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Beach and Ocean Pollution Disaster:

The Response of Two New Jersey Governors

Edward M. Neafsey
Former Assistant Counsel to Governor Tom
Kean
Former Assistant Commissioner for
Environmental Enforcement for Governor
Jim Florio

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BEACH & OCEAN POLLUTION DISASTER: THE RESPONSE OF TWO NEW JERSEY GOVERNORS

by Edward M. Neafsey



This history and analysis of New Jersey's response to the late 1980's beach wash-up disaster was commissioned by the Eagleton Center on the American Governor at Rutgers University's Eagleton Institute of Politics. It was written by Edward M. Neafsey who spent over 33 years in public service at the county, state and federal levels. During the period described which began 34 years ago this month, Neafsey served first as Assistant Counsel to Governor Tom Kean and then, in the administration of Governor Jim Florio, as Assistant Commissioner for Environmental Enforcement.¹

I. INTRODUCTION

When disaster strikes, officials have a responsibility to respond, recover and mitigate the effects. The obligation arises whether the disaster's cause is natural (like a hurricane), technological (like a widespread power failure), or man-made (like a terroristic act). That obligation extends to environmental disasters resulting from a combination of human behavior and natural forces.

New Jersey (NJ) experienced a multi-cause environmental disaster when its ocean beaches were despoiled by garbage and medical waste during the summers of 1987 and 1988. The debris posed both a public safety and health risk, which threatened the State's multi-billion-dollar tourism industry. Between the first wash-up in 1987 and 1992, Governors Tom Kean who served from 1982 and 1990 and Jim Florio who followed him from 1990-1994 chose a set of actions that both addressed the immediate needs and could be a model for avoiding recurrence of similar disasters.

Whatever the disaster, the immediate goal is deploying resources to save lives, protect property and mitigate suffering and damage. Governor Kean did that in 1987 and 1988, by identifying all sources of the waste, stopping its contamination, and reassuring the public when ocean waters and beaches were safe.

The next goal, arguably more difficult to achieve, was to set long-term objectives and develop strategies to restore damaged areas, reduce the potential for future harm, and preserve the social and economic structure. The administrations of Governor Kean and Governor Florio pursued these objectives by signing new laws to protect the public, developing new programs to combat pollution, and creating new offices to go after polluters. It is noteworthy that the two governors who were from different parties and had been political rivals followed approaches that were consistent making the transition in 1990 from Kean to Florio, for this situation, virtually seamless.

Both administrations allocated millions of dollars to upgrade the infrastructure that contributed to the problem. Their multi-year efforts spanned Florio's gubernatorial election in 1989.² Indeed, the disaster's impact on public perception of NJ waters was part of his political campaign.

Rebuilding public trust is another critical goal post-disaster. This takes time, honesty, transparency, unity of purpose and relentless effort. While the governors' leadership styles may have differed, their actions to address NJ's environmental disaster were both aimed at achieving this overarching goal.³

Kean undertook a two-pronged strategy for dealing with the problem; he confronted the immediate situation and attempted to prevent its reoccurrence.⁴ He forged a bipartisan approach to addressing pollution in a holistic way. Florio built on that work, and took a more enforcement-centric approach against polluters. He concentrated on deterring "bad actors." Their styles differed, but dedication, commitment and unwavering focus on bettering NJ's environment were characteristics they shared.

II. TOM KEAN ADMINISTRATION

A. 1987

On August 13, 1987, a 50-mile-long slick of raw garbage and hospital waste washed from the ocean to beaches in Monmouth, Ocean and Atlantic Counties.⁵ For the second time that year, beaches were closed to swimmers.⁶ In May, a wash-up of algae and sludge also resulted in beach closures.⁷ But the closures on August 13th were much larger in scope and

came at the peak of the Jersey shore's summer vacation season. Governor Kean called it "New Jersey's own day of infamy."⁸

Kean vowed "to have the guilty party pay every penny of damage" caused by the wash-ups.⁹ At this point, and for a long while, people suspected that an unscrupulous midnight dumper or dumpers had caused the pollution.¹⁰ No one could fathom any other explanation. A 1989 investigation, however, debunked the midnight dumping theory.¹¹

Kean took immediate action. He flew over the garbage slick in the ocean to see it for himself; afterward, he held a press conference expressing his anger and advising citizens the State was doing everything in its power to reverse the damage.¹² Kean sought to allay the public's fear of going into the water. At the press conference on Island Beach State Park, he said: "I'm angry, frankly. Very angry. The ocean is not a cesspool."¹³ Kean appeared in televised ads letting the public know NJ was doing more than any other State to ensure safe and clean beaches, and he ordered the State to conduct water quality tests and disclose the results to the public.¹⁴ Transparency was a key element of his response, because he understood that restoring public confidence in the cleanliness of ocean waters depended on it.

As beaches re-opened, however, concerns along the entire coast were reignited when Atlantic City - for the first time in its history - had to close its beaches due to high fecal coliform counts in the water.¹⁵ It became clear the pollution problem was not going away, and posed a direct and continuing threat to the State's 11-billion-dollar tourism industry which was heavily reliant on summer business at the shore.¹⁶

One of the hallmarks of the Kean administration was the bipartisan support the Governor garnished for most of his proposals.¹⁷ Responding to this crisis was no different. Comments by State Senator Richard Van Wagener (D), Chair of the Senate Environment Committee, indicated the Legislature saw the situation in as grave terms as the Governor. Van Wagener stressed his concern that the State was "facing what could become a life-threatening situation" and called it "something out of a bad horror movie."¹⁸

Understandably, initial reactions to the ocean crisis led to calls for tougher laws dealing with liability and punishment. Bills seeking strict liability for haulers when their haulers

disposed of waste illegally (Senator William Gormley, Atlantic County, R) and mandatory prison terms for off-shore polluters (Senator Frank Pallone, Monmouth County, D) were introduced.¹⁹

Kean commissioned a poll to determine what was needed to convince the public that his administration was taking ocean pollution seriously.²⁰ “Jail sentences for offenders” topped the list.²¹ Kean instituted a \$5,000 bounty reward program for those providing information leading to the successful prosecution of an ocean polluter, and he established a hotline for citizens to convey it.²² He said: “If they are dumping illegally in the ocean, we can find them and bring them to justice; we can even put people in jail.”²³ Kean’s bounty program remained in effect through the Florio administration.

Studies of the pollution’s causes were also initiated. The NJ Department of Environmental Protection (DEP) and U.S. Environmental Protection Agency (EPA) conducted a “floatables study” to identify the source, nature and volume of materials deposited on ocean shores, as well as the transport routes in waterways.²⁴ It was determined that floatable items included: glass bottles and jars, kitchen wastes, beer and soda cans, cardboard boxes and newspapers, plastics, Styrofoam and wood.²⁵ Hospital waste (“syringes, dressing, intravenous fluid packs, etc.”) and sewage related material flushed down toilets (“tampon applicators, disposable diapers, condoms, tampons and sanitary napkins”) were also identified as floatable items.²⁶

Investigators found that floatable debris came from a myriad of sources. Heavy rain effected the capacity of plants to treat sewage, particularly if the plant had combined sewer lines carrying both toilet waste and debris-filled storm water. Sewage treatment plants that overflowed during periods of heavy rain allowed untreated raw sewage to enter waterways.²⁷ Street debris and excess water also bypassed plants in heavy rain, and flowed untreated directly into waterways.²⁸ Other sources identified included beach litter, wood from rotting piers, and marine transfer stations in the NY-NJ harbor.²⁹

Floatable material in the harbor, carried to the sea by currents, was transported onto beaches primarily by onshore winds and tides over a 2-or-3-day period. It was reported that “[m]aterials are carried through the surf zone by the combined force of winds, waves and surf zone (rip) currents, where they accumulate above the swash zone.”³⁰ One important way

identified to reduce the problem was removing debris in the harbor before it reached the ocean where the whims of nature took control.

Work on addressing the pollution problems continued after the summer ended. Fresh Kills Landfill on Staten Island was identified as a source of garbage that landed on NJ beaches.³¹ Currents took debris in the NY-NJ estuary to the ocean, where it travelled either north or south depending on the prevailing winds. NJ Attorney General Cary Edwards announced the State had reached an agreement to settle a suit against New York City that required the City to spend millions. The “Fresh Kills Consent Order” obligated the City to prevent solid waste at Fresh Kills Landfill Complex and City Marine Stations from entering the water.³² The Consent Order required containment booms at transfer stations to capture trash that fell into the water while being loaded on barges; limited the height of the solid waste placed on barges and required the use of netting during transport; and, among other things, required the use of booms and skimmer boats at the landfill during the off-loading of solid waste from barges.³³ Kean called the agreement “a major step to make sure that Jersey shore vacationers only have to worry about surf and sunburn, and not soda cans, syringes or whatever else washed up in that particular tide.”³⁴

That month, Kean announced a multi-faceted program to deal with pollution and “safeguard ocean waters off New Jersey shores.”³⁵ The program showed that the government was willing to bear the expense. It provided 200 million dollars in grants to upgrade the State’s treatment plants; regularly clean beaches; improve municipal street cleaning to keep litter from being carried into waterways through the State’s 5,000 storm-water discharge pipes; maintain storm drains; improve stormwater overflow systems; expand the marine police to protect waterways from polluters; and extend Monmouth County’s sewage discharge pipes to 5,000 feet off-shore.³⁶ The plan received enthusiastic backing, including that of environmental groups.³⁷

Kean also called on federal officials to close a dredge spoils site 106 miles off shore and end all ocean dumping by 1991.³⁸ The Governor’s leadership on this issue bore fruit the following year.

Kean understood solving the ocean pollution problem required such a holistic approach. He laid that foundation in 1987, and everyone knew the effort was ongoing and the work had to continue. The government was committed to it. What people could not foresee at that time, however, was just how bad things would get in the summer of 1988.

