

FINDING NATURE IN AN INDUSTRIAL SWAMP:
A CASE STUDY OF NEW JERSEY'S
HACKENSACK MEADOWLANDS

by
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A dissertation submitted in partial fulfillment
of the requirements for the degree

of
Doctor of Philosophy
in
History

MONTANA STATE UNIVERSITY
Bozeman, Montana

April 2017

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ACKNOWLEDGEMENTS

This project would have been impossible without the support of many people. At the top of the list are my advisor, Mary Murphy, and my committee members, Timothy LeCain, Billy Smith, and William Wyckoff, who offered valuable insight and advice. I owe many thanks to Susan Cohen who graciously accepted, or at least did not reject, the role of an unofficial mentor. Many thanks to my colleagues and friends at Montana State University, especially to my writing partner, Sarah Coletta.

Thank you to The Graduate School at Montana State for granting me a PhD Dissertation Completion Fellowship which allowed me to complete this work. I am also grateful for financial support from the Department of History & Philosophy and the College of Letters and Science, especially for the Staudohar Memorial Scholarship.

I am grateful to the staff of the Meadowlands Environmental Research Institute, Hackensack Riverkeeper, Inc., and NY/NJ Baykeeper for allowing me access to their records, and to all those who shared their experiences in the Meadowlands with me. This research would have been impossible without assistance from the staff at Montana State University's Interlibrary Loan Department at Renne Library. In their ability to track down local newspapers and obscure documents, they have enabled this historian in Montana to conduct research on a New Jersey landscape, and for that I am grateful.

To my parents, Bob and Donna Hendry, who instilled in me a love of learning and a tenacity that enabled me to see this project through, and to my husband, Andy Marshall, who gave me constant encouragement in so many ways, I could not have done this without you.

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ABSTRACT

The Hackensack Meadowlands is a large tidal marsh ecosystem and state-designated planning district located in heavily urbanized northeastern New Jersey. Because the Meadowlands' wetlands had been perceived as worthless, dangerous, and a barrier to progress, over half of the Meadowlands' wetlands disappeared under drainage ditches and developers' fill as Greater New York expanded in the eighteenth, nineteenth, and twentieth centuries. Yet, today 8,400 acres of wetlands remain there; this dissertation seeks to explain why. This dissertation analyzes environmental preservation efforts in the Meadowlands from 1968 to 2004, including legislative efforts to pass the Hackensack Meadowlands Reclamation and Development Act in 1968, early Hackensack Meadowlands Development Commission planning efforts and environmentalists' attempts to block construction of an incinerator and the Meadowlands Sports Complex in the early 1970s, the Environmental Protection Agency's veto of fill permits filed under Section 404 of the Clean Water Act in the 1980s, and grassroots environmentalists' efforts to block a Special Area Management Plan and the construction of the Meadowlands Mills Mall at the end of the twentieth century. These efforts culminated in the HMDC's adoption of a Master Plan in 2004 which barred all new development on the Meadowlands' wetlands. In each of these episodes, this dissertation analyzes the ways in which people defined nature, and the human relationship to it, in this place over time, and it explains how those definitions of nature shaped policy and the Meadowlands' landscape. It argues that 8,400 acres of wetlands remains in the United States' most densely populated metropolitan area stands as a testament to Americans' willingness to embrace humanized landscapes within their understandings of nature and their ability to force the environmental management system to protect such landscapes.

INTRODUCTION

If New Jersey represents the epitome of environmental collapse to many Americans, the Hackensack Meadowlands has long been at the core of that image. A large tidal marsh, located in heavily urbanized northeastern New Jersey, fewer than five miles from the center of Manhattan, the Meadowlands is crisscrossed by highways and railroad lines (Figure 1). Much of what was once wetland is now home to landfills, power plants, and warehouses, and its waters are so polluted that signs warn fishermen to avoid eating their catch. There are six Superfund sites in or immediately adjacent to the Hackensack Meadowlands and in 2015, the United States Environmental Protection Agency considered the entirety of the lower Hackensack River for Superfund designation. People who lived near the Meadowlands in the middle of the twentieth century remember the stench that emanated from landfills that covered nearly 2,000 acres and the constant smoke from dump fires. They also witnessed the filling of hundreds of acres of wetlands in the region every year for new industrial and commercial construction. Various described by the *New York Times* as a “mosquito-infested jungle of rank vegetation” and as “thousands of acres of outwardly mean and inhospitable land,” if there is a “scenic totem pole,” as nature writer Robert Sullivan suggests, the Meadowlands is at the bottom.¹

¹ “Jersey Meadows Viaduct,” *New York Times*, November 25, 1932, ProQuest Historical Newspapers (99777229); Walter H. Waggoner, “200 Brave Bleakness and Rain to Tour Jersey Meadowlands,” *New York Times*, October 22, 1967, ProQuest Historical Newspapers (117733548); Robert Sullivan, “The Meadowlands,” in Robert Sullivan and Joshua Lutz, *Meadowlands* (Brooklyn: PowerHouse Books, 2008).

The Hackensack Meadowlands is a term that refers both to an 8,400-acre wetland complex and the area of land within the boundaries of the state-designated Hackensack Meadowlands District, which encompasses parts of two counties and fourteen municipalities (Figure 2).² The District's wetlands are part of the New York-New Jersey Harbor Estuary, a complex of rivers and bays that empty into the New York Bight and beyond to the Atlantic Ocean (Figure 3). Here, tides move in and out of the bays and rivers twice daily, bringing the ocean's salt water upstream where it mixes with rivers' freshwater creating a brackish environment. Because it can trap nutrients, the estuary provides vital nourishment for numerous species and it is a primary nursery for ocean dwelling fish. It provides habitat for avian species and other wildlife, especially migratory birds, and it filters water as it moves into the Atlantic Ocean. This makes the estuary potentially one of the most ecologically valuable ecosystems in the world.

Its location in the most densely populated part of the most densely populated state in the nation also makes the Meadowlands one of the most economically valuable regions in the world. As such, the history of the Meadowlands is largely one of attempts at making its wetlands disappear. From their earliest settlement in what is now the New York City metropolitan area, Euro-Americans viewed New Jersey's wetlands as an obstacle to economic development. Evidence from the mid-eighteenth century shows that English colonists diked and drained portions of the Meadowlands, hoping to turn its wetlands into productive agricultural spaces. In the nineteenth century, members of New

² The Meadowlands District includes part of the following municipalities: in Bergen County – Carlstadt, East Rutherford, Little Ferry, Lyndhurst, Moonachie, North Arlington, Ridgefield, Rutherford, South Hackensack, and Teterboro; in Hudson County – Jersey City, Kearny, North Bergen, and Secaucus.

York's mercantile class created land reclamation companies to undertake such agricultural reclamation projects on a large scale, and in the early twentieth century, health officials drained much of the wetlands to rid the region of mosquitos. By the middle of that century, New Jerseyans turned the wetlands into fast land for landfills, chemical factories, railroad yards, superhighways, townhouses, and a football stadium. In the minds of many residents and developers, the Meadowlands' wetlands were nothing more than a barrier to economic progress. This view extended through the end of the twentieth century when as late as 1996, developers still looked at the Meadowlands' wetlands as an appropriate place to build a shopping mall.

Despite this, nature endures in the Meadowlands. Over 8,000 acres of wetlands still exist there, flanking the Hackensack River as it flows south to Newark Bay. Ospreys nest on railroad trestles and power lines (Figure 4), carp spawn in Mill Creek, and eagles perch on cottonwood trees. On February 17, 2017, the Bergen County Audubon Society posted a photo to its Facebook page showing twenty-seven bald eagles in a group of trees in Ridgefield Park, where Overpeck Creek enters the Hackensack River at the northern end of the Meadowlands. The eagles had chosen to rest on trees that sit on land that was wetland not too long ago; it was filled in the mid-twentieth century with waste from the Lincoln Paper Company. Today, that land bears the evidence of its former industrial use. Its soils exceed acceptable levels of heavy metals and PCBs and because of this, the site is recorded on the New Jersey Department of Environmental Protection's Known Contaminated Sites list. From their trees, on this contaminated land, the eagles could see and hear tractor trailers speeding down the New Jersey Turnpike and U. S. Route 46.

