railroad. And the sloop William Scott was blown to and pounded against the railroad trestle at Rockaway Beach; but the “terrific gale, blinding snow, and heavy waves” prevented the lifesaving crew from Hammel’s Station from launching their lifeboat to rescue it. Another article in the same day’s newspaper noted that the season would quickly change and that there would be 600 boats heading out on the water in the next month in advance of the season.



## Dangerous Waters

*“the man ran from the shore with the shark following fast . . .”*

Sailing and angling could be dangerous, with drownings and other casualties both from storms and boating accidents. Dozens of such incidents occurred over the decades. Often several articles per year appeared about individuals being drowned or otherwise found dead in the bay. A small sampling follows.

In 1874, during a severe thunderstorm, a fishing party of half a dozen were trolling for bluefish in Jamaica Bay when lightning struck the mast of the boat, shivering it to splinters and burning a number of holes in the sail ([Long Island](#); NYH 20 Jul 1874). Five of the party was seeking refuge in the forecastle but only one was affected by the strike.

In May 1880, a party of ten was trolling for bluefish near Rockaway Inlet ([Drowned in Jamaica Bay](#); TS 31 May 1880). Twenty-one year old Louis Mallette hooked an especially large bluefish and as he attempted to land the fish, fell overboard. The yacht, which was traveling at 8 knots, was immediately put about while Mr. Mallette struggled to stay afloat. Unfortunately, before they could reach him he sank. Twenty minutes later, while pulling up the lines they had left out in the rescue attempt one man exclaimed “My God! I believe he is on my line!” In fact, he was attached to several lines with which he had grabbed with a death grip so strong that it was difficult to release.

Another mishap occurred in 1890. Three men went out from Canarsie at night to go fishing through the early morning and into the next day but they went missing after an overnight gale passed through ([Drowned in Jamaica Bay](#); TS 10 Jun 1890). Their empty boat and then their bodies were found over the next several days. Incidents involving ferry mishaps and train accidents also were highlighted. Excursion boats occasionally were hit by squalls. In 1887, one such boat by the Rockaway Inlet was capsized with 27 drowned. (Twenty-Seven Drowned; TS 11 Jul 1887).

However, with some accidents the victims only suffered—without perishing. “SKEETER KILLERS MAROONED IN ICE” was a column heading in a newspaper article from March 1920 ([Skeeter Killers Marooned in Ice](#); NYH 17 Mar 1920). Mosquito experts had been sent to clear dead clams stuck in Jamaica Bay. Fifteen mosquito experts of the Department of Health started from Canarsie for Rockaway Point under orders from the Commissioner to clear away the many tons of dead clams which were thrown up on the beach by recent storms. But the small boat in which they sailed became stuck in ice jams in Jamaica Bay and the squad was marooned almost the entire day. The boat was damaged by the heavy ice and the men were kept busy bailing. Eventually they all waded to shore.

In [Marooned Angler Yells 7 Hours Before His Cries Bring Help](#); BDE 27 Sep 1933), an unfortunate fisherman spent much of the day with his boat stuck on a sandbar while also having a fish hook stuck in his palm. Though crying for help for hours it wasn’t until the quiet of the evening that residents of East Hamilton Beach heard him and called for the Police Emergency squad to rescue him.

The occasional shark attack also was recorded. In August of 1884, for example, a man was clamming in several feet of water when he was attacked by a seven-foot shark. It was reported that the man ran

from the shore with the shark following fast and that it almost grounded itself. This happened during a week when several shark attacks were reported in the bay. Occasionally the dark fins of the porpoises were mistaken for sharks and resulted in humorous fish tales ([Fishing in Jamaica Bay](#); TS 19 Jul 1885).

Hunting in Jamaica Bay could be dangerous, with people dying from accidents and storms. Three duck hunters in a cockleshell craft were on the bay when a sudden gale struck. Numbers of decoys were found but after one week the men were assumed lost ([Find Decoy Ducks of Lost Hunters](#); BDE 20 Nov 1921). However, the body of a man who perished while duck hunting in November 1921 was found in Inwood the following May ([Find Hunter's Body in Jamaica Bay](#); BDE 11 May 1922). When three boys were hunting seagulls an unintentional discharge struck one of the boys in the neck and killed him ([Boy shot and killed while hunting gulls](#); BDE 16 Dec 1945).

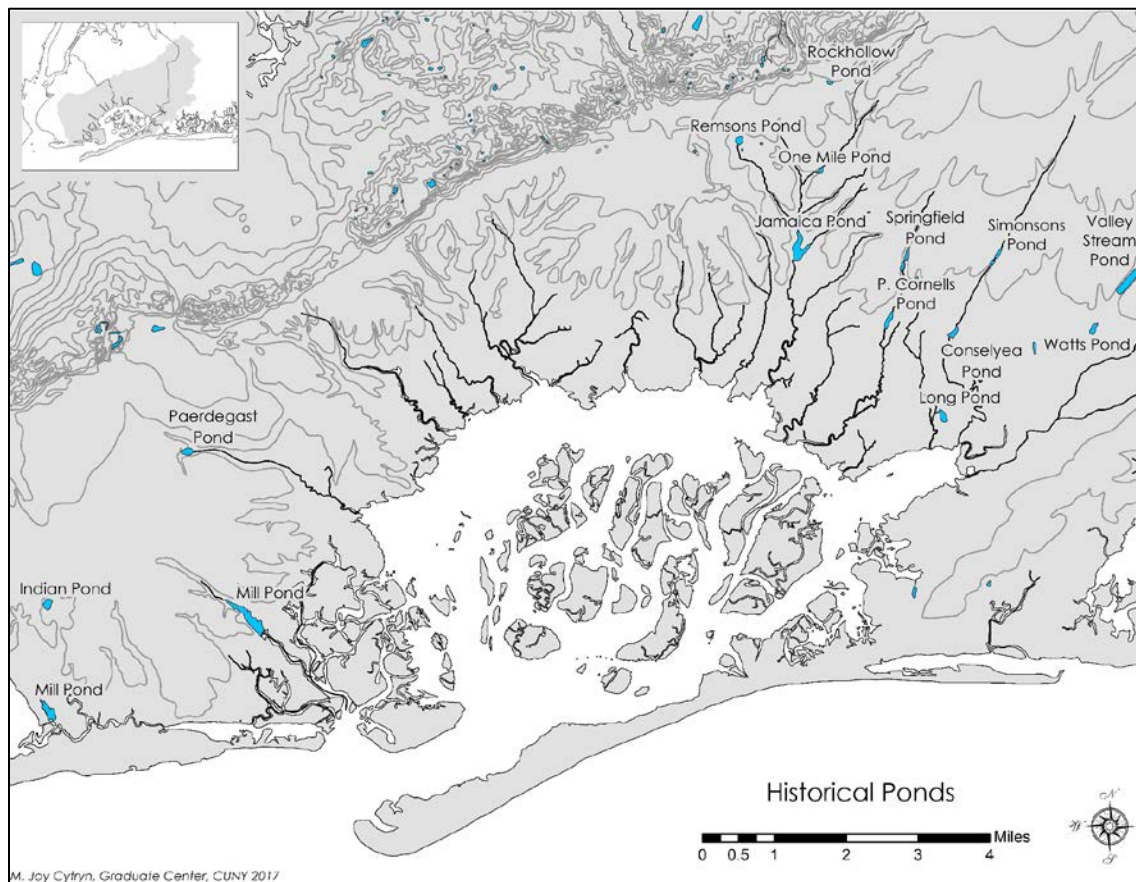
Many more articles describing accidents and drownings were found. A sampling includes: [Caution to Bathers](#) (NYH 20 Jun 1870), [Long Island](#) (NYT 5 May 1883), [Long Island](#) (NYT 2 Jun 1883), [Drowned while Bathing](#) (NYT 11 Jun 1884), [Drowned in Local Waters](#) (NYT 30 Jun 1884), [Drowned in Jamaica Bay](#) (NYT 10 Jul 1886), [Two men drowned](#); NYT 25 Nov 1901, [Mystery In Drowning](#) (NYT 11 Jul 1904); [Drowns in Jamaica Bay](#) (NYT 14 May 1906); [Fisherman Drowned](#) (NYT 4 Nov 1908).

## Fresh Waters - Distribution & Contamination

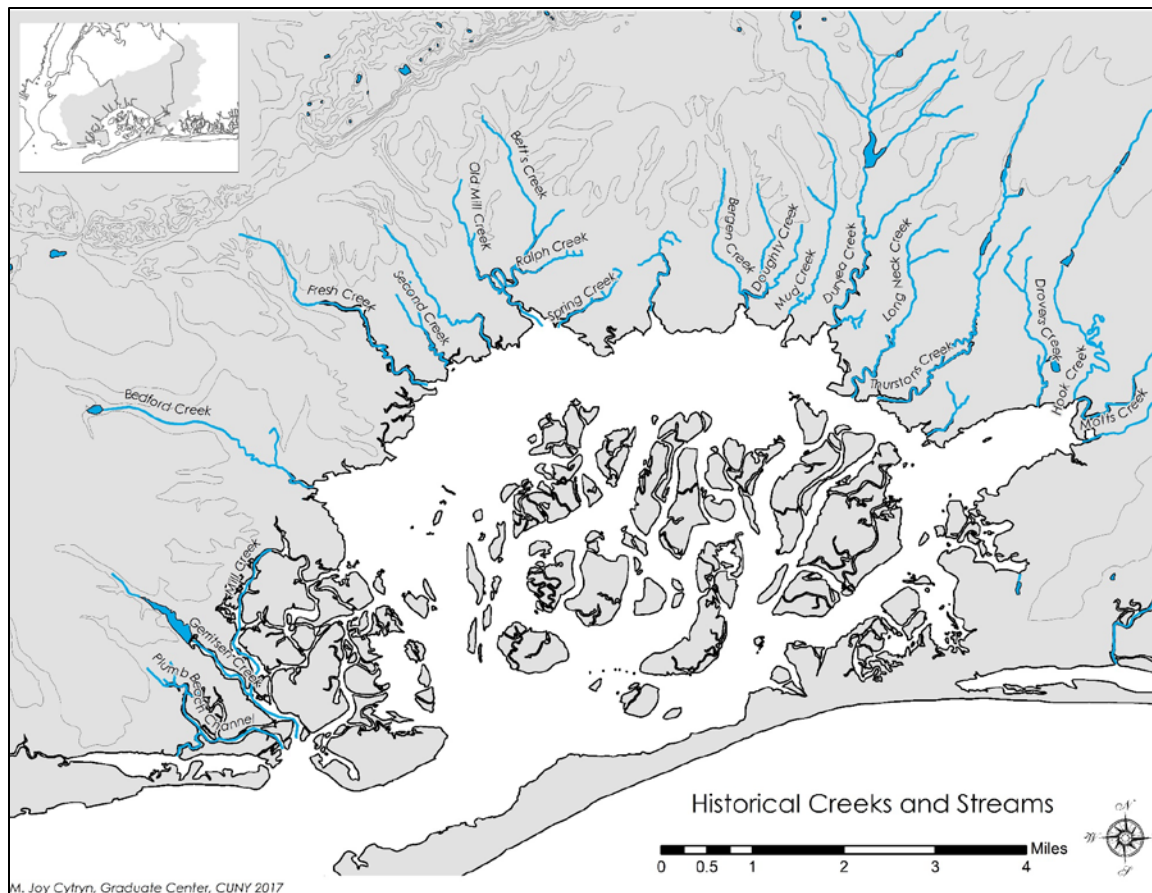
*“Several dead cats emphasize the seriousness of the affair.”*

A lengthy exposé in *The World* on March 3, 1894 ([Brooklyn's Foul Water](#); TEW 3 Mar 1894) had six attention-grabbing subheadlines: “Brooklyn's Foul Water,” “Drainage from Cemeteries and Cesspools in the Water-shed,” “Rankest Kind of Pollution,” “Graveyards on the Banks of Some of the Principal Ponds and Creeks,” “Streams Dark with Sewage,” and “Urgent Necessity for the Immediate Purification of the Whole System.” It claimed that one-million Brooklynites were unaware that their drinking water is largely composed of the drainage of cemeteries, the refuse of factories and, in some cases, the sewage of towns. So daunting was the task of ameliorating these conditions that Brooklyn's “machine administration” of the previous eight years did not make a single attempt to address it.

