New Jersey Department of Environmental Protection

Water Resource Management

Division of Water Monitoring and Standards

COOPERATIVE COASTAL MONITORING PROGRAM

2019 Summary Report

April 2020

Cover Photo- Ocean City from a Distance (Richard Opiekun, NJ Department of Health)

COOPERATIVE COASTAL MONITORING PROGRAM

2019 Summary Report

New Jersey Department of Environmental Protection

Water Resource Management

Division of Water Monitoring and Standards

Bruce S. Friedman, Director

Bureau of Environmental Analysis, Restoration and Standards

Kimberly Cenno, Bureau Chief

Jay Springer, Section Chief

April 2020

Report prepared by:

Sheri Shifren, Program Manager

Emmalee Carr, Assistant Program Manager

Rachel White, Assistant Program Manager

Cooperative Coastal Monitoring Program

Table of Contents:

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 at our beaches so residents and tourists may 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; however, 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 (EPA) 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 passed through 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. 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 sampled once a week, each beach has bracket stations that are sampled only if an exceedance occurs. 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. Upon primary station exceedance, one bracket on each side of the failure will be sampled along with the primary station resample. Bracketing the station that exceeded the standard to both sides will continue until all resamples at stations associated with the primary station are within standard. 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.

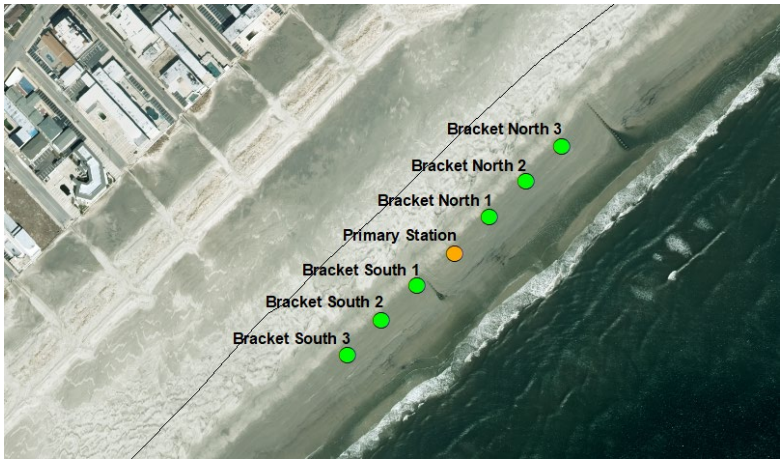

Figure 1: Ocean Beach Station with North and South Brackets

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 is 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, such as gastroenteritis, low grade fevers and infections.

Ocean, bay and river monitoring officially 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. If pre-season water quality monitoring detects an exceedance, protocol is the same as it is in-season; resamples of primary stations and brackets are collected and sanitary surveys are performed daily until results are within the recreational bathing standard. Exceedances don't result in advisories or closures, since the beach is not yet open for the season; however, warning signs are physically posted at a beach that has pre-season sampling results above the recreational bathing standard.

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 that 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 laboratory receiving the samples. Counties submit water quality monitoring data to the DEP through DEP's web-based Beach Monitoring System. The system automatically determines if an exceedance has occurred at a beach and generates beach actions (advisories/closures) for beaches that have opened for the season. If samples exceed the standard, then an advisory is posted on NJBEACHES.ORG and physically at the beach, and the primary station is resampled, bracket stations are sampled, and a mandatory sanitary survey of that beach is performed by the health agency. The advisory alerts the public to avoid contact with the water to reduce their risk of illness, but beaches under advisory remain open while additional samples are collected. 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 station's samples exceed the standard for a second consecutive day, the beach is closed to swimming and primary recreation. During a closure, resamples are collected at the station(s) that exceeded the standard and the corresponding pair of bracket locations. Closures apply to swimming or any other bathing activities; however, the public may remain on the beach itself. The beach remains closed to swimming 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 a pollution incident (e.g. sanitary sewage overflow) or floatables washup. Beaches may also be closed as a precaution for other miscellaneous reasons typically related to large storm events or infrastructure issues such as construction, dredging and beach replenishment.

Throughout the year, the DEP evaluates water quality results to prioritize 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. The geomean is used to identify recreational bathing beaches with low-level, but persistent water quality issues. 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. All beach water quality monitoring and notification data are uploaded to the EPA-maintained databases at the end of each beach season, and can be found at: https://watersgeo.epa.gov/beacon2/.

NJ's Beach Monitoring Program information can be found at NJBEACHES.ORG including an interactive map that displays sampling locations, current beach status and water quality results. In addition, all water quality data and specific beach closing and advisory data can be downloaded. Coastal surveillance flight reports are updated daily along with flight path and chlorophyll levels. Any other news regarding NJ's coastal recreational bathing beaches is also posted on the website. The Program has a social media presence and the public can follow @NJBeachReport for daily beach tweets.

2019 Results and Discussion:

In 2019, the CCMP monitored water quality at 188 ocean stations, 18 bay stations and 8 river stations for a total of 214 primary monitoring stations. Typically, there are not many changes to monitoring station locations from year to year; however, there were a few changes in 2019, all of which were approved by the DEP prior to the start of the season. Bay Beach in Barnegat Township, Ideal, bay beach in Middletown Township and West Beach Avon Rd, river beach in Pine Beach Borough did not open for beach season 2019 due to a lack of staffing. Therefore, there was a decrease in the number of monitoring stations from 217 stations in 2018 to 214 stations in 2019.

Memorial Day is generally the first weekend that beaches open for the summer in New Jersey. In 2019, the first samples of the season were collected on May 13 ensuring adequate time for pre- season sampling of all beaches that were opening Memorial Day weekend. One hundred and seventy beaches were open for Memorial Day weekend: six bay beaches, two river beaches and 162 ocean beaches. Beaches continued to open throughout the next month, and by June 20, all beaches were open for the 2019 beach season.

All but two river beaches in Ocean Gate Borough, Ocean County remained open through Labor Day; these beaches closed on August 22. Seventy-one beaches closed on September 3, the day after Labor Day: 15 bay beaches, 6 river beaches and 50 ocean beaches. Beaches continued to close throughout the month of September, until the last 25 beaches closed on September 30, marking the end of the 2019 beach season.

In total, 3,710 ocean, bay and river water quality samples were collected during the 2019 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 closures were lifted.