Yet, bald eagles inhabiting toxic land next to a twelve-lane superhighway is a scene that somehow seems perfectly normal in the Hackensack Meadowlands, an area that author and naturalist John R. Quinn calls “one of the grandest environmental paradoxes on Earth.”³ Here, five miles from Times Square, in the center of a metropolitan area with over twenty million people, in a region that bears the scars of centuries of industrial use and development pressure, a functioning wetland, ten times the size of Central Park, still exists. Given the extraordinary economic and development pressures foisted on this piece of land, how is it that 8,400 acres of wetlands and open space still exist there?

The story of environmental preservation efforts in the Hackensack Meadowlands begins in 1968 when the New Jersey State Legislature created the Hackensack Meadowlands Development Commission (HMDC) to oversee the orderly development of the Hackensack Meadowlands District. That legislation also mandated that the HMDC protect the District’s “delicate balance of nature.”⁴ As early HMDC staff struggled to interpret the agency’s mandate to protect “nature,” the agency sponsored scientific studies and instituted innovative zoning regulations to protect a wetland that many people at the time described as “dead.” Meanwhile, a national environmental movement grew. National organizations and some local citizens saw in the Meadowlands’ remaining wetlands the last bulwark against ecological collapse, and they began to fight against any new development. While the federal Clean Water Act of 1972 provided a strong tool to

³ John R. Quinn, *Fields of Sun and Grass: An Artist’s Journal of the New Jersey Meadowlands* (New Brunswick, NJ: Rutgers University Press, 1997), 1.

⁴ *Hackensack Meadowlands Reclamation and Development Act with Digest* (New Jersey: Hackensack Meadowlands Development Commission, 1969).

environmentalists in efforts to protect water and wetlands elsewhere, the Army Corps of Engineers, the HMDC, and developers used the age-old argument that the Meadowlands was “dead” to limit the application of the Act to the Meadowlands’ wetlands. As local citizens increasingly saw the HMDC as nothing more than an arm of the development community, they began to fight back. That resistance escalated in the early 1990s when a large out-of-state developer proposed to build a mall on hundreds of acres of the Meadowlands’ wetlands in what was the single largest wetlands reclamation project proposed since the Clean Water Act passed. In what they often described as a battle between David and Goliath, citizens stood up to the HMDC and developers. Leaders of a grassroots movement appealed to traditional understandings of nature to create a local constituency who cared about the Meadowlands, and they used science to force government agencies to apply the Clean Water Act to urban wetlands.

Historiography of America’s Wetlands

Wetlands are areas of land that are saturated by fresh, salt, or brackish water. Wetland is a term that covers a variety of landscapes, including swamps, bogs, fens, and marshes, that are defined by their waters and the types of vegetation they support. Swamps, such as the cypress swamps and mangrove swamps of the southeastern United States, are dominated by trees or shrubs. Bogs are defined by spongy peat, acidic waters, and mosses; fens are like bogs but are fed by groundwater rather than precipitation and tend to be less acidic. Marshes are wetlands that are characterized by grasses, they can be either tidal or non-tidal. Tidal marshes, found along coasts and estuaries, can be

inundated with fresh water, salt water, or brackish water, but all are influenced by the tides.⁵ Most of the wetland areas that remain in the Meadowlands today are tidal salt marshes. Until the mid-twentieth century when the word “wetland” began to be used to describe these types of landscapes, people used words like “marsh,” “swamp,” and “meadow” interchangeably to describe the tidal marshes of the Hackensack Meadowlands. I use both “marsh” and “wetland” to describe the Meadowlands’ historic and remaining wetlands.

“A Landscape on the Periphery”

In the key text on the history of America’s wetlands, *Discovering the Unknown Landscape*, environmental historian Ann Vileisis describes wetlands as “a landscape on the periphery” because they “have been little explored, little known, and little understood.”⁶ This lack of understanding of wetlands, she argues, was the product of a long history of American thought about these landscapes. For centuries, Americans believed wetlands to be worthless at best, and dangerous at worst. To Puritan New Englanders, swamps seemed like the evil and chaotic antithesis of orderly pastoral landscapes. Early Americans attributed outbreaks of diseases like malaria and yellow fever to the swamps’ noxious gases. By the early nineteenth century, wetlands seemed like nothing but a barrier to economic progress and cities like Boston filled their wetlands to allow for urban expansion.⁷

⁵ United States Environmental Protection Agency, “Wetlands Classification and Types,” <https://www.epa.gov/wetlands/wetlands-classification-and-types>.

⁶ Ann Vileisis, *Discovering the Unknown Landscape: A History of America’s Wetlands* (Washington, D.C.: Island Press, 1997), 2.

⁷ *Ibid.*, 29-50.

Vileisis argues that this cultural understanding of wetlands shaped Americans' treatment of them. Until the mid-twentieth century, Americans either wholly ignored their wetlands or reworked them into entirely different landscapes. By the middle of the nineteenth century, such negative attitudes were codified in local and federal drainage laws. It was the beginning of a policy history that would result in the destruction of much of the nation's wetlands. By the 1980s, nearly fifty-three percent of the wetlands in the continental United States had been converted to agricultural fields or industrial, commercial, and residential developments. What remains today has been compromised by pollution and fragmentation.⁸

Much of this transformation happened before the 1950s when scientists began to recognize the ecological services that wetlands provide. We now know that wetlands provide critical hydrologic functions. With their ability to store water, wetlands protect areas from flooding, they recharge aquifers, and enhance water quality by filtering nutrients and pollutants. They provide habitat for numerous species including migratory birds and they support biodiversity. Tidal marshes additionally serve as nurseries for many ocean-dwelling fish species. The special ecological value of wetlands was internationally recognized in 1971 when seven countries (Australia, Finland, Greece, Iran, Norway, South Africa, and Sweden) signed the Ramsar Convention, a treaty to promote the conservation of the world's wetlands. It is the only such treaty to deal with a specific ecosystem type. Today, 169 countries have signed the treaty and over 2,000

⁸ Ibid., 2-3, 71-94.

individual wetland sites are protected by the treaty. The United States signed onto the Convention in 1986 and the Hackensack Meadowlands is not a Ramsar-listed site.

Despite this scientific evidence and international accord as to the importance of wetlands, in the United States an inclination toward destruction of wetlands persists. This is evident most recently in President Donald Trump's order instructing the Environmental Protection Agency to rewrite the Waters of the U. S. Rule, which the Obama administration implemented in 2015 to include small tributaries and isolated wetlands under the Clean Water Act's protection against filling the nation's waterways.⁹ Thus, the story of America's wetlands cannot be read as a simple trajectory of increasing scientific knowledge leading to legal protections of wetlands spaces. It is instead, as Vileisis argues, a complicated history of a society that "struggles to accommodate those [ecological] values amid myriad pressing others."¹⁰ In America's wetlands, histories of science, environment, and culture intersect.

If wetlands have been relegated to the periphery of American thought, as Vileisis shows, they have been relegated to the periphery of historical scholarship as well. Very few book-length works have examined the history of America's wetlands; Vileisis's work, published in 1997, remains the most comprehensive treatment. Other scholars have looked at particular wetlands. In his study of the Midwest's inland wetlands, Geographer Hugh C. Prince also argues that cultural perceptions of wetlands impacted actions and policies toward them. Here white settlers looked at wetlands as nothing but a

⁹ Susan Phillips, "Trump Plans to Ditch Obama's Protection for Small Wetlands and Waterways," *StateImpact*, February 27, 2017, <https://stateimpact.npr.org/pennsylvania/2017/02/27/trump-plans-to-ditch-obamas-protection-for-small-wetlands-and-waterways/>.

¹⁰ Vileisis, *Discovering the Unknown Landscape*, xii.

barrier to progress, and in the late nineteenth and early twentieth centuries, farmers converted most of America's wet prairie lands into the nation's most productive agricultural land.