B. 1988

In July, Governor Kean signed new laws protecting the coastline from pollution.³⁹ One dealt with six sewage treatment plants that were dumping up to 2.8 million tons of sludge in the ocean on a daily basis.⁴⁰ The law barred municipal sewage treatment plants from dumping sludge at sea starting March 17, 1991.⁴¹ Other measures appropriated funds to increase monitoring of coastal sewage treatment plants and study the health risks of ocean pollution.⁴²

Weeks later, disaster struck again. On July 29, 1988, medical waste washed-up on six miles of beaches at Sandy Hook National Park and raw sewage washed-up on other Monmouth County beaches.⁴³ This was not the summer's first medical waste incident. In June, Island Beach State Park closed its beaches because four blood vials washed-up.⁴⁴ But the broad geographic scope of the July wash-ups, the type of waste and the fact that such medical waste wash-ups persisted throughout the remainder of the summer season alarmed shore visitors and inhabitants. Ortley Beach in Ocean County was affected and closed its beaches.⁴⁵ In Monmouth County, three miles of beaches in seven municipalities - Allenhurst, Asbury Park, Ocean Grove, Bradley Beach, Avon, Belmar and Spring Lake - were closed for nearly three weeks.⁴⁶

Sources of the pollution in July included "discharges from Sylvan Lake in Monmouth County, pollution from stormwater and tributaries full after recent rains, and the Asbury Park sewage treatment plant."⁴⁷ The DEP reported that Asbury Park's primary treatment plant had failed to maintain its sewer lines.⁴⁸ Consequentially, when the plant flushed the lines to clean them, "[l]arge clumps of grease containing high levels of fecal bacteria" and other material flowed into the ocean untreated.⁴⁹ The DEP imposed a hefty one million-dollar fine on Asbury Park.⁵⁰

The summer of 1988 is still remembered for the "syringe tide."⁵¹ It became a national story that saddened the hearts and minds of many beach and water lovers and angered others.

On August 1, both *Time* and *Newsweek Magazines* devoted multiple articles to ocean pollution. *Newsweek's* cover read: "Our Polluted Oceans - Don't Go Near the Water" over an image of an empty beach adorned with a "beach closed /health hazard" sign.⁵² *Time's* cover read: "Our Filthy Seas," and pictured human hands reaching toward dolphins jumping out of the water.⁵³

The *Time* cover story referred to the wash-ups as "an assault on the eyes, the nose and the stomach" of beachgoers, and described the "horror" awaiting beachgoers in graphic terms.⁵⁴ It read:

"From northern New Jersey to Long Island, incoming tides washed up a nauseating array of waste, including plastic tampon applicators and balls of sewage 2 inches thick. Even more alarming, drug paraphernalia and medical debris began to litter the beaches: crack vials, needles and syringes, prescription bottles, stained bandages and containers of surgical sutures. There were also dozens of vials of blood, three of which tested positive for hepatitis-B virus, and at least six were positive for antibodies to the AIDS virus."⁵⁵

Graphic and disgusting, the article showed that the public contributed to the problem by discarding items in an easy but unacceptable way. People were forced to acknowledge that whatever they tossed into gutters on the street or flushed down a toilet at home could travel to the ocean and onto the shore.⁵⁶

Officials tried to confront three problematic questions threatening summer tourism: What diseases are lurking in dirty ocean waters? What is the public safety/health risk for a beachgoer stuck by a needle? And who wants to visit a beach strewn with medical waste and garbage? Tourists answered by avoiding the shore. An inn owner in Ocean Grove said, "hotel rooms were empty; beaches were deserted; stores were closing early . . . There is plenty of blame to spread around."⁵⁷ The tourism industry suffered a 1-billion-dollar loss in 1988.⁵⁸

Once again, State leaders faced an ongoing environmental and economic disaster. Kean continued to work on a holistic solution, and he continued to lead on bringing an end to dumping sludge in the ocean. In September, Kean convinced New York Governor Mario Cuomo to join his call for an end to ocean dumping. Both Governors proposed it end by 1991.⁵⁹ Their bi-partisan unity of purpose was successful, and President Ronald Reagan signed a law to ban the dumping of sewage sludge by the end of 1991.⁶⁰

A month later, Kean signed a “certificate of imminent peril,” which imposed a moratorium on new housing construction along the coast. This move temporarily plugged a loophole in the Coastal Area Facility Review Act (CAFRA), which only regulated developments of 25 units or more.⁶¹ The moratorium was not directly related to the wash-ups. But Kean acted soon after a blue-ribbon NJ panel issued a “State of the Ocean Report” that recommended lowering “the density of development on the coast,” because “each new unit of development had [has] an additive effect” with regard to the amount of sewage and contaminants entering waterways.⁶² The moratorium was a courageous step.

Before the year ended, a federal law creating a medical waste tracking system and establishing criminal penalties for violations was signed into law by President Ronald Reagan.⁶³ NJ followed suit a few months later when Kean signed the Comprehensive Regulated Medical Waste Management Act into law.⁶⁴ That law established a cradle-to-grave medical waste tracking system and, for the first time, specifically made the illegal disposal of medical waste a crime in NJ.⁶⁵

C. 1989

Public confidence in the cleanliness of the waters began its slow return in 1989. Before the summer season, Governor Kean released a new ad campaign intended to counter negative publicity about the shore and educate the public about the cleanliness and safety of the beaches.⁶⁶ “This new ad campaign won’t just sell sun and surf, but it will get the truth out,” he said.⁶⁷ Again, his transparency was a way to rebuild public confidence.

Kean was concerned about getting people to return to the beaches. He believed one particular “New Jersey and you” ad was influential in this regard. He was filmed standing on a beach and saying: “We’ve got these beautiful beaches, and we hope you’ll all come, wonderful summer coming ahead, and we want you all to come down.”⁶⁸ The scene then shifted to the Essex County Jail where Kean continued - “But! If you think you’re going to pollute our shore in any way, you will end up in here!” - while slamming a jail cell door shut.⁶⁹

The ad campaign worked. The tourism industry not only rebounded but grew to 12 billion dollars, mainly on the basis of tourists returning to the shore.⁷⁰ An annual shore business survey showed the highest number of beachgoers and best profits in three years.⁷¹

Programs instituted by Governor Kean were improving things at the shore. Three programs in particular – the Floatables Action Plan, Operation Clean Shores and the Coastal Cooperative Monitoring Program - combatted beach wash-ups, protected health, and let the public know that ocean waters were clean and safe for swimming.

A New Jersey Floatables Study led the DEP, EPA, Coast Guard, US Army Corps of Engineers, New York City Department of Sanitation and New York State Department of Conservation to join in a “Floatables Action Plan” (FAP). The FAP was an interagency task-force established to mitigate the adverse impact of floatable debris. It included a surveillance component to detect floatable slicks in harbor waterways, and a response component to collect debris before it travelled to the ocean.⁷² DEP’s daily helicopter overflights of the harbor area and Coast Guard marine patrols kept check on developing problems.⁷³ Interagency responses were communicated via a 24/7 network, and the Army Corps’ skimmer boats were dispatched to remove floatable debris from the harbor.⁷⁴

The FAP was integral to keeping beaches clean of debris and open.⁷⁵ Yet, “[s]licks were observed in the harbor complex after practically every rainfall event.”⁷⁶ Therefore, all involved understood that the present plan was no more than a stop-gap measure until a permanent solution to the problem could be instituted.⁷⁷

Because so much of the floatable debris washing-up on NJ beaches came from the harbor area, the DEP and NJ Department of Corrections initiated a new program - Operation Clean Shores (OCS). That program relied on inmate labor to remove floatable material from the shore on the New Jersey side of the harbor. It was no day at the beach for inmates. Working hard, they removed 6 million pounds of debris from a 23 mile stretch of the harbor shore that summer.⁷⁸ Because of their work, the debris did not reach the waterway in a high tide or heavy rain. Most of the material removed by the inmates consisted of wood, paper and plastic that was recycled.⁷⁹ OCS worked so well that DEP Commissioner Scott Weiner expanded it into a year-round program during the Florio administration.⁸⁰

The third program, the Coastal Cooperative Monitoring Program (CCMP), began in the mid-80’s. It was critical to ensuring the public that ocean waters were safe for swimming. Under the CCMP, 330 separate sites along NJ’s 127-mile coastline were sampled and tested on a

weekly basis by local health agencies. Where ocean water quality measured in excess of 200 colonies of fecal coliform per 100 milliliters of water on two consecutive days, swimming was barred until the count dropped below 200.⁸¹ Thus, if a beach was open, everyone knew that it was safe.

The CCMP identified water quality problems and warned the public about them. In a two-year analysis of beach closings in 10 coastal states, the Natural Resources Defense Council (NRDC) reported “New Jersey is the only State that required a beach to close when tests showed a bacteria count exceeding the State health standard.”⁸² The NRDC praised NJ for its strict beach testing standard, which led to more beach closings but protected the public from illness.⁸³

Twenty-nine ocean beaches were closed during the summer of 1989 because of high bacteria counts.⁸⁴ Stormwater runoff after heavy rains was the primary cause.⁸⁵ This problem did not go away. There were ten ocean beach closings due to high bacteria counts during the summer of 1991; again, the primary cause was “stormwater runoff.”⁸⁶

On November 7, 1989, NJ voters overwhelmingly approved the Stormwater Management and Combined Sewer Overflow Abatement Bond Act, which authorized issuance of 50 million dollars in bonds for local projects related to stormwater management and sewer overflow abatement.⁸⁷ It was a sign that the public, who had been educated about the problem, was willing to invest in clean waterways.