Ocean Summary:

In 2019, there were 188 ocean monitoring locations (Figure 2), from which 3,238 ocean water quality samples were collected and analyzed by the CCMP. 88% of the 2019 CCMP monitoring locations are ocean stations. In total, there were 10 advisories which resulted in zero closures due to bacterial exceedance. There were two events which resulted in one day precautionary closures at eight beaches. The first event took place on July 1 in Cape May County due to a malfunction of the Cape May County Municipal Utilities Authority's Wildwood Lower's Wastewater Treatment Plant which impacted four beaches. The second event took place on August 14 and impacted the four beaches adjacent to Wreck Pond in Monmouth County. See ocean beach actions in Figure 3.

Four beaches closed on July 1 in Cape May County related to the malfunction of the Cape May County Municipal Utilities Authority's Wildwood Lower's Wastewater Treatment Plant: Hollywood, Jefferson, and Miami in Wildwood Crest Borough and Richmond in Lower Township. On July 1, the DEP was notified that two million gallons of secondary treated effluent was discharged without proper disinfection from the Jefferson Avenue outfall, located one mile off Wildwood Crest. The Jefferson Avenue outfall combines the wastewater discharged from several municipal wastewater treatment plants. Three million gallons of disinfected/ chlorinated effluent was discharged through the Jefferson Avenue outfall during this event. In order to determine the potential extent and impacts from the event, one mile of beaches were closed a precaution and all primary stations in this area were sampled. Six additional samples were collected at sites strategically chosen based on environmental conditions and their proximity to the Jefferson outfall. In total, ten samples were collected to evaluate beach conditions. All results were within the water quality standard, which indicated there were no elevated bacteria levels at any beaches within the vicinity of the outfall. Thus, this event had no impact to recreational bathing beaches and the closure was lifted on July 2.

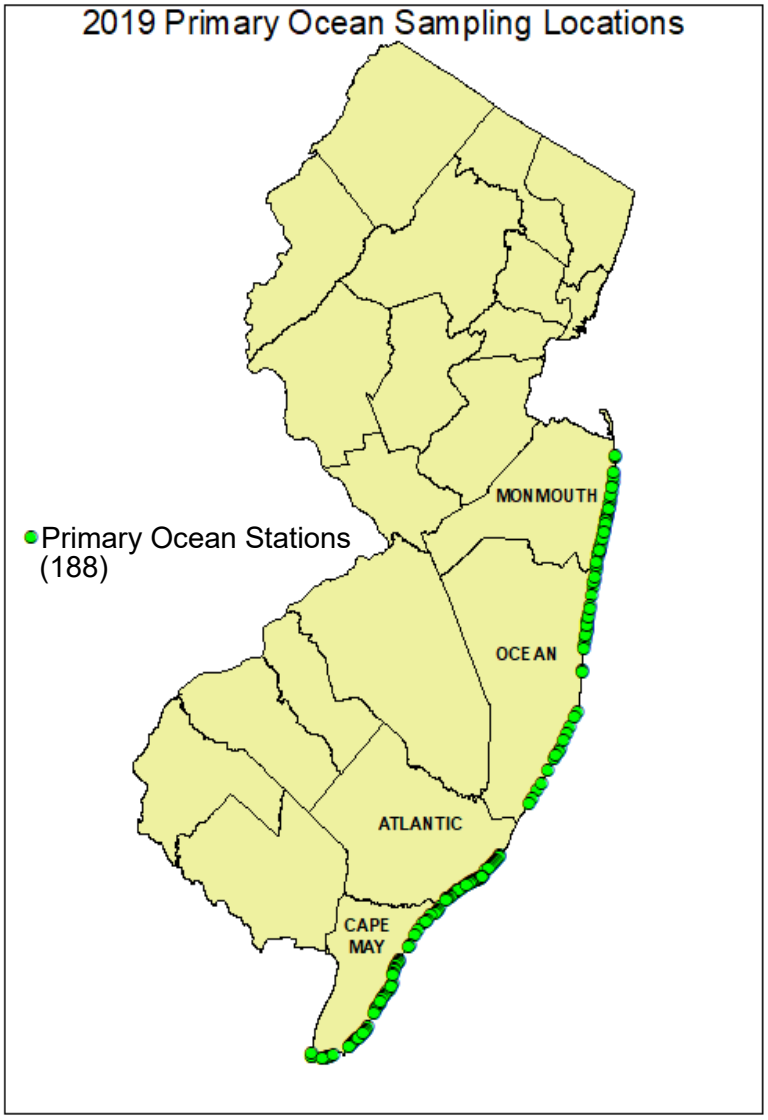

Figure 2: 2019 Primary Ocean Sampling Locations

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

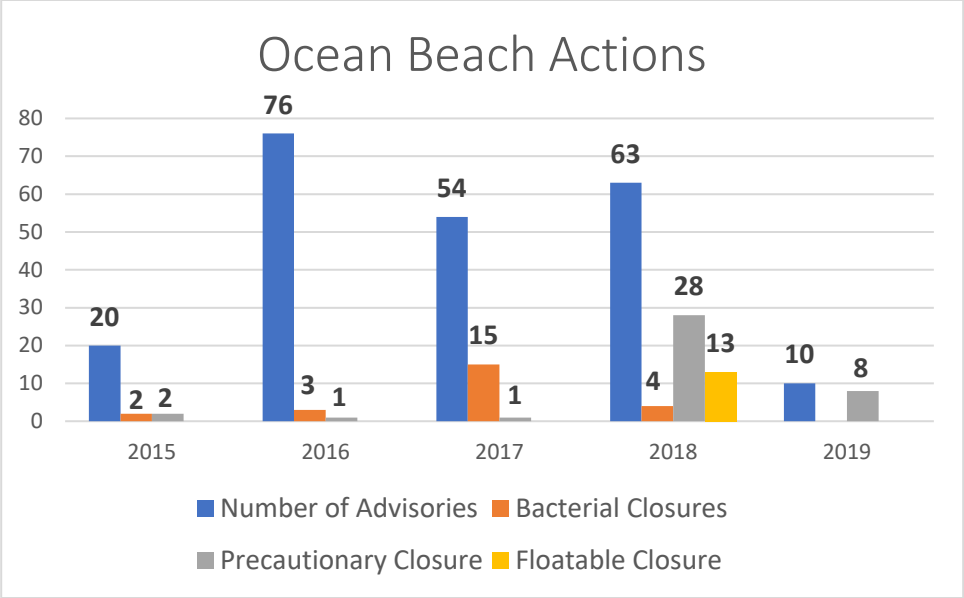

Figure 3: Ocean Beach Actions 2015-2019

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 until the emergency conditions subside and the knife gate has been shut for 24 hours. In 2019, only one event required the Wreck Pond knife gate to open which resulted in a one-day closure on August 14. This event occurred 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. Spring Lake Borough was anticipating a large storm with five inches of rainfall and opened the knife gate to lower the water level in the pond to prevent flooding. The storm did not occur, but the beaches remained closed for 24 hours per the policy outlined in the Wreck Pond Outfall Operation and Maintenance Plan.