Several historians and geographers have considered the environmental history of Florida's Everglades, perhaps one of the nation's best known wetlands due to its protection as a National Park in 1947. David McCalley, in *The Everglades: An Environmental History* looks at the pre-park changes to the region. Like the prairie wetlands of the Midwest, much of the Everglades succumbed to agricultural development, specifically sugar cane production, at the turn of the twentieth century. While McCalley does not delve into the modern attempts at preservation in the Everglades, he makes the case that the current management system is not sustainable because it does not account for the history of water manipulation that drastically altered the Everglades' hydrology and biology.¹¹

In a story that should look familiar by now, Philip Garone details the destruction California's Central Valley wetland. Californians reclaimed much of the wetlands for agricultural production as they chased "a mythic vision of the state as an agricultural empire" in the century following California's admission as a state in 1850.¹² Like others who study America's wetlands, Garone argues that the decisions made about water in the Central Valley say something about Americans' values and our relationship to nature. California's Central Valley wetlands sit on the Pacific Flyway, an important migratory

¹¹ David McCalley, *The Everglades: An Environmental History* (Gainesville: University of Florida Press, 1999).

¹² Philip Garone, *The Fall and Rise of the Wetlands of California's Great Central Valley* (Berkeley: University of California Press, 2011), 2.

corridor. In Garone's story, waterfowl are central to the wetlands' ultimate preservation. In the 1930s, Californians began to link declining waterfowl populations to loss of wetland habitat and this motivated them to fight for new policies that supported preservation of the Central Valley's wetlands.¹³

Historicizing Urban Wetlands

These works provide important insights into the ways that Americans' values shaped policies toward wetlands landscapes, but they largely deal with rural wetlands. Scholars have only recently begun to examine the history of urban wetlands. It is perhaps in the history of such places "where men gather at urban densities, [and] enormous competition for a tiny land base forces unbearable choices," that the relationship between values, policies, and landscapes can become most clear.¹⁴ Historical studies of New Orleans, San Francisco, and New York City have uncovered important aspects of the role that wetlands played in shaping urban development, about the relationship between wetlands and urban cores, and the ways that urban dwellers perceived wetlands around them.

Perhaps no city has a more obvious, yet complicated, relationship with its wetlands than does New Orleans, a city that historical geographer Craig E. Colten describes as being "wrest[ed]" from its wetland environment. To understand how environment affects urbanization, in *An Unnatural Metropolis*, Colten puts Louisiana's

¹³ Ibid., 1-15.

¹⁴ Hackensack Meadowlands Development Commission, *Master Plan: Wetlands Order Procedures and Guidelines*, November 8, 1972, p. 4, Meadowlands Environmental Research Institute Library, Lyndhurst, NJ (hereafter MERI).

wetlands at the center of his analysis of New Orleans' physical and social development. New Orleans responded to the challenges presented by its environment by trying to exclude its watery surroundings. Engineers built extensive reclamation systems to create land and protect it from floods, and Colten shows that every choice made shaped both the environment and the city's racial geography.¹⁵

In *Down by the Bay*, Matthew Morse Booker shows how the tidelands of San Francisco Bay shaped the rise of San Francisco and how the Bay's landscapes are products of human land use decisions. As is true for New Orleans, Booker argues that San Francisco Bay's tidelands are the "basis of [San Francisco's] built environment." He argues that people here also remade their environment into a "specific kind of urban landscape" and that their decisions strongly impacted the environmental and social geography of the Bay region. Booker shows how San Franciscans' decisions resulted in the loss of thirty percent of the historic extent of San Francisco Bay as they filled tidelands to create real estate. As Colten does for New Orleans, Booker shows that environmental decisions about the Bay differentially impacted San Franciscans. When the former tidelands commons became private property, San Francisco's poor and minority populations were denied access to the Bay.¹⁶

Like Colten and Booker, Ted Steinberg argues that environment is critical to understanding patterns of urbanization in New York City. He shows how that city arose from its estuarine environment and analyzes the ways that urbanization altered the

¹⁵ Craig E. Colten, *An Unnatural Metropolis: Wrestling New Orleans from Nature* (Baton Rouge: Louisiana State University Press, 2005).

¹⁶ Matthew Morse Booker, *Down by the Bay: San Francisco's History Between the Tides* (Berkeley: University of California Press, 2013), 1-12, quotes from p. 2.

region's ecology. Steinberg argues that in Greater New York, "an estuary with a high natural density was replaced by one with an astonishingly high unnatural (for lack of a better word) density" by a population who "trust[ed] in constant population and economic growth."¹⁷ Steinberg's *Gotham Unbound* is an analysis of the ecological effects of that ideology on the New York-New Jersey Harbor Estuary.

Part of Steinberg's work is dedicated to an analysis of urban development's spread beyond the core of Manhattan into the region's wetlands, including the Hackensack Meadowlands. He argues that the growth imperative and the idea of a "Greater New York" caused New Yorkers to imagine the wetlands in the outer boroughs and New Jersey as nothing more than a blank space awaiting development. This led to the disappearance of most of the region's wetlands. Such an expansion brought development into floodplains and ended former uses of the wetlands like salt haying and hunting. Because it created the conditions that allowed species uniquely suited to life near industrial development to thrive, it changed the region's flora, fauna, and habitat.¹⁸

Colten, Steinberg, and Booker all show the importance of the environment to the process of urbanization and the effects of urbanization on the environment. The physical and social development of these cities cannot be understood apart from their environments. Because of the Meadowlands' location fewer than five miles from the center of Manhattan, its history cannot be understood separately from that city.

¹⁷ Ted Steinberg, *Gotham Unbound: The Ecological History of Greater New York* (New York: Simon & Schuster, 2014), xvii-xviii.

¹⁸ *Ibid.*, 183-280.

These authors also elaborate on Vileisis's and Prince's contention that the landscape exists as an artifact, a monument of sorts to cultural attitudes and perceptions about wetlands. That any wetlands remain in these places stands as a testament to the ways in which people came to appreciate urban wetlands – to conceive of them as something other than developable real estate. Colten finds a shift in New Orleans' attitudes toward its wetlands beginning in the 1970s as the city advocated and implemented policies to preserve its wetlands. He argues that this was driven in part by a general shift in attitudes toward the environment and more specifically in the idea that wetlands could provide a public service. As water management projects of the early twentieth century largely erased the health threats that New Orleans' residents had associated with wetlands, by the 1970s, wetlands could be reimagined and constructed as places to experience remnants of a "preurbanized" nature. In the early 1970s, citizens organized to create the Louisiana Nature Center and a swamp exhibit at the Audubon Park Zoo. The realization that wetlands could provide protection from flooding and coastal erosion also helped spur the federal government's protection of Barataria Preserve and Bayou Sauvage on the outskirts of New Orleans.¹⁹

Sitting at the south end of San Francisco Bay are a series of multi-colored ponds, remnants of San Francisco's salt making industry. By the middle of the twentieth century, these ponds remained some of the Bay area's last undeveloped space and their owner envisioned developing them into real estate. Yet, by the late 1960s, influenced by modern environmentalism's critique of urban sprawl and by findings of ecological

¹⁹ Colten, *An Unnatural Metropolis*, 162-185, quote from p. 163.

science, Bay area environmentalists began to reimagine the salt ponds as open space, a critical environmental amenity, and part of the San Francisco Bay ecosystem. As in New Orleans, Bay area residents turned to the federal government for assistance in protecting the southern end of the Bay. By 1972, local citizens, organized as the South San Francisco Bay Lands Planning Conservation and National Wildlife Refuge Committee, had successfully pressured the federal government to purchase the salt ponds and preserve them as the San Francisco Bay Wildlife Refuge.²⁰

Like these authors, I also see the remaining 8,400 acres of wetlands and open space in the Meadowlands as a testament to shifting views of nature that occurred in the late twentieth century.

Finding Nature in an Urban Swamp

The general inattention to urban wetlands largely derives from a long American intellectual and cultural tradition that has placed “true” nature or wilderness in large, sweeping, western landscapes. This concept of wilderness has shaped the American definition of nature and our understanding of the human relationship to the non-human natural world. Nature and wilderness was something “out there”; it was something that provided an escape from our everyday lived experience. American environmental history had its roots in these seemingly uncomplicated rural and wild areas. In *Wilderness and the American Mind*, one of the founding texts of the field, Roderick Nash traced the intellectual history of the wilderness idea, culminating with the Wilderness Act of 1964’s

²⁰ Booker, *Down by the Bay*, 153-184.

definition of wilderness as an area “untrammeled by man.” However, since the 1990s, historians have increasingly problematized this emphasis on a seemingly pristine nature.