Water pollution in general and ocean pollution in particular were important issues during the 1989 gubernatorial campaign. As a candidate, Jim Florio promised to protect NJ’s drinking water with tough new laws and to take on polluters with an environmental prosecutor.⁸⁸ Two days after the election, Governor Kean and Governor-Elect Florio met for 90 minutes to discuss the transition.⁸⁹ Kean promised the smoothest in NJ history.⁹⁰

One of the environmental issues that carried over from the Kean to the Florio administration involved General Marine Transport Corporation and its company President Evelyn Berman Frank. The corporation had an EPA permit to transport sludge on its ships to the 106-mile ocean dump site. On the last day of May 1989, Frank and the company were indicted for, among other crimes, short dumping sludge near the NJ coastline. The allegations involved

“midnight dumping” in Newark Bay and off the coast of Sea Girt. The case was about an unscrupulous business person who reaped financial rewards by polluting the ocean. It was the type of conduct people had been worried about, but it could not be tied into a particular beach closure. Governor Florio’s Environmental Prosecutor prosecuted Frank for releasing a hazardous and toxic pollutant.⁹¹

Another issue carried over to the new administration involved the Clean Water Enforcement Act. During the Kean administration, DEP had opposed the bill. It passed the Senate, but died in the Assembly on the final day of the 1988-89 legislative session. Enactment of a clean water enforcement law, however, was a priority for the Florio administration.⁹² The bill was re-introduced in the new session and this time it had DEP’s support.⁹³

III. FLORIO ADMINISTRATION

A. 1990

Jim Florio represented NJ’s 1st Congressional District in Congress for 8 terms before he was elected Governor. In Congress, he authored the federal Superfund law to clean-up the most polluted sites in the nation, and he also worked on a law that created the Pineland National Preserve which protected 1.1 million acres of natural resources in NJ’s Pinelands.⁹⁴ So, Florio came into State office with a strong environmental record.

During the gubernatorial campaign, Florio presented himself as someone who led the fight for a clean environment. He had been an amateur boxer before enlisting in the U.S. Navy, and an ad campaign portrayed him as a fighter for NJ with a proven record of leadership.⁹⁵ In Trenton, he took on a principled but pugnacious style of leadership in confronting many thorny issues: the cost of car insurance, assault weapons, public education funding, and cleaning NJ’s environment.

Florio’s approach to problem-solving was different than Kean’s. Consensus building remained a key factor but so was wielding a big stick, particularly in tackling environmental problems. During the campaign, Florio called for tougher environmental laws and a new prosecutor to enforce them. As Governor, he delivered on those promises. He was wise and savvy. He did not throw the baby out with the bath water. Florio retained programs from the

Kean administration - the Cooperative Coastal Monitoring Program, Operation Clean Shores, and the Floatables Action Plan - that stemmed pollution and rebuilt public confidence. What changed was the amped-up rhetoric in the fight against pollution.

The Governor's language on what to do with polluters was intentionally a forceful warning of consequences for polluters. His strong message of deterrence put would-be polluters on notice that Trenton was getting a new sheriff. Florio's comments at the signing ceremony for laws enacted in response to the Exxon Oil Pipeline Leak are a good example.

Two weeks before the new Governor was sworn into office, an environmental catastrophe occurred in the Arthur Kill. In the first two days of 1990, 567,000 gallons of #2 fuel oil leaked from an underwater pipe at Exxon's Bayway facility in Linden.⁹⁶ Faulty monitoring equipment allowed the leak to go undetected for six hours.⁹⁷ Oil fouled shorelines in Staten Island and New Jersey, and covered over 200 acres of salt marshes that were sensitive nesting areas for many bird species including ducks, diving birds and gull-like birds.⁹⁸ The oil smothered fish, crabs, clams, and killed 700 waterbirds.⁹⁹ It spread from Pralls Island to Newark Bay.¹⁰⁰ State environmental officials called it the worst leak ever in the New York area.¹⁰¹

Legislators in NJ took the calamity seriously. Within weeks, they held a special joint hearing on the spill.¹⁰² Within months, the Legislature passed a package of bills establishing the nation's toughest oil and chemical industry rules, and imposing fines of up to 10 million dollars in the event of a major spill.¹⁰³

During the signing ceremony at the Elizabeth Marina alongside the Arthur Kill, Florio told the crowd:

"I've had it. I've had entirely too much carelessness, neglect, and indifference seen from those responsible for transporting oil in this area. It's not going to be business as usual anymore. We're putting teeth, sharp teeth, into our new laws. The laws carry a very simple message. If you spill, you pay. Not a little, but a lot, up to 10 million dollars. It's time to hit these companies where it hurts - in their wallets - with stiff penalties and fines."¹⁰⁴

In federal court, Exxon pled guilty to negligently violating the federal clean water act and agreed to pay a 15 million dollar fine.¹⁰⁵

Governor Florio was sworn into office and delivered his Inaugural Address on January 16, 1990. He spoke about ideals, like “opportunity, community, security, family and leadership,” and how they “rise or fall on the realities” of daily life.¹⁰⁶ He explained that he wanted “to be remembered as the Governor who brought new ideas to preserve old ideals.”¹⁰⁷

Florio noted that NJ is a State “willing to work, to struggle, to even fight” for values that “we know are right.”¹⁰⁸ He acknowledged that people “know what’s been happening” at the shore.¹⁰⁹ “All too often,” he said, “the irresponsible deeds of a few polluters spoil our beaches for everyone.”¹¹⁰

Florio spoke about what “security” means. He said:

It “means going to the shore, knowing that you can enjoy its majesty, its beauty, its power without worrying about needles and garbage. Our Jersey shore defines us, inspires us, renews us. And we need new ideas - like an environmental prosecutor - to make sure it stays that way. . . Throughout my career, I have fought for clean water, for clean air, for the Jersey shore. That will continue to be true.”¹¹¹

Florio’s address covered many topics with clear themes. He spoke of appointing an environmental prosecutor to deal with polluters, and he ensured the public they could be confident that - under his leadership - they would enjoy clean drinking water and garbage-free beaches. He committed to fighting for that.

Florio focused on building a clean and green NJ throughout his term. A week after the address, he took a Marine Police boat tour of the harbor devastated by the Exxon oil leak.¹¹²

Before the month ended, Florio signed an Executive Order that established an Environmental Prosecutor’s Office in the Department of Law and Public Safety to work under the supervision and direction of Attorney General Robert Del Tufo.¹¹³ It was the first office of its kind in the nation. The office was tasked with overseeing the prosecution of priority enforcement cases and coordinating enforcement policy throughout the State.¹¹⁴ Florio gave the Environmental Prosecutor “broad authority to coordinate actions with all of the agencies in New Jersey to take action against polluters.”¹¹⁵ That coordination was across State, county and local levels.

That May, Florio addressed an environmental conference at the Eagleton Institute of Politics in New Brunswick. Among other things, he returned to the environmental themes of his Inaugural Address. He began by noting the need to “deliver water we can drink and swim in, air we can breathe healthfully, a planet that will remain safe - clean and green - for our children.”¹¹⁶ He acknowledged “the need for even tougher laws.”¹¹⁷ And he spoke about his recent accomplishments: the environmental prosecutor in place, the clean water enforcement act about to become law, and the solid waste task force in place.¹¹⁸

Later in May, Florio went to the Asbury Park boardwalk where he had announced his candidacy for Governor in 1989. He returned to fulfill a campaign promise by signing the Clean Water Enforcement Act.¹¹⁹ He billed it as “the nation’s toughest water enforcement law.”¹²⁰ In addition to providing for the imposition of mandatory fines for permit violations, penalty amounts for water pollution increased from \$7,500 to \$250,000.¹²¹ The law took effect on July 1, 1991, and required DEP to file an annual report.¹²² The department reflected its philosophy of “fair but firm” enforcement in its first annual report.¹²³

Florio told the large, enthusiastic crowd:

“Nearly 14 months ago I came to Asbury Park to make a promise. It was the day I announced I was running for Governor. I wanted to be the Governor who makes sure everyone in New Jersey - when we turn on the faucet - gets safe, clean water to drink. And I said I want to be the Governor who makes sure we can always enjoy the beauty and inspiration of the Jersey shore. Well, I’m Governor and I’m back. Not to make promises, but to keep them. Not to call for tough measures to fight polluters, but to sign into law the toughest clean water enforcement rules in the United States. To those who would pollute our water let me make it very clear: No more excuses. No more ifs. Nor more buts. No more will you be able to throw away and get away. We won’t just pick up your garbage; we’ll pick you up too. Your garbage will go to the dump and you’ll go to jail. . . In a few days, these beaches will be alive with people enjoying the warmth of the sun and the surge of the waves. The shore will be, for them, what it has been for generations. A place to relax in the sand, to marvel at the majesty of the sea, to reflect on the beauty we inherited.”¹²⁴

It is hard to summon up a clearer message of deterrence.

Two weeks later, just as another shore tourist season was beginning, oil spilled in the harbor area. This time, a tanker, the BT Nautilus, ran aground outside the federal navigation channel and dumped 250,000 gallons of #6 fuel oil into the water.¹²⁵ As with the Exxon Pipeline Oil Spill, bird nesting areas between New York and New Jersey were harmed. Within days, tar balls from the oil spill began to wash-up along NJ's coastline, and Island Beach State Park was forced to close its beaches.¹²⁶ DEP Commissioner Judith Yaskin dispatched a large contingent of DEP emergency responders to clean-up the fouled shoreline.

After that dreadful start, the rest of the summer was relatively uneventful. Inmates in Operation Clean Shores removed nearly 8 million pounds of debris from the shorelines in the harbor.¹²⁷ Although 10 beaches closed due to floatable debris and 22 beaches closed for high bacteria counts, those numbers were lower in each category than they were during the previous summer.¹²⁸

That September, Florio went to Point Pleasant to announce \$13 million in grants for sewer upgrades and declare the shore had "bounced back."¹²⁹ He called the grants an investment "in the future by preventing the accidents of tomorrow," and he praised the "very high" water quality during the summer, noting the fewest ocean swimming bans in years."¹³⁰

B. 1991

Governor Florio delivered his first State of the State Address in January. He touted his environmental record, saying: "We collected record fines from polluters. We can do more and we will. This year our ocean will stop being a septic tank, and go back to being the precious resource we love. On March 17th, we keep our pledge to ban all dumping in the Atlantic Ocean."¹³¹ The last statement was a reference to the dumping ban enacted during the Kean administration.