Bay Summary:

New Jersey's coast has an extensive bay system. In 2019, there were 18 public recreational bay beaches, each of them with a monitoring station (Figure 4), representing 8% of the 2019 CCMP monitoring stations. In total, 316 water quality samples were collected and analyzed in the CCMP.

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 bay monitoring locations outside of Barnegat Bay are in Great Egg Harbor Bay, Absecon Bay, Sandy Hook Bay, and the Raritan Bay.

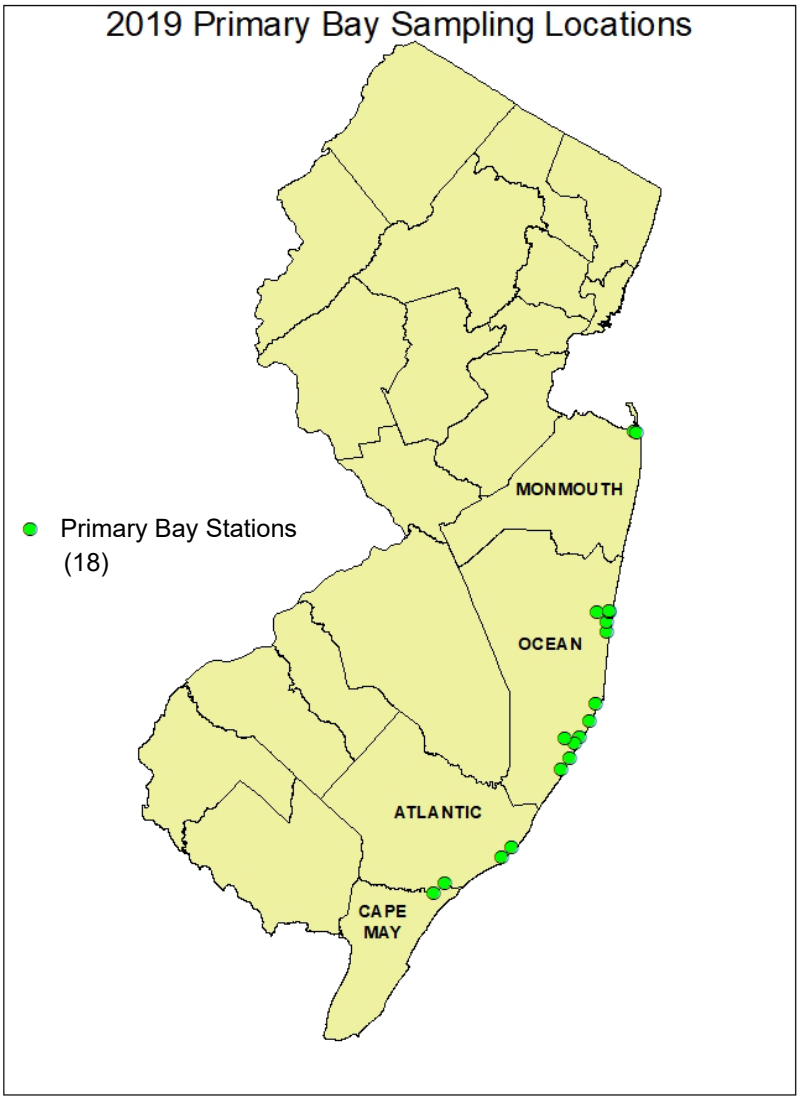

Figure 4: 2019 Primary Bay Sampling Locations

There was a total of 17 bay beach actions in 2019. Twelve advisories were posted at bay beaches which resulted in only five closures (Figure 5). The 75th Bay Front Beach in Harvey Cedars Borough, Ocean County had a two-day closure in late August.

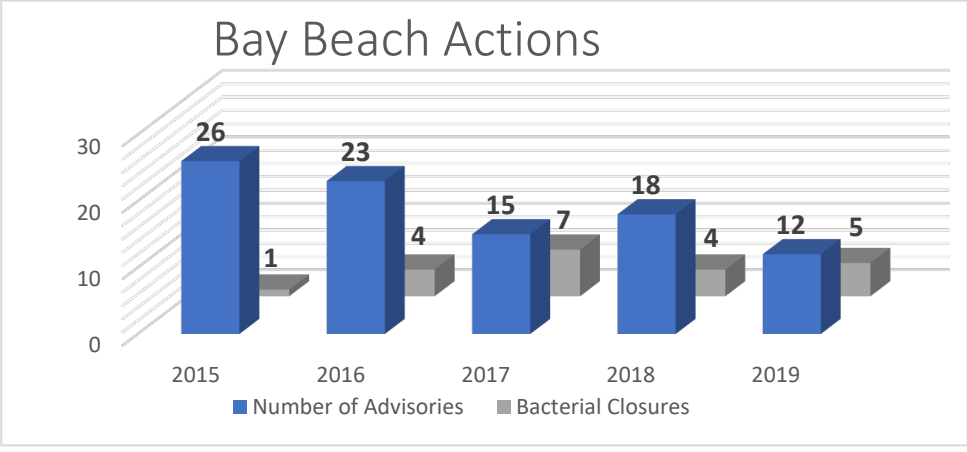

Figure 5: Bay Beach Actions 2015 - 2019

The other three closures were at 25th Street Bay Beach, Barnegat Light, Ocean County. There are currently ongoing source tracking efforts at 25th Street Bay Beach in Barnegat Light.

River Summary:

Only 4% of CCMP monitoring locations are within riverine systems (Figure 6). All eight 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 2019, 152 river water quality samples were collected and analyzed in the CCMP.