In 1996, in “The Trouble with Wilderness, or Getting Back to the Wrong Nature,” William Cronon put out a clarion call to scholars to reconsider the idea of wilderness. Wilderness, Cronon said, was problematic in that it served as an “escape from history.”²¹ It was entangled with ideas of primitivism, with the myth of a vanishing frontier, and it ignored the removal of human inhabitants to create places like Glacier and Yellowstone National Parks. Besides the fact that wilderness was wholly ahistorical, he found that the wilderness concept had also set an exceptionally high bar for what Americans considered to be “nature” – nature must be large, it must “give us God’s-eye views or grand vistas . . . [and] the illusion that we are alone on the planet.”²² Americans found true nature or wilderness in places like Yellowstone and Yosemite, and Cronon argued that this came at the expense of the places where they lived and worked, places that he called “the middle ground.”²³ Cronon argued that any solution to modern environmental problems would be found in an environmental ethic that valued this “middle ground” as much as it did wilderness.

Responding to Cronon’s criticism of wilderness, historians began to explore the places of the “middle ground,” or what historians of the early twenty-first century came to call “hybrid landscapes.” Scholars understand hybrid landscapes to be neither wholly natural nor wholly cultural. By arguing that all landscapes interweave the natural and

²¹ William Cronon, “The Trouble with Wilderness or, Getting Back to the Wrong Nature,” *Environmental History* 1, no. 1 (January 1996): 16.

²² *Ibid.*, 22.

²³ *Ibid.*, 21.

cultural in complex ways, hybridity provides a corrective to the definition of nature as a non-human realm, the definition that Cronon critiqued. Hybridity allows historians to see cultural traces in so-called “natural” environments and vice versa, and it forces us to view all environments as necessarily historical.²⁴ In 2013, reflecting on the utility of hybridity as a category of historical analysis, Paul Sutter commented that hybridity had enabled American environmental historians “to find the natural thriving in places swamped by human activity” and to supplant “Edenic ideals . . . with a commitment to seeing environments as necessarily historical, produced by forces of change, human or not, over time.”²⁵

This understanding of environments as complex cultural and natural spaces has deep roots in the field of urban geography and urban planning. In 1972, Thomas R. Detwyler and Melvin G. Marcus edited a volume called *Urbanization and Environment: The Physical Geography of the City*, which brought together key works on the relationship between humans and urban environments. This text challenged the traditional understanding of a stark division between humans and nature, instead arguing for their inseparability. In their introduction to the volume, Detwyler and Marcus argued that,

there is an increasing awareness that man’s works – his buildings, his highways, his dams and canals – are not divorced from environment, but are artificial or altered environments subject to many of the same physical processes that operate in undisturbed nature. Conversely, it is recognized

²⁴ Richard White, “From Wilderness to Hybrid Landscapes: The Cultural Turn in Environmental History,” *The Historian* 66, no. 3 (2004): 563.

²⁵ Paul S. Sutter, “The World With Us: The State of American Environmental History,” *The Journal of American History* (2013): 96.

that nature must be understood not only in its pristine state, but also in terms of man's impact on it.²⁶

The work of these scholars marked an important shift in the ways that geographers thought about nature and about the human relationship to the non-human natural world. They brought the study of cities and places with obvious human impacts into the realm of geography's interrogation of the natural world.

This understanding of nature and the human relationship to it influenced the ways that architects and planners conceptualized and designed the built environment. In 1969, Ian McHarg published his influential text *Design with Nature*, which pioneered the concept of environmental design. Lewis Mumford describes McHarg's philosophy in his introduction to the text,

McHarg's emphasis is not on either design or nature by itself, but upon the preposition **with**, which implies human cooperation and biological partnership. He seeks, not arbitrarily to impose design, but to use to the fullest the potentialities – and with them, necessarily, the restrictive conditions – that nature offers [emphasis in original].²⁷

McHarg embraced an ethic that accepted the inseparability of the human and natural and he put that ethic to work in designing built environments. He rejected the growth prerogative and its utter destruction of exurban environments and instead argued that humans could respect and attend to environmental conditions in their urban planning and design.²⁸

²⁶ Thomas R. Detwyler and Melvin G. Marcus, "Urbanization and Environment in Perspective," in *Urbanization and Environment: The Physical Geography of the City*, ed. Thomas R. Detwyler and Melvin G. Marcus (Belmont, CA: Duxbury Press, 1972), 4-5.

²⁷ Lewis Mumford, introduction to *Design with Nature*, by Ian L. McHarg (Garden City, NY: The Natural History Press, 1969), viii.

²⁸ Ian L. McHarg, *Design with Nature* (Garden City, NY: The Natural History Press, 1969).

Chester (Chet) Mattson, would have been very familiar with these understandings of the relationship between humans and urban environments that geographers and urban planners developed in the late 1960s and early 1970s. Before he was hired to direct the Hackensack Meadowlands Development Commission's environmental planning, Mattson had studied urban planning at the Massachusetts Institute of Technology, where he likely read works by scholars like Marcus, Detwyler, and McHarg. This influence is evident in the ways in which he talked about the relationship between human and natural history in the Meadowlands. In 1970, he wrote of the ways in which he perceived the marsh,

I was thinking about the comparative merits of seeing this expanse as: First, a marsh intersected by a transportation network; and second, a transportation network interrupted by marsh. Pondering those alternatives got me to an understanding that I like; the understanding that this expanse was at one time the first – a meadow being intersected by a transportation network; had become in the recent past the second – a transportation network interrupted by meadow; and now needed to be re-perceived as the first even though the newer physical arrangements could not be undone. I liked this understanding because it got me to a way of seeing two pasts persisting into the arrangement of forms visible from a helicopter: 1, an archaeo-logical-geological-ecological past – call it a natural history, continuing to happen down there; and 2, a human past continuing to happen. The two were intersecting each other.²⁹

The above quotation comes from a paper that Mattson wrote shortly after he was hired, as he and his colleagues began to develop a land use plan for the Meadowlands. Though he did not use the terminology, the fact that the Meadowlands was a hybrid landscape was obvious to Mattson. In fact, the land use plan that he co-authored claimed that in the Meadowlands “a wholly new ecology, that of the urban estuary [had] been formed.” This environmental understanding shaped the way that Mattson and his colleagues planned

²⁹ Chester Mattson, “The Hackensack Meadowlands – An Ecological Perspective” (unpublished manuscript, August 1970), New Jersey State Library, Trenton, NJ, 1-2.

Meadowlands development.³⁰ For state planners, the Meadowlands' history of pollution and overdevelopment forced a very concrete grappling with the imaginary boundaries between "nature" and "civilization" as they sought to accommodate both in the Meadowlands.

Meanwhile, environmentalists in the Meadowlands held fast to traditional understandings of nature as an antidote to civilization, but they expanded their definition of nature to include complex landscapes like the Meadowlands. In the 1970s, as state planners tried to accommodate both development and preservation, environmentalists from national organizations like the National Audubon Society and residents local to the Meadowlands reimagined the Meadowlands as the region's last vestige of open space. In 1996 as Cronon asked his fellow scholars, "how can we take the positive values we associate with wilderness and bring them closer to home?," grassroots activists in the Meadowlands explicitly used the word "wilderness" to describe the place they were trying to save.³¹ They valued the Meadowlands for the same reasons that Americans had long valued seemingly more "natural" places like Yellowstone – it was a place where one could see nature, where one could escape from the city, and where one could experience solitude. Yet, they expanded the definition of nature and wilderness. They did not pretend that the Meadowlands existed in some untouched past and their idea of wilderness did not require any sort of "pristine" landscape – it could include the invasive *Phragmites* reed, factories, mosquito ditches, and pollution. By ascribing wilderness

³⁰ Clifford Goldman and Chester P. Mattson, *Hackensack Meadowlands Comprehensive Land Use Plan* (Lyndhurst, NJ: Hackensack Meadowlands Development Commission, 1970), 29.