The reporter visited water bodies in Jamaica and Springfield (Figures 18 & 19) that provide water to Brooklyn, finding them so filthy that “any cleanly person would not even wash a wagon with water from the ponds.” Local residents recognized the health threat posed by these waters and instead preferred to draw water from wells. However, the water diverted to Brooklyn was filtered to some degree on its passage through sandy soils.



**Figure 18.** Historical ponds of Jamaica Bay, New York.



**Figure 19.** Historical creeks and streams of Jamaica Bay, New York.

The first water body described was Remson's Pond in Jamaica. Remson's Pond was four to six acres in size and located at sloping terrain near Jamaica Station. "From a thousand hidden pores in these banks the filth of the town filters through to the water of the pond." The pond also was situated 250 feet away and 75 feet below Prospect Cemetery. During heavy rainstorms, hundreds of rivulets wash down from the graveyard directly into the pond, and at all times, small streams ooze into a larger stream that feeds the pond, telling a tale that is "startling to a student of hygiene." Houses on the banks of the pond also contributed to the "conglomeration of nastiness." Hundreds of cesspools are found at a small community near the pond, and some sewers led into it. The stream also flowed past manure piles, ash heaps, a chicken coop, and a pigsty. Another source of pollution was a sewer that connected a stream to a gas works, which oozed grease and oil.

After touring Remson's Pond and its watershed the reporter interviewed residents. The reporter was told that formerly, dead animals were carried down to the pond through the sewers but that recently, a man had been hired to watch the sewage discharges and to remove any animal corpses.

Between Remson's Pond and Jamaica Pond, various water courses could be seen, all integrated with sewage lines. The water of Jamaica Pond was considered to be cleaner than that of Remson's Pond because the connecting flow was somewhat filtered through a sandy bottom; however, the reporter

noted that the reservoir must still contain some of the poisonous substances. Jamaica Reservoir was about forty acres and surrounded by big swamps that received the flows of “a long line of straggling streams” originating in Jamaica, three miles away. The reporter added that “Between Remson’s Pond and the big Jamaica reservoir [Jamaica Pond] little of the drainage of the 25,000 inhabitants of the town escapes the water consumed by Brooklynites.” Another foul smelling stream flowed west of the Rockaway Road and discharged to the south end of the reservoir.

The reporter noted that below Jamaica Park the next location that Brooklyn drew water is Baisley’s Station, where it was pumped from wells supplied by the same sources that flow into the reservoir. Nonetheless, he observed that it is very cold and of good flavor, though it contained unidentified white filaments also seen in higher densities in the reservoir water.

The next site visited was Springfield Pond, described as a long oyster-shaped affair on the line of the Long Island Railroad. He added that absolutely nothing in the Brooklyn watershed could compare with the uncleanness of the north end of the pond. Though there was no cemetery drainage, the foulness of the house drainage was frightful. Sources included back yards of manure, chicken coops, piggeries, cow sheds, and water closets in abundance, and a few fertilizing agencies.

Back yards lined the north end of the pond for a mile. From these, solid refuse was dumped into its waters while liquid manure drained through short ditches. Cesspools in the town were simply unlined holes in the ground. So densely arrayed were these “disease-breeding pit holes” that five minutes after a heavy rainstorm the streets and roads of the town were almost thoroughly dried. However, the porous soil drained water from these holes to the pond, which rose visibly immediately after a rainfall.

The reporter stated that “It is nauseating even to look at the water of Springfield Pond at this point.” And that “Several dead cats emphasize the seriousness of the affair.” However, a resident told him that the condition was not now to be compared with the appearance of the north end of the pond in the hot weather, when dead horses and cows are added to the putrid mass in the swamp. The residents of Springfield would not drink water from Springfield Pond, which nonetheless was pumped out for other Brooklynites.

The outlet of Springfield Pond flowed through “heavily timbered country” but received more effluent from ditches behind homes. South of the pumping station the water flowed into Cornell’s Pond. Water from the pond was routed to a feed well and then to pumps where it appears to have mixed with clean spring water. Cornell’s Pond was said to be famous for its fresh eels.

Two miles southeast of Springfield Pond was Brookfield Reservoir. This water body, located on the Merrick Plank Road, had a watershed of about nine square miles (~5,760 acres). Though relatively clean, it carried the runoff from farms and residences, an effect “perceptible to the palate.”

About a mile south of Brookfield lays Conselyea’s Pond. The waters of this pond were particularly good because there was no contaminated drainage in the vicinity. A nearby pond that also contributed fairly pure drinking water via driven wells was Clear Stream Reservoir.



Farther east on Merrick Plank Road was 73-acre Valley Stream Reservoir. Its north end was said to be severely contaminated that in hot weather “reeks with filth.” Nonetheless, the main part of the pond held clear water and its narrow sections were “absolutely alive with frogs” which were caught and sold to New York marketmen.

The reporter then noted that the waters between Jamaica and Brooklyn drew from the cesspools and cemeteries of East New York and Ridgewood. Tests of Spring Creek had shown clearly the contamination of the stream; however, that the water passed through a filter was deemed by authorities as sufficient treatment despite its water always being regarded as a “public menace.” Much debris was removed from the weir daily and the reporter concluded that an epidemic would thrive on the substance furnished by this stream. On the line of the Merrick Plank Road, on the outskirts of Jamaica, the next pond was even filthier than Spring Creek. It was known as One Mile Pond and was supplied by foul, sluggish brooks.

At Ridgewood, the water was obtained from a series of ponds, brooks, spring, and wells. Conduits led to the reservoirs from the east, the waters originating from the pumping stations known as Smith’s, Watt’s, Clear Stream, Forest Stream, Springfield, Jamaica Park, Baisley’s, and Spring Creek, and from there it was distributed to the inhabitants of Brooklyn. Although it was believed that by the time the waters reached Ridgewood all the contaminants were filtered out, additional sewage and other pollutants entered Brooklyn’s drinking water after it was sent from Ridgewood, largely from cemeteries on higher ground.

In order to make a “fair test” of these waters a reporter carefully bottled samples from the foulest streams flowing into the reservoirs and ponds and also from its destination in Brooklyn. In all cases except for the latter, thick sediment settled at the bottom of the bottle, while the water “reeked with filth.” Even then the water had a soapy or muddy hue. “Not a single sample of the filthy water could be obtained which was free from ‘wigglers,’ oil and sediment. After the samples had been bottled for a few hours the water gave forth a nauseating odor that was suggestive of Newtown Creek.”

[Our Economical Sewers](#) (BDE 31 Jul 1898) contrasts the extensive development, but low amount of funding, of sewers in Brooklyn compared with the other boroughs. At that time, Brooklyn had 611 miles of sewers; whereas there were only 49 in Richmond, 120 in Queens, 115.5 in the Bronx, and 483 in Manhattan. Yet, for example, the Bronx was appropriated \$70,000 [~2,090,000 USD in 2017] while Brooklyn was to receive \$50,000 [~1,490,000 USD in 2017].

The article also described in detail the workings of the sewage treatment plant for the 26<sup>th</sup> Ward (New Lots neighborhood), which was obligated to avoid interfering with fishing industries in Jamaica Bay. Briefly, 65 miles of main and lateral lines gather sewage from the 3,200 acre community. Two main brick sewers 11 feet in diameter fed a twin sewer 187-feet long, after which it flowed into a trap basin. Sewage was then drawn from the bottom of this basin and fed into open ducts 385-feet long in a building where it was treated with lime, per-chloride of iron, and chlorine gas. From there it was pumped into another tank and discharged to the bay in an outflow sewer. The plant’s total capacity was 10 million gallons per 24 hours. However, at the time of publication the plant was handling only 1,250,000 gallons per day, but working only eight hours.

By 1899, it was recognized that the circulation of Flatlands Bay was insufficient to handle the sewage discharged into it from Flatbush ([News from the Suburbs](#); BDE 2 Jun 1899).

Recommendations by the Metropolitan Sewerage Commission were sent to Mayor Gaynor in March 1912 ([Disposal of Sewage](#); TS 4 Mar 1912). This second in the series of reports prescribed that the city be divided into four drainage areas, each of which would include several points where sewage would be collected and treated so that the residue would be discharged into the harbor or ocean without defilement or danger to health. These four areas were called the Jamaica Bay division; the Richmond division; the lower Hudson River, lower East River and bay division; and the upper East River and Harlem division.

The commission recommended that as far as possible the collecting points should be near the ocean or Long Island Sound, or close to the unobstructed flow in deep tidal channels. Points of outlet for untreated sewage should never be situated in shallow, stagnant or remote parts of the harbor. They added that at any outfall where facilities are lacking for the disposal of sewage through dilution by freely flowing tidal water, compensation should be made by a higher degree of treatment for the removal of impurities before the sewage is discharged.

In March 1921, the New York Herald published a letter to the editor complaining of practices that fouled Jamaica Bay waters ([Oil Alarms an Angler](#); NYH 14 Mar 1921): “If it is true that the Government is cleaning oil tankers in Jamaica Bay it means that if all the anglers clubs and fishing boat captains do not take steps to stop the practice right away we will not have a fish to catch that fall.” And further “Already there are many dead fish floating around the lead works in Flatlands Bay. If it keeps up we might as well start fishing in another state.” By Ervwin J. Wall.

Jamaica Bay’s water quality remained a major concern in the 1920’s. In [Wynne Condemns Jamaica Bay as Bathing Menace](#) (BDE 1 Aug 1929) the Commissioner of Health warned the public against swimming in any part of the bay because of sewage contamination. This followed a statement by the Howard Beach Association that the commissioner earlier discriminated against Howard Beach by warning of typhoid and eye infections from its immediate waters. Test results from the region of Howard and Hamilton Beaches showed a high 200 colonies of colon bacilli in 200 cubic centimeters of water.

In 1934 ([Plan to End Bay Pollution](#); BDE 8 Dec 1934), a proposal for a new way of treating sewage was discussed by the Jamaica Bay Protective Committee and the Deputy Sanitation Commissioner. The method is called the Travers Marl System and it is based on the placement of compounds at sewage outlets in the proportions of 65% marl, 30% slaked lime, and 5% ferrous oxide. Experiments to assess its practicability were conducted by the Flatlands Property Owners Association ([Ask Water Rates Cut](#); BDE 12 Jan 1935).