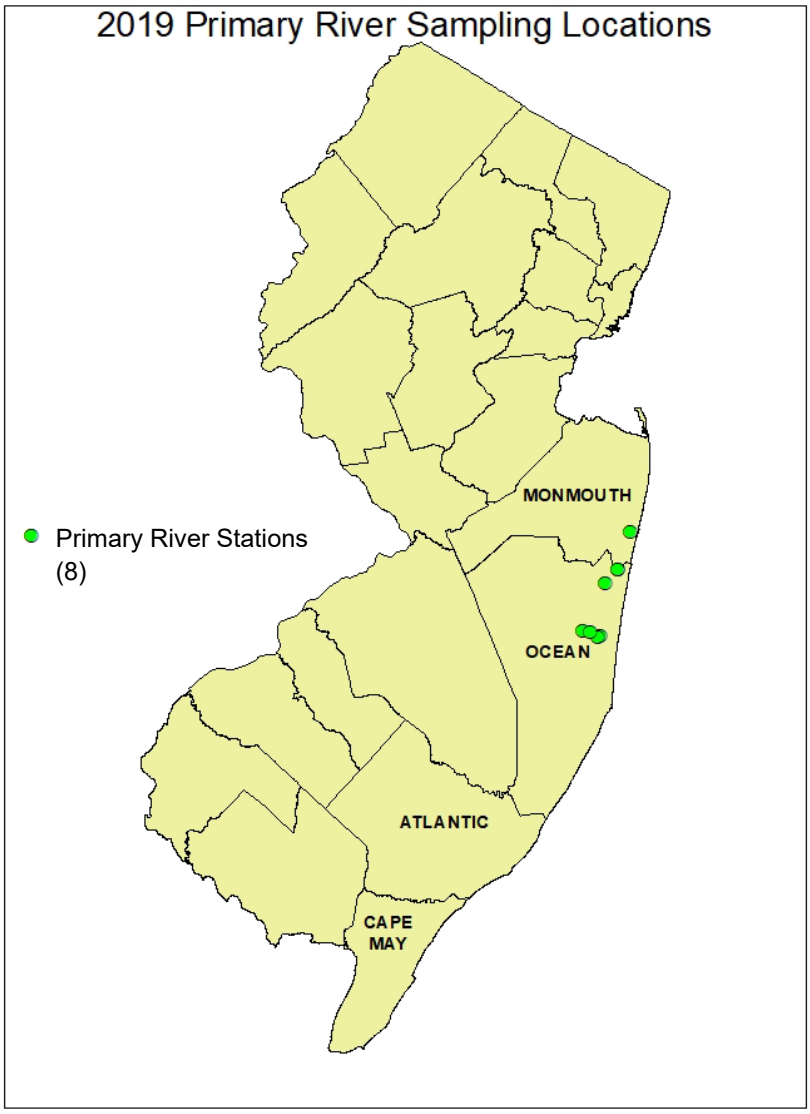

Figure 6: 2019 Primary River Sampling Locations

Of the eight river beaches, seven are located within the Barnegat Bay Watershed: four 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 2019, there were six river actions: one advisory that led to a 5-day closure at the end of July at Windward Beach, Brick Township, Ocean County (Figure 7). This Metedeconk River beach experienced 0.33 inches of rain prior to the sample collection that resulted in the advisory. It continued to rain throughout this 5-day closure. By the time the beach was reopened it had rained over an inch during that period. 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. There are currently efforts underway to identify pollution sources and potential fixes through track-down studies within the Toms River, Metedeconk River, and the Shark River.

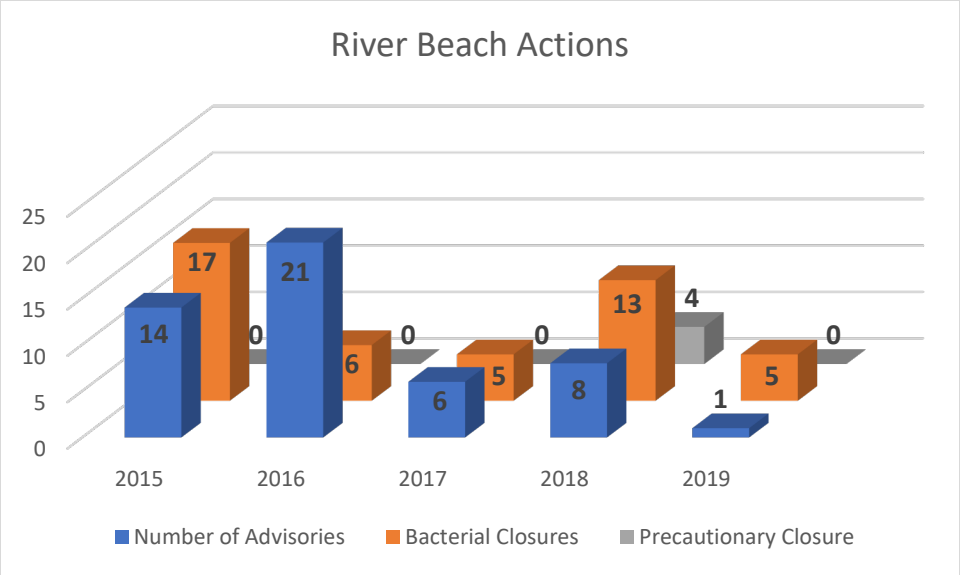

Figure 7: River Beach Actions 2015-2019

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 2019, two river beaches and one bay beach failed to meet the standard (Figure 8). The river beaches were the Windward Beach and Beachwood Beach West 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.