³¹ Cronon, "The Trouble with Wilderness," 23.

values onto a seemingly unwild place, environmentalists in the Meadowlands made a case for protecting the wetlands from a continued urban assault. In expanding the definition of wilderness to include urban places, these activists did exactly what Cronon argued for – they took “the positive values we associate with wilderness and [brought] them closer to home.”³²

These grassroots environmentalists argued against any additional filling of the Meadowlands’ wetlands; it was an argument that environmentalists had made at various points since the 1970s. Yet, in the early twenty-first century, they were successful; the Meadowlands Commission in 2004 issued a new Master Plan that directed all new development away from wetlands. That the environmentalists succeeded tells us something about the values that they could tap into to make their case in the 1990s. Even as scholars were questioning the usefulness of wilderness as a category, these environmentalists used that idea and its associated values to connect residents to this place – to the wilderness in their own back yard. Environmentalists used the wilderness idea to protect the Meadowlands even as they ultimately challenged the very concept.

No one in the 1990s made the argument that the Meadowlands was any kind of unaltered, pristine landscape. About ninety-five percent of the Meadowlands was covered by the *Phragmites* reed. *Phragmites* could take hold there only because it is one of the few marsh plants that can live in highly altered, highly polluted waters. Its existence in the Meadowlands speaks clearly to centuries of human alteration of the marsh and is one of the clearest examples of the “urban ecology” that Chet Mattson had

³² Ibid.

described in 1970. In the 1990s, as mall developers used the *Phragmites* as evidence that nature no longer existed in the Meadowlands, environmentalists there fought for protection of tracts covered in the reed. *Phragmites* was perfectly “natural” to them. Cronon said, “if wilderness can . . . help us perceive and respect a nature we had forgotten to recognize as natural – then it will become part of the solution to our environmental dilemmas rather than part of the problem.”³³ In the Meadowlands, wilderness was already part of the solution.

Meadowlands activists would have found more that they identified with in Samuel P. Hays’s response to Cronon’s “The Trouble with Wilderness.” Hays critiqued Cronon for only reading the big thinkers of wilderness philosophy and ethics. Cronon, according to Hays, paid little attention to “those active in the fray and the more day-to-day and down-to-earth ideas and actions wilderness advocates carried out.” Hays argued that “most of those advocates have long been ‘going forward’ to the ‘right nature’; Cronon just has not noticed.”³⁴

That “right nature” is what author Emma Marris calls the “rambunctious garden” or the nature in everyday places – natures tended by humans. She argues that when environmentalists embrace the rambunctious garden instead of only pristine places, “they can use all sorts of new tools and approaches” to protect nature.³⁵ But the acceptance of such places as “nature,” must happen first. Marris concedes that wilderness and pristine

³³ Ibid., 24.

³⁴ Samuel P. Hays, “Comment: The Trouble with Bill Cronon’s Wilderness,” *Environmental History* 1 no. 1 (1996): 30.

³⁵ Emma Marris, *Rambunctious Garden: Saving Nature in a Post-Wild World* (New York: Bloomsbury, 2011), 3.

places attracted many environmentalists and environmental scientists to their fields of study, but she contends that when they embrace the rambunctious gardens of the world, “they are finding that the values that got them into conservation in the first place are still relevant.” For example, she holds that, “we can marvel at the diversity of life and fight its disappearance, even if that diversity occurs in unfamiliar places.”³⁶ The history of environmental preservation efforts in the Meadowlands in the late twentieth century is a story of environmentalists reimagining an urban swamp as a “rambunctious” wetland, of finding their attachment to wild values still relevant, and perhaps more relevant, in this urban place.

Urban Landscapes and the Twentieth Century Environmental Movement

Just as Cronon, Marris, and others argue that we need to reconsider wilderness, historians also need to reconsider the places and people we study. Andy Willner, one of the activists involved in protecting the Meadowlands, has started to write a monograph on the fight he was involved in because, as he said, “I just felt that somebody had to put something down in writing about this extraordinary urban environmental victory.” He asked me, “where else in the country, perhaps in the world, was literally thousands of acres of wetlands just taken back from the clutches of developers?”³⁷ And the answer is, probably nowhere. Yet, while many scientific studies about the Meadowlands have been published and much has been written about the destruction of the place, little has been

³⁶ Ibid.

³⁷ Andrew Willner, interview with author, August 4, 2015, Kearny, NJ.

written about preservation efforts there. Perhaps, the bias that existed in 1968 – that “the Meadowlands had nothing worth conserving” – has influenced current scholarship.³⁸

It is true that historians have begun to look for nature in urban places. Studies of the creation of landscaped places like Central Park abound, as do studies of the City Beautiful Movement. We have used the human body to break down any conceptual divisions that existed between humans and nature and we have even reconceived of cities themselves as ecosystems. Yet when it comes to histories of landscape preservation efforts, historians have largely maintained the conceptual blinders inherited from the beginning of the environmental movement – “preservation” is something that happens “out there.” Could it be that historians also imagined that at the end of the twentieth century, there were few urban landscapes worthy of preservation?

Instead, historical studies of environmental activism in the last decades of the twentieth century emphasize environmental justice efforts aimed at revealing and challenging unfair distributions of environmental advantages and burdens. Andrew Hurley’s *Environmental Inequalities* provides an early model of such scholarship. He argues that race and class shaped the ways residents living in Gary, Indiana after the second World War experienced urban environments. These experiences influenced the environmental activism of poor and minority city dwellers.³⁹ In his study of Diamond, Louisiana, Steve Lerner shows how residents of that largely African-American enclave outside of New Orleans formed a group called Concerned Citizens of Norco to fight

³⁸ Clifford A. Goldman, “The Hackensack Meadowlands: The Politics of Regional Planning and Development in the Metropolis” (PhD diss., Princeton University, 1975), 289.

³⁹ Andrew Hurley, *Environmental Inequalities: Class, Race, and Industrial Pollution in Gary, Indiana, 1945-1980* (Chapel Hill: University of North Carolina Press, 1995).

pollution from a nearby Shell Chemical plant in the early 1990s.⁴⁰ Perhaps this emphasis on environmental justice is deserved. The environmental justice movement was a new form of activism in the 1990s and scholarly attention to it helped to fill in the gaps of previous scholarship that limited its analysis to a white middle-class environmentalist experience. But this focus on environmental justice movements in the 1990s perhaps also blinds us to the use of older traditions, values, and methods in protecting urban landscapes.

My study of environmental preservation efforts in the Hackensack Meadowlands helps to fill a void in the history of late twentieth century environmentalism. In 1993, Robert Gottlieb pondered the future of environmentalism in his conclusion to *Forcing the Spring*. He identified a division between mainstream environmental groups and grassroots organizers and asked if the environmental movement of the 1990s was “primarily about Nature or about industry . . . about wilderness or about pollution, about natural environments or about human environments.”⁴¹ The history of environmentalism in the Meadowlands blurs the edges of any such dichotomies. In the 1990s, environmentalists there argued *for* landscapes more than *against* toxics. They certainly did not reject the notion of environmental justice but neither did they overtly embrace that message. Theirs was still a rather consumption-based environmentalism, focusing on recreation and environmental amenities, and they fought their battles from within the environmental management system. In this, grassroots environmentalists in the

⁴⁰ Steve Lerner, *Diamond: A Struggle for Environmental Justice in Louisiana's Chemical Corridor* (Cambridge, MA: The MIT Press, 2004).

⁴¹ Robert Gottlieb, *Forcing the Spring: The Transformation of the American Environmental Movement* (Washington, D.C.: Island Press, 1993), 315.

Meadowlands had more in common with mainstream groups than with alternative groups like those in the anti-toxics campaigns. Yet, Meadowlands environmentalists also shared qualities with other grassroots organizers. They focused on empowering their community to fight against additional development and in doing so, bridged the gap between politics, science, and environmental change.⁴²

Chapter Outlines

I tell the history of preservation efforts in the Meadowlands between 1968 and 2004 in largely chronological order, but what follows is not a comprehensive history of the Meadowlands, nor is it a comprehensive environmental history of the Meadowlands during that time. Each chapter focuses on an episode in the Meadowlands' history to show the ways in which people reinterpreted nature in this place over time and how that interpretation shaped policy and the Meadowlands' landscape.

