



New Jersey Department of Environmental Protection
Water Resource Management
Division of Water Monitoring and Standards

COOPERATIVE COASTAL MONITORING PROGRAM

2018 Summary Report



April 2019

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Division of Water Monitoring and Standards

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April 2019

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Cooperative Coastal Monitoring Program

Cover Photo- Atlantic City from a Distance (NJDEP)

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New Jersey Cooperative Coastal Monitoring Program
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Introduction:

Beaches along the Jersey Shore are a hallmark of summer, and as such, the Department of Environmental Protection (DEP) prioritizes the health and safety of the beaches for residents and tourists to enjoy. The Cooperative Coastal Monitoring Program (CCMP) is New Jersey's Beach Monitoring Program administered by the DEP's, Division of Water Monitoring and Standards, Bureau of Environmental Analysis, Restoration and Standards with participation from the New Jersey Department of Health and local health agencies (Table 1). The program was established in 1974, in response to the Clean Water Act, to assess coastal water quality at recreational bathing beaches, communicate results to the public and investigate sources of water pollution to protect public health and safety. The DEP designs the beach sampling and administers the communication, notification and response portion of the CCMP. Agencies that participate in the CCMP perform sanitary surveys of recreational bathing beaches and collect samples of nearshore ocean and estuarine waters to assess the acceptability of these waters for recreational bathing. During the off-season, the DEP develops all guidance and protocol documents as well as identification and prioritization of areas for pollutant source tracking.

In 1993, the New Jersey Coastal Protection Trust Fund was created to generate funding to support clean water programs including the CCMP through the sale of the Shore to Please license plates. The CCMP receives up to \$65,000 based on annual revenue. Due to declining sales the Program hasn't received this funding since State Fiscal Year 2017. On October 10, 2000, the Beaches Environmental Assessment and Coastal Health (BEACH) Act was signed which gave the Environmental Protection Agency the authority to award grants to develop and implement beach monitoring and assessment programs. The DEP has been awarded BEACH Development and Implementation grants every year since 2001. These funds are primarily distributed from the DEP to the four primary county agencies (Table 1) to implement the program on the local level and to collect and analyze ocean and bay water samples.

Table 1: List of Local Health Agency Partners

Primary County Agencies:	Auxiliary Local Agencies:
Cape May County Health Department	Atlantic City Health Department
Atlantic County Division of Public Health	Long Beach Island Health Department
Ocean County Health Department	Long Branch Health Department
Monmouth County Health Department	Middletown Township Board of Health
	Monmouth County Regional Health Commission

Cooperative Coastal Monitoring Program Procedures:

The CCMP uses sampling methods and protocols for beach openings and closures from both the New Jersey State Sanitary Code, Chapter IX – Public Recreational Bathing, [N.J.A.C 8:26](#) and the DEP’s [Field Sampling Procedures Manual](#). Local health agencies organize and perform routine weekly sampling at all primary beach monitoring stations generally from mid-May through Labor Day. Water quality is monitored to protect the health and safety of recreational bathers from elevated levels of bacteria and to develop long term water quality trends.

Monitoring stations are selected to be representative of recreational water quality and ensure adequate spatial coverage. All lifeguarded river and bay recreational bathing beaches open to the public have their own monitoring stations because of their noncontiguous locations. Ocean monitoring station locations are selected based on possible impacts from a potential pollution source. If there are no potential pollution sources, locations are selected to represent the water quality at several lifeguarded beaches in a contiguous area of the coast. All monitoring station selections are completed by the participating health agencies annually, prior to May 1, and approved by the DEP.

In addition to primary stations which are sampled once a week, each beach has bracket stations that are sampled only if an exceedance occurs. These primary and bracket stations help the DEP and health agencies to determine the extent of the problem. Bay and river beaches have one bracket station located on both sides of the primary station, approximately 150 feet away. Ocean beaches have three bracket stations spaced every 150 feet on both sides of the primary station. Figure 1 demonstrates an ocean beach station with north and south brackets. Bay and river beaches have fewer bracket stations because these beaches are smaller and isolated. This configuration allows the DEP to better understand the spatial extent and location of the problem thereby better protecting public health and safety.



Figure 1: Ocean Beach Station with North and South Brackets

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The State of New Jersey's recreational bathing water quality single-sample maximum standard is 104 Colony Forming Units (CFU) of *Enterococci* per 100mL of sample. *Enterococcus* is a genus of gram-positive bacteria that is found within the intestine of humans and other warm-blooded animals. It is a fecal indicator bacterium that are tolerant of a wide range of environmental conditions including salt water and more closely mimics many pathogens than other indicators. *Enterococcus* itself is generally not harmful but indicates the possible presence of pathogenic (disease-causing) bacteria, viruses, and protozoans that also live in human and animal digestive systems. Therefore, swimming in water exceeding the standard poses an increased risk of illness.

Ocean, bay and river monitoring begins at all public recreational beaches two weeks prior to opening for recreational bathing. Pre-season water quality monitoring is required to determine if changes occurred during the off-season that might impact water quality. Pre-season protocol is the same as in-season; resamples of primary stations and brackets are collected and sanitary surveys are performed daily until results are within the bathing standard. However, during pre-season sampling, no beach actions are taken since the beach is not yet open for the season. Beach actions are advisories or closures. Advisories are posted to notify the public that a water sample collected from the beach within the past 24 hours indicates bacteria levels that exceed the recreational bathing standard. Beaches under advisory remain open and additional samples are collected. The advisory alerts the public to avoid contact with the water to reduce their risk of illness. Closures apply to recreational bathing such as swimming or other bathing activities; however, the public may remain on the beach itself. Closures may be a result of two or more consecutive exceedances of the recreational bathing standard, a pollution incident (e.g., sanitary sewage overflow), floatables washup or precautionary closing for other miscellaneous reasons (e.g., storm predictions, outfall operation and maintenance plan policies).

Samples are collected on Monday mornings, unless it is a holiday in which case they are sampled Tuesday. Sampling may also be delayed by a day in the event of rough surf conditions which may pose a danger to samplers. Water samples are analyzed for *Enterococci* by DEP-certified laboratories using EPA Method 1600. Results are available within 24 hours of the lab receiving the samples. Counties submit water quality monitoring data to the DEP through DEP's web-based Beach Monitoring System. The system will automatically determine if an exceedance has occurred at a beach and generate beach actions for beaches that are open for the season. If samples exceed the standard, then an advisory is posted physically at the beach and on NJBEACHES.ORG, the primary station is resampled, bracket stations are sampled, and a mandatory sanitary survey of that beach is performed by the health agency. Resamples are always performed in conjunction with a sanitary survey, which identifies possible pollution sources and observes water and shoreline conditions. If any of the primary or bracket stations samples exceed the standard for a second consecutive day, the beach is closed. During a

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closure, resamples are collected at the station(s) that exceeded the standard and corresponding pair of bracket locations. The beach remains closed and is resampled and surveyed daily until all resamples are within the recreational bathing standard.