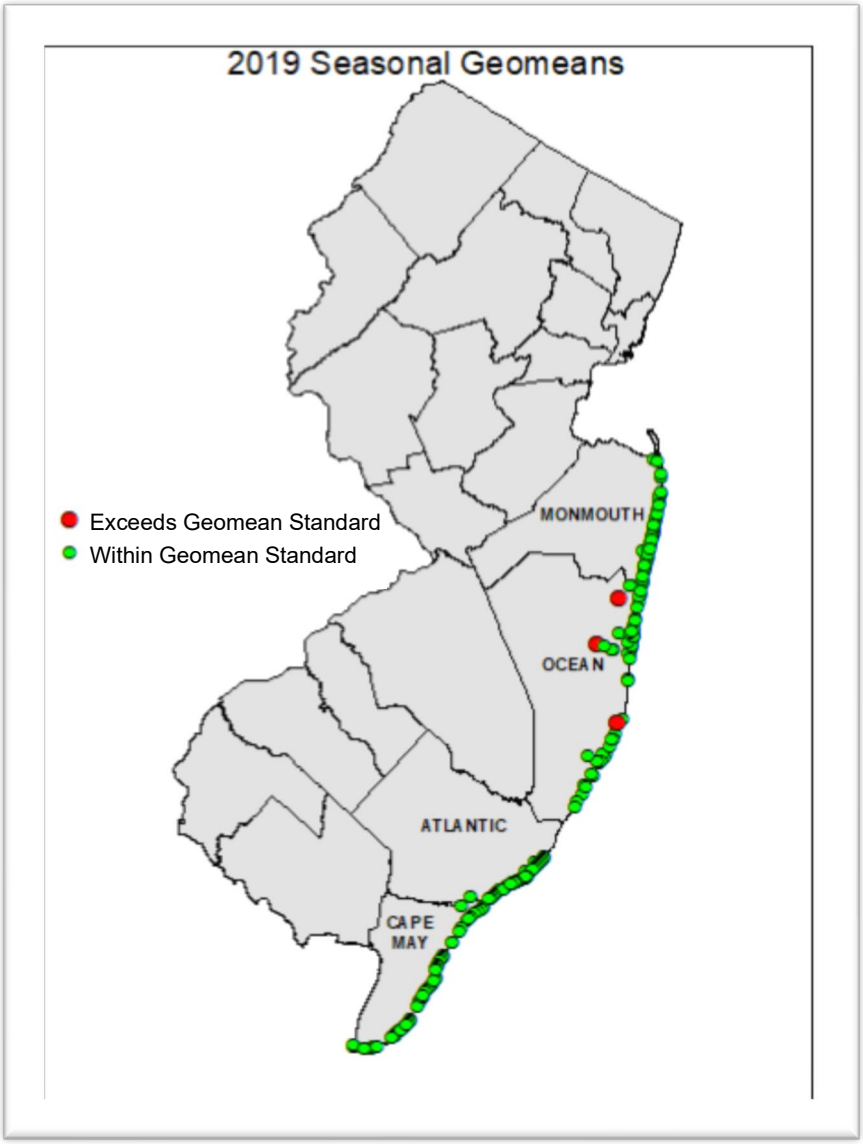

Figure 8: Map of 2019 Stations' Seasonal Geomean

Beaches and Rainfall:

Rainfall and resulting stormwater runoff have 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 the DEP with another tool to assess rain impact on water quality and public health at New Jersey's beaches.

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 (Figures 9 and 10). Along the way, stormwater can pick up trash (fast-food wrappers, cigarette butts, plastic waste, etc.), as well as toxic substances and various pollutants (gas, motor oil, antifreeze, fertilizers, pesticides and pet waste). Therefore, rainfall has the potential to increase bacteria concentrations at recreational beaches near stormwater outfall pipes.

Figure 9: Ocean Stormwater Outfall Pipe, Atlantic City, NJ (Richard Opiekun, NJ Department of Health)

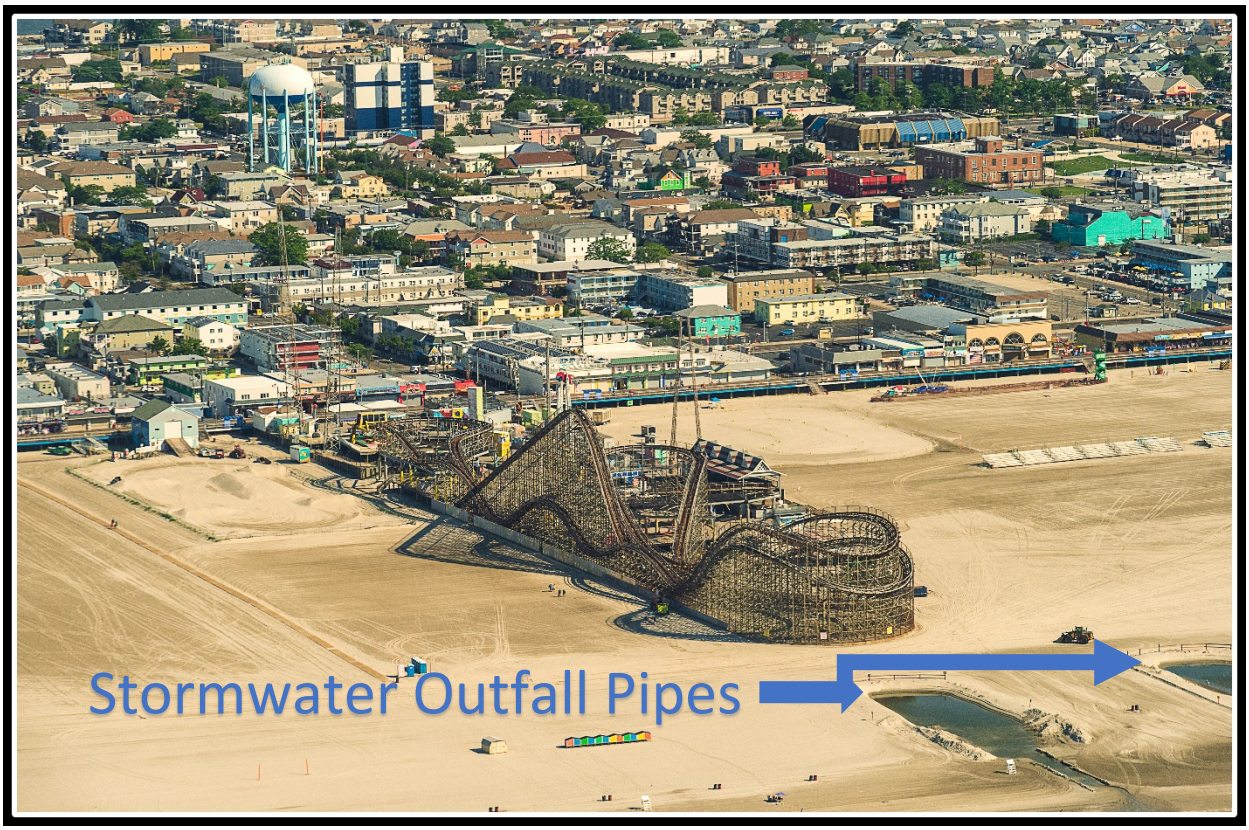

Figure 10: Ocean Stormwater Outfall Pipe, Wildwood, NJ (Richard Opiekun, NJ Department of Health)

The State of New Jersey is divided into five water regions: Upper Delaware, Northeast, Raritan, Atlantic Coastal and Lower Delaware (Figure 11). All of the public recreational bathing 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 Water Region experienced less rainfall in 2019 compared to 2018 which led to significantly fewer exceedances in the 2019 beach bathing season compared to previous years (Figure 12). Advisories and closures generally increase during "wet" years and decrease during "dry" years.