## Waste & Public Health

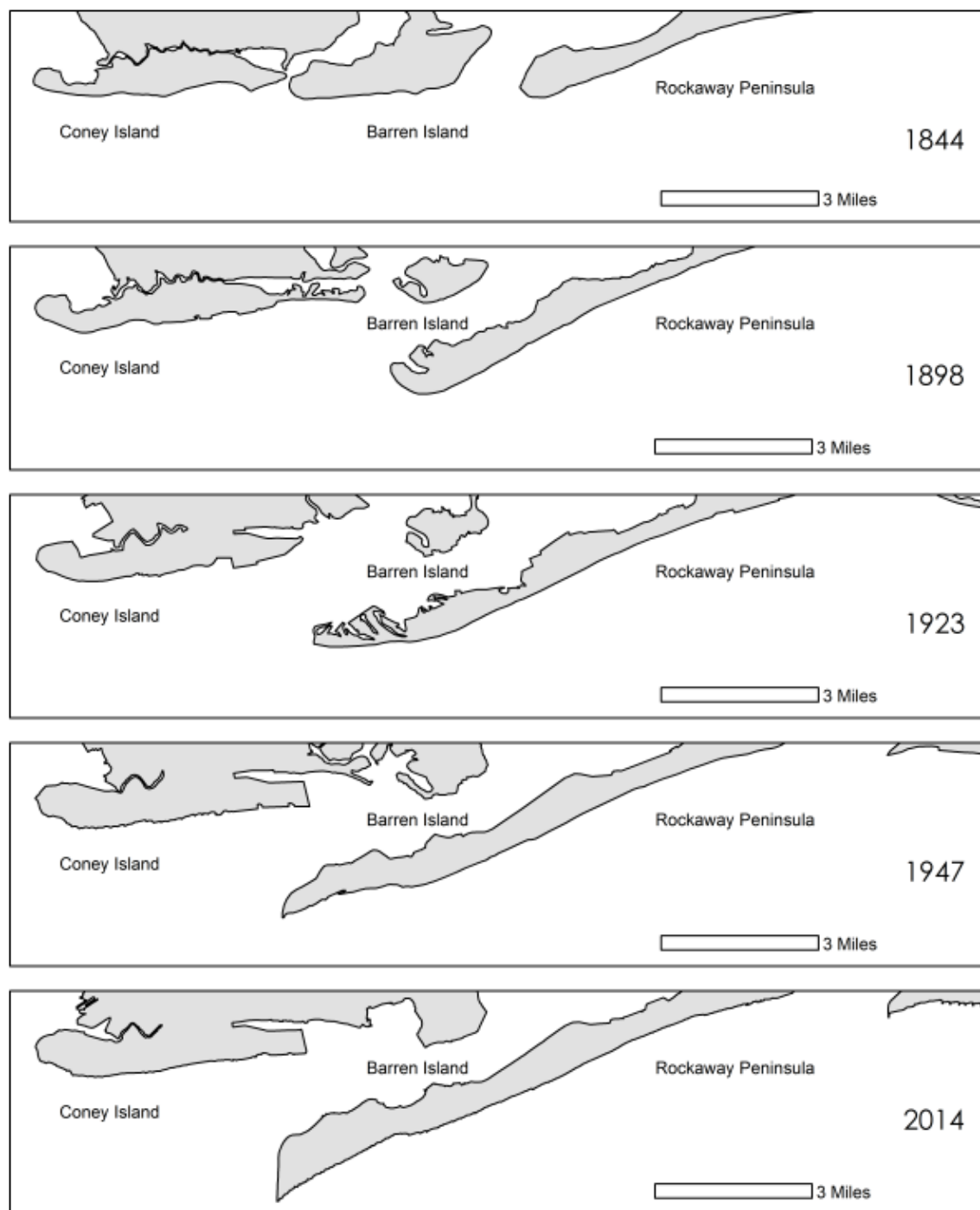
*“ . . . a site for malaria ”*

Reports of disease outbreaks were frequent in New York City and Brooklyn throughout the second half of the 19<sup>th</sup> Century. In the early 19<sup>th</sup> Century disease was often introduced from cargo and crews arriving via the port. Ships arriving often were reported as quarantined ([The Public Health](#); BDE 12 Jan 1856). While cases rarely involved Jamaica Bay, they illustrated the concern that cargo and crews coming into the city were carrying disease. However, with its “boggy and marshy” character, the bay was perceived as a site for malaria, a disease associated with the bad air of such locations ([Waiting for Ducks](#); NYT 18 Nov 1883).

Contamination of the bay’s water and waterways was present at least as early as the mid-19<sup>th</sup> Century. One of the central areas of concerns for contaminants and waste in Jamaica Bay was the shifting sands (Figure 20) of Barren Island (part of Flatlands Town). Early on, a Barren Island factory started as a fish processing site for the production of agricultural fertilizer. [The general processing of dead animals on the island was present as early as the 1850s; L.B. Brockett, "The Manufacturing Interests of Kings County," in Stiles, II, 756-57]. The market of the fertilizer was mostly outside of the region.

As commercial net fishing diminished in the early 1890s, the processing facilities moved exclusively toward the handling of other dead animals—particularly horse carcasses [As the availability of local fish for processing declined, local businesses seemed to be flexible and to adapt their processing facilities to handle several types of animal carcasses. New York and Brooklyn had hundreds of thousands of horses and, given the natural death rates, tens of thousands likely died each year]. It was this activity that served as the center of Barren Island animal rendering activities through the early 20<sup>th</sup> Century.

Barren Island-related water contamination was an issue for the region since the early 1880s. Farmers and fisherman expressed their concerns about pollution problems at a Canarsie schoolhouse meeting in 1881. They stated that their livelihood and their families’ wellbeing were being threatened by the pollution from the Barren Island facilities. The plants were causing water pollution that tainted the oysters and fish. Others said that interests to get rid of the facilities and replace it with a fancy resort were putting these claims forward and that the problem was being exaggerated ([Effect of the Barren Island Nuisance](#); NYT 13 Feb 1881). Consistent claims were made that acid was thrown into Jamaica Bay from Barren Island and that the dumping was killing the oysters and clams. Baymen asked town officials to request the factory managers to stop doing this ([Brief Mention](#); TS 13 Jan 1881).



### Changes in the Barrier Island Structure

M. Joy Cylfryn, Graduate Center, CUNY 2017

**Figure 20.** Changes in the barrier island structure, Jamaica Bay, New York.

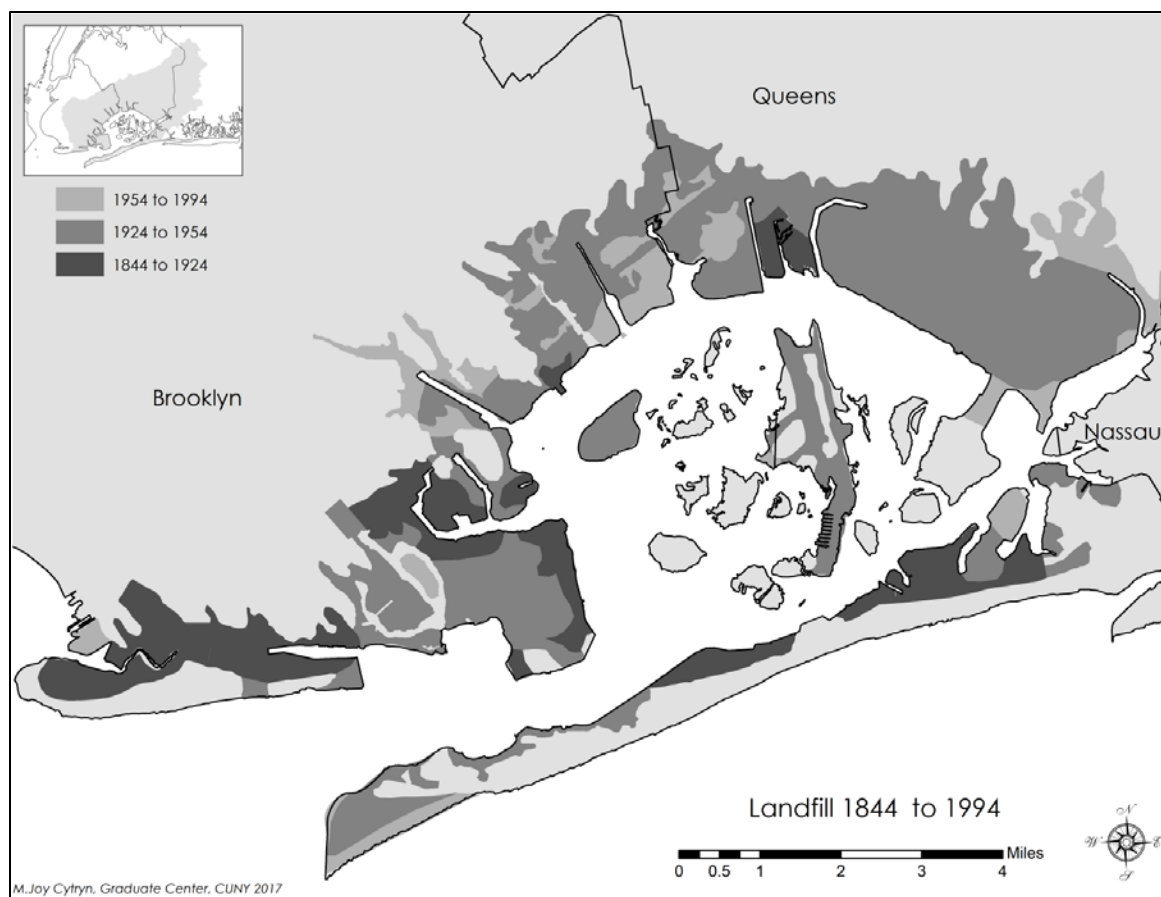
The hotel development, at least as early as the 1880s, also brought isolated areas of pollution to Jamaica Bay. For example, the sewer of the Long Beach Hotel emptied into the bay. It had been discovered that the fish within the immediate vicinity had been dying. The Health Officer of the town of Hempstead made an examination of the sewer and reported that it was in bad condition. An officer was notified to take the requisite steps to “abate the nuisance” ([The Sewer Kills the Fish](#); TEW 18 Aug 1888). The primary means considered to remedy these sorts of contamination was to enhance water mixing and flow.

Conflict between the Barren Island facilities and the hotels and other recreation amenities in the area increased over time. In 1890, the Far Rockaway Improvement Company brought a petition against the Barren Island factories. The petition was supposed to be addressed by officials in Albany ([The Barren Island Nuisance](#); NYT 19 Oct 1890). A variety of schemes were proposed as potential solutions to the water quality issue. In general, the solutions were relatively small scale and problematic, typically striving to increase dilution. “The State Board of Health is acting wisely in its exercise of caution about approving the scheme for a sewerage system at Far Rockaway which proposes to make Jamaica Bay its outlet” ([More things for the World’s Affair](#); NYT 17 May 1891). Questions were raised as to whether Jamaica Bay would be able to dilute the waste and whether the ocean might be more appropriate, or whether deodorizers could be used. The reporter noted that Far Rockaway’s hotels should not be burdening others living in the Bay with their waste.

A variety of industrial incidents also occurred during this period. Large among these was a fire that destroyed a massive garbage processing plant owned by the New York Sanitary Utilization Company, resulting in a loss of \$1,000,000 [~27,500,000 USD in 2017]. The fire wiped out two acres of the facility and sent the plant’s 400 Polish laborers retreating for safety ([Barren Island Burns](#); NYT 21 May 1906).

Complaints about the quality of the oysters also were being consistently raised by the 1910s. In 1916, Health Commissioner Emerson denied statements that they are all polluted and unhealthful. It was clear that at the same time there was already a federal restriction on the interstate shipment of Jamaica Bay oysters because of quality concerns ([Board of Health O.K.’s Jamaica Bay Oysters](#); TEW 18 Mar 1916).

By the 1920s, Jamaica Bay, particularly the Bergen Lands, was seen by individuals in other parts of the city as the preferred place to dump waste (Figure 21) and build a disposal plant ([Queens Fights Garbage Plant at Woodhaven](#); TEW 4 Aug 1922). The perception of Jamaica Bay as a dumping ground for a wide range of noxious and polluting activities seemed to be rapidly meeting the reality on the ground.