Throughout the recreational bathing season, local, county, and State agencies have the authority to temporarily close beaches within their jurisdiction for reasons that may impact water quality or create a safety issue such as construction, dredging and beach replenishment. Beaches may also be closed as a precaution. Typically, these precautionary closures are related to large storm events or infrastructure issues. All beach water quality monitoring and notification data are uploaded to the EPA-maintained databases at the end of each beach season.

Throughout the year, the DEP evaluates water quality results to prioritize and focus on areas where pollution is a concern. Source track down studies are implemented to find potential pollution sources and assist responsible entities in correcting the problem. During the beach season, the DEP also evaluates the rolling geomean at each monitoring location, using data collected over the most recent 30-day period, with a minimum of five samples. The State of New Jersey's recreational bathing water quality geomean standard is 30 CFU of *Enterococci* per 100 mL of sample. If a beach exceeds the geomean during the season without exceeding the single sample maximum, a sanitary survey is required to identify possible pollution sources and observe water and shoreline conditions. Once the season is over, a seasonal geomean is calculated for every beach using all primary station data collected during the season. The seasonal geomean calculations aid in the prioritization of resources for pollution source tracking efforts.

2018 Results and Discussion:

In 2018, the CCMP monitored water quality at 188 ocean stations, 20 bay stations and 9 river stations for a total of 217 primary monitoring stations. Typically, there are not many changes to monitoring station locations from year to year; however, there were a few changes in 2018, all of which were approved by the DEP prior to the start of the season. Ocean County closed Summit Beach, a Toms River beach in Island Heights Borough, due to staffing issues. Ocean County also began monitoring a new bay beach in Berkeley Township, Berkeley Island. This beach was sampled in the beginning of the season, but it never officially opened due to staffing issues and monitoring ceased mid-season. Monmouth County alerted the DEP that Thompson Ave, a bay beach in Middletown Township, needed to be closed mid-season, also due to a lack of staff. Atlantic County requested two new ocean beach monitoring stations in Atlantic City: Dover Ave and Virginia Ave. Overall, however, there was no net change in the number of monitoring stations from 2017 to 2018.

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Memorial Day is the first weekend that beaches open for the summer in New Jersey. In 2018, the first samples of the season were collected on May 14 ensuring adequate time for pre-season sampling of all beaches that were opening Memorial Day weekend. Seventy-six beaches were open for Memorial Day weekend: five bay beaches, three river beaches and 68 ocean beaches. Beaches continued to open throughout the next month and, by June 28, all beaches were open for the 2018 beach season. All beaches remained open through Labor Day weekend. Seventy-eight beaches closed on September 4, the Tuesday after Labor Day: 17 bay beaches, four river beaches and 47 ocean beaches. Beaches continued to close throughout the month of September, until the last 26 beaches closed on October 1, marking the end of the 2018 beach season.

In total, 4,019 ocean, bay and river water quality samples were collected during the 2018 recreational beach bathing season. Beach conditions, advisories, beach closures and reasons for beach closures were posted on the DEP's webpage, NJBEACHES.ORG. Additionally, when beach advisories or closures were necessary, signs were posted at the beach. Signs remained posted until the advisories or swimming bans were lifted.

Ocean Summary:

In 2018, there were 188 ocean monitoring locations (Figure 2), from which 3,358 ocean water quality samples were collected and analyzed by the CCMP. 87% of the 2018 CCMP monitoring locations are ocean stations. In total, there were 63 advisories which resulted in only four closures due to bacterial exceedance. In addition, there were twenty-eight precautionary closures, and 13 closures which occurred during a single day as a result of a floatables event on July 19 (Figure 3 and Table 2). The 28 precautionary closures took place over seven days at the four Wreck Pond beaches: Beacon Blvd and the Terrace in Sea Girt Borough, and Brown Ave S and York Ave in Spring Lake Borough, Monmouth County (see below for details).

The DEP and Monmouth County Health Department have worked in partnership for years to manage and mitigate water quality issues associated with Wreck Pond. The Borough of Spring Lake's DEP-approved Wreck Pond Outfall Operation and Maintenance Plan outlines policies for the two outfalls and corresponding gates which allow the pond and ocean to have an open connection. The Plan states that the knife gate on the concrete culvert outfall will remain closed during the beach season to prevent potential pollution sources impacting the four neighboring recreational bathing beaches (Beacon Blvd and the Terrace in Sea Girt Borough, and Brown Ave S and York Ave in Spring Lake Borough). During the recreational bathing season, it is only permissible to open the knife gate under emergency conditions where imminent flooding of the surrounding area may occur. During emergency conditions, when the

knife gate is open, the four ocean beaches adjacent to Wreck Pond are closed as a precaution. The Plan states that these beaches shall remain closed after the emergency conditions subside and the knife gate has been shut for 24 hours.

In 2018, three different events required the Wreck Pond knife gate to open which resulted in a three-day closure in May, a one-day closure in July and a three-day closure in August. These events account for the 28 ocean beach precautionary closures in 2018 (Figure 3).

On Thursday, July 19, 2018, 13 beaches from Long Branch to Loch Arbor in Monmouth County were closed late one afternoon because of a floatable debris washup. Based on the type of debris observed, predominant wind direction, surface current patterns and 2.5 inches of rainfall in the metropolitan New York area, it was suspected that the source of debris was likely from Combined Sewer Overflows in the NY/NJ Harbor.

All affected beaches were reopened the following morning after beaches were raked and inspected by the DEP and local health agency. This single event accounts for all the ocean floatable closures in 2018. The other four ocean closures, two in Ocean County and two in Monmouth County, were due to exceedances of the bacteria standard. All four closures occurred on August 15, 2018. Thirty-six hours prior to the sample collection that resulted in the closures, these four beaches experienced an average of 1.8 inches of rainfall. It is likely that elevated bacteria levels were caused by stormwater runoff and nonpoint source pollution.