In May, Florio embarked on a mini-campaign to boost tourism by promoting visits to the shore during the summer. He delivered a speech in Red Bank at the 26th annual meeting of the Monmouth-Ocean Development Council, and said the shore can look forward to a profitable summer.¹³² He ticked off the reasons. First, the Coastal Cooperative Monitoring Program, one of the most stringent ocean testing programs in the nation, made ocean waters cleaner.¹³³

Second, NJ stopped the practice of dumping sludge in the ocean.¹³⁴ Third, the Clean Water Enforcement Act was another way to keep the ocean clean.¹³⁵

A few days later, he toured the coastline in a helicopter to draw attention to the State's programs - Operation Clean Shores and the Floatable Action Plan - to keep beaches clean and avoid a repetition of the wash-up problem that closed beaches in the past.¹³⁶ After his helicopter trip, he proclaimed: "If you think the Jersey shore looks great at sea level, you should see it from 500 feet up. Gorgeous. What a beautiful sight."¹³⁷

Despite the progress made by two administrations, an Eagleton Institute of Politics Poll released during the summer of 1991 indicated 86% of NJ residents still considered water pollution a serious problem and 79% were still concerned about the quality of their drinking water.¹³⁸ The poll also found that citizens wanted government "to be more active in protecting the State's oceans, rivers, lakes and drinking water."¹³⁹ In the poll, 78% said government was falling short on monitoring sources of industrial pollution, and 72% said government was not doing enough to monitor polluters.¹⁴⁰

In September, Florio returned to Point Pleasant to declare the summer of 1991 "one of the best summers ever."¹⁴¹ He called the water quality excellent, and once again praised State programs that kept beaches clean. He singled out the ban on ocean dumping, the Coastal Cooperative Monitoring Program, and Operation Clean Shores.¹⁴² Florio's DEP Commissioner, Scott Weiner, said the summer would go down as the year people "renewed their love affair with the ocean and beach."¹⁴³ Florio concurred, saying: "Everyone has said to me this year that they have never seen the ocean cleaner, that it's never been better. That didn't just happen by accident. We can all take justifiable pride . . . in the programs to keep the shore clean."¹⁴⁴

The State's tourism industry had a banner year, \$13 million, \$8 million of which came from seven million people who visited the shore that summer.¹⁴⁵ Public confidence in the prospect of having a fun day at the beach had returned. Once again, people could experience fully the charm of NJ's natural environment. It was a sign of environmental resilience, made possible by measures the Governors put in place before the breaking point was reached.

C. 1992

Things turned around significantly for the Jersey shore in 1991. That summer marked

the completion of a big comeback from the late 1980's. Policies and programs instituted by two administrations sparked NJ's recovery from the garbage and medical waste wash-up disaster. The objectives of preserving the coast's beauty, reducing the risk of future harm, and restoring economic vitality were accomplished. That makes this a logical place to conclude the article. But two events occurred in 1992 that warrant mention.

First, in February, Environmental Prosecutor Steven Madonna announced "a record-breaking global resolution of the Ciba-Geigy litigation."¹⁴⁶ A settlement of \$62 million in fines, cleanup costs, and natural resource acquisition ended seven years of criminal and civil litigation involving the State and the company.¹⁴⁷ In addition to the company itself, two mid-level company officials pled guilty to illegally dumping laboratory wastes in the company's "lined-but-leaky" landfill between 1981-84.¹⁴⁸ They received probationary terms. Madonna, who called the case "the biggest environmental case we've ever had," accepted the company president's statement that the violations "did not cause any environmental harm" or health hazards.¹⁴⁹ A few years after leaving office, Florio praised the Environmental Prosecutor's ability to accomplish "environmental cleanups seemingly impossible" prior to the existence of his office.¹⁵⁰ The Ciba-Geigy landfill cleanup was one of those matters.

Ciba-Geigy was the largest employer at the Jersey shore.¹⁵¹ In the 1980's, the factory manufactured pharmaceutical chemicals, and that activity produced a wastewater effluent. Up until 1966, the effluent was dumped directly into the Toms River.¹⁵² In 1967, the company built an ocean outfall pipeline to end complaints from residents troubled by the dumping in the river.¹⁵³ Two decades later, the company's permit still allowed it to discharge 5 million gallons of treated wastewater into the ocean on a daily basis.¹⁵⁴ The permit was up for renewal in 1987. The "nightmarish" events of that summer placed the discharge pipeline under a spotlight, and the company became a notorious symbol of environmental degradation.¹⁵⁵ The following year, the company, pressured by environmental activists, announced it would close the pipeline by 1991.¹⁵⁶

Officials focused on Ciba-Geigy because it was the subject of public outrage. In doing so, they missed a larger health risk from "the plume of groundwater contamination from the old illegal dump at Reich Farms."¹⁵⁷ Industrial waste leaked from five thousand Union Carbide

drums illegally dumped at that site in 1971.¹⁵⁸ Around 1982, the waste contaminated Toms River Water Company's Parkway well field, which was the town's "main source of drinking water."¹⁵⁹ During the years of tumult over Ciba-Geigy, Reich Farms "had been all but forgotten" even though both it and Ciba-Geigy had been placed on the national Superfund list in 1983.¹⁶⁰ Despite its designation as a Superfund site, water pollution at Reich Farms was not discovered by the EPA until 1988.¹⁶¹ It was not until then that the agency ordered remedial steps be taken to address the pollution plume contaminating the Parkway well field.¹⁶²

Between 1979 and 1995, 90 children in Toms River were diagnosed with cancer.¹⁶³ Between 1995 and 2001, "another 28 children" in the area were given the same diagnosis.¹⁶⁴ A 2001 epidemiological study on the cause of this cancer cluster "found an association between prenatal exposure to Parkway well water and air emissions from the former Ciba-Geigy Corp. plant in Toms River and the development of leukemia in girls."¹⁶⁵ This is the sad legacy of pollution in Toms River.

The Reich Farms part of the Ciba-Geigy saga shows the importance of scientific objectivity and truth, and how much facts matter. When it comes to health, facts can mean the difference between life and death. The lesson here is comparable to those of the Covid-19 pandemic - face facts with courage and honesty, and never ignore them. If the facts had been uncovered and acted upon sooner, it is likely there would have been fewer illnesses and deaths.

The second event of 1992 warranting mention occurred in August, when 19 beaches in three counties - Monmouth, Atlantic and Cape May - closed on the same day because high bacteria levels made swimming in ocean waters unsafe.¹⁶⁶ The Atlantic County beaches were in Atlantic City; the Cape May County beaches were in Wildwood Crest; and the Monmouth County beaches were adjacent to lakes with outfall pipes to the ocean.¹⁶⁷ Storm water runoff and non-point source pollution came after six days of rain, and it led to the high bacteria counts.¹⁶⁸

That single day of beach closures in 1992 was the worst in four years.¹⁶⁹ All told, 27 beaches were closed to swimmers that summer due to high bacteria counts in the water, a 170% increase compared to the previous summer.¹⁷⁰ Most of those closures occurred in August after rain events.¹⁷¹ Fortunately, as in the previous summer, floatable debris did not cause any

closings that year.¹⁷² Inmates working in Operation Clean Shores had removed nearly 9 million pounds of debris from 54 miles of shoreline.¹⁷³

It became apparent that sewage plant overflows and storm drain discharges after heavy rain were blocking NJ from reaching its goal of zero beach closures.¹⁷⁴ 7,000 outfall pipes along the coast made sure of that.¹⁷⁵ The mapping of sewer systems had lagged and millions of dollars from the 1988 Sewage Infrastructure Act set aside for that purpose was unspent.¹⁷⁶

It was not until 1995 that DEP required operators of a combined sewer system to have a permit. When that was done, the number of combined sewer overflow outfalls fell from 281 to 210, but not until 2018.¹⁷⁷ Indeed, the problem of untreated sewage and polluted stormwater entering the State's waterways has yet to be fully addressed.¹⁷⁸

According to Jersey Water Works, a group that works to improve water infrastructure, "overflowing sewers dump 7 billion gallons of untreated sewage into the State's waterways each year."¹⁷⁹ That is why heavy rain can still cause ocean beach closures. Four years ago, for example, 13 ocean beaches from Monmouth to Atlantic counties closed on a single day "because of elevated bacteria levels."¹⁸⁰ Again, the readings followed consecutive days of heavy rainfall.¹⁸¹

It is clear the rainfall problem persists. The environmental group Environment New Jersey reported that 11 ocean and Barnegat Bay beaches had to be closed multiple times during the summer of 2020 because of high bacteria levels.¹⁸² Nonpoint source pollution from over development also enters waterways, causing an increase in bacteria loads. According to Cindy Zipf, the Executive Director of the environmental group Clean Ocean Action (COA), NJ has "very high water quality, with one caveat, as long as it doesn't rain."¹⁸³

Similarly, the medical waste issue of 1988 has not completely gone away. In 2008, over 100 syringes washed-up on Avalon's beachfront.¹⁸⁴ Days later, in an unrelated matter, two syringes washed-up on an Ocean City beach.¹⁸⁵ A bad actor was responsible for the Avalon incident.¹⁸⁶ But the source for the Ocean City incident was never identified. In 2017, COA reported collecting 395 syringes during its annual beach cleanup, the highest number in over a decade.¹⁸⁷ On a July weekend in 2021, "more than 100 home-use, diabetic syringes were found after high tide" in Long Branch, causing beach closures.¹⁸⁸ Monmouth County Commissioner

Director Thomas Arnone believed the responsible party should be charged with a crime.¹⁸⁹ He said: “To think that someone intentionally disposed of medical waste in the ocean is beyond comprehension. This despicable action shows complete lack of respect for human safety, marine safety and the environment.”¹⁹⁰

The DEP, however, debunked the deliberate dumping allegation. The department attributed the medical waste wash-up to sewage and stormwater overflow after heavy rain. The DEP said: “The floatables came from outfalls in and around New York Harbor following combined sewer overflows from large rain events prior to and during Tropical Storm Elsa. The overflows, in addition to wind direction and tides, directed the floatables onto beaches.”¹⁹¹ This explanation harkened back to the finding in the NJ Division of Criminal Justice’s 1990 report on NJ Atlantic Coast Wash-ups; to wit: there is “little evidence” that intentional medical waste dumping is “a factor in wash-up events.”¹⁹²

These occurrences are stark reminders to be careful about what one flushes down a toilet, tosses into the water, or drops on a street. On this issue, as Pogo said, we have met the enemy and he is us. For good or for ill, when it comes to waste, small things matter. Attentiveness to our own daily activity can have a positive impact on the environment. The NJ experience is an important lesson for confronting the slow-moving existential disaster of climate change.