New Jersey Water Regions and Watershed Management Areas

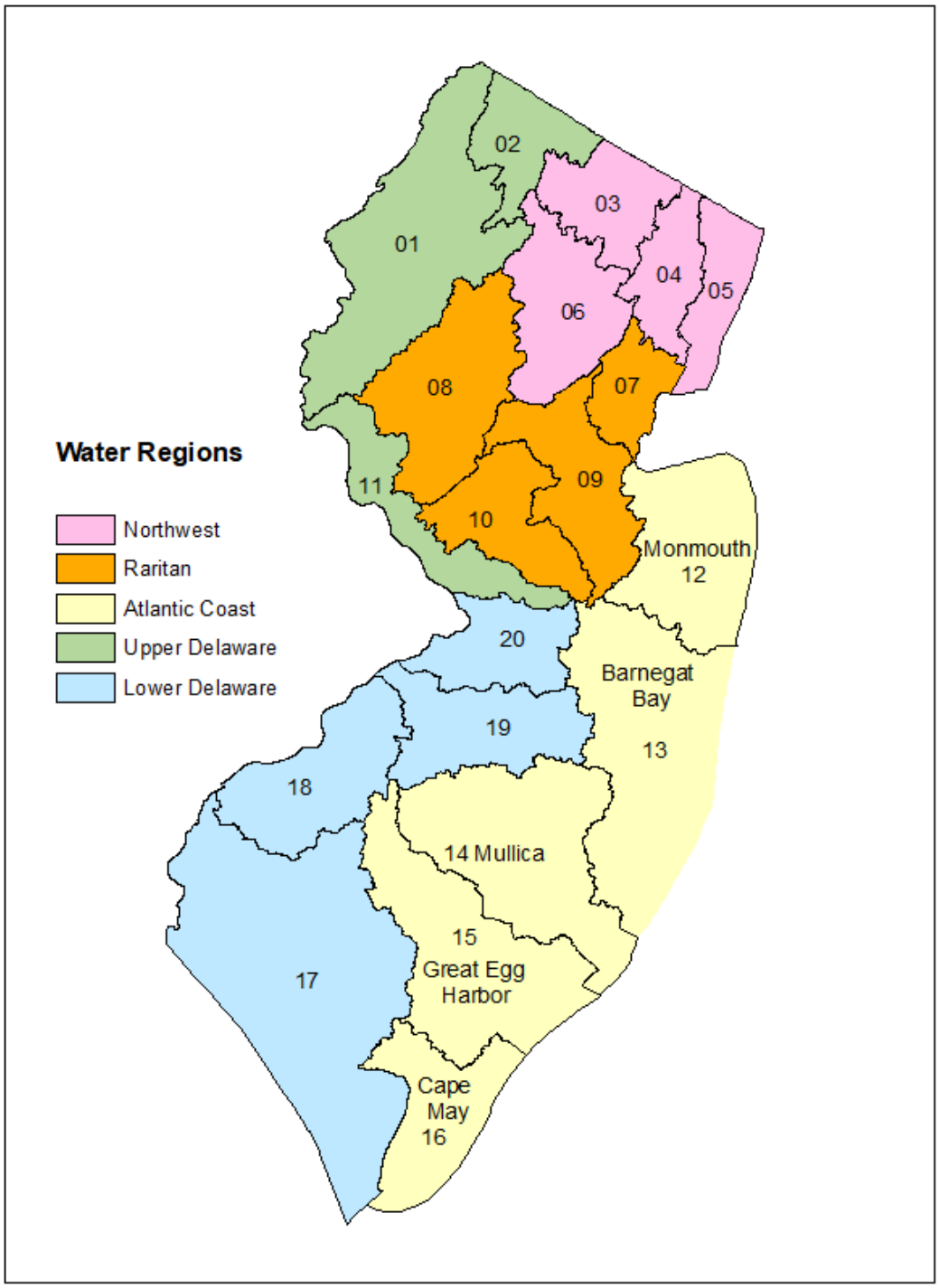

Figure 11: New Jersey Water Regions and Watershed Management Areas

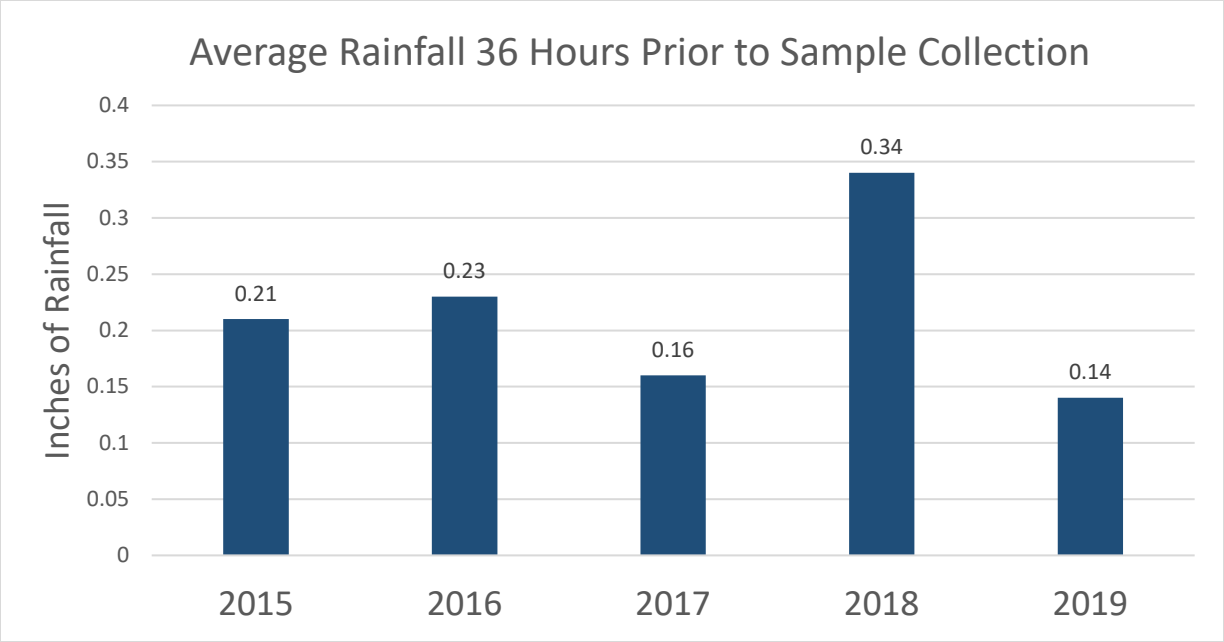

Figure 12: 2015-2019 Average Rainfall 36 Hours Prior to Sample Collection in the Atlantic Coast Water Region

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 of Water Monitoring and Standard'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 water quality 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 locate problems and fix them. When infrastructure repair 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 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/dwq/mface_njeifp.htm.