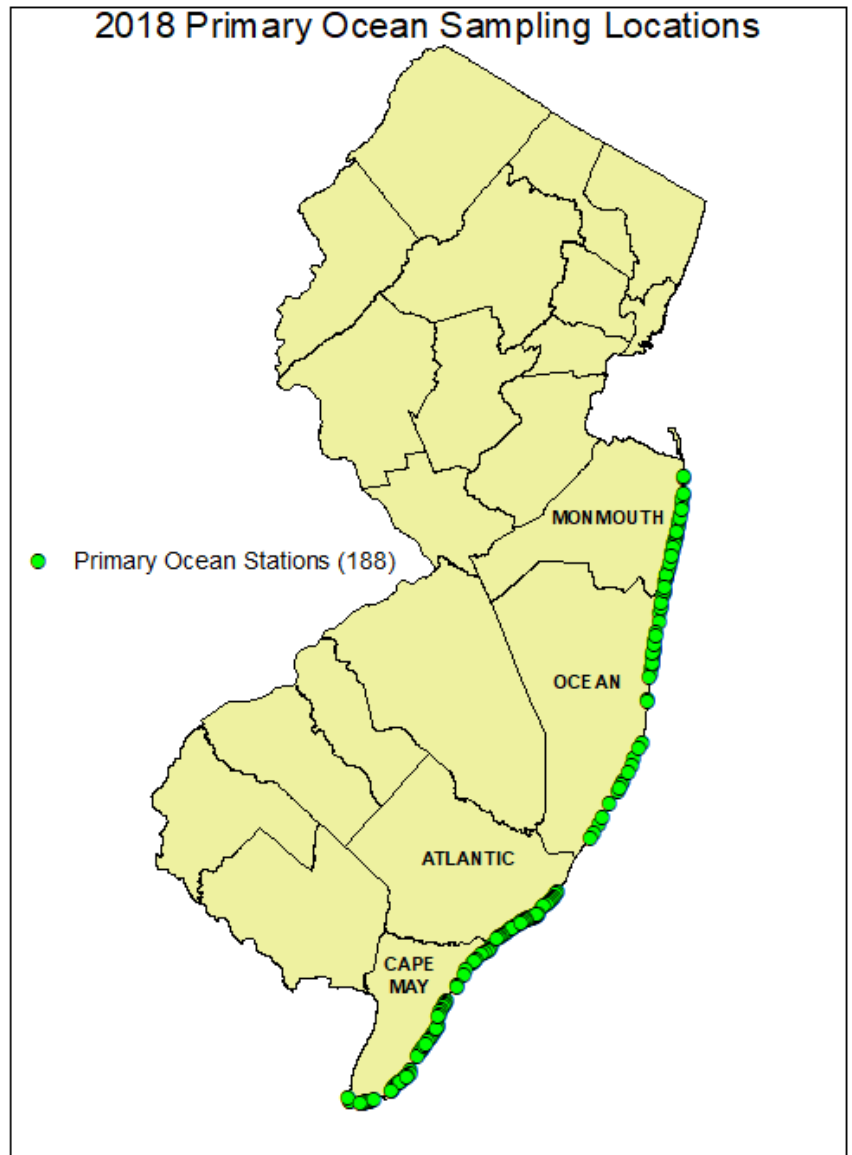


Figure 2: 2018 Primary Ocean Sampling Locations

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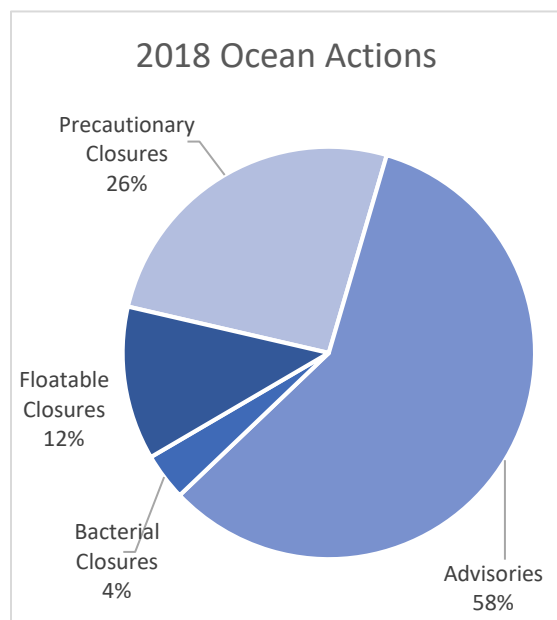


Table 2: Ocean Actions 2014-2018

	2014	2015	2016	2017	2018
Number of Advisories	12	20	76	54	63
Bacterial Closures	5	2	3	15	4
Precautionary Closure	-	2	1	1	28
Rainfall Provisional Closure	15	-	-	-	-
Floatable Closure	3	-	-	-	13
Total	35	24	80	70	108

Figure 3: 2018 Ocean Beach Actions

Bay Summary:

New Jersey's coast has an extensive bay system. In 2018, there were 20 public recreational bay beaches, each of them with a monitoring station (Figure 4). In total, 389 water quality samples were collected and analyzed in the CCMP. 9 % of the 2018 CCMP monitoring stations are bay locations.

Back bay systems are inland to barrier islands, home to important wetlands, exposed to riverine input and have an open connection to the ocean. These waters typically have higher residence times, meaning that it takes longer for the water to be exchanged with ocean water. Most of New Jersey's bay beaches are in Barnegat Bay, however every participating county in the program has at least one bay beach and corresponding monitoring station. The other bay monitoring locations are in Great Egg Harbor Bay, Absecon Bay, Sandy Hook Bay, and the Raritan Bay.

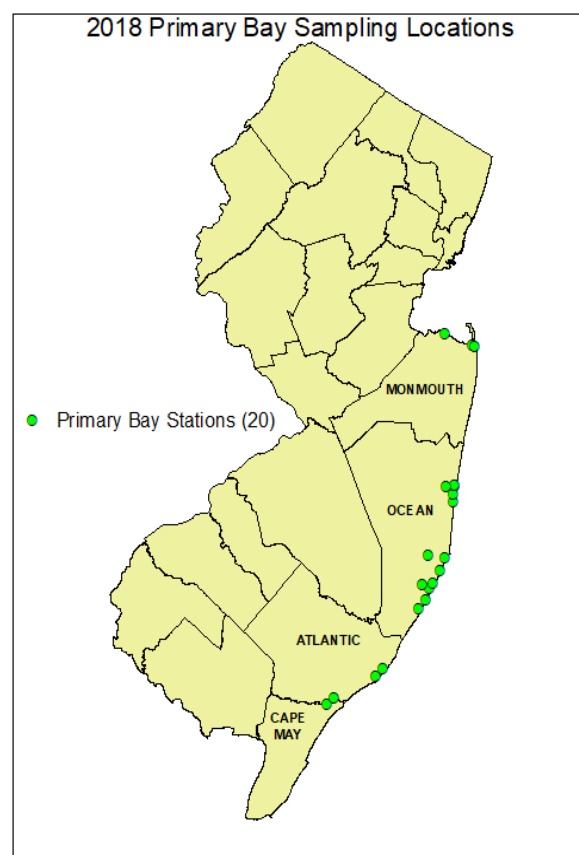


Figure 4: 2018 Primary Bay Sampling Locations

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There was a total of 22 bay beach actions in 2018. Eighteen advisories were posted at bay beaches which resulted in only four closures (Figure 5 and Table 3). The Highlands Recreational Center, Highlands Borough, Monmouth County had a two-day closure in July. The other closures were for a single day at 25th Street Bay Beach, Barnegat Light, Ocean County and 26th Street, Brigantine City, Atlantic County. There are currently ongoing source tracking efforts at both Highlands Recreational Center and 25th Street Bay Beach.