Chapter one details the Meadowlands' human history before 1968 and asks, why did over half of the Meadowlands' wetlands vanish by the middle of the twentieth century? Here, the story of the Meadowlands follows narratives about wetlands elsewhere as told by Ann Vileisis, Hugh Prince, Ted Steinberg, and others. Because the Meadowlands' wetlands had been perceived as worthless, dangerous, and a barrier to progress, over half of the wetlands disappeared under drainage ditches and developers' fill as Greater New York expanded.

⁴² Ibid., 314-320, for a discussion of differences between mainstream and alternative groups.

Chapter two analyzes the decisions made by early HMDC environmental planners and argues that early HMDC staff, especially Chet Mattson, reimagined the Hackensack Meadowlands as a place that had been shaped by both human and natural forces. Any future for the Meadowlands would have to include both development and preservation. With innovative zoning and regulations, the HMDC staff believed that they could shape and direct the processes of urban growth in an ecological manner.

Chapter three shows that environmentalists and citizens interpreted the need to preserve the balance of nature very differently from the HMDC. Responding to the long history of abuse, and activated by the environmental movement of the 1960s and 1970s, they argued that all development must stop and the Meadowlands must be preserved in its entirety as open space if there was any hope to stem the tide of impending environmental disaster. To them, the Meadowlands was the lone remaining bulwark against urban growth.

These early planning efforts and ensuing environmental debates largely occurred before any federal legislation protected the nation's waterways. After 1972, the Clean Water Act brought federal agencies into Meadowlands planning efforts and chapter four examines the process of implementing the Clean Water Act in the Meadowlands. In the 1980s, the Army Corps of Engineers and Environmental Protection Agency fought over implementation of the Clean Water Act as they worked to issue (and veto) fill permits under Section 404 of that act. Their disagreements centered on what counted as viable wetlands – the Army Corps argued that a “degraded” wetland could be filled in the name

of economic progress, the EPA countered with a claim that all wetlands, even urban ones, had value.

Grass roots environmentalists in the 1990s took up that EPA argument. When state and federal government agencies endorsed a plan for the Meadowlands that allowed over eight hundred acres of wetlands to be filled, these activists mobilized in opposition. Chapter five argues that grass roots environmentalists used the power of a deep connection to the Meadowlands, an ability to tap into Americans' long-held appreciation of wilderness, and strong wetlands science, to finally shift the conversation in the Meadowlands.

Chapter six shows the outcomes of their efforts, culminating in a Master Plan adopted by the HMDC in 2004 that declared an end to wetlands development in the Meadowlands District. Grassroots environmentalists characterized this as a "people's victory."⁴³ However, any ultimate "saving" of the Meadowlands would have been impossible without the early efforts of HMDC environmental planning and Congress's passage of the Clean Water Act, which provided the legislative apparatus that environmentalists used in their fight to protect the Meadowlands. In the early twenty-first century, environmental planning, legislation, science, and individual passion came together to make the "people's victory" possible.

The history of preservation efforts in the Meadowlands shows that the questioning of the human/nature divide was not solely an academic exercise. It was playing out on the ground in the ways that governments planned land use and in the ways that

⁴³ Andy Willner and Bill Sheehan, "Celebrating an Environmental Victory," *Hackensack (NJ) Record*, March 23, 2003, LexisNexis Academic.

environmentalists fought to preserve urban wetlands. In places like the Meadowlands the conceptual division between city and country was hard to maintain. By studying the histories of preservation efforts in places like this, historians can more clearly understand the ways that Americans understood urban nature and fought to protect it at the end of the twentieth century. That 8,400 acres of wetlands remains in the most densely populated corner of this country stands as a testament to Americans' willingness to embrace hybrid landscapes within their understandings of nature and their ability to force the environmental management system to protect humanized landscapes.



Figure 1. View of the Hackensack Meadowlands, looking northeast over the Hackensack River toward Hudson County and Manhattan, April 26, 2006.

Source: Doc Searls, <https://www.flickr.com/photos/docsearls/138258762/>.

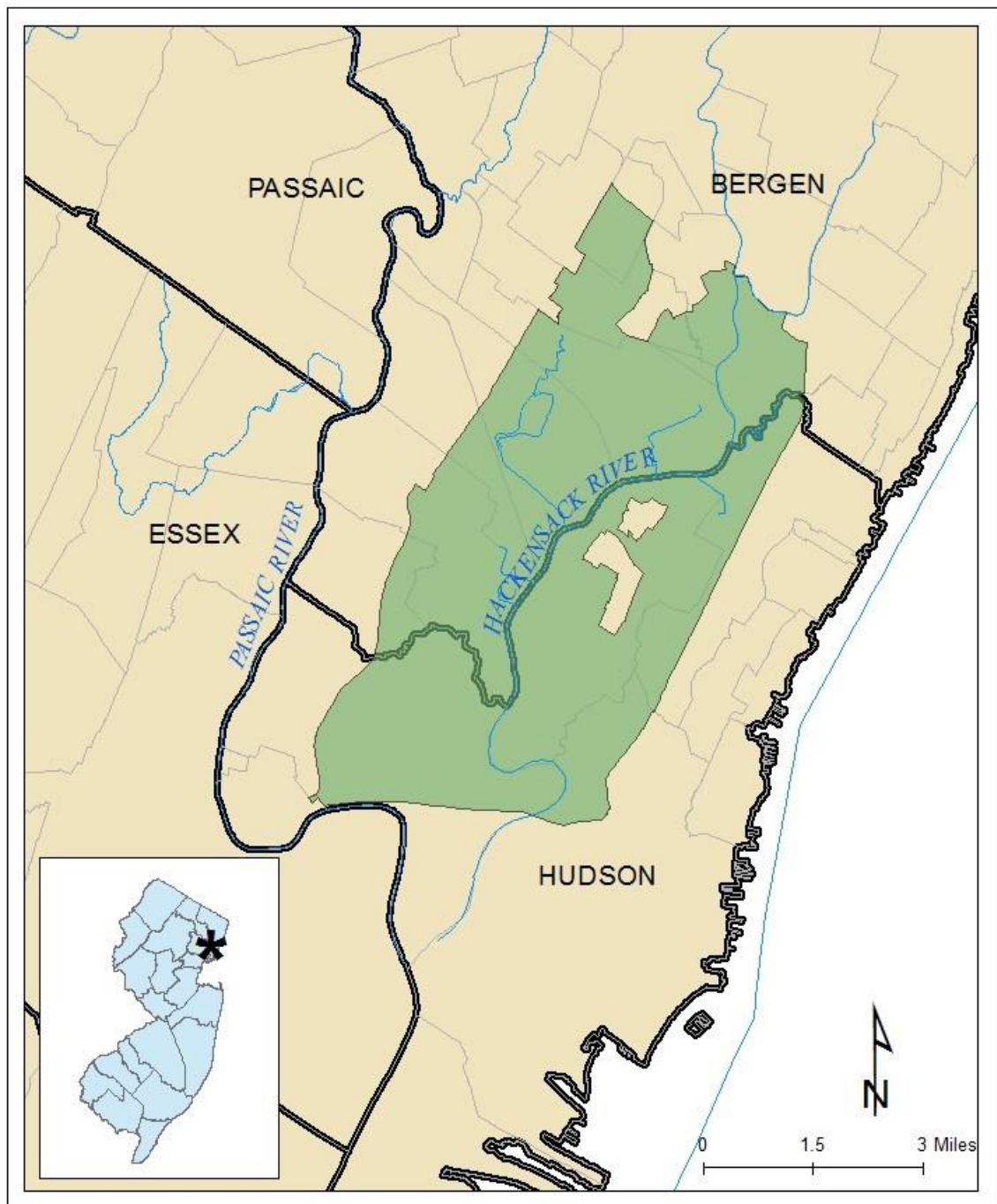


Figure 2. Boundaries of the Hackensack Meadowlands District.

Source: Created by author with data from New Jersey Meadowlands Commission and New Jersey Office of Information Technology, Office of Geographic Information Systems.