IV. CONCLUSION

In terms of protecting the quality of ocean waters and its beaches, NJ has come a long way since the “bad old days” of the late 1980’s and early 1990’s when those natural resources were under threat. We have the administrations of two NJ Governors - Tom Kean and Jim Florio - to thank for that. They instituted policies and programs that turned the tide and helped the State recover. They were relentlessly focused on developing solutions for the crisis, and they did it in a transparent and holistic way. A testament to the merit of their work is that many of these programs are still in place and operational.

Governors Kean and Florio restored public trust. While a wash-up problem still re-surfaces on a rare occasion, it is dealt with swiftly. Any effect on the vibrant summer tourism

industry is de minimis. Visit any beach on a summer weekend to see how public confidence in clean water and clean beaches has been restored. The smiling crowds tell the story.

¹ ED NEAFSEY spent over 33 years in public service at the county, state and federal levels. He served as an Assistant Counsel to Governor Tom Kean in 1989. During Jim Florio's administration, he served as the Assistant Commissioner for Enforcement in the NJ Department of Environmental Protection. He also oversaw the Coastal Cooperative Monitoring Program, Operation Clean Shores and the Floatables Action Plan. During the final year of the Florio administration, he was Chief of the Environmental Crimes Bureau in the Attorney General's Office and was responsible for handling investigations, trials, appeals and post-sentencing hearings. He came out of retirement post-Superstorm Sandy to serve as the lead legal advisor for FEMA's public assistance program in New Jersey and assisted in rebuilding public infrastructure at the Jersey shore. He is the author of "Bicycling the Jersey Shore," which was published in New Jersey Outdoors (Spring 1991) magazine. He is an Eagleton Institute of Politics Associate, and teaches at Rutgers Law School - Newark.

ENDNOTES

INTRODUCTION

² Republican Tom Kean defeated Democrat Jim Florio in the extremely close 1981 Governor's race by a margin of 1,797 votes. (Thomas H. Kean Archive, Center on the American Governor, Eagleton Institute of Politics, Rutgers University). Kean served two terms. In 1989, Jim Florio was elected Governor by a 24-point margin. (James J. Florio Archive, Center on the American Governor, Eagleton Institute of Politics, Rutgers University). He served one term.

³ In 2019, NJ's Department of Environmental Protection (DEP) honored both Governor Thomas (Tom) Kean and Governor James (Jim) Florio by awarding them Environmental Excellence Awards at the same ceremony. ("DEP Honors Leaders During Annual Governor's Environmental Excellence Awards Ceremony," DEP news release (12/9/2019)). Among other accomplishments, Governor Kean was recognized for his work on dealing with ocean pollution, ending ocean waste dumping, regulating coastal development under the Coastal Facility Review Act (CAFRA), and tracking medical waste. Id. Among other accomplishments, Governor Florio was recognized for enacting the Clean Water Enforcement Act. Id. The law became a model for the national clean water enforcement act. Id. (As an Assemblyman in 1970, Kean shepherded passage of the law that created the DEP on the first Earth Day. Thomas H. Kean Archive, "Environmental Policy in the Kean Administration" (May 14, 2013), transcript pages 89-90, Center on the American Governor, Eagleton Institute of Politics, Rutgers University).

⁴ Alvin Felzenberg, Governor Tom Kean, Rutgers University Press (2006), p. 290.

KEAN ADMINISTRATION

1987

⁵ "50 Miles of Garbage Closes NJ Beaches," Associated Press (AP) article published in the NY Times (8/15/1987).

⁶ "50 Miles of Garbage Closes Beaches," AP, Supra, at 4.

⁷ "50 Miles of Garbage Closes Beaches," AP, Supra, at 4.

⁸ Felzenberg, Governor Tom Kean, p. 290, Supra, at 3; Deborah Coombe, "Garbage Slick Off Shore Forces Ban on Swimming," Star Ledger (8/15/1987).

⁹ Felzenberg, Governor Tom Kean, p. 290, Supra, at 3.

¹⁰ Midnight dumping is a general term used for the illegal disposal of hazardous waste in remote locations, often at night. Albert Ingram was an example of a midnight dumper, who was prosecuted during the Kean administration. Ingram abandoned about 200 drums of hazardous waste at four locations in Salem and Gloucester Counties, rather than pay to dispose of them lawfully. He was convicted and sentenced to 10 years in jail. (Kitty Dumas, "Hauler Convicted of Hazardous-Waste Dumping," Philadelphia Inquirer, (3/11/1988)); Bernie Weisenfeld, "'Midnight Dumper' Gets 10-Year Term," Courier Post (5/3/1988); State v Ingram, 226 N.J. Super. 680 (Law Div. 1988).

¹¹ "There is little evidence that deliberate dumping of floatable debris, including medical waste, was a factor in wash-up events which occurred on New Jersey's beaches." (Supervising Deputy Attorney General Edward Bonanno, "Investigative Report for 1989 NJ Atlantic Coast Wash-ups," Environmental Prosecutions Bureau, Division

of Criminal Justice (5/23/1990)). In announcing what the Division of Criminal Justice investigation found, the Environmental Prosecutor said that “the wash-ups were a result of the mishandling of solid waste, including household medical waste.” (Department of Law and Public Safety news release (6/1/1990)). He indicated there was scant evidence that deliberate dumping of floatable debris, including medical waste contributed to the wash-ups. Id. The main cause of the problem, he said, was the antiquated sewer systems in Northern NJ and New York City that combined storm and sanitary sewers into a single line, which allowed untreated sewage from storm sewers and sanitary lines to discharge directly into harbor waters during periods of heavy rain. Id.

¹² Felzenberg, Governor Tom Kean, p. 290, Supra, at 3.

¹³ Felzenberg, Governor Tom Kean, p. 290, Supra, at 3; Coombe, “Garbage Slick Off Shore Forces Ban on Swimming,” Supra, at 4.

¹⁴ Felzenberg, Governor Tom Kean, p. 290, Supra, at 3

¹⁵ Felzenberg, Governor Tom Kean, p. 290, Supra, at 3.

¹⁶ Joseph Sullivan, “Stung by Shore’s Pollution, Jersey Legislators Plan Bills,” NY Times (8/27/1987).

¹⁷ Thomas H. Kean Archive, “Environmental Policy in the Kean Administration” (May 14, 2013), transcript pages 15-16, Center on the American Governor, Eagleton Institute of Politics, Rutgers University.

¹⁸ Sullivan, “Stung by Shore’s Pollution, Jersey Legislators Plan Bills,” Supra, at 15.

¹⁹ Sullivan, “Stung by Shore’s Pollution, Jersey Legislators Plan Bills,” Supra, at 15.

²⁰ Felzenberg, Governor Tom Kean, p. 291, Supra, at 3.

²¹ Felzenberg, Governor Tom Kean, p. 291, Supra, at 3.

²² Sullivan, “Stung by Shore’s Pollution, Jersey Legislators Plan Bills,” Supra, at 15.

²³ Felzenberg, Governor Tom Kean, p. 291, Supra, at 3; Dan Weissman and Donna Leusner, “Governor Posts Bounty of \$5,000 for Those Who Caused Garbage Slick,” Star Ledger (8/26/1987).

²⁴ “New Jersey Floatables Study,” NJDEP and USEPA (November 1987), p. 1.

²⁵ “New Jersey Floatables Study,” p. 2, Supra, at 22.

²⁶ “New Jersey Floatables Study,” p. 2, Supra, at 22. For decades, the environmental group - Clean Ocean Action - has conducted annual beach clean-ups and removed material like this from NJ’s beaches. (“2019 Results,” Clean Ocean Action Beach Sweep Report (2019), p. 6).

²⁷ “New Jersey Floatables Study,” p. 6, Supra, at 22.

²⁸ “New Jersey Floatables Study,” p. 12, Supra, at 22.

²⁹ “New Jersey Floatables Study,” p. 6, Supra, at 22.

³⁰ “New Jersey Floatables Study,” p. 20, Supra, at 22.

³¹ Bonanno, “Investigative Report for 1989 NJ Atlantic Coast Wash-ups,” p. 3, Supra, at 10.

³² “Fresh Kills Consent Order Comprehensive Report Prepared for NJDEP.” Baler/TSA, Inc. (May 1990). Nine transfer stations located in four NYC Boroughs - Bronx, Brooklyn, Manhattan and Queens - processed 10 to 14 tons of solid waste that was shipped to Fresh Kills Landfill on a daily basis. Id.

³³ “Fresh Kills Consent Order Comprehensive Report for NJDEP,” Supra, at 30.

³⁴ Felzenberg, Governor Tom Kean, p. 291, Supra, at 3; Herb Jaffe, “NY Agrees to Act on Shore Pollution,” Star Ledger (11/17/1987). Kean called Fresh Kills Landfill “Mount Koch,” after New York City Mayor Ed Koch. (Thomas H. Kean Archive, “Environmental Policy in the Kean Administration” (May 14, 2013), transcript page 82, Center on the American Governor, Eagleton Institute of Politics, Rutgers University).

³⁵ Felzenberg, Governor Tom Kean, p. 292, Supra, at 3; Tom Johnson, “Kean Asks Millions to Safeguard Shore,” Star Ledger (11/18/1987).

³⁶ Joseph Sullivan, “Kean Proposes a Cleanup Plan for Jersey Shore,” NY Times (11/18/87).

³⁷ “The Last Wave,” New Jersey Monthly Magazine (April 1988), p. 194. At an environmental forum at the Eagleton Institute of Politics on May 14, 2013, Cindy Zipf - Executive Director of the environmental group Clean Ocean Action - credited Governor Kean’s “leadership” in stepping-up to the challenge of doing all of the things necessary to get the situation under control. (Tom H. Kean Archive, “Environmental Policy in the Kean Administration” (May 14, 2103), transcript page 80, Center on the American Governor, Eagleton Institute of Politics, Rutgers University). Governor Kean put in place many corrective actions to address the crisis. In the next administration, implementation of those actions continued under Governor Florio.