Table 3: Bay Action 2014-2018

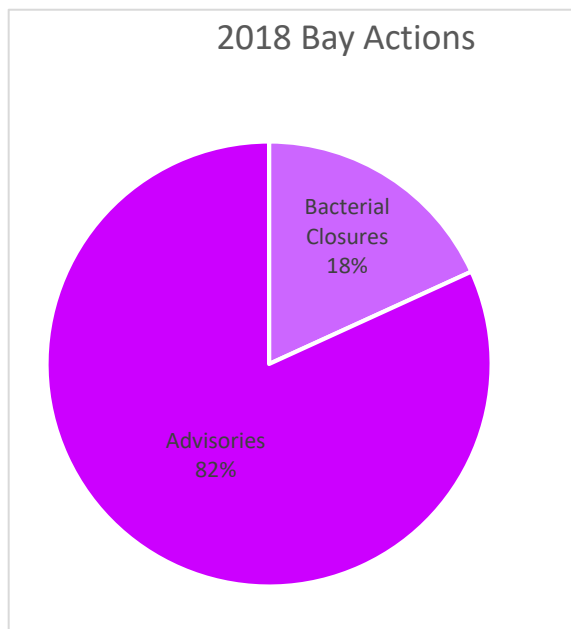


Figure 5: 2018 Bay Beach Actions

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Number of Advisories	7	26	23	15	18
Bacterial Closures	1	1	4	7	4
Precautionary Closures	-		-	-	-
Rainfall Provisional Closures	-	-	-	-	-
Floatable Closures	-	-	-	-	-
Total	8	27	27	22	22

River Summary:

Only four percent of CCMP monitoring locations are within riverine systems (Figure 6). All nine river beaches that are included in the CCMP are tidally influenced. Tide has a significant effect on flushing and residence time of riverine waters. Typically, it takes longer for flushing to occur in riverine systems. In 2018, 272 river water quality samples were collected and analyzed in the CCMP.

Of the nine river beaches, eight are located within the Barnegat Bay Watershed: five are in the Toms River, one is on the Metedeconk River and two are within the Manasquan River. The other river monitoring station is located in the Shark River, Belmar Borough, Monmouth County.

In 2018, there were 25 river actions: eight advisories and 17 closures. Four were precautionary closures and thirteen were caused by bacterial exceedances (Figure 7 and Table

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4). Most river closures are due to nonpoint source pollution and storm water impacts resulting from rainfall. Pollution sources tend to linger at river beaches due to tide cycles, currents, wind, and geographical features. Therefore, it is not uncommon for advisories to result in closures that can last several days.

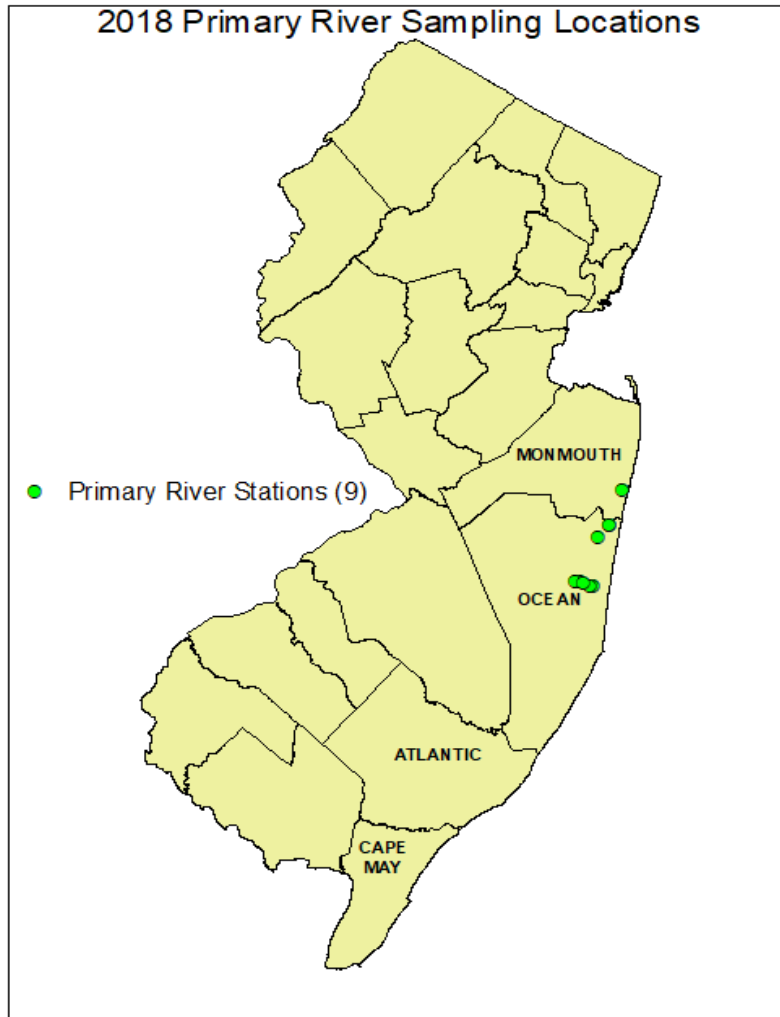


Figure 6: 2018 Primary River Sampling Locations

All the precautionary closures occurred at L-Street Beach in Belmar Borough as a result of two large storm events that inundated the sanitary sewer system and caused it to overflow at the manhole adjacent to the beach resulting in raw sanitary sewage entering the Shark River. Each overflow of sanitary waste caused the beach to be closed for several days. Unrelated, on June 12, elevated bacteria levels at two different river beaches resulted in a two-day closure at Windward Beach located on the Metedeconk River and East Beach Station Avenue Beach along the Toms River, Ocean County. From July 24 through July 26, Beachwood Beach West on the Toms River closed due to consecutive exceedances of the recreational bathing standard.

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There are currently efforts underway to identify pollution sources and potential fixes within the Toms River, Metedeconk River, and the Shark River.