**Figure 21.** Landfill 1844 to 1994, Jamaica Bay, New York.

## Oysters & Typhoid Fever

*“It is only a question of time when from the water of Jamaica Bay will be excluded either the sewage or the edible shellfish.”*

The significance of typhoid fever associated with Jamaica Bay oyster consumption cannot be overestimated. It became increasingly recognized beginning in the mid-1890s that there was a correlation between water pollution in the bay, consumption of oysters from the bay, and typhoid fever-related illnesses. By that decade it was already a common convention to not eat oysters in a month without an “r” in its spelling. (Although a newspaper account noted that it could be still safe to eat local oysters into June or possibly later.) ([Oysters have Typhoid Fever](#); BDE 31 May 1896). [Months without “r” are summer months, when it is more likely for oysters to pick up toxins from algal blooms and because oysters can spoil easily in warm weather.] In 1896, some deaths on Long Island from typhoid fever were connected with oyster consumption. The cause of the contamination was known to be sewage dumping. In the next year, a rumor spread that oysters in the Long Island region, particularly in the Great South Bay, were infected with typhoid ([Latest Long Island News, No Typhoid Bacilli in South Shore Oysters](#); BDE 11 Feb 1897), but when the Great South Bay oysters were investigated by the local experts, no evidence of typhoid bacteria was found. The rumor, however, significantly impacted local harvesting and shipping. The oyster industry accounted for 500,000 USD [~14,900,000 USD in 2017] in business and provided the only income for a majority of the people on the bay.

Throughout the next few years, medical assessments of oysters as being responsible for occasional typhoid outbreaks occurred simultaneously with continued support from others promoting their consumption and stating that oysters were overwhelmingly safe ([Oysters as Typhoid Carriers](#); BDE 26 Apr 1904). One writer stated that the public had unrightfully demonized oysters as enemies of the human race. Yet, in the following year, typhoid was directly linked to Jamaica Bay as oyster shipments from its waters caused illness throughout the state and the wider region ([Jamaica Bay Oysters Blamed for Typhoid Fever](#); NYT 5 Mar 1905). A comprehensive medical report concluded that, “it is only a question of time when from the water of Jamaica Bay will be excluded either the sewage or the edible shellfish.”

The bay continued to be an important source of harvested oysters for the nearby New York market. Some 500,000 to 800,000 bushels were harvested each year from about 700 plots ranging from 1.5 acres to 3.0 acres each ([Germs in Oysters; Bivalve is Healthful](#); BDE 31 May 1908). Additionally, a 1911 article mentioned an annual harvest of approximately a million bushels annually ([Sewage Polluting the Oyster Beds](#); NYT 14 Mar 1911). The need to seek a favorable resolution to the contamination question emerged through several outlets. New scientific studies such as by the Department of Commerce and Labor reported that oysters could rapidly rid themselves of typhoid bacteria when removed from polluted waters and transferred to clean water ([Oysters and Typhoid](#); BDE 20 May 1905). In 1908, ([Oystermen Combine](#); BDE 25 Jan 1908), owners and dealers in the oyster business collaborated to make a statement against the idea that oysters spread typhoid fever.

New scientific evidence was put forward that vigorously denied typhoid disease was being spread by oysters and proclaimed this to be another attempt to slander the oyster business.

To support the idea that the oysters were safe to eat it was claimed that the oyster beds were regularly flushed with clean water via the tide cycle. Other research highlighted a possible contamination pathway associated with oyster “fattening” which occurs as the oysters are brought up and prepared for market. [“Fattening” was the moving oysters to fresher waters before they were marketed, which increased their plumpness.] Harvesters agreed to dispense with this practice or work with health officials to ensure that fattening or also known as “drinking” was done under the best conditions ([Germs in Oysters; Bivalve is Healthful](#); BDE 31 May 1908). Even so, other studies were regularly initiated as public claims of getting sick from the oysters and being carriers of typhoid disease continued ([Jamaica Bay Destined to be Shipping Center](#); BDE 13 Jun 1908).

A 1911 study seemed especially significant ([Sewage Polluting the Oyster Beds](#) TNYT 14 Mar 1911). A Doctor George Soper, the President of the Metropolitan Sewerage Commission, gave a presentation to the New York Academy of Sciences and the American Museum of Natural History about his recent studies and defined a clear link between Jamaica Bay oysters and typhoid illness. According to Soper, the Board of Health 15% of all typhoid cases to eating shellfish. Soper presented data on the level of pollution in the bay defined as the number of bacteria per cubic centimeter in a water sample. Compared with the open ocean as defined as a baseline of 120, Jamaica Bay had a bacterial value of 5,800 (versus the Upper Bay at 14,500, Coney Island at 4,500, and the East River at 8,700).

The evidence of the connection between oysters and typhoid fever took another step in 1912 when a high profile report by the Federal Bureau of Chemistry again provided a clear link between illnesses and oysters floated in Indian Creek near Canarsie. The waters of the bay were described as “dangerously polluted,” that millions of gallons of sewage were discharged into the Bay and that in many instances this was in close proximity or directly over oyster beds. ([Poisoning in Oysters](#); TNYT 27 Sep 1912 & [Jamaica Bay Oysters Blamed for Typhoid Epidemics](#); 6 Oct 1912). The New York Times highlighted the study in a full-page investigative report that included definitive scientific evidence.

Opinions became heated about what should be the appropriate action regarding Jamaica Bay oysters. Much of the focus was on closing the waters to oyster harvesting. Others argued that it would be better to further enhance the control of sewage dumping and limit the economic losses ([Oysters and Typhoid](#); BDE 11 Jan 1912). Many felt that the oystermen might have grounds for a damage suit and that more political will was needed to construct disposal plants to help purify sewage water being discharged into the bay, and to help enlighten public opinion by arguing against the notion that oysters are the spreaders of typhoid disease by cleaning the waters in which oyster beds reside ([Jamaica Bay Oysters Should be Protected by Sewage Disposal](#); BDE 23 Jan 1912).

By this time, the story of Jamaica Bay oysters had reached the national press. Articles were featured in places as distant as Salt Lake City, Utah. The article in the Salt Lake City newspaper described how the scientists first established a correlation between people who die of typhoid fever and raw



oyster consumption. Then, by examining the unique shape and growth patterns from discarded shells, scientists were able to identify Jamaica Bay as the source of these oysters, which were commercially sold as “Rockaways.” The article provides a step-by-step cartoon portrayal of how typhoid travels through the environment to and infect citizens ([How they Tracked Down the Typhoid Oysters](#); SLT 23 Feb 1913). The process of fattening oysters, still continuing, was seen as most dangerous to spreading typhoid fever because it brought them closer to sewage outlets ([Thin Oysters the Safest](#); NYT 7 Feb 1914). A little later, a newspaper from Richmond, Virginia reported that U.S. Health Officials were seeking to prosecute oyster breeders who continue to breed their oysters near sewage dumping sites in the bay even after federal warnings against doing so. The article stated that five big trunk sewers discharged their entire contents into the Bay daily, totaling at least 50,000,000 gallons ([Filt, Sewage and Disease in Raw Oysters](#); RTD 2 Apr 1916).

The newspaper accounts of Jamaica Bay oysters dwindle after this point. The Jamaica Bay oyster industry never fully recovered from this period, and all oyster harvesting there ceased a few years later.



## Farms

*“ . . . immense quantities of drift weed constantly driven by the bay and ocean on the farm that can be collected to enrich the soil.”*

There is scant newspaper coverage of farming near the bay, beyond their offerings for sale. The development of rail access to the areas south of Jamaica was highlighted in many of the notices. Farms that might be called today hobby farms and gentlemen farms were most often advertised. The notices provide some information on their dimensions and amenities, though it seems likely these advertisements represent only more valuable properties:

\$6000—A SMALL FARM OF eight acres of good land, on Long Island, for sale or exchange for other city property, six miles from the City Hall [likely Brooklyn] and within half a mile of Jamaica Bay. Good buildings and outbuildings ([A Small Farm](#); NYH 11 Nov 1858). [At six thousand dollars [~180,000 USD in 2017], the cost per acre was less than one thousand dollars.]

FOR SALE—A Farm situated at Far Rockaway, Long Island, within a short distance of the Marine Pavilion, and fronting on the Jamaica Bay and the Atlantic Ocean. It is within 15 miles of New York, and it contains nearly 200 acres of land, 70 odd acres of which is first rate tillable land, 100 acres of good grass and meadow land, between 11 and 15 acres of woodland. On the premises is a neat Farm House, barn, hovel, and other oat buildings, together with a well of first rate water. There are immense quantities of drift weed constantly driven by the bay and ocean on the farm that can be collected to enrich the soil. Vessels drawing from 4 ½ to 5 feet water, can by the Jamaica Bay deliver to or receive goods and produce from the said farm. The above farm; can be divided into farms of less quantities of land, if so desired, or it will be sold altogether at prices to suit the times Rockaway ([For Sale](#); NYDT 18 Mar 1843).

A CHOICE VILLA SITE—Of about 8 acres of ground, situated in the village of Jamaica, L. I., on the high ground, north of and overlooking the village, Jamaica Bay, the Lower Bay, Sandy Hook, &c. Fifteen minutes easy walking from the Railroad Depot, soil first rate, and under good cultivation; a fine APPLE ORCHARD In full bearing, and a Small Pond of Pure Living Water on the premises. Altogether one of the most desirable locations for gentleman's residence to be found within the same distance from New York. ([A Choice of Villa Site](#); NYDT 20 Jun 1855).

FARMS for SALE on LONG ISLAND.—The well known Stevens Farm, at Jamaica South, containing 130 acres of Upland and Meadow Land, with spacious Cottage and Stables, Farm-House and Barns. The land is in a high state of cultivation. The Farm is situated about two miles south of the Village of Jamaica, upon the road leading to Jamaica Bay.

Also, the Cottage House and Farm, containing 40 acres of Land, well situated for building purposes, and half a mile distant from Jamaica, at the head of Van Wyck Avenue, and quarter of a mile from Jamaica Railroad. This farm is pleasantly situated and surrounded by well improved farms and country seats ([Farms for Sale on Long Island](#); NYDT 8 May 1857).

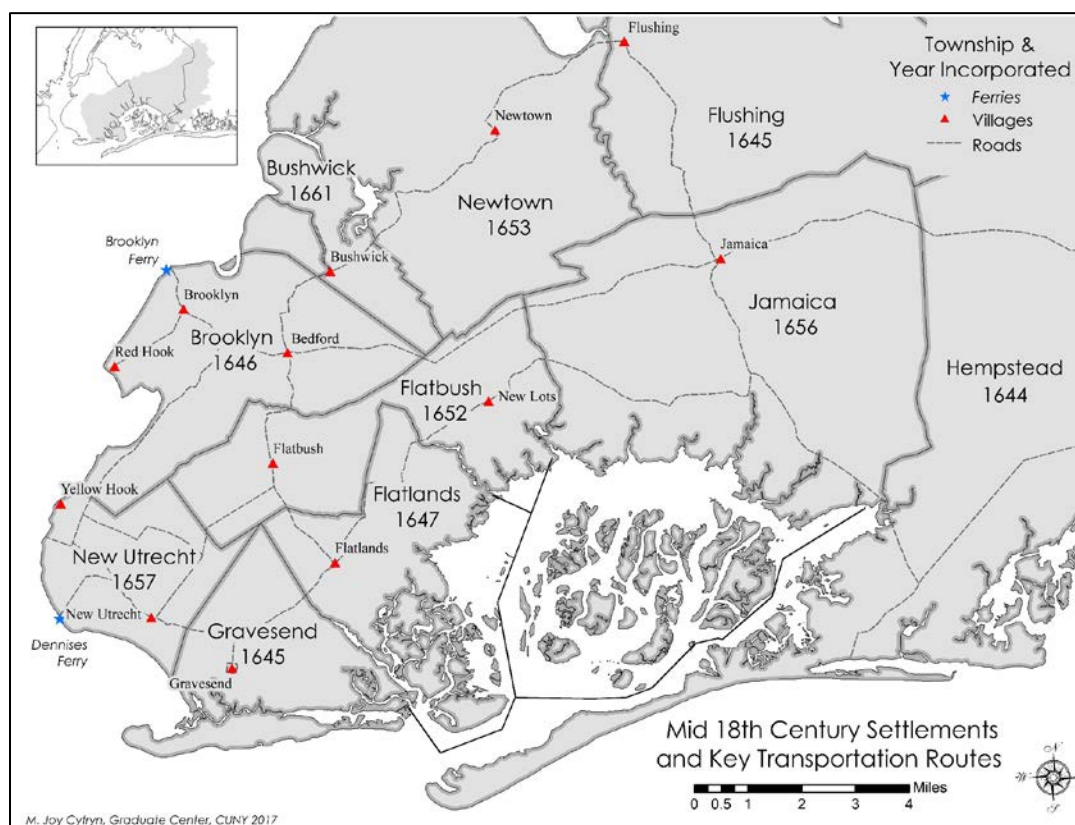
FOR SALE—VALUABLE COUNTRY PROPERTY, TWO miles south of Jamaica, L. I., about 35 acres; first class house, barn and outbuildings, shrubbery and small fruits in abundance; all in a high state of cultivation, well stocked and splendidly adapted for farming purposes; on South Side Railroad, about five minutes from station; three trains each way daily; after June 1 four trains daily ([For Sale](#); NYH 12 Mar 1871).