Supporting Programs:

As part of the CCMP, the DEP's Division of Water Compliance and Enforcement routinely inspects 17 wastewater treatment facilities that discharge to the ocean (Appendix 1).

The CCMP partners with the NJ Forest Fire Service to perform coastal surveillance flights (Figure 13). In the past this consisted of flights six days a week, weather permitting, during the recreational bathing season to observe changing coastal water and beach conditions. This year, a flight was added on the seventh day of the week as a result of harmful algal blooms in lakes. Staff on the surveillance flights look for floatables, possible pollution sources, algal blooms or anything potentially harmful to bathers.

Figure 13: NJ Forest Fire Service Cessna Fixed Wing Aircraft (Richard Opiekun, NJ Department of Health)

Coastal surveillance flights cover the Raritan Bay, Lower New York Bay, and the Atlantic coast from Sandy Hook to Little Egg Inlet every day of the week. Flights on Thursdays and Sundays are extended to include the area from Barnegat Inlet to Cape May Point and up Delaware Bay. Flights on Tuesdays are extended to include the following inland lakes: Round Valley Reservoir, Spruce Run Reservoir, Budd Lake, Lake Musconetcong, Lake Hopatcong, Lake Mohawk, Greenwood Lake and Swartswood Lake. 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 potentially harmful to humans and animals (see https://www.nj.gov/dep/hab/ for more information) . Figure 14 shows an example of chlorophyll-*a* levels collected on the short flight path flown on Mondays, Wednesdays, Fridays and Saturdays. Figure 15 is an example of the long flight path flown on Thursdays and Sundays. Figure 16 is an example of the new flight path that was added during the 2019 beach season, which includes lakes and a short coastal flight, and is flown on Tuesdays.

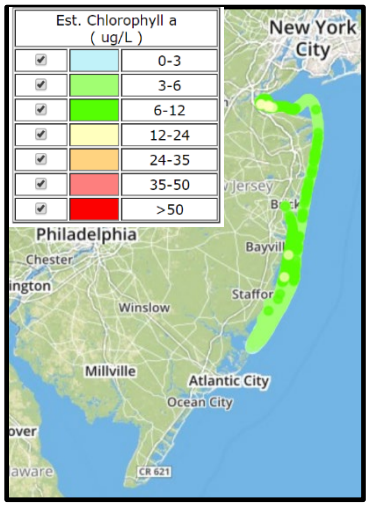

Figure 14: Short Coastal Flight Path

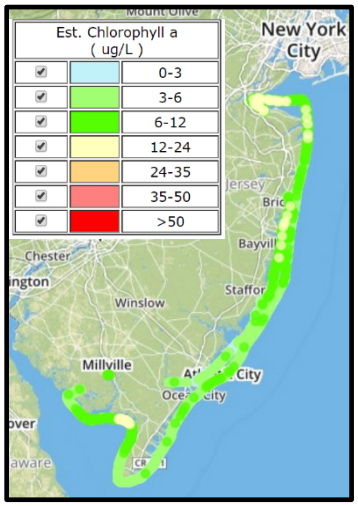

Figure 15: Long Costal Flight Path

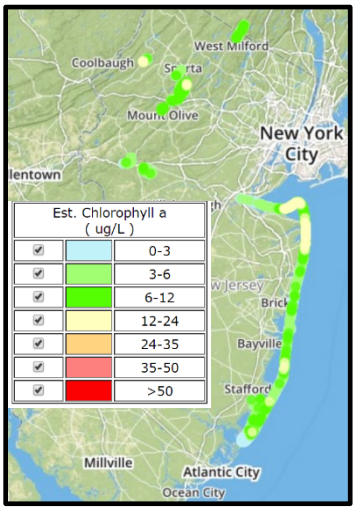

Figure 16: Short Flight Path including Lakes

Observers' flight reports, including marine life sightings, are available daily at NJBEACHES.ORG. Coastal aerial surveillance statistics can be found in Table 2.

Table 2: Aerial Surveillance Statistics

Number of Scheduled Flights	136
Number of Flights Attempted	111
Number of Flights Completed	99
Number of Canceled Flights Due to Weather prior to Departure	24
Number of Flights Chlorophyll-*a* data was collected	105
Number of Flights with Dolphin Sightings	52
Number of Flight with Baitfish Sightings	56
Number of Flights with Ray Sightings	31
Number of Flights with Whale Sightings	1
Number of Flights with Sea Turtle Sightings	1
Number of Flights with Bald Eagle Sightings	2
Number of Flights with Sunfish Sightings	2

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. Typically, the detail removes floatable debris like wood, litter, and plastic waste (Figure 17). 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. Additional information on this Program is available at https://www.state.nj.us/dep/wms/bears/cleanshores.html.

Figure 17: Clean Shores Detail removing wood debris, trash and plastics on Sandy Hook. (NJDEP)

Municipalities that currently participate in the Clean Shores Program include the shorelines of the Hudson, Raritan and Delaware estuaries, tidal shorelines, barrier islands and back bays. Note, in Figure 18 that not all eligible municipalities are currently participating. When the Program began in 1989, the State's shoreline had significant amount of debris and litter, especially large wooden debris such as, pilings and docks. As a result, the Program did not cover significant mileage due to the enormous volume of debris collected, typically millions of pounds each year. 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 (Figure 19).