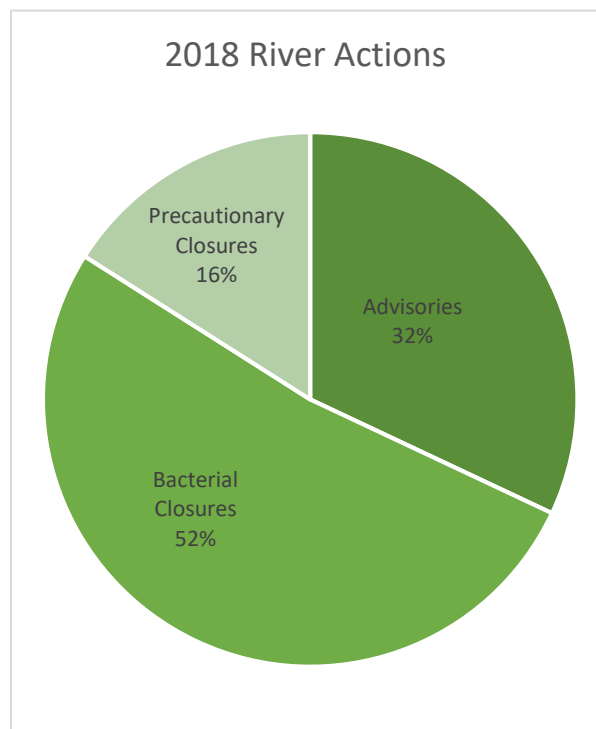


Figure 7: 2018 River Actions

Table 4: River Actions 2014-2018

	2014	2015	2016	2017	2018
Number of Advisories	12	14	21	6	8
Bacterial Closures	-	17	6	5	13
Precautionary Closure	-	-	-	-	4
Rainfall Provisional Closure	2	-	-	-	-
Floatable Closure	-	-	-	-	-
Total	14	31	27	11	25

Seasonal Geographic Mean:

As previously mentioned, the DEP utilizes a seasonal geomean statistic to identify recreational bathing beaches with low-level, but persistent water quality issues. At the end of the bathing beach season, all water quality data is collected from each primary monitoring station and analyzed to calculate the seasonal geomean. The geomean water quality standard is 30 CFU of *Enterococci* per 100 mL of sample. In 2018, six river beaches and one bay beach failed to meet the standard (Figure 8). The river beaches were the Highlands Recreational Center and L-Street Beach in Monmouth County as well as Windward Beach, Beachwood Beach West, West Beach Avon Road, and Wildwood Beach in Ocean County. The bay beach that did not meet the standard was 25th Street Bay Front Beach in Ocean County. The DEP uses this information to strategically deploy resources for source tracking work to “find and fix” compromised infrastructure to improve water quality at these beaches.

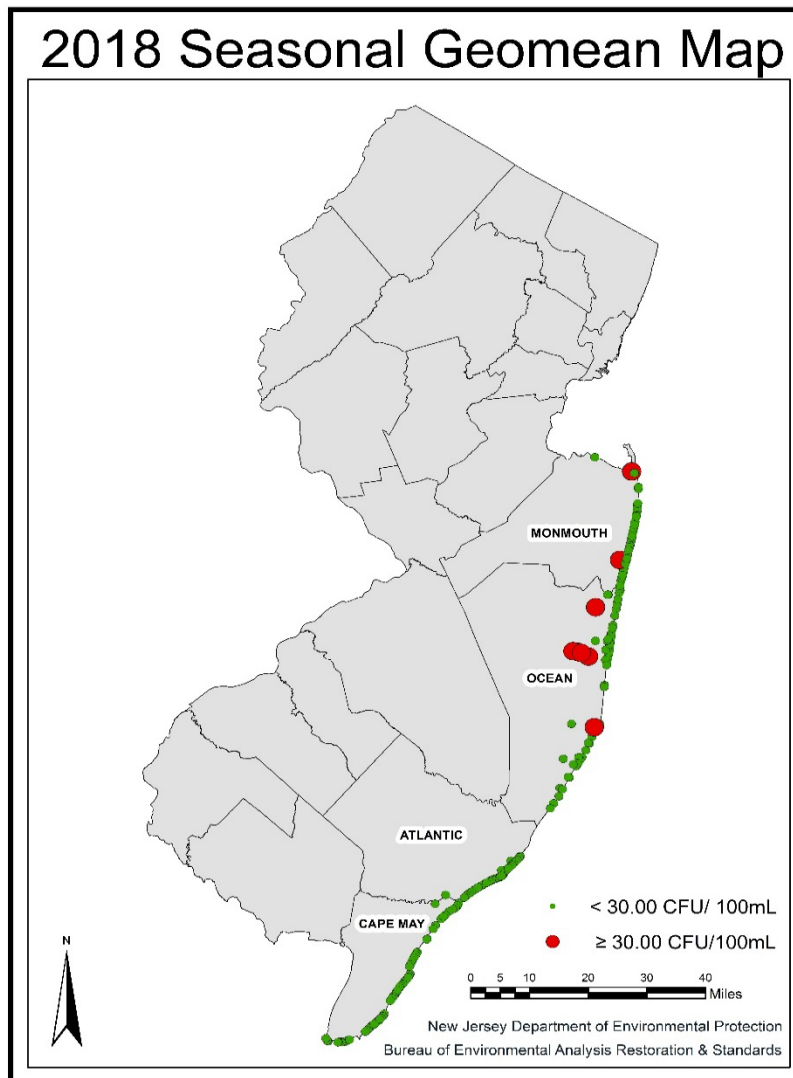


Figure 8: Map of 2018 Stations' Seasonal Geomean

Beaches and Rainfall:

Rainfall and resulting stormwater runoff has a significant impact on water quality at public recreational beaches. The DEP works with Rutgers University to compile and make available online rainfall data from the [National Weather Service's Multi-sensor Precipitation Estimator](#). This sensor technology utilizes a combination of rain gauges and radar to estimate rainfall totals in near real-time for a 2.5-mile grid area around each rain gauge. During storm events, users can access the latest rain total estimates every 30 minutes after the hour. This rainfall data provides DEP another tool to assess rain impact on water quality and public health at the New Jersey's beaches.

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Figure 9: Ocean Stormwater Outfall Pipe, Monmouth County, NJ

As noted previously, monitoring stations are located at beaches with known potential pollution sources. Many of these pollution sources are stormwater outfalls that convey stormwater from our streets to oceans, bays and rivers. When it rains, water flows across the landscape, over lawns, parking lots and streets. The water continues to travel along gutters, into catchment basins, through storm drain pipes and ditches, until finally arriving at stormwater outfall pipes that flow into local waterbodies (Figure 9). Along the way, stormwater can pick up trash (fast-food wrappers, cigarette butts, plastic waste, etc.), as well as toxins and various pollutants (gas, motor oil, antifreeze, fertilizers, pesticides and pet waste). Therefore, rainfall has the potential to increase bacteria at recreational beaches near stormwater outfall pipes.