FOR SALE—A FIRST CLASS FARM, FROM 30 TO 40 acres, in a high state of cultivation; house and outdoor buildings all first class; fruits and shrubbery In abundance. The location can be laid out in building lots with very little expense, having four fronts on two main roads, two miles south of Jamaica, on the Merrick plankroad and Locust avenue, I ½ mile from Jamaica Bay; railroad communication within 350 yards of the house; eight trains dally; will be sold on reasonable terms ([For Sale](#); NYH 12 Mar 1871).

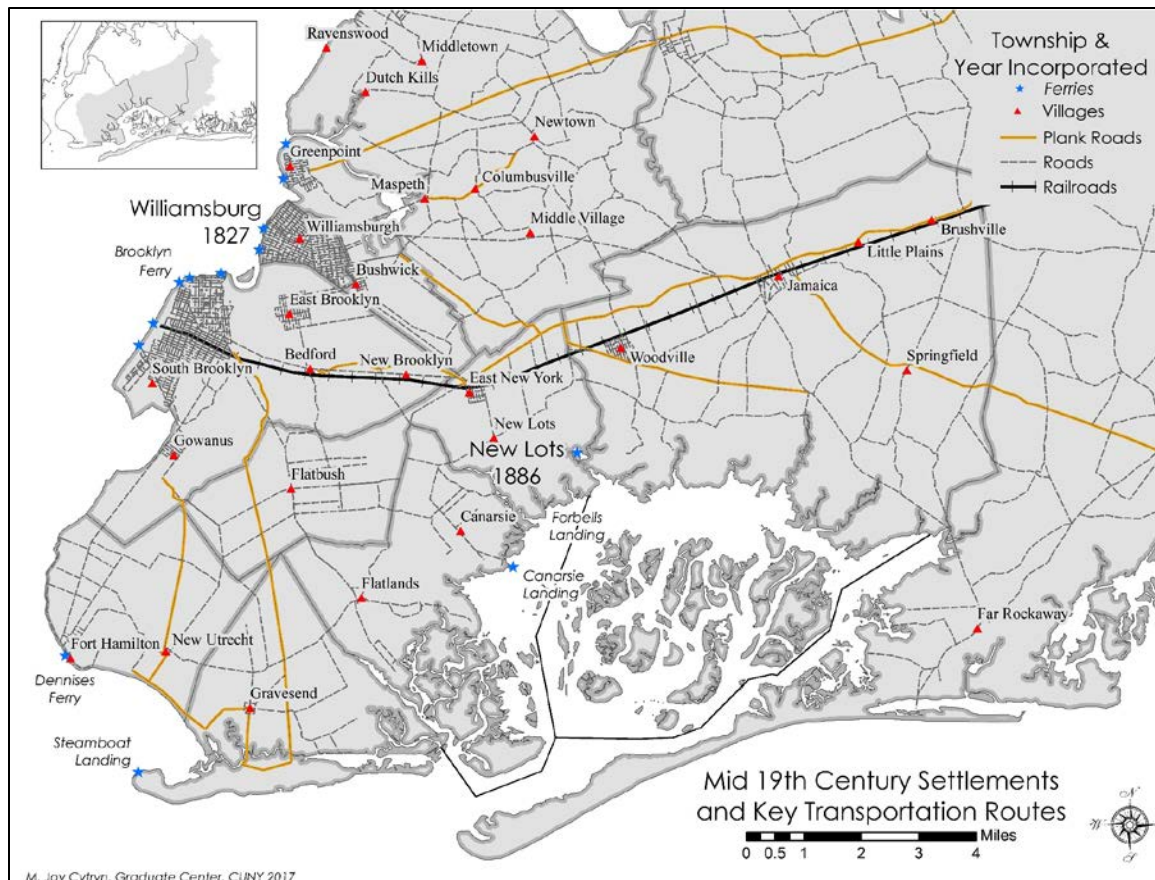
## Port & Land Development

*“This body of water has a shoreline of twenty miles, and there is not a more perfectly protected harbor in the country than Jamaica Bay affords.”*

Jamaica Bay has long beckoned New Yorkers. In the mid-18<sup>th</sup> Century, communities around the bay were widely dispersed and connected by a road that ringed the bay (Figure 22). By the mid-19<sup>th</sup> Century, a wider network of railroads and plank roads [roads lined crosswise with split timber, flat side down, to avoid sinking into the mud], in addition to dirt roads were established (Figure 23). As early as 1867, a proposal was made to widen Atlantic Avenue and the road leading from the City of Brooklyn out into the country to promote development. The Jamaica Bay waters were described as gleaming ([Atlantic Avenue](#); NYH 5 May 1867). Furthermore, the ocean breezes from nearby Jamaica Bay also drew investors to the 30-acre Cozine Farm in East New York that was being sold in 1869 and subdivided into lots ([Proclamation](#); NYH 11 Apr 1869). Seaside property around the bay, particularly in recreation spots such as Far Rockaway, often were auctioned as housing lots advertised with easy access to train and highway ([Hitchcock’s Real Estate Office](#); NYT 18 Aug 1888). Business groups frequently operated in the bay as well. These partnerships became significant actors in medium-scale development plans in the region. In 1883, a party of oystermen of the town of Hempstead has purchased from Benjamin C. Mott an island in Jamaica Bay to erect buildings for business ([Long Island](#); NYT 5 May 1883).



**Figure 22.** Mid 18<sup>th</sup> Century settlements and key transportation routes, New York.



**Figure 23.** Mid 19<sup>th</sup> Century settlements and key transportation routes, New York.

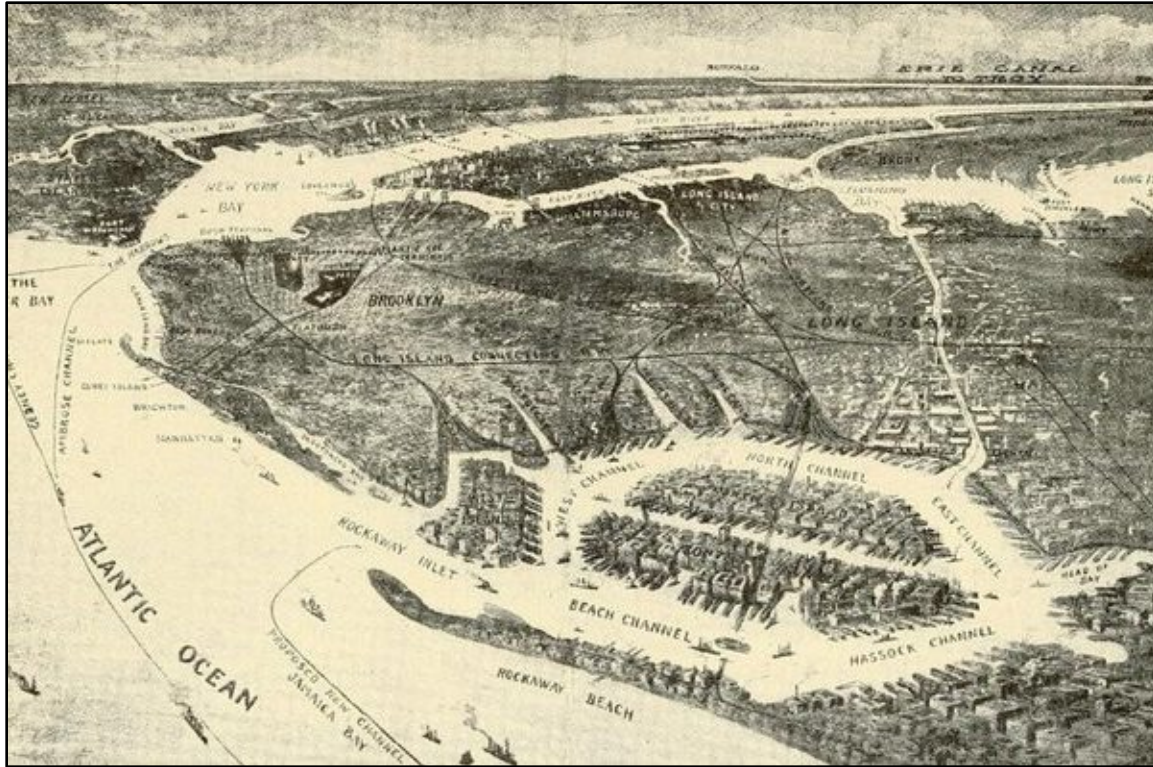
The most significant, early, larger scale transformation of the Bay was the construction of a railway across Jamaica Bay by way of the Broad Channel Islands. Heretofore, the development schemes worked along the edges of the bay with, for example, improved access to Canarsie and the railway through the old village of Jamaica. In 1869, a bill was introduced into the New York State Legislature to incorporate the Jamaica Bay Railroad Company. The company would supply ferry service and, more importantly, have the authority to dredge or make other improvements to “land under the water” ([Real Estate Notes](#); NYH 17 Feb 1869; [Assembly](#); NYH 20 Feb 1869; [Bills Reported](#); NYH 8 May 1869).

By 1879, the concept of the railroad across Jamaica Bay was being forcefully advanced ([Woodhaven](#); NYT 28 Dec 1879). The rail connection would link the Rockaways more directly to the rest of Long Island and dramatically change how New Yorkers traveled across the bay. The petition of the Brooklyn and Rockaway Beach Railroad Company to bridge the navigable waters of Jamaica Bay was still moving forward in 1881 ([Barnum Island](#); NYT 15 Dec 1881). The Queen’s County Board of Supervisors met to discuss whether to grant the request of the company to build a railroad across the bay but, because it did not file all the papers, it would have to re-file ([The Question of Bridging Jamaica Bay](#); NYT 21 Jul 1881). At roughly the same time, the U.S. Congress petitioned to open up Jamaica Bay sufficiently for vessels to pass through it to Hempstead and the Great South Bays. This









**Figure 25.** Rendering of proposed channel and Flushing Creek, New York, c. 1910. (source: Untapped Cities <http://untappedcities.com/2016/02/10/the-nyc-that-never-was-the-jamaica-bay-flushing-canal/>)

In general, the bay and its waters were seen as a broad expanse that could be manipulated to help generate economic growth, and address and solve problems. The opportunity for improvement and betterment stood behind these actions. For example, altering the hydrology of the bay was seen as a viable way to solve the sewage problem emerging from the larger hotels on the bay ([The Sewage of the Larger Hotels](#); NYH 18 Aug 1879). It was suggested that dredging and cutting a canal from Sheepshead Bay to the outlets on Gravesend and Jamaica Bays could carry off the waste material from Coney Island hotels. Engineers saw discharge that took advantage of tides as a critical best option. Other land alteration plans also were being discussed, including dredging land by Jamaica Bay to enhance flushing [the exact location was not specified but can be assumed to be near the Rockaway inlet or across the Rockaway Beach].