³⁸ Sullivan, “Kean Proposes a Cleanup Plan for Jersey Shore,” Supra, at 35.

1988

³⁹ “Kean Signs Legislation to Cut Pollution of Ocean,” NY Times (7/12/1988).

⁴⁰ “Kean Signs Legislation to Cut Pollution of Ocean,” Supra, at 38.

⁴¹ “Kean Signs Legislation to Cut Pollution of Ocean,” Supra, 38; Philip Shabecoff, “Why NY and NJ Are Still Dumping Sludge into the Sea,” NY Times (7/17/1988). During the same month, Vice President George H. W. Bush joined Governor Kean on a tour of NJ’s coastline. He decried ocean pollution and agreed to support stronger action to combat ocean dumping. (Stacey Barchenger, “George H.W. Bush Campaigned at Jersey Shore in 1988, 1992,” Asbury Park Press (12/1/2018)).

⁴² “Kean Signs Legislation to Cut Pollution of Ocean,” Supra, at 38.

⁴³ Thomas H. Kean Archive, “Thomas Kean Administration Environment Timeline,” Center on the American Governor, Eagleton Institute of Politics, Rutgers University.

⁴⁴ Sally Squires, “Needles on the Beach,” Washington Post (8/23/1988).

⁴⁵ Michael Sol Warren and Alex Napoliello, “More Syringes Are Washing Up on NJ Beaches,” NJ.com (8/7/2018).

⁴⁶ “Chronology of Public and Environmental Health Events (Post World War II),” Monmouth County Health Department (8/9/2013); Jesse Rangel, “Asbury Park Fined for Beach Pollution,” NY Times (10/16/1988).

⁴⁷ Rangel, “Waste Drowns Summer Along the Shore,” NY Times (7/29/1988).

⁴⁸ Rangel, “Asbury Park Fined for Beach Pollution,” Supra, at 45.

⁴⁹ Rangel, “Asbury Park Fined for Beach Pollution,” Supra, at 45.

⁵⁰ Rangel, “Asbury Park Fined for Beach Pollution,” Supra, at 45. Viewing the DEP’s action as too little too late, environmentalists came out in support of the Clean Water Enforcement Act sponsored by Senator Frank Pallone and Assemblyman John Bennett, which eliminated the DEP’s discretion to impose fines for permit violations. Id. (“In the Matter of the City of Asbury Park Sewage Treatment Plant,” DEP Administrative Order and Notice of Civil Administrative Penalty Assessment (10/11/1988)).

⁵¹ Warren and Napoliello, “More Syringes Are Washing Up on NJ Beaches,” Supra, at 44.

⁵² “Our Polluted Oceans - Don’t Go Near the Water,” Newsweek Magazine (8/1/1988).

⁵³ “Our Filthy Seas,” Time Magazine (8/1/1988).

⁵⁴ “Our Filthy Seas: The Oceans Send Out an SOS,” Time Magazine (8/1/1988).

⁵⁵ “Our Filthy Seas: The Oceans Send Out an SOS,” Supra, at 53.

⁵⁶ On January 2, 1989, Time Magazine named the “Endangered Earth” the “Planet of the Year.” (“Endangered Earth - Planet of the Year,” Time Magazine (1/2/1989)). One of the stories was devoted to waste. (“A Stinking Mess - The Problem: Throwaway Societies Befoul Their Land and Seas,” Time Magazine (1/2/1989), p. 44).

⁵⁷ Jesus Rangel, “Waste Drowns Summer Along the Shore,” Supra, at 46; Eric Schmidt, “On the Jersey Shore, a Summer to Forget,” NY Times (9/2/1988).

⁵⁸ Warren and Napoliello, “More Syringes Are Washing Up on NJ Beaches,” Supra, at 44.

⁵⁹ This meant New York City, which dumped 2.5 million gallons of sludge in the ocean every day, had to find an alternative method of disposal. (Elizabeth Colbert, “Cuomo and Kean Join in Sludge Plan,” NY Times (9/15/1988)).

⁶⁰ J. Scott Orr, “Reagan Enacts Ban on Dumping Sludge Off Jersey,” Star Ledger (11/19/1988).

⁶¹ N.J.S.A. 13:19.1, et seq. (CAFRA); Joseph Sullivan, “Kean Order Halts New Construction on Jersey Coast,” NY Times (10/4/1988).

⁶² “The Report by the Blue-Ribbon Panel on Ocean Incidents - 1987,” The State of the Ocean (May 1988), p. 19. The report also noted the relationship between the density of development and habitat destruction and point and non-point source pollution. “The Report by the Blue-Ribbon Panel on Ocean Incidents - 1987,” p. 3, Ibid.

⁶³ Medical Waste Tracking Act (1988).

⁶⁴ N.J.S.A. 13:1E-48, et seq.

⁶⁵ N.J.S.A. 13:1E-48.20-1, et seq. Before the law making the illegal disposal of medical waste a crime was enacted, a case involving the illegal disposal of blood vials that washed-up on the shore was prosecuted based upon statutes proscribing the unlawful release of hazardous waste and harmful substances and the illegal discharge of pollutants. (State v Villegas and Plaza Health Laboratories, Inc., Indictment SGJ215-88). The court, however, rejected this theory of prosecution. (Bill Sanderson, “Charges Dismissed in Blood-Vial Case,” The Record (6/2/1989), p. A-3.) Attorney General Cary Edwards criticized the trial court ruling. He said the defendant was “caught red-handed tossing blood vials contaminated with the hepatitis-B virus into the Hudson River, but the case was thrown out last year because the criminal statute ‘didn’t say specifically: Dumping blood vials is a crime in New Jersey.’” (Thomas Fitzgerald, “Critics: Is Madonna All Bark, No Bite?”, Trenton Times (8/5/1990)). In an

unpublished opinion, an appellate court ruled the dismissal of the charges by the trial court after the State rested was not appealable even though the appellate judges expressed “very serious doubts as to the correctness of the trial judge’s readings and applications of the statutes.” (*State v Villegas and Plaza Health Laboratories, Inc.*, Unpublished Appellate Court Decision, A-5788-88TSF, 4/10/1990). The jury had been discharged and double jeopardy grounds precluded defendants’ retrial. Federal authorities also prosecuted Villegas and Plaza Health Laboratories for this conduct. Their conviction under the federal Clean Water Act, however, was reversed on appeal. (Laurie Asseo, “Court Refuses to Reinstate Conviction for Dumping Blood Vials in River,” Associated Press (6/27/1994)); *United States v Plaza Health Labs, Inc.*, 3 F.3d 643 (2d Cir. 1993).

1989

⁶⁶ Thomas H. Kean Archive, “Thomas Kean Administration Environment Timeline,” Center on the American Governor, Eagleton Institute of Politics, Rutgers University.

⁶⁷ Thomas H. Kean Archive, “Thomas Kean Administration Environment Timeline,” Center on the American Governor, Eagleton Institute of Politics, Rutgers University.

⁶⁸ Thomas H. Kean Archive, “Environmental Policy in the Kean Administration” (May 14, 2013), transcript page 83, Center on the American Governor, Eagleton Institute of Politics, Rutgers University.

⁶⁹ *Id.*

⁷⁰ Christine Lapusheski, “Assembly Bill Aims at Beach Protection,” Atlantic City Press (10/20/1990).

⁷¹ Thomas H. Kean Archive, “Thomas Kean Administration Environment Timeline,” Center on the American Governor, Eagleton Institute of Politics, Rutgers University.

⁷² “Assessment of the Floatables Action Plan,” USEPA (Summer 1989), p. 4

⁷³ “Assessment of the Floatables Action Plan,” p. 5, *Supra*, at 71.

⁷⁴ “Assessment of the Floatables Action Plan,” p. 7, *Supra*, at 71.

⁷⁵ “Assessment of the Floatables Action Plan,” p. 26, *Supra*, at 71.

⁷⁶ “Assessment of the Floatables Action Plan,” p. 10, *Supra*, at 71.

⁷⁷ “Assessment of the Floatables Action Plan,” p. 26, *Supra*, at 71.

⁷⁸ “Operation Clean Shore: Project Summary,” NJDEP (1989); Wayne King, “Sweeping 20 Miles of Jersey’s Littered Shore,” NY Times (8/3/1990).

⁷⁹ “Operation Clean Shores: Project Summary,” *Supra*, at 77; King, “Sweeping 20 Miles of Jersey’s Littered Shore,” *Supra*, at 77.

⁸⁰ Beau Phillips, “State Extends Sweep of Shoreline,” Asbury Park Press (11/23/1991). The program was also expanded geographically to include the Delaware River shoreline in Trenton. (Don Henry III, “Operation Clean Shores,” Trenton Times (3/4/1992)).

⁸¹ “Annual Report, Cooperative Coastal Monitoring Program 1989,” DEP (March 1990), p. 1.

⁸² Eugene Kiely, “NJ Beach Standards Praised,” The Record (8/15/1991).

⁸³ Kiely, “NJ Beach Standards Praised,” *Supra*, at 81.

⁸⁴ “Annual Report, Cooperative Coastal Monitoring Program 1989,” p. 17-18, *Supra*, at 80. Additionally, thirteen ocean beaches were closed as a precaution or due to floatable debris. “Annual Report, Coastal Cooperative Monitoring Program 1989,” p. 18, *Ibid.*

⁸⁵ “Annual Report, Cooperative Coastal Monitoring Program 1989,” p. 17, *Supra*, at 80.

⁸⁶ Eugene Kiely, “NJ Beach Closings Drop,” The Record (7/24/1992); “Annual Report, Coastal Cooperative Monitoring Program 1991,” DEPE (March 1992), p. 10. For a time during the Florio administration, the DEP was reconstituted as the Department of Environmental Protection and Energy (DEPE). No ocean beaches were closed in 1991 due to floatable debris.

⁸⁷ Public Question No. 3 was approved by a margin of 1,094,516 to 529,270.
[https://ballotpedia.org/New_Jersey_Public_Question_No._3_\(1989\)](https://ballotpedia.org/New_Jersey_Public_Question_No._3_(1989)).