The State of New Jersey is divided into five water regions: Upper Delaware, Northeast, Raritan, Atlantic Coastal and Lower Delaware (Figure 10). All the public recreational bathing

New Jersey Water Regions and Watershed Management Areas

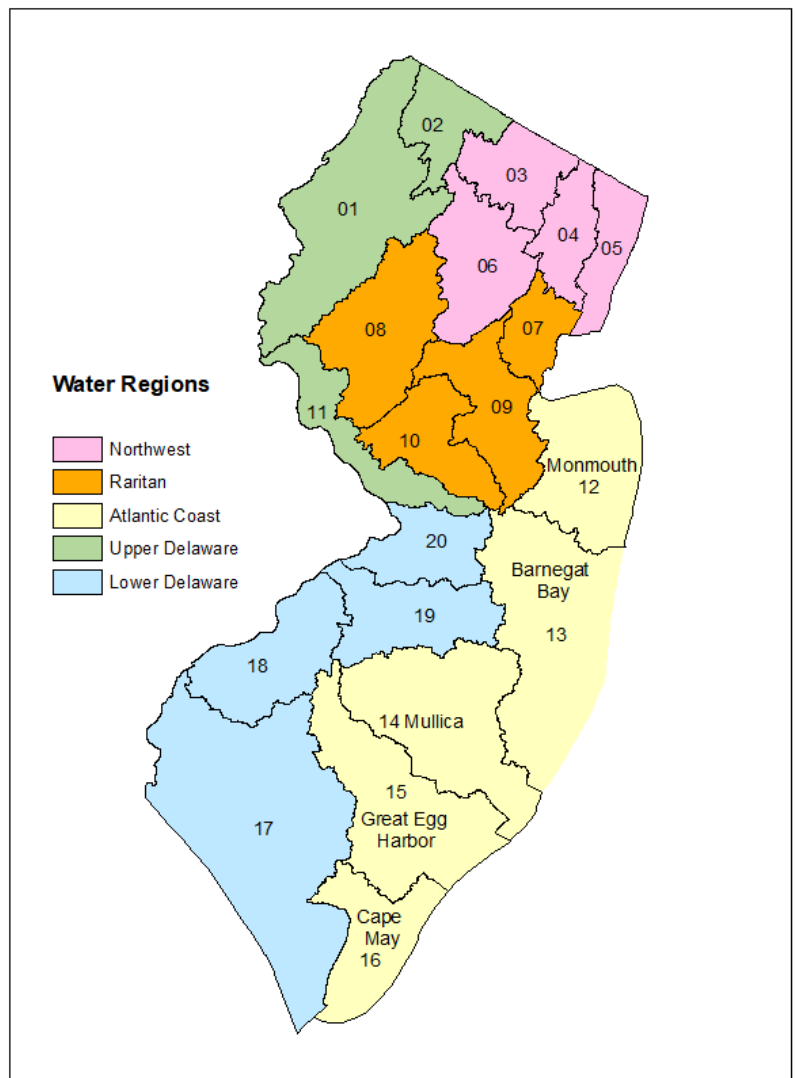


Figure 10: New Jersey Water Regions and Watershed Management Areas

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beaches are in the Atlantic Coastal region. This region is divided up into five watershed management areas which are, from north to south, Monmouth, Barnegat Bay, Mullica, Great Egg Harbor and Cape May. Rainfall data was compiled and analyzed based on watershed management area to determine if it rained prior to sampling. Many beaches in the State are adversely affected by stormwater discharges. Impacts at beaches can continue over 24-48 hours after a rainfall event, especially in rivers and bays. For this reason, the DEP analyzed rainfall data 36 hours prior to sample collection. The Atlantic Coastal Region experienced greater rainfall in 2018 compared to 2014-2017 (Figure 11). Advisories and closures generally increase during “wet” years and decrease during “dry” years.

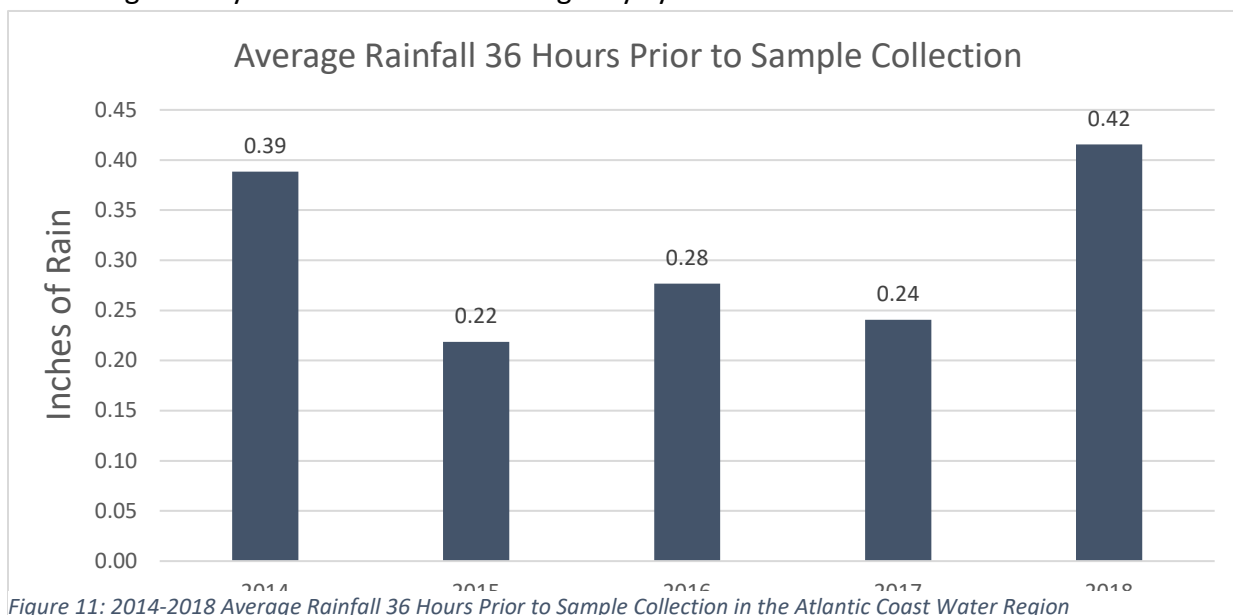


Figure 11: 2014-2018 Average Rainfall 36 Hours Prior to Sample Collection in the Atlantic Coast Water Region

DEP Actions:

If the DEP identifies persistent water quality problems at a recreational bathing beach, the CCMP will implement a source track down strategy in partnership with the Division’s [Bureau of Marine Water Monitoring](#), the local health agency and municipality. Background information is collected beginning with a review of existing water quality results and supplemented with monitoring studies to address data gaps and provide additional data. Results from the monitoring studies allow the DEP to understand the spatial extent of any issues and identify areas of concern, which more efficiently directs resources. Additional investigation of infrastructure using techniques such as video surveillance and dye testing may be necessary. This strategy allows the responsible entity to effectively find where problems are located and quickly fix them. When infrastructure repairs or replacement is necessary additional funding is typically required.