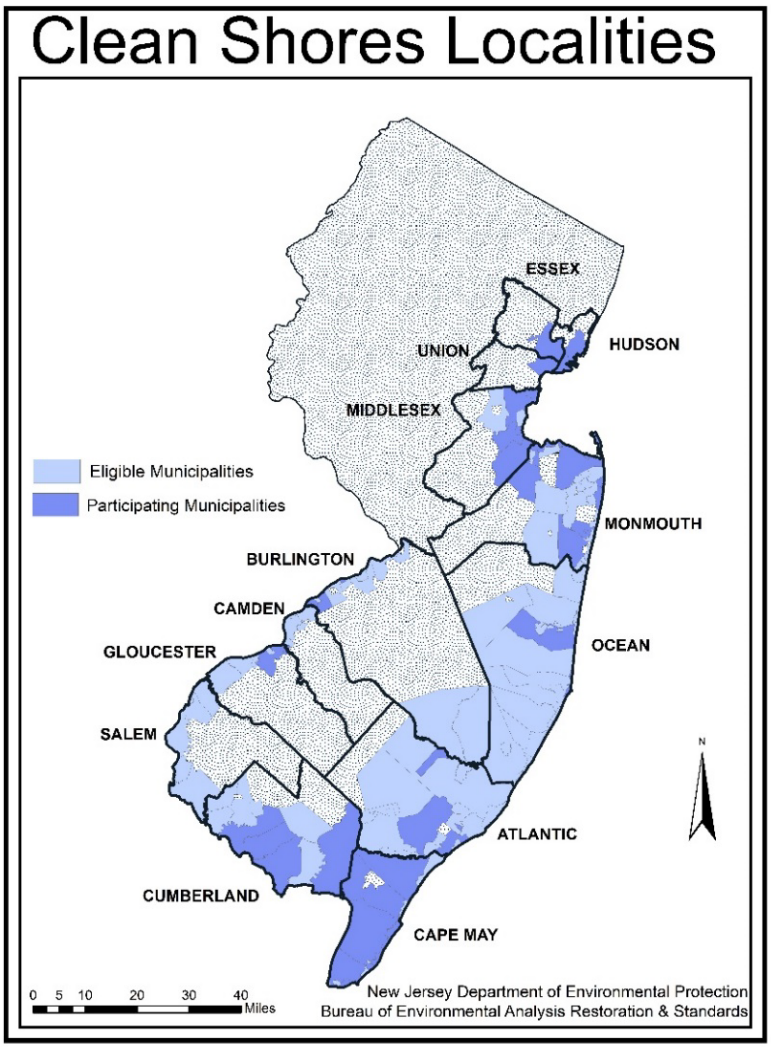

Figure 18: Eligible and Clean Shores Participating Municipalities

Between 1989 and 2019, more than 154 million pounds of debris have been removed, and 3,636 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 who are eligible.

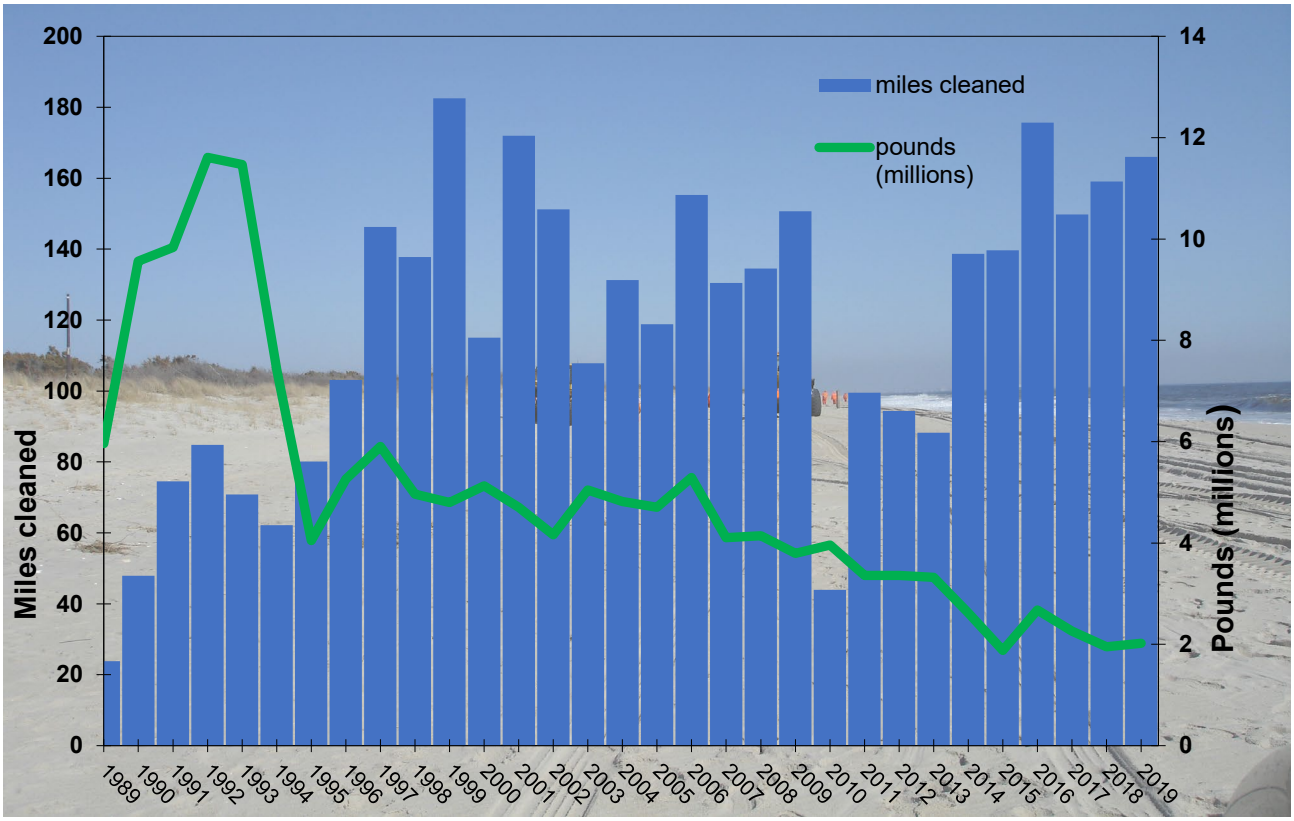

Figure 19: Miles Cleaned vs. Trash Removed by the Clean Shores Program

The Clean Shores Program is entirely funded by the "Shore to Please" specialty license plate sales (Figure 20). During the 2018 and 2019 beach seasons, the DEP used an aerial billboard to promote the sale of these specialty plates. The public's support of the program through sales of the license plate will allow more municipalities to participate throughout the year and consequently, 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 20: Keep an Eye Out for the Banner Plane Advertising the Shore to Please License Plate During the Summer Months (NJDEP)

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