⁸⁸ James J. Florio Archive, Florio 1989 Campaign Ad, “Protecting NJ’s Drinking Water,” YouTube, Center on the American Governor, Eagleton Institute of Politics, Rutgers University. Also, in the 1989 Republican primary for Governor, Candidate Cary Edwards touted his national and State work to “halt ocean pollution.” (“Edwards Will Step Down as Attorney General to Consider Race for Governor,” Department of Law and Public Safety news release (1/5/1989), p. 2.)

⁸⁹ Thomas H. Kean Archive, “Thomas Kean Administration Environment Timeline,” Center on the American Governor, Eagleton Institute of Politics, Rutgers University.

⁹⁰ James J. Florio Archive, “James Florio Administration Timeline,” Center on the American Governor, Eagleton Institute of Politics, Rutgers University.

⁹¹ Shortly after being sworn-in as Environmental Prosecutor, Steven Madonna told a NJ Environmental Federation Convention: “I intend to change the perception of the polluter that the ‘P’ in ‘Pollution’ stands for profit to a perception that the ‘P’ in ‘Pollution’ stands for prison.” (Mark Lagerkvist, “New Prosecutor Comes Out Fighting,” Asbury Park Press (8/5/1990); Fitzgerald, “Critics: Is Madonna All Bark, No Bite,” *Supra*, at 66). As Governor Florio hoped in establishing the position, the Environmental Prosecutor sought to send a hard-nosed message of deterrence. After pleading guilty to the second-degree crime of releasing a hazardous waste and toxic pollutant, Evelyn Berman Frank was sentenced to a term of probation. (Al Frank, “At Anchor - Sludge Barge Owner Averts Prison Term,” *Star Ledger* (11/27/1990)). Because of the probationary sentence, environmental groups claimed the “P” in “Pollution” stood for probation. The Environmental Prosecutor was criticized for not living up to his promises. Former Deputy DEP Commissioner Michael Catania framed the question groups raised about the Environmental Prosecutor’s Office this way: “After a while, people started asking ‘Where’s the beef?’” (Walter Lucas, “Special Prosecutor Post Celebrates 1st Birthday – Icon of Form or Substance,” *New Jersey Law Journal*, (2/7/1991), p. 5.) Ultimately, Evelyn Berman Frank did go to jail. Superior Court Judge Anthony Iuliani sentenced her to a three-year jail term after the Environmental Crimes Bureau in the Division of Criminal Justice prosecuted her for violating the terms of her probation. In particular, Evelyn Berman Frank refused to sever all ties with the family tug, barge and tank clean companies, and she travelled to Florida several times without the permission of the court or the probation department. (Al Frank, “Polluter Starts Term for Flouting Probation,” *Star Ledger* (5/19/1994)). She served her prison sentence after losing an appeal. (Al Frank, “Harbor Polluter Reports to Prison,” *Star Ledger* (4/6/1995); *State v Evelyn Berman Frank*, 280 *N.J. Super.* 26 (App. Div. 1995)). Reporter Al Frank and defendant Evelyn Berman Frank are not related.

⁹² Thomas Fitzgerald, “Florio Pours Clout on Clean Water Bill,” *Trenton Times* (March 13, 1990).

⁹³ Fitzgerald, “Florio Pours Clout on Clean Water Bill,” *Supra*, at 91.

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⁹⁴ Superfund Law, Comprehensive Environmental Response, Compensation and Liability Act of 1980. (42 U.S.C. 9601, et seq.).

⁹⁵ James J. Florio Archive, Florio 1989 Campaign Ad, “Personal Record of Leadership,” YouTube, Center on the American Governor, Eagleton Institute of Politics, Rutgers University. In another campaign ad, Florio promised to stop chemical companies from illegally dumping by “dumping” polluters in jail. (Florio 1989 Campaign Ad, “Illegal Chemical Dumping,” YouTube, Center on the American Governor, Eagleton Institute of Politics, Rutgers University.)

⁹⁶ Craig Wolff, “Exxon Admits a Year of Breakdowns in S.I. Oil Spill,” *NY Times* (1/10/1990); “Exxon Bayway Oil Spill, Linden, NJ (January 1990),” NOAA Damage Assessment, Remediation and Restoration Program, <https://darrp.noaa.gov/oil-spills/exxon-bayway>.

⁹⁷ Wolff, “Exxon Admits a Year of Breakdowns in S.I. Oil Spill,” *Supra*, at 95.

⁹⁸ Wolff, “Exxon Admits a Year of Breakdowns in SI Oil Spill,” *Supra*, at 95; “Exxon Bayway Oil Spill, Linden, NJ (January 1990),” *Supra*, at 95; Allan Gold, “Exxon Said to Offer Millions to Erase 1990 Harbor Spill,” *NY Times* (3/15/1991).

⁹⁹ “Exxon Bayway Oil Spill, Linden, NJ (January 1990),” *Supra*, at 95; Gold, “Exxon Said to Offer Millions to Erase 1990 Harbor Spill,” *Supra*, at 97.

¹⁰⁰ Wolff, “Exxon Admits a Year of Breakdowns in SI Oil Spill,” *Supra*, at 95.

¹⁰¹ Wolff, “Exxon Admits a Year of Breakdowns in SI Oil Spill,” *Supra*, at 95.

¹⁰² The legislative hearing was co-chaired by Senator Richard Van Wagener and Assemblyman Robert Smith. (Testimony of Jerry Burke, Assistant Commissioner for Enforcement and Regulatory Affairs, NJDEP (2/5/1990)); Thomas Fitzgerald, “Senators: Greed Caused Exxon Spill,” *Trenton Times* (3/20/1990).

¹⁰³ Bill Gannon, “State Gets Toughest Spill Law in the Nation,” *Star Ledger* (7/22/1990).

¹⁰⁴ Gannon, “State Gets Toughest Spill Laws in Nation,” *Supra*, at 102.

¹⁰⁵ Al Frank, “Exxon Spill Settlement Praised . . . Panned,” *Star Ledger* (3/21/1991). Prior to the guilty plea, Exxon spent approximately \$18 million in clean-up costs. New York and New Jersey split millions of dollars of court fines earmarked for the restoration of natural resources along the Arthur Kill. *Id.* \$1.5 million went into an Arthur Kill Trust Fund for the reclamation and acquisition of sensitive wetlands. (“Exxon Pleads Guilty for Arthur Kill Spill,”

United Press International (3/21/1991)). The guilty plea and settlement came one week after Exxon reached a \$1.1 billion dollar agreement with Alaska for the March 1989 Exxon Valdez Oil spill. (Gold, "Exxon Said to Offer Millions to Erase 1990 Harbor Spill," *Supra*, at 97).

¹⁰⁶ Governor Jim Florio Inaugural Address, Trenton, NJ (1/16/1990).

¹⁰⁷ Governor Jim Florio Inaugural Address, *Supra*, at 105.

¹⁰⁸ Governor Jim Florio Inaugural Address, *Supra*, at 105.

¹⁰⁹ Governor Jim Florio Inaugural Address, *Supra*, at 105.

¹¹⁰ Governor Jim Florio Inaugural Address, *Supra*, at 105.

¹¹¹ Governor Jim Florio Inaugural Address, *Supra*, at 105.

¹¹² James J. Florio Archive, "Governor Florio Briefing Event on Wednesday (1/22/1990)," Center on the American Governor, Eagleton Institute of Politics, Rutgers University.

¹¹³ Governor James Florio, Executive Order #2 (1/24/1990). This Executive Order was rescinded in 1994, when Governor Christie Todd Whitman came into office. (Governor Christie Todd Whitman, Executive Order #9, 3/15/1994)).

¹¹⁴ Governor James Florio, Executive Order #2, *Supra*, at 112.

¹¹⁵ Todd Bates, "Going after the Bad Guys," Asbury Park Press (2/25/1990).

¹¹⁶ Governor Jim Florio Remarks at the Eagleton Institute's Conference on the Environment, New Brunswick, NJ (5/16/1990).

¹¹⁷ Governor Jim Florio Remarks at the Eagleton Institute's Conference on the Environment, *Supra*, at 115.

¹¹⁸ Governor Jim Florio Remarks at the Eagleton Institute's Conference on the Environment, *Supra*, at 115.

¹¹⁹ Clean Water Enforcement Act (CWEA), P.L. 1990, c.28.

¹²⁰ "Governor Florio Signs Toughest Clean Water Bill in the Country," Office of the Governor news release (5/23/1990).

¹²¹ CWEA, *Supra*, at 118.

¹²² N.J.S.A. 58:10A-14.1 – 14.2.

¹²³ First Annual Report of the Clean Water Enforcement Act, DEPE (March 1992); Tom Johnson, "DEPE Reports Record in Pollution Fine Collection," Star-Ledger (March 24, 1992); Tom Fitzgerald, "Enforcement Act Finally Holding Water," Trenton Times (March 24, 1992).

¹²⁴ "Governor Florio Signs Toughest Clean Water Bill in the Country," Office of the Governor news release, Remarks for Bill Signing Ceremony in Asbury Park (5/23/1990).

¹²⁵ Allan Gold, "Oil Spilled in New York Harbor and First Mate on Tanker Is Held," NY Times (6/8/1990).

¹²⁶ "Tanker Owner Agrees to \$4 million for Oil Spill," United Press International (8/18/1993).

¹²⁷ Todd Bates, "Revival of Shore Declared by Florio," Asbury Park Press (9/29/1990).

¹²⁸ "Annual Report, Coastal Cooperative Monitoring Program 1990," DEP (March 1991); "Coastal Cooperative Monitoring Program Beach Closings Summary (1989-2005)," Division of Watershed Management, DEP, p. 14. There were no beach closures caused by floatable debris the next two summers. *Id.* In 1991, the number of closings caused by high bacteria counts dropped to 10. ("Annual Report, Coastal Cooperative Monitoring Program 1991", DEP (March 1992), p. 10.) The small number of closings can be attributed to the weather - westerly winds and a relatively dry summer. That was not the case in 1992, when closures caused by high bacteria counts jumped to 26. ("Coastal Cooperative Monitoring Program Beach Closings Summary (1989-2005)," *Ibid.*).