By the late 1890s, the pace and pattern of land development was at the cusp of significant change. While the grand vacation hotels continued to function, the stretch of summer bungalows nearby and suburban development became more present in the wider area, including a summer “Tent City” at the Rockaways (Figure 26) that became year-round cottage developments (Figure 27). The conditions for large-scale proposals had emerged. The vision as the bay as a potential Venice of New York emerged at this time and dominated the narrative of Bay development on and off for the next two decades.



**Figure 26.** Tent City, for vacationers, Rockaway, New York, date unknown. (source: Library of Congress Prints and Photographs Division Washington, D.C. 20540 USA  
<http://www.loc.gov/pictures/item/ggb2004001984/resource/>)



**Figure 27.** Bungalow colony, Rockaway, New York, date unknown. (source: Library of Congress Prints and Photographs Division Washington, D.C. 20540 USA  
<http://www.loc.gov/pictures/item/ggb2004001982/resource/>)

The bay at this time was still a somewhat undeveloped and natural place. A New York Times reporter ([City on Jamaica Bay](#); NYT 15 Mar 1896) described it as follows:

“Little is known at present of the attraction of Jamaica Bay. A few sportsmen and fishermen are familiar with its advantages for their particular purposes, but to most people it is at high tide a broad inland lake, and at low tide a succession of exposed mud flats, traversed by sundry streams or channels, as they are called. These streams become well-defined creeks nearer land, and reach up into the surrounding townships.”

In 1896, two local developers, John A. Eppig—a wealthy brewer—and Frederick W. Dunton—former Supervisor of the Town of Jamaica planned but eventually were unable to turn the northeast shore region of the Bay into an elegant resort region to rival that of Asbury Park or Arverne-by-the-Sea. The new resort would be centered on the Cornell Creek area. This region, several miles from the village of Jamaica was an enclave of relatively isolated country estates of the New York and Brooklyn elite. These residents had long tried to keep their lands quiet and away from the pressure of bathers and other recreationalists. [The area is the current site of JFK airport – it is possible that the exclusionist policies of the long term owners could have facilitated the conditions under which large parcels of land were held undeveloped and later became the Idlewild Golf Course before being converted to airport use during World War Two].

Eppig and Dunton pressed for the dredging and filling of the marshes toward the water’s edge because of its great economic potential.

Dunton was quoted as saying, “I believe that the large area of land which at low tide lies exposed to view in Jamaica Bay may, if reclaimed, prove of great desirability to the town as place of business and residence. At any rate, under existing conditions, the town receives ten times more annual net revenue from them, by reason of granting of oyster license, than it did formerly. In my opinion this revenue is capable of being still greatly increased by the placing upon the list of taxable property the buildings already erected there. If this is however improvement will have to be made, and the only question is the last extravagant and most available means of making them.

This property is unique, and will, when improved, demonstrate that it supplies a much sought for combination of advantages. The close proximity of Jamaica Bay to the great cities [of Brooklyn and New York], its present and prospective railroad facilities, coupled with the other proposed improvements, undoubtedly make of it a satisfactory source of revenue for the town, an ideal location for summer homes, and a sure investment for the capitalist.

Reclamation of these lands by a new process will be begun at once. We shall first show what can be done in that line and will then interest the necessary capital. My idea is for the town then to share with the investors the profits from marketing the improved land, after they had been reimbursed for the amount invested. In this way the town would derive continuous revenue from land now very nearly worthless.”



The quote illustrates the critical connection between investors, town revenues, and emerging technology to transform land. The opportunity for Jamaica Town to increase its ratable land value was seen as significant. The Town Assessors determined that the Town “controlled 10,000 acres of meadow lands (wetlands) along the bay which wholly escape taxation, not to mention the buildings upon them.” It was understood that houses built on stilts over the meadow lands were not subject to taxes since the town was not able to supply them with any services. If the land was filled, then services could be provided and tax revenue earned.

A critical component of this moment was the transfer of governmental control of the bay from the old towns (and counties) to the City of New York with its consolidation in 1898 and emergence as a significant policy player in the several years to follow. The prospects for rapid land use and land cover change were evident. It was clear that much of the meadow property along Jamaica Bay belonged to the State of New York ([News of Brooklyn](#); NYT 4 Aug 1897), with the remaining property belonging to private citizens. The New York State land would soon go back to the Borough of Brooklyn of the Greater City of New York. This land could require a lot of dredging and canal work but in 1899 sufficient progress had been made and land lots in Jamaica Bay were being sold to the Rockaway Improvement Company ([No Mandamus Issued](#); NYT 14 Dec 1899). Once the land was reclaimed, businesses and residences could be built on it. The properties then could become tax revenue generating parcels for the City of New York. The transfer of land from local town control to the City of New York in effect led to a significant transfer of wealth and wealth generating capacity, i.e., land as in many cases became a central commodity.

A key piece of new infrastructure was the construction of the Jamaica Bay Turnpike (Cross Bay Boulevard). Strong opposition to the turnpike construction existed. David N. Carvalho, a large property owner in Far Rockaway, was against the plan. He stated that the roadway would cut off tides and boat traffic to the eastern sections of the bay. P.H. Flynn, building the turnpike, responded that these issues would be resolved with trestles and draw bridges ([Flynn Will Fight Carvalho](#) ; NYT 3 Sep 1899). Another plan, more ambitious and never built, was to construct a road from Canarsie to the Rockaways. This was proposed by the Brooklyn and Jamaica Bay Turnpike Company ([Rich Men Unnamed in the Indictment](#); TEW 6 Feb 1903) and, as with the most easterly thoroughfare, it could not be seen as blocking navigation.

The Rockaways were by far most often used as a reference point in the real estate notices and other discussions of land development, along with frequent mention of Canarsie and Barren Island. Canarsie was a major point of departure for steamboats headed to the Rockaways by day users. Barren Island and its industrial facilities had a settlement of a few hundred and seemed separate from the rest of the bay communities. The railroad and subsequent road across the bay via Broad Channel became a significant force for change in the bay. In some ways development in Howard Beach – likely what today is called Old Howard Beach and the Edgemere and Arverne became the prototypes for future development in the bay.

A community deeply attached to the bay was Ramblersville (Figure 28), on Hawtree Creek, which was described in 1905 as a “Little Venice in New York,” and as “a bit of Holland and Venice jumbled into one” ([A Little Venice in New York](#); TS 30 Jul 1905). And that “Its streets are canals, its

houses clubs, its carriages boats, its life aquatic.” In summer this “poor man’s paradise” hosted one thousand people, in winter scarcely a dozen. Homes were built on stilts (as in Figure 29), the first shanty built around 1875. Most were summer clubhouses, though some substantial three-story homes were occupied year round. In the rear of the houses were narrow wooden sidewalks and boats of styles and sizes. Nearly every house was painted a brilliant gaudy color. Lots could be leased for \$5 [~141 USD in 2017] to \$10 per year and a home could be built for \$300 [~8440 USD in 2017].

The suburban residential neighborhoods of the Jamaica Bay began to be built in the 1910s and especially after World War One. Howard Beach was one of the earliest neighborhoods. In 1919, 500 Howard Beach lots were to be sold at public. This event was illustrative of a very active period of land speculation, investment, property transfer, and development ([500 Howard Beach Lots to Be Sold at Public Auction](#); NYT 13 Jul 1919).

As the City of New York started to express its more comprehensive public policy plans for the Bay, grand visions by private developers for elite enclaves in the bay were set aside. In their place, emerged a set of modernist, progressive era plans focused on industrial development, port facilities and housing for the growing working and middle classes. In 1904, the Industrial Federation of America (IFA) proposed to reclaim Jamaica Bay and establish upon the ground thus created an immense industrial colony ([Weinseimer’s Part in Gas Deal being Probed](#); TEW 25 Aug 1904). This plan was under investigation by the local district attorney.

The marketing of the bay as a “Venice” for wealthy New Yorkers also continued as other interests added onto the IFA plan by proposing that the new residential space should be secured for wealthy New Yorkers. For example, New York City Comptroller Grout proposed a revised grand Venice plan in 1905. It was to turn the Bay into a massive industry, commercial, and residential space—and a vast engine for enterprise ([City’s Jamaica Bay Venice](#); TS 29 Nov 1905).

“I [Grout] believe that one of the most necessary and advantageous cases in which the principles of municipal ownership and operation of public utilities can be applied is this of the city’s waterfront, to which the city has devoted itself on Manhattan Island since 1871, and to the extension of which, in its more newly acquired territory, there is growing need, to be attended, if conservatively managed, by great profit.”

Coupled with these initiatives were proposals to greatly expand the potential of the Bay as a harbor. Already \$25,000,000 [~688 million USD in 2017] worth of commerce utilized the waters of Jamaica Bay.” Plans were set to deepen the Coney Island Channel. The bay also needed to be dredged more to allow access to all of its 20 miles of coastline. The Rockaway Inlet also would need to be significantly dredged. Vast testimony pointed out the potential value of the bay for commerce and that it represented no better potential harbor in the country ([A Harbor Improvement](#); NYT 21 Jun 1906).

# New-York Tribune.

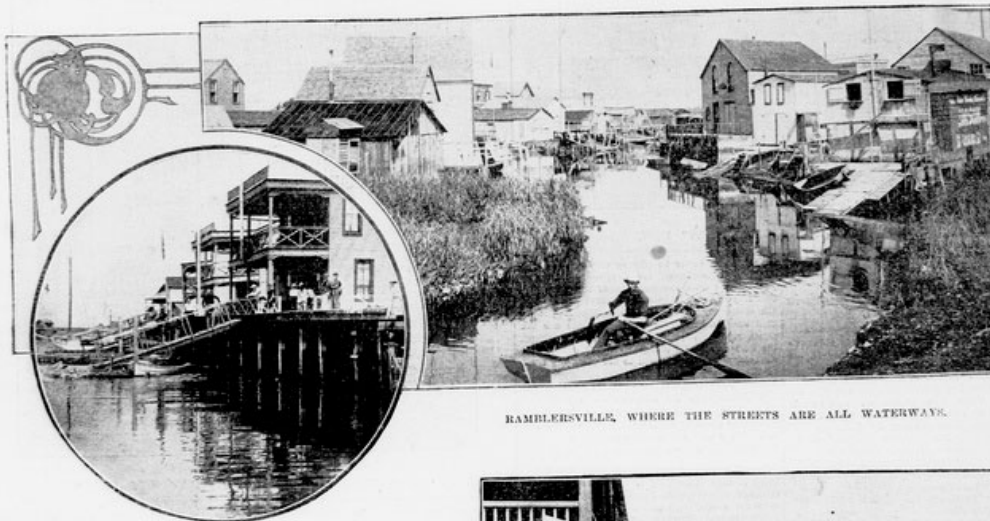
ILLUSTRATED SUPPLEMENT.

SUNDAY, AUGUST 2, 1903.

NEW-YORK HAS A PICTURESQUE VENICE ALL HER OWN, AND WITHIN THE CITY LIMITS, AT JAMAICA BAY



THE DOMED AND CASTELLATED SKY LINE OF ROCKAWAY SEEN FROM JAMAICA BAY.



RAMBLEVILLE, WHERE THE STREETS ARE ALL WATERWAYS.

CLUBHOUSES AT THE RAUNT.



BOATS TO HIRE AT GOOSE CREEK.



A GLIMPSE OF THE NORTH SIDE BROAD CHANNEL.



SHOWING HOW THE LONG ISLAND RAILROAD GIVES ITS PASSENGERS THE SENSATION OF PUTTING OUT TO SEA IN CABS.