Figure 3. Satellite image of the New York metropolitan area, showing part of the New Jersey-New York Harbor Estuary, with the general area of the Hackensack Meadowlands circled.

Source: https://commons.wikimedia.org/wiki/File:Aster_newyorkcity_lrg.jpg



Figure 4. An osprey and its nest in the Hackensack Meadowlands.

Source: Photo by author, June 21, 2014.

LOSING THE MEADOWLANDS

“Wasteland,” “swamp,” “desolate” – these are words that have been used for centuries to describe America’s wetlands. Since the seventeenth century, Euro-American settlers understood wetlands as useless barriers to progress at best and dangerous at worst. In 1867, *Frank Leslie’s Illustrated Newspaper* expressed the general feeling toward wetlands that existed by the middle of the nineteenth century,

Swamp-lands are blurs upon the fair face of Nature; they are fever-breeding places; scourges of humanity; which, instead of yielding the fruits of the earth and adding wealth to the general community, only supply to the neighboring places poisonous exhalations and torturing musquitos [*sic*]. They are, for all practical purposes, worthless; and the imperative necessity for their reclamation is obvious to all, and is universally conceded.¹

Of the Hackensack Meadowlands, sitting in the backyard of the growing New York City metropolis, *Frank Leslie’s Illustrated Newspaper* lamented that they “stand in the way of civilization, keeping hundreds of millions of dollars locked up in their oozy, muddy, worthless bosoms. Jersey City and Hoboken would long since have become one continuous city but for the unsightly marsh which spreads out, barren, between.”²

As these excerpts suggest, the history of human activity in the Hackensack Meadowlands after the seventeenth century is largely a story of continuous attempts at making the seemingly unproductive meadows disappear to enable urban growth in the New York City metropolitan area. Dutch and English colonists had drained small parcels of land for individual agricultural use. As the metropolis grew in the nineteenth century, the Meadowlands succumbed to the pressures of what historian Ted Steinberg called the

¹ “The New System of Reclaiming Lands,” *Frank Leslie’s Illustrated Newspaper*, November 16, 1867, 136.

² Ibid.

nation's "growth fetish," the idea that progress required continuous physical and economic expansion.³ New York City capitalists who saw in the Meadowlands an opportunity to supply the city with milk, meat, and produce, amassed large tracts on which they implemented widespread reclamation schemes to turn the wetlands into farms. They left behind a legacy of sunken meadows that proved a perfect breeding ground for what some called New Jersey's most famous bird – the mosquito. These pesky insects plagued those who lived on the edges of the Meadowlands and once medical science ascribed malaria and other diseases to the mosquito, its eradication became New Jersey public health officials' highest priority. They attacked the mosquito by targeting its habitat – the Meadowlands' wetlands – with an extensive system of water drainage features. This thoroughly altered both the Meadowlands' topography and its ecology.

Twentieth century growth in New York City and New Jersey's urban areas put even more pressure on the Meadowlands. Developers saw in the increasingly-less-mosquito-infested undeveloped land, a perfect foundation on which to build factories, warehouses, transportation facilities, and other conveniences required by a modern metropolis. Between 1920 and 1950, Bergen and Hudson counties lost nearly 2,400 acres of their wetlands to developers' fill; more would disappear after construction of the New Jersey Turnpike began.⁴ Meanwhile, the Hackensack and Passaic rivers served as sewage pipes for surrounding municipalities, their waters convenient conduits for effluent from

³ Ted Steinberg, *Gotham Unbound: The Ecological History of Greater New York* (New York: Simon & Schuster, 2014), xviii.

⁴ *Ibid.*, 357-358.

the region's chemical factories, and the marshes along the rivers' banks a resting place for the metropolis's solid waste.

Because of this history, by the mid-twentieth century, many New Jerseyans thought of the Meadowlands as nothing but a continuous garbage dump, a wasteland. Although thousands of acres of salt marsh wetlands remained in the Meadowlands by the end of the 1960s, the estuarine ecosystem had largely been erased from people's consciousness. Motorists on the New Jersey Turnpike sped over the remaining wetlands, with barely a notice of the marsh below them. By the mid-twentieth century, people had largely been divorced from this place.⁵

Four hundred years of attempts to rid the region of its pesky swamplands did not only result in a conceptual loss of the wetlands, but in a physical loss as well. Over 14,000 acres, half of the former wetlands, had disappeared under agricultural and mosquito ditches, factories, and landfills since reclamation efforts began early in the eighteenth century. As Chester Mattson once said of the Meadowlands, "Oh, the human...the human use of this place is the extension of a human perception of the place."⁶ Until the late twentieth century, the Meadowlands' wetlands had been perceived as nothing more than a barrier to progress and then as a garbage dump and then as real estate. Thus, they disappeared.

⁵ John R. Quinn, *Fields of Sun and Grass: An Artist's Journal of the New Jersey Meadowlands* (New Brunswick, NJ: Rutgers University Press, 1997), 1-10.

⁶ Chester Mattson, Interview with Sunnyside Films, c. 1983, p. 3, Report 1983-032, MERI. [note, location inaccurate as of August 13, 2015. This transcript was found in a binder labeled "Nature Conservancy"].

A “Coastal Cornucopia”

The Meadowlands was once part of Lenapehoking, the traditional Lenape Indian territory. For Lenape people, the Meadowlands was neither useless, nor real estate; its resources provided them with seasonal sustenance. Though archaeologists have not uncovered specific archaeological evidence of early Lenape use along the Hackensack River, evidence from other sites in the Mid-Atlantic region suggests that from about 6000 BCE to 1000 BCE, the Lenape followed a coastally-oriented subsistence strategy with seasonally rotating settlements. Meadowlands researcher Kevin W. Wright surmises that Lenape people would certainly have utilized the Hackensack River’s “attractive and convenient resource-corridor.” As a stopover point for migratory birds on the Atlantic Flyway, the estuary around the river would have, at the very least, drawn seasonal hunters. Collection of the estuary’s fish and shellfish resources likely started with the development of fishing technology around 1000 BCE and intensified during the first century of the Common Era. At the time of European contact in the early seventeenth century, Lenape people lived in small bands in communal territories and continued to orient their subsistence toward the water. In 1630, colonists from the Dutch West India Company’s New Netherland colony, which had been founded at present-day Manhattan in 1626, began to expand into what is now New Jersey when the Council of New Netherland acquired land between the Hackensack and Hudson rivers. There, Dutch colonists recorded two Lenape bands they called the Hackensack and the Tappans. The Hackensack had established a permanent village near the confluence of the Overpeck

Creek and Hackensack River, towards the northern end of what the Lenape called “Mankachkewachky,” or the Great Marsh.⁷

Dutch and English settlers commented on the riverine orientation of the Hackensack and Tappan Indians. A seventeenth century observer noted, “almost all of them can swim; they themselves construct the boats they use, which are of two sorts: some entire trees excavated with fire, azes and adzes; the Christians call these Canoes.”⁸ The Hackensack relied on the river for nourishment as well, smoking fish and harvesting oysters from the estuary. In 1750, botanist Peter Kalm reported that “the Indians who inhabited the coast before the arrival of the Europeans made oysters and other shell fish their chief food.”⁹ Thus in the early years of Dutch contact, the Hackensack lived in more permanent settlements at the edges of the Hackensack Meadowlands’ wetlands and utilized the estuarine environment for transportation and sustenance.

Like the Hackensack and Tappans, early Dutch colonists were attracted to the Meadowlands for its natural resources. In the first half of the seventeenth century, Dutch settlers saw New Amsterdam and its surroundings as a “coastal cornucopia” – with abundant wildlife, vital salt hay, and easy access to waterways.¹⁰ David Pietersz de Vries, who established Vriessendaal, the earliest settlement in present day Bergen County in 1640, devoted a section of his journal to a description of the birds and fish around

⁷ Kevin W. Wright, “The Hackensack Meadowlands: Prehistory and History” (unpublished manuscript, December 1988), MERI, 4-16, quote from p. 5; Wright (8-9) notes that Indian deeds to Dutch and English colonists in the seventeenth century offer the only indication of the Lenape name for the Meadowlands – one deed refers to “the Great Marsh called Mankachkewachky” and another describes the peninsula between the Hackensack and Passaic rivers as “Meghgectecock.” He surmises that these may be Dutch and English corruptions of a Lenape word for the marsh.