¹²⁹ Bates, "Revival of Shore Declared by Florio," *Supra*, at 126. The money, part of 1988 Sewage Infrastructure Improvement Act, went to mapping storm sewers and sewers that carried human waste. *Id.*

¹³⁰ Bates, "Revival of Shore Declared by Florio," *Supra*, at 126.

1991

¹³¹ James J. Florio Archive, "Governor Florio's First State of the State Message," Program for the American Governor, Eagleton Institute of Politics, Rutgers University.

¹³² Meg Nugent, "Buoyant Outlook – Florio Expects Good Times at the Shore," Star Ledger (5/18/1991).

¹³³ Nugent, "Buoyant Outlook-- Florio Expects Good Times at the Shore," *Supra*, at 131.

¹³⁴ Nugent, "Buoyant Outlook-- Florio Expects Good Times at the Shore," *Supra*, at 131

¹³⁵ Nugent, "Buoyant Outlook-- Florio Expects Good Times at the Shore," *Supra*, at 131.

¹³⁶ "Florio Declares Shore 'Gorgeous' After Tour," Star Ledger (5/21/1991).

¹³⁷ "Florio Declares Shore 'Gorgeous' After Tour," *Supra*, at 135.

¹³⁸ “Poll Finds Jerseyans See Water Pollution as Peril,” *Star Ledger* (7/12/1991).

¹³⁹ “Poll Finds Jerseyans See Water Pollution as Peril,” *Supra*, at 137.

¹⁴⁰ “Poll Finds Jerseyans See Water Pollution as Peril,” *Supra*, at 137.

¹⁴¹ Coleen Dee Berry, “Florio Touts Tourism’s Comeback,” *Asbury Park Press* (9/4/1991).

¹⁴² Coleen Dee Berry, “Florio Touts Tourism’s Comeback,” *Supra*, at 140

¹⁴³ Coleen Dee Berry, “Florio Touts Tourism’s Comeback,” *Supra*, at 140.

¹⁴⁴ Coleen Dee Berry, “Florio Touts Tourism’s Comeback,” *Supra*, at 140

¹⁴⁵ Coleen Dee Berry, “Florio Touts Tourism’s Comeback,” *Supra*, at 140.

1992

¹⁴⁶ Attorney General Robert Del Tufo and Environmental Prosecutor Steven Madonna, “Second Annual Report to Governor Jim Florio,” Office of the Environmental Prosecutor, Department of Law and Public Safety (April 1992), p. 19.

¹⁴⁷ Joseph Sullivan, “Ciba to Pay New Jersey for Illegal Waste Dumping,” *NY Times* (2/29/1992); Attorney General Robert Del Tufo and Environmental Prosecutor Steven Madonna, *Supra*, at 145.

¹⁴⁸ Sullivan, “Ciba to Pay New Jersey for Illegal Waste Dumping,” *Supra*, at 146; Dan Fagin, *Toms River*, Bantam Books (2013), p. 288.

¹⁴⁹ Sullivan, “Ciba to Pay New Jersey for Illegal Waste Dumping,” *Supra*, at 146.

¹⁵⁰ “Familiar Democratic Faces Join to Support Madonna,” *New Providence Democrats Press Release* published In Independent Press (7/12/1998).

¹⁵¹ Jean Mikle, “Toms River Ciba-Geigy Superfund Site Will Take Decades to Clean,” *Asbury Park Press* (4/12/2018). The former plant is now owned by BASF

¹⁵² Kirk Moore, “Cancer Probe’s Data Out,” *Asbury Park Press* (2/29/2000).

¹⁵³ Moore, “Cancer Probe’s Ciba Data Out,” *Supra*, at 151.

¹⁵⁴ Fagin, *Toms River*, p. 155, *Supra*, at 147.

¹⁵⁵ Fagin, *Toms River*, p. 234, *Supra*, at 147. An environmental activist leading a protest against the company on Labor Day weekend said: “What the hell is the difference if they’re dumping it off a barge or through a pipeline into the water,” p. 232, *Ibid*.

¹⁵⁶ Fagin, *Toms River*, p. 245, *Ibid*.

¹⁵⁷ Fagin, *Toms River*, p. 237, *Ibid*.

¹⁵⁸ *Id*.

¹⁵⁹ *Id.*; Mary Kugler, “Ciba-Geigy and the Toms River Cancer Cluster Settlement,” *VeryWell Health*, (4/26/2020); Jean Mikle, “Notorious Toms River Superfund Site Gets 5 More years of Water Testing,” *Asbury Park Press* (4/11/2018).

¹⁶⁰ Fagin, *Toms River*, p. 237,239, *Supra*, at 147.

¹⁶¹ Mikle, “Notorious Toms River Superfund Site Gets 5 More Years of Water Testing,” *Supra*, at 158.

¹⁶² Fagin, *Toms River*, p. 247, *Supra*, at 147.

¹⁶³ Kugler, “Ciba-Geigy and the Toms River Cancer Cluster Settlement,” *Supra*, at 158.

¹⁶⁴ “Families Settle for Childhood Cancer Claims in Toms River, NJ,” *Environmental Health and Safety Today* (12/16/2001).

¹⁶⁵ Mikle, “Notorious Toms River Superfund Site Gets 5 More Years of Water Testing,” *Supra*, at 158; Fagin, *Toms River*, p. 434, *Supra*, at 147.

¹⁶⁶ Tom Johnson and Ted Sherman, “High Bacteria Forces Closing of 19 Beaches,” *Star Ledger* (8/20/1992).

¹⁶⁷ Johnson and Sherman, “High Bacteria Forces Closing of 19 Beaches,” *Supra*, at 165.

¹⁶⁸ Todd Bates, “Water Quality Hurt by Runoff,” *Asbury Park Press* (9/20/1992).

¹⁶⁹ Johnson and Sherman, “High Bacteria Forces Closing of 19 Beaches,” *Supra*, at 165.

¹⁷⁰ Bates, “Water Quality Hurt by Runoff,” *Supra*, at 167; “Coastal Cooperative Monitoring Program Beach Closings Summary (1989-2005),” *Supra*, at 127.

¹⁷¹ Bates, “Water Quality Hurt by Runoff,” *Supra*, at 167.

¹⁷² Bates, “Water Quality Hurt by Runoff,” *Supra*, at 167; “Coastal Cooperative Monitoring Program Beach Closings Summary (1989-2005),” *Supra*, at 127.

¹⁷³ Bates, “Water Quality Hurt by Runoff,” *Supra*, at 167.

¹⁷⁴ David Veasey, “By Land, Sea and Air, at War with Pollution,” *NY Times* (8/16/1992).

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- ¹⁷⁵ Todd Bates, "State Lags in Enforcing Key Water Pollution Law," Asbury Park Press (8/16/1992).
- ¹⁷⁶ Todd Bates, "Three 1988-89 Pollution Packages Await Action," Asbury Park Press (8/16/1992); Bates, "Water Quality Hurt by Runoff," Supra, at 167
- ¹⁷⁷ Warren and Napoliello, "More Syringes Are Washing Up on Jersey Beaches," Supra, at 44.
- ¹⁷⁸ "[T]he environmental group Riverkeeper notes that despite huge improvements in pollution control, billions of gallons of untreated sewage and polluted stormwater still enter the Hudson River and New York Harbor each year by way of combined sewer overflows and other methods." (Noah Cohen, "Company Dumped Sewage into Hudson, Ex-Workers Allege," Star Ledger (12/6/2020)).
- ¹⁷⁹ Jon Hurdle, "Bacteria Are Fouling the Water Off NJ's Beaches, Advocates Warn," NJ Spotlight News (7/24/2020).
- ¹⁸⁰ "Don't Go in the Water! 15 Jersey Shore Beaches Closed Due to Water Quality," NBC 10 News using material from the Associated Press (7/27/2017).
- ¹⁸¹ "Don't Go in the Water! 15 Jersey Shore Beaches Closed Due to Water Quality," Supra, at 179.
- ¹⁸² Avalon Zoppo, "Report: High Bacteria Levels Found at These Beaches Last Summer," Star-Ledger (July 4, 2021), p. 21.
- ¹⁸³ Id.; According to John Weber, a regional manager for the Surfrider Foundation, "[t]he pollution we can't see is when there is a rain event, and essentially human fecal stuff is not treated all the way and is released into the local waterway, and those all lead into the ocean." Michael Sol Warren, "Flooding , Waste Put Spotlight on Old Sewer Systems," Star Ledger (August 2, 2021), p. 1.
- ¹⁸⁴ "Medical Waste Soils Some New Jersey Beaches," Associated Press (8/29/2008).
- ¹⁸⁵ Id.
- ¹⁸⁶ A Pennsylvania dentist admitted to causing the closure of beaches in Avalon for five days by throwing a bag of syringes from his motor boat into Townsends Inlet. (MaryAnn Spoto, "Pennsylvania Dentist Admits Dumping Needles, Medical Waste near Avalon," NJ.com (3/15/2010)). His reprehensible conduct in using coastal waters as a cesspool was reminiscent of Evelyn Berman Frank's conduct in dumping sludge off the coast of Sea Girt. The dentist pled guilty to the unlawful discharge of water pollutants and was placed on probation. Id.
- ¹⁸⁷ Clean Ocean Action collected 450 syringes during its annual beach cleanup in 2006. Warren and Napoliello, "More Syringes Are Washing Up on Jersey Beaches," Supra, at 44.
- ¹⁸⁸ Chris Sheldon, "More Beaches Closed Due to Medical Waste," Star Ledger (July 15, 2021), p. 10.
- ¹⁸⁹ Jeff Goldman, "Medical Waste Found on NJ Beaches Might Have Been Intentionally Dumped, Official Says," Associated Press (July 13, 2021).
- ¹⁹⁰ Id.
- ¹⁹¹ Id.
- ¹⁹² Supervising Deputy Attorney General Edward Bonanno, "Investigative Report for 1989 NJ Atlantic Coast Wash-ups," Environmental Prosecutions Bureau, Division of Criminal Justice (5/23/1990). (See Endnote 11).