Figure 28. Scenes of Jamaica Bay, New York, 1903. (source: <http://nycedges.blogspot.com/2011/01/islands-of-jamaica-bay-broad-channel.html>)





**Figure 29.** The Raunt, Jamaica Bay, New York. (source: <http://www.loc.gov/pictures/collection/ggbain/item/ggb2004001988/>)

Some of this work already was ongoing. In 1906, a contractor was soon to deepen the channel to Canarsie Landing and to make it 20 feet deep and 600 feet wide at low tide. This channel would increase port access to Canarsie ([Will Re-dredge Big Channel](#); NYT 4 Aug 1906). “Solution in waterways” proposals in 1907 were made to perform an extensive dredging operation in Jamaica Bay to obtain a sufficient depth of water for large ocean freighters ([Hill’s Freight Remedy](#); NYT 31 Mar 1907). By 1909, a bill was introduced to the New York State Legislature requiring the state engineer to make plans for creating an artificial waterway connecting Flushing Bay with Jamaica Bay to support industrial expansion due to population growth and urbanization ([New Measures at Albany](#); TS 22 Jan 1909; [Homebuilders turn to Nassau County](#); TS 30 Nov 1913).

At the same time, reports circulated that the Jamaica Bay improvement plans had been approved ([Plans to Improve Jamaica Bay Had Been Fully Approved](#); TEW 31 Jan 1912). The sinking fund-commissioners sanction proposition for great docks and warehouses signaled the start of development of a great port in the area. “Scores of organizations and individuals were there to support the action.” New York City committed one million USD [~25 million USD in 2017] to the project but it was understood that it would cost millions more.” [A sinking fund is a means of repaying funds borrowed through a bond issue through periodic payments to a trustee who retires part of the issue by purchasing the bonds in the open market. Rather than the issuer repaying the entire principal of a bond issue on the maturity date, another company buys back a portion of the

issue annually and usually at a fixed par value or at the current market value of the bonds, whichever is less.]

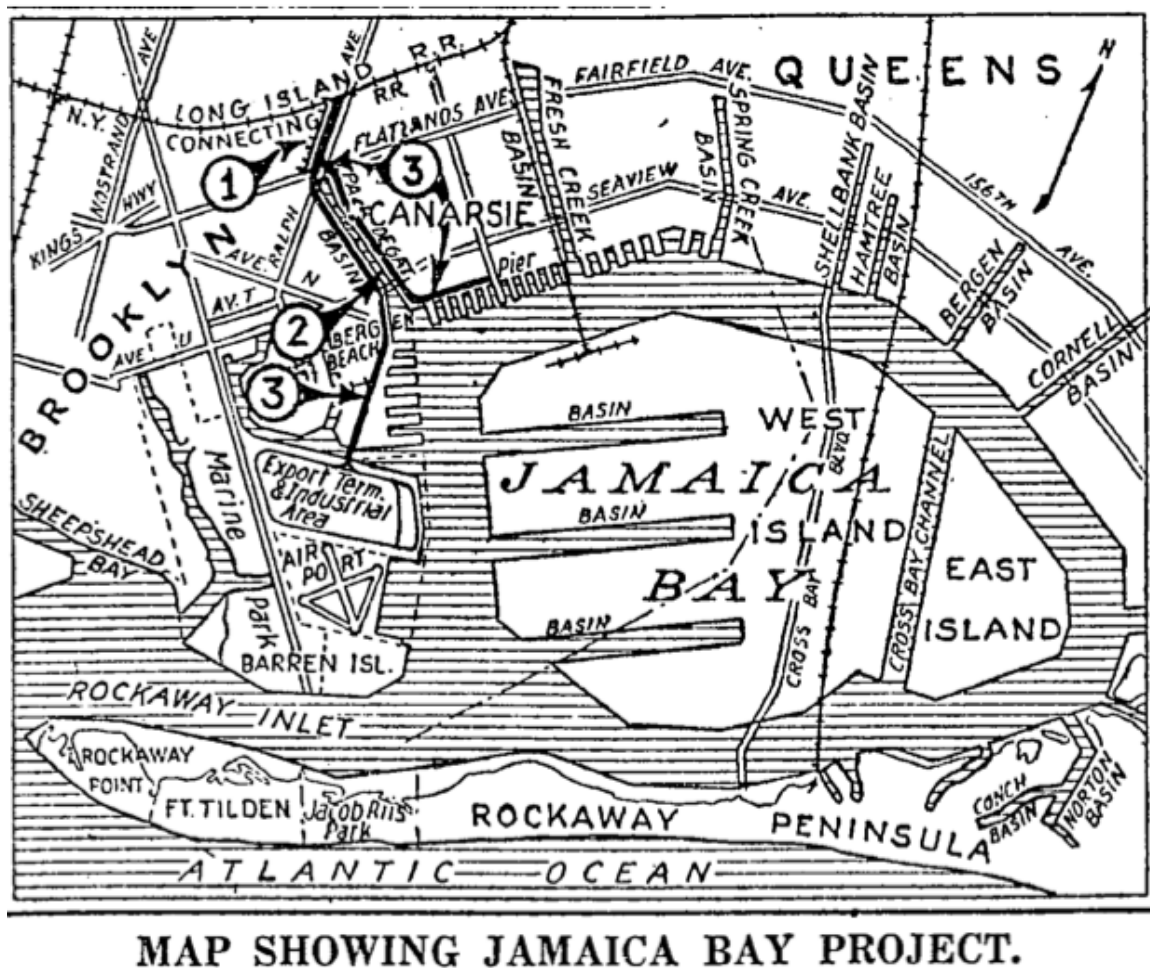
Many of these projects and plans were not constructed after being proposed and, in 1920, New York City Mayor Hylan promoted them again ([Mayor Hylan urged financiers to promote construction as a patriotic duty and as a business proposition \(Proposition\)](#); NYT 18 Jan 1920). He stated that his “administration has approved include the construction of the most modern and commodious docks at Staten Island and Jamaica Bay.” However, only parts of the plans were implemented over the next decade.

Reviews that discussed costs factoring into dock price and construction projects associated with Jamaica Bay were significant news items ([Dockage Here High Priced](#); TS 6 Jul 1919). F.R. Lonas proposed to city officials a 25 million USD project [347 million USD in 2017] to build fourteen 1,100 foot piers on Jamaica Bay and offered the city \$1,050,000 [~14.6 million USD in 2017] for a 50-year lease on the land. In his discussions with the City of New York, he was particularly interested in how the municipality would dredge several of the channels needed for ships to reach the proposed piers ([Offers to Spend \\$25,000,000 on Jamaica Bay Piers](#); TEW 13 Mar 1919). In 1921, the Estimate Board passed a resolution forwarded by the Brooklyn Borough President to turn over \$800,000 [~11.1 million USD in 2017] for the construction of channel from northeast of Mill Basin to Fresh Creek ([City Authorizes Jamaica Bay Work](#); TEW 18 Mar 1921). In 1922, \$600,000 [8.3 million USD in 2017] was appropriated for dredging an 80-foot channel entrance to Jamaica Bay ([Navigate Larger Vessels](#); NYT 5 Dec 1922). As in other cases, Lonas’ project never happened.

Residential development also became a consistent part of the land development and transformation process during the early decades of the 20<sup>th</sup> Century. By the 1910s many parcels on the Rockaways had been transferred to small lots and residential development. In 1895, Fred Lancaster bought 100 acres of land in Edgemere stretching from the ocean to Jamaica Bay. He built the grand Edgemere Hotel and many smaller hotels, and sold off parcels after putting in millions of dollars of improvement. In 1914, he sold off the last lot parcels, which signaled the end of a 20-year period of ownership ([Last Edgemere Lot Auction](#); TS 14 Jun 1914). After World War I, the demand for middle class housing spiked in the area as battles between real estate and rent profiteers and the city increased ([Fighting for Middle Class](#); NYT 12 Mar 1920). It was argued that 7,500 empty lots near Jamaica Bay should be developed as bungalows and that city needed to convert its property into homes to keep middle class away from the “Bolshevik interests.” [The social and economic reforms to enhance the growth of a home owning middle class often were presented as a bulwark against sympathies for the Bolshevik revolution in Russia. The common thought was that if working class people were provided access to home buying their opportunity to become politically radicalized would be diminished because they would not want to disrupt their economic investment in their home. ]

Even as late as 1938, a bill was presented to discuss the intent to have the City of New York and the Federal Government work together to transform Jamaica Bay into a new harbor (e.g., Figure 30) and the continued prospect of transforming Jamaica Bay’s waste lands into an industrial port and ship terminal ([Jamaica Bay as a World Port](#); BDE 1 Aug 1938; [What a Belt Around Brooklyn Will Do](#);

BDE 23 Sep 1938). At the same time, Robert Moses offered his own plans, and public opinion was highly optimistic regarding his ability to accomplish alternative scenarios. Later in the same year ([Boro Leaders Back Moses' Bay Proposal](#); BDE 18 Jul 1938), borough leaders overwhelmingly supported Commissioner Robert Moses' proposal to develop Jamaica Bay into a residential and recreational area instead of the industrial center that was planned thirty years earlier. The plan for a great shipping port evaporated, although on the shores of Bay grew one of the largest passenger and airfreight centers in the world: Kennedy Airport (Figure 31). Construction of the airport began in 1943 and the first flight took place in 1948. This aerial image of the airport was taken in 1954 (Figure 32) while the airport is still under construction.



**Figure 30.** Map showing the Jamaica Bay Project, New York. (source: [Pushes Port Plans for Jamaica Bay](#); Pushes Port Plans for Jamaica Bay, New York Times, 22 October 1930)





**Figure 31.** A 1924 aerial image of the location of the John F. Kennedy International Airport before it was constructed. White lines depict current shoreline. (source: New York – History <http://nygeschichte.blogspot.de/2015/01/idlewild-airport-and-lost-villages-of.html>)



**Figure 32.** John F. Kennedy International Airport, New York, 1954. This aerial image of the airport was taken in 1954 while the airport is still under construction. White lines depict current shoreline. (source: New York – History <http://nygeschichte.blogspot.de/2015/01/idlewild-airport-and-lost-villages-of.html>)

## Conclusions

A significant part of the history of New York City is embedded in how New Yorkers transformed the landscape and natural resources of the region to create wealth and welfare (Steinberg 2014). From the earliest European settlement, the local ecology was exploited and turned into commodities such as fur pelts and timbers for European markets. As New York expanded, a variety of tensions emerged pitting the broader interests of a growing city against those of local residents, and of recreational interests against those of subsistence or commercial resource extraction interests (e.g., farmers, commercial fishers).

The narrative of Jamaica Bay presented in this report reflects the span in which these tensions rose significantly, reached crises, and were at least partially resolved. While human interactions with the environment are always dynamic, we attempt to illustrate how the late 19th to the early 20th Century represented a time of signal transformation in the bay. At the beginning of the period, the bay and its environs in many ways still held the characteristics of what it had been since the late 1600s—a region of vast wetlands, bountiful aquatic life and, on the dry uplands, farms and orchards and villages and small towns. By end of the period—circa the 1920's—the bay was experiencing profound degradation as a consequence of the expansion of the Greater City of New York, with it serving as a waste depository, and from wetland infilling, urban land conversion, and siting of massive infrastructure features.

We highlight both the significant shifts that occurred during this period and how people, communities, and ecosystems experienced them. We focus on defining the main themes of the narrative, the drivers of change, and role of root, context, and proximate factors of system change. Our use of the newspaper sources provides the fullest picture of this transformation ever before assembled; however, elements of the story are still not complete and deserve more focused attention.