The DEP encourages municipalities and counties to apply to the New Jersey Water Bank to repair and replace problematic and antiquated infrastructure. The program currently offers

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50% principal forgiveness for capital improvement projects that will eliminate, prevent or reduce occurrences of beach closings due to the presence of pathogens. Funding may be awarded to projects that would eliminate potential sources such as leaking or broken sanitary sewers and illegal cross connections between storm sewers and sanitary sewers. For more information on the Water Bank go to: www.nj.gov/dep/dwg/mface_njeifp.htm.

Supporting Programs:

As part of the CCMP, the DEP's Division of Water Compliance and Enforcement routinely inspects seventeen wastewater treatment facilities that discharge to the ocean (Appendix 1). The CCMP partners with the NJ Forest Fire Service to perform coastal surveillance flights six days a week, weather permitting, during the recreational bathing season to observe changing coastal water and beach conditions. Staff on the surveillance flights look for floatables, possible pollution sources, or anything potentially harmful to bathers. Coastal flights began in the late 1980s. In 2007, the aircraft was equipped with a hyper-spectral sensor calibrated to estimate chlorophyll-*a* levels in coastal waters. High levels of chlorophyll-*a* are indicative of algal blooms. If an algal bloom is detected, samples are collected by either DEP staff or partnering counties. Samples are analyzed to determine the predominant algal species and if any species present are toxic. Coastal surveillance flights are conducted six days per week (no flights on Wednesdays) and include the Raritan Bay, Lower New York Bay, and the Atlantic coast from Sandy Hook to Little Egg Inlet. Flights on Thursdays and Sundays are extended to include the area from Barnegat Inlet to Cape May Point and up Delaware Bay. Figure 12 is an example of a short flight path flown on Mondays, Tuesdays, Fridays and Saturdays. Figure 13 is an example of a long flight path flown on Thursdays and Sundays.



Figure 12: Short Flight Path Example

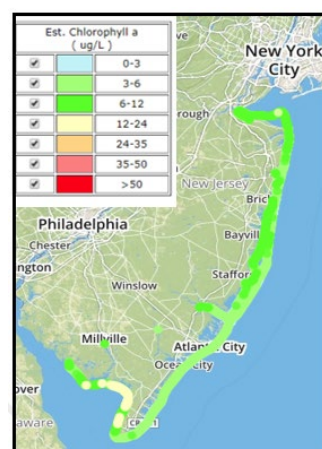


Figure 13: Long Flight Path Example

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Observers' flight reports, including marine life sightings, are available daily through the NJBEACHES.ORG. Coastal aerial surveillance statistics can be found in Table 5.

Table 5: Aerial Surveillance Statistics

Number of Scheduled Flights	113
Number of Flights Attempted	73
Number of Flights Completed	60
Number of Canceled Flights Due to Weather prior to Departure	40
Number of Flights Chlorophyll-<i>a</i> data was collected	67
Number of Flights with Dolphin Sightings	39
Number of Flight with Baitfish Sightings	44
Number of Flights with Ray Sightings	32
Number of Flights with Whale Sightings	2
Number of Flights with Sea Turtle Sightings	1

Clean Shores Program

The DEP has partnered with the NJ Department of Corrections since 1989 to administer the Clean Shores Program. Clean Shores is a year-round program that utilizes State inmate labor to conduct daily clean-ups in tidally influenced waterways, such as back bays and beaches, to remove floatable debris like wood, and litter, including plastic waste. Non-recreational shorelines that have been left unattended serve as reservoirs for floatable debris and trash that can be dispersed during coastal storms and extreme high tides. Removing this trash and debris prevents it from washing up on recreational beaches, becoming floating hazards to navigation, or impacting marine life. The partnership is mutually beneficial allowing the State to provide a needed service to municipalities and giving an opportunity for minimum security inmates to give back to the community in a meaningful way.

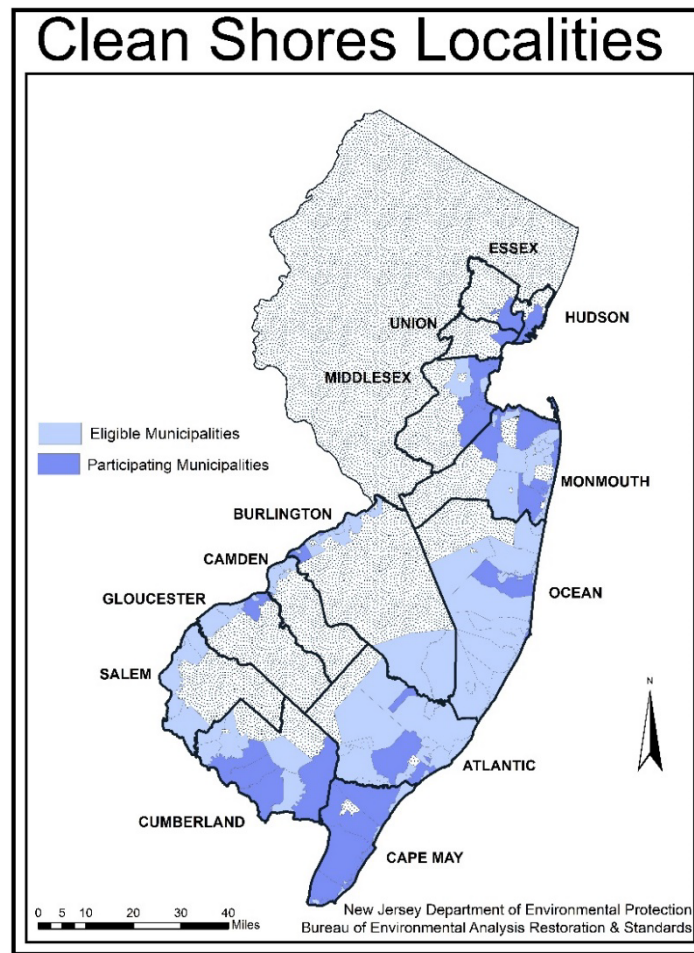


Figure 13: Municipalities Currently Eligible to Participate in the Clean Shores Program

Municipalities that currently participate in the Clean Shores Program (Figure 13) include the shorelines of the Hudson, Raritan and Delaware estuaries, tidal shorelines, barrier islands and back bays. When the Program began in 1989, the shoreline had significant amount of debris and litter, especially large wooden debris. As a result, the Program did not cover significant mileage due to the enormous volume of debris collected, typically millions of pounds each year (Figure 14). Due to continued commitment to this Program, the density of trash found at the work sites has been reduced, which allows the Program to cover more coastal mileage. Between 1989 and 2018, more than 153 million pounds of debris were removed, and 3,629 miles of New Jersey's tidal shorelines have been cleaned and recleaned by the Program. The Program aims to expand and serve more areas by raising awareness of the Program to those that are eligible. All the data that is collected by the CCMP and supporting programs assists the DEP in responding to immediate public health concerns at coastal recreational bathing beaches.