The analysis provides an understanding of how the bay was used and perceived and how both of these conditions influenced the struggle over the Bay and resulting ecological transformation. For example,

1. Most users only interacted with Jamaica Bay in a limited way. Implicit in the newspaper coverage is that it was difficult for actors to see the bay as a whole or as having content or direction, and to imagine that there was a trajectory. One could infer that the actors in the bay looked only at their small piece of the bay and how it interacted with other users with which they directly interacted. While shell fishing and, particularly, oyster farming was highly productive, producing as much as 100,000 bushels of oysters annually, commercial fishing in the bay may have supported only about 100 families during the late 19th Century.
2. For the vast majority of users, Jamaica Bay was largely seen as a placid and tranquil place for recreation, including fishing, boating, yachting, and swimming. However, the intensity of usage of the bay in the late 1800s and early 1900s for hook and line fishing for recreation and provisioning was intense due to its proximity to the swelling populace of the greater region and its easy accessibility via railroad and ferry transportation networks. It also became a site



for growing crowds for beaches and resorts at the Rockaways and other locations. Canarsie was long a major point of departure as a harbor and a working class and middle port and recreation area. The interest of these day visitors overwhelmed the interests of the commercial fishers resulting in political and economic support for the more lucrative tourism and recreation markets over local fishing and oystering interests.

3. The large-scale business community saw the bay as vacant and a wasteland onto which their plans could be laid. Local interests and residents emerged as hardened forces to oppose or block such outside interests. The region represented a classic tension between a production landscape where local interests were involved in resource extraction and a consumption landscape where outside interests were focused on consuming the amenities of the place during short visits. In almost all of these histories, large-scale business interests win out over local interests, and that was case in Jamaica Bay.
4. Each step of action imposed a residual effect on the landscape—large and small scale actions left it pocked-marked with impacts which would have legacy influences for future users. For example, the early presence of fish rendering facilities on Barren Island later developed into a variety of related noxious and toxic plants on the island. This altered nature then becomes the starting point for the next initiative or ambitious plan. This residue can be either an enabling or constraining condition to these future actions.
5. Arguably the most profound alteration of the bay and the trajectory of its transformation occurred with the development of the railway, and then the road across what would become Broad Channel. This connection to the railroad and the regular, rapid, and reliable transit it offered greatly enhanced mobility through and around the bay. It curtailed the importance of the Canarsie Landing as a departure point and brought massive numbers of tourists and then residential development to the Rockaways and points on the way. Four stops across the bay were created along what became the present-day neighborhoods of Howard Beach, Broad Channel, and the Rockaways. Each stop had its own character and type of residents and day users—not unlike towns on the Jersey shore or other beach areas.
6. The incorporation of Jamaica Bay into the Greater City of New York significantly changed the trajectory of the bay through the transfer of political control from towns to the City. The towns had used the bay as a substantial revenue source through submerged land leases and sales. An immediate impact of the consolidation was the collapse of large-scale private development schemes and the emergence of public development schemes. A significant example is the collapse of the plan to make the Broad Channel area an enclave for wealthy New Yorkers and rename the area Monarch Island. The fuller impact of control by New York City with later siting on the bay of immense waste sites, sewage treatment facilities, highways—including the girdling Belt Parkway—and two major airports are yet to fully understood.
7. The creation of market value from non-market or poorly monetized resources such as wetlands is a prime example of how profoundly communities on the bay relied on the natural

ecosystems of the region to promote their own interests. Submerged lands were a key source of revenue because the towns could sell leases to local oystermen, etc. In contrast, wetlands onto which houses on stilts were built did not generate tax revenue for towns or the city because since they did not supply services; the convention was that the property owners could not be taxed. Thus it was in the towns' and later the city's interest to "reclaim" wetlands and then provide opportunities for residential and business construction—allowing the properties to be taxed. Around 1900, but before acquisition by New York City, the towns used the sale of lots to expand their budgets; the desire to fill swamps and reclaim land was an important way to raise revenue for the towns.

8. Overall, the newspaper articles reveal conditions of chronic environmental stresses on the bay and one can infer increases of these stresses over time, e.g., sewage inputs, habitat destruction. The record speaks of rising conflicts and resolutions or adjustment to new conditions. What are not present are critical turning points or tipping points in the sequence of events. It is interesting that we cannot define a single extreme event or disaster that appeared to turn the trajectory of development in the bay. This great transformation was incremental, not episodic.
9. Storms and extreme events revealed vulnerabilities. However, it seems that the larger policy context including the connection to New York City, the building of infrastructure making the area more accessible, demographic growth, the approach of larger population, suburbanization, and the demand for housing and cultural shifts including the social and class segregation and the opening of lands further east for the wealthy of New York City played the most significant and pervasive roles in transforming the bay. This weight seemed to tip the balance of the bay's transformation.



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## Appendix A. Map Sources

The maps included with this report are representational and are for illustration purposes only. Maps from 1780 through 1898 were used to establish the shorelines, ponds, streams, villages and townships.

Several different shorelines are used but none are true to any particular map. Shorelines were designed to make the maps more readable and to make the identification of and comparison of features easier for the reader.

The location and existence of ponds and streams were assembled from many maps. Not every historical map showed every stream or pond. In addition the exact location of the ponds, the meandering of the streams and often names were differed in each map.

- Historical Shoreline shapefile data:
  - The following USGS topographic quadrangle maps
    - NY\_Brooklyn\_139311\_1900\_62500, published in 1910
    - NY\_Brooklyn\_1891\_62500
    - NY\_Harlem\_139658\_1898\_62500, published in 1900
    - NY\_Hempstead\_139676\_1898\_62500, published in 1903
    - NY\_Oyster Bay\_148121\_1898\_62500, published in 1898
    - NY\_Staten Island\_255388\_1898\_62500, published in 1899
    - NJ\_Patterson\_255310\_1888\_62500, published in 1888
  - Map of the City of New-York and its Environs (David Rumsey Historical Map Collection, 1860)
  - Map of Kings and part of Queens Counties, Long Island NY/surveyed by R.F.O. Conner (Lionel Pincus and Princess Firyal Map Division NYPL, 1852)
  - New York Bay and Harbor (David Rumsey Historical Map Collection, 1845b)
  - Map of the Country Thirty Miles Round the City of New York (David Rumsey Historical Map Collection, 1811)
- Mid 18th and Mid 19th Century shapefiles data:
  - David Rumsey Historical Map Collection. (1845b). *Map of New-York bay and harbor and the environs* [Map of New - York Bay and Harbor and the Environs. Founded upon a 234 Trigonometrical Survey under the direction of F.R. Hassler Superintendent of the Survey of the Coast of the United States. Triangulation by James Ferguson and Edmund Blunt Assistants. The Hydrography under the direction of Thomas R. Gedney Lieutenant U.S. Navy. The Topography by C. Renard, T.A. Jenkins & B.F. Sands Assists. Published in 1845. A.D. Bache Superintendent. Verified by Lieut. A.A. Humphreys. Topography Engraved by S. Siebert & A. Rolle, Views Engraved by O.A. Lawson. Engraving supervised & Views of



the Coast drawn by J. Farley. Hydrography Engraved by F. Dankworth, Lettering by F. Dankworth & J. Knight.] (2nd ed.). Washington D.C.: U.S. Washington. Retrieved from <http://www.davidrumsey.com/rumsey/download.pl?image=/D5005/1018001.sid>

- A Map of New York [i.e. Manhattan] & Staten Islds and Part of Long Island. Drawn by Charles Blaskowitz, Capt. Guides & P [Pioneers] also covering part of the New Jersey coast; (the area depicted is now in the United States of America); showing refugee posts (one dated 21 July 1780) on the New Jersey shore of the Hudson River, and soundings around Sandy Hook. Reference table to redoubts and fortifications; detailed reference notes on a military campaign of 1776. Decorative drawings of ships. Scale: 1 inch to 1 mile. Compass indicator. Soundings taken in July 1782.  
Covering dates: 1782  
Held by: The National Archives, Kew
- Street centreline has been maintained and updated as a component of the New York City Basemap. The "Street centreline" dataset is a line representation of New York City streets including various pedestrian transportation routes. The data is comprised of line geometries and attribute information including street name and VSAM code.  
The user constraints are defined by the New York City Department of Information Technology and Telecommunications.
- Township shapefile: i
  - How Queens Became New York City's Largest Borough  
<http://ny.curbed.com/2015/10/20/9912148/how-queens-became-new-york-citys-largest-borough>
  - Brooklyn's Evolution From Small Town to Big City to Borough  
<http://ny.curbed.com/2014/7/24/10069912/brooklyns-evolution-from-small-town-to-big-city-to-borough>
  - Walling, H. F., W.E. & A.A. Baker & H.F. Walling's Map Establishment. (1859)  
*Topographical map of the counties of Kings and Queens, New York*. New York: W.E. & A.A. Baker, publishers. New York: Engraved, colored, printed & mounted at H.F. Walling's Map Establishment. [Map] Retrieved from the Library of Congress, <https://www.loc.gov/item/2013593266/>.
- Eelgrass beds shapefile data:
  - USGS smooth sheets:
    - H01358, NOS Hydrographic Survey 1877 of the western portion of Jamaica Bay. scale 1:5000
    - H01392, NOS Hydrographic Survey 1878 of the eastern portion of Jamaica Bay. scale 1:10000

- Substrate data (eelgrass, quality, etc.) was from 2 hydrographic surveys that were taken at different scales which accounts for the difference in density of features between the eastern and western halves of Jamaica Bay.
- Watershed shapefile:
  - National Park Service, Gateway National Recreation Area, Federal lands.
- New York State county boundaries clipped to the shoreline.
  - NYS Office of Information Technology Services GIS Program Office (GPO)
- Oyster bed shapefile data:
  - Jamaica Bay Oysters Blamed for the Typhoid Epidemics, New York Times, Published October 6, 1912
- Historical ponds, historical streams and historical wetlands shapefiles are derived from the following sources:
  - The following USGS topographic quadrangle maps
    - NY\_Harlem\_139657\_1898\_62500, published in 1899
    - NY\_Hempstead\_139676\_1898\_62500, published in 1903
    - NY\_Oyster Bay\_148121\_1898\_62500, published in 1898
    - NJ\_Patterson\_255310\_1888\_62500, published in 1888
    - NY\_Staten Island\_255388\_1898\_62500, published in 1899
    - NY\_Brooklyn\_139316\_1900\_62500, published in 1910
    - NY\_Brooklyn\_1891\_62500
  - Shapefiles from the Wildlife Conservation Society Mannahatta Project
  - Map of New-York Bay and Harbor and the Environs.
    - Collection: David Rumsey Historical Map Collection
    - Author: United States Coast Survey, date 1844
  - Map of Kings and part of Queens Counties, Long Island, N.Y. surveyed by R.F.O. Conner.
    - Collection of the New York Public Library
    - Creator: Korff Brothers -- Lithographer
    - Publisher Dripps, M. (Matthew)
    - Year 1852
  - Map of the City of New-York And It's Environs
    - Collection: David Rumsey Historical Map Collection. From Actual Survey under the direction of H.F. Walling. Published By S.D. Tilden. 356, 358 & 360, Pearl Street, New York. Year 1860

- Map of Jamaica Bay
  - Courtesy of the Wildlife Conservation Society, By Charles Blaskowitz, Year 1782
- Plan of New York and Staten Island with parts of Long Island
  - Collection: Library of Congress Geography and Map Division, Watermark: J. Whatman, Surveyed in the years 1781 and 1782
- Map Of The Country Thirty Miles Round the City of New York
  - Collection: David Rumsey Historical Map Collection, Author: Eddy, John H., Date: 1811
- Wetland Shapefile
  - U.S. Fish and Wildlife Service National Wetlands Inventory.
- Recreational Fishing Sites:
  - Are assembled from the newspaper articles cited in the paper.

The Department of the Interior protects and manages the nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its special responsibilities to American Indians, Alaska Natives, and affiliated Island Communities.

NPS 962/143324, March 2018

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