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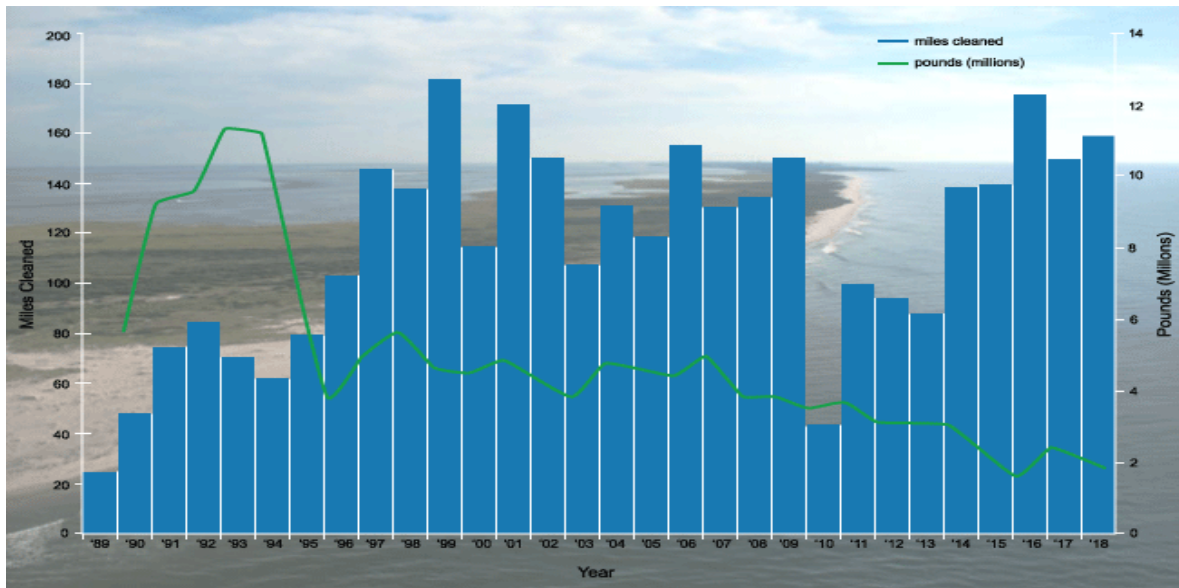


Figure 14: Miles Cleaned vs. Trash Removed by the Clean Shores Program

The Clean Shores program is entirely funded by the “Shore to Please” specialty license plate sales (Figure 15). During the 2018 beach season, the DEP used an aerial billboard to promote the sale of these specialty plates. The Public’s support of the program through the sale of the license plate will allow more municipalities to participate throughout the year and would remove more debris from New Jersey’s shorelines. Please support this program and look for the plane during the recreational bathing beach season. Applications for the “Shore to Please” license plate can be found [here](#).

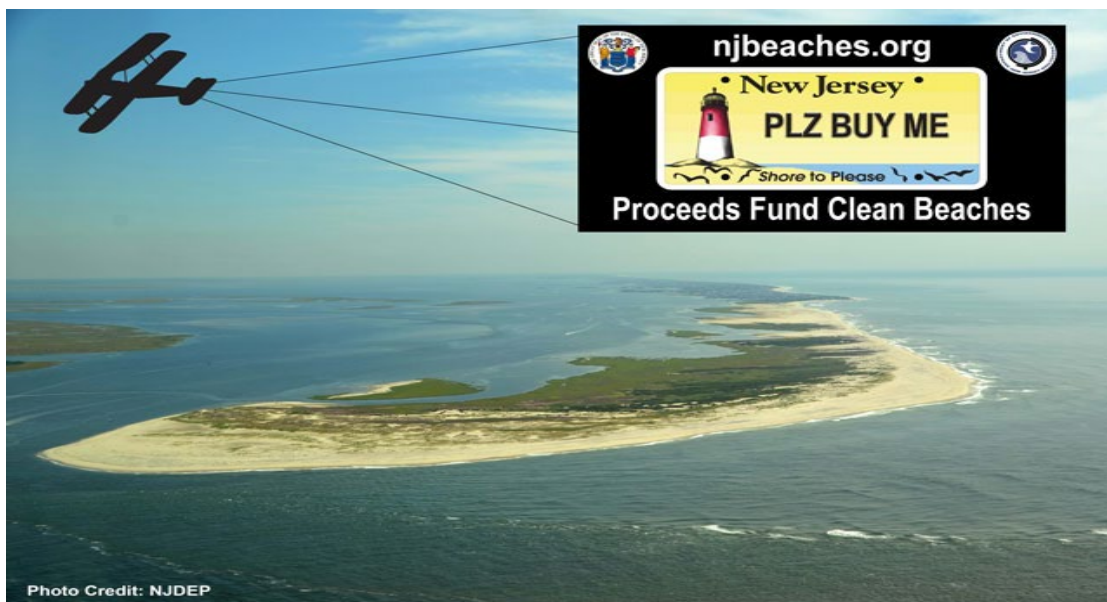


Figure 15: Keep an Eye Out for the Banner Plane Advertising the Shore to Please License Plate During the Summer Months

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Appendix 1

Wastewater Treatment Facilities Discharging to the Nearshore Coastal Waters:

1. Monmouth County Bayshore Outfall Authority
2. Bayshore Regional Sewerage Authority
3. Township of Middletown Sewage Authority
4. Two Rivers Water Reclamation Authority
5. Long Branch Sewerage Authority
6. Township of Ocean Sewerage Authority
7. Asbury Park Sewer Utility
8. Neptune Township Sewerage Department
9. South Monmouth Regional Sewerage Authority
10. Ocean County Utilities Authority, Northern
11. Ocean County Utilities Authority, Central
12. Ocean County Utilities Authority, Southern
13. Atlantic County Utilities Authority
14. Cape May County Municipal Utilities Authority, Ocean City
15. Cape May County Municipal Utilities Authority, Seven Mile Middle
16. Cape May County Municipal Utilities Authority, Wildwood
17. Cape May County Municipal Utilities Authority, Cape May Point
18. Lower Township Municipal Utilities Authority