⁸ Ibid., 10.

⁹ Ibid., 11.

¹⁰ Steinberg, *Gotham Unbound*, 17.

Newark Bay and the Hackensack River. Noting an abundance of avian life in the region, de Vries claimed, “nothing is wanted but good marksmen with powder and shot.”¹¹ He reported that hunters could kill thirty to thirty-four pigeons at one time. In addition to numerous pigeons, de Vries also observed thousands of geese that wintered in the region, and a bounty of swans, partridge, meadow-hen, gulls, turkeys, and black birds. He remarked that Indians caught striped bass in large quantities during the spring, when the fish entered the estuary from the ocean. De Vries also mentioned herring, sturgeon, pike, perch, trout and “many kinds of fish which we have not in our Fatherland.”¹² Adraien van der Donck, a Dutch lawyer, provides another description of the region’s natural abundance. In 1656 he described Manhattan’s wildlife, where he saw large beaver populations that thrived in the island’s freshwater wetlands, as well as shad, sturgeon, waterfowl, seals, mussels, clams, and oysters that lived in the region’s coastal waters.¹³

De Vries’s and others’ commentaries also reveal the importance of salt hay to Dutch settlers. Salt hay, a term used to describe three different types of marsh grass that grew naturally in the Meadowlands, provided an exceptionally nutritious feed for cattle and could be harvested when the marsh froze or at very low tides, without any land reclamation efforts.¹⁴ De Vries described a large *valaye*, or meadow, “an hour and a half’s journey in extent” on his plantation at Vriessendaal where hay could be cut for two

¹¹ David Pietersz de Vries. “Korte Historiae Ende Journaels Aenteyckeninge, 1633-1643,” in *Narratives of New Netherland, 1609-1664*, ed. J. Franklin Jameson (New York: Charles Scribner’s Sons, 1909), 221.

¹² *Ibid.*, 223.

¹³ Steinberg, *Gotham Unbound*, 15-16.

¹⁴ See Kimberly R. Sebold, *From Marsh to Farm: The Landscape Transformation of Coastal New Jersey* (Washington DC: National Park Service, U.S. Department of the Interior, 1992), 41-56 for the process of cutting salt hay.

hundred head of cattle. Jasper Danckaerts, who wrote about the area in 1679 and 1680, described a meadow as “low flat land which is overflowed at every tide – miry and muddy at the bottom, and which produces a species of hard salt grass or reed grass.” He also noted that the “cattle would rather eat [salt grass] than fresh hay or grass.”¹⁵ Adraien van der Donck reiterated the value of the naturally-occurring hay for cattle when he noted that cattle brought from Holland had declined in health until they were fed salt hay.¹⁶ De Vries, Danckaert, and van der Donck’s comments indicate the extent to which Dutch settlers relied on the Meadowlands’ natural resources.

Evidence suggests that the Dutch primarily used the Meadowlands for its easily attainable natural resources – primarily fowl and salt hay. Both were utilized seasonally and could be gathered without any alteration to the wetlands. Although the Dutch had a long history of land reclamation in Holland where they constructed extensive systems of dikes, ditches, and sluice gates, and they brought this water management technology to New Netherland, no evidence has been found that they carried out such land reclamation projects in the Meadowlands. Perhaps the region’s rich meadows of salt hay rendered such effort unnecessary.¹⁷

¹⁵ Reginald McMahon, “Vriessendael: A Note,” *New Jersey History* 87 (1969): 176-177.

¹⁶ Sebold, *From Marsh to Farm*, 5.

¹⁷ Sebold and Steinberg provide examples of Dutch land reclamation efforts in the region. In the late seventeenth century, the Governor of New Netherland diked a piece of marsh on the Delaware River near Burlington, New Jersey and had cultivated grain on the reclaimed land (Sebold 4). On a wetland called Blommaert’s Vly on the southern tip of Manhattan, colonists dug two canals to drain the land for sheep pasture and provide transportation from New York Harbor into the Manhattan settlement (Steinberg 14). But, while Dutch settlers in Manhattan and in Southern New Jersey utilized land reclamation for agricultural purposes, there is little specific evidence of such efforts in the Meadowlands.

Reclamation, or Making the Meadows “Productive”

The earliest definitive evidence of land reclamation practices in the Meadowlands comes from the mid-eighteenth century when English farmers built embankments around their individual wetland properties to exclude saltwater and grow the English grasses to which they were accustomed. The earliest evidence of this type of reclamation in the Meadowlands appears in a newspaper advertisement from 1744, which announced the sale of a 230-acre tract on the peninsula between the lower Passaic and Hackensack rivers. It described the tract as containing "very good Upland, well timber'd, with One Hundred and six Acres of Fresh Meadow, *all bank'd in* [emphasis added]."¹⁸ A 1768 advertisement for land on Berrys Creek highlighted the ease with which one could turn the salt marsh into fresh meadow, indicating that the practice had been more extensively undertaken in the region. The notice of sale read, “the meadows are reckoned by those in the neighbourhood, who have frequently mowed in them, not inferior to any salt meadow in that part of the country; and some parts thereof, at a very small expense, may be made fresh meadow, and to yield good English grass.” Moreover, the advertisement notes the ease with which “common sloops and wood-boats go up the creek to be loaded,” suggesting that by the mid-eighteenth century, English settlers may have used the Meadowlands for commercial purposes.¹⁹

¹⁸ Hunter Research, Inc., *Historic Context Development: Hackensack Meadowlands Drainage Systems and Features, Hackensack Ecosystem Restoration Project, Hudson and Bergen Counties, New Jersey*, prepared for Mabbett & Associates, Inc., Bedford, MA and United States Army Corps of Engineers, New York District, New York, New York, February 2010, 5-2.

¹⁹ *New York Gazette*, August 22, 1768, America’s Historical Newspapers.

In the nineteenth century, the growth of New York City forced more significant ecological changes in the Meadowlands, in a pattern like that which William Cronon describes in his study of Chicago and its hinterlands. In *Nature's Metropolis*, Cronon argues that Chicago's growth in the second half of the nineteenth century utterly transformed the western landscape and economy. In doing so, he erases the imagined boundaries between Chicago and landscapes like the Illinois prairie, Great Lakes forests, and shortgrass prairies of the High Plains and imagines them instead as a single system with a common history. As New Yorkers converted agricultural land on Manhattan Island into housing and commercial structures, they, like their counterparts in Chicago, looked farther afield to fulfill their agricultural needs. Like the lands surrounding Chicago, the Hackensack Meadowlands were drawn into Manhattan's economic orbit. As Chicagoans' demand for wheat and cattle completely changed vegetation on the Illinois prairie and their demand for white pine deforested Wisconsin's North Woods, New Yorkers' demand for dairy transformed the Hackensack Meadowlands.²⁰

John, Robert, and Samuel Swartwout, brothers of a wealthy New York City mercantile family, saw the Meadowlands not simply as an endless swamp, but as potential grazing land for cattle. Beginning around 1813, they undertook the first large-scale reclamation effort in the Meadowlands on nearly 3,800 acres of wetlands they had purchased between the Hackensack and Passaic rivers. They had already constructed water management features on the wetland tract by 1815 as shown in a deed from Samuel Swartwout to his brothers for interest in the land. The deed noted the existence of a dike,

²⁰ William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: Norton, 1991); Steinberg, *Gotham Unbound*, xv-xxii.

a windmill, and a sluice gate. The following year, the brothers began work on a more extensive embankment to exclude the tides from nearly 3,000 acres.²¹

By 1819, the Swartwouts reported some success; they had reclaimed 1,300 acres of land which supported a herd of dairy cattle as well as crops of vegetables, grain, flax, and hemp. However, that success proved to be short-lived. High tides and tunneling muskrats continuously compromised their earthen embankments. After decades of financial difficulties, the brothers went bankrupt in 1844. As Kevin Wright argues, the Swartwouts' efforts "were overcome by the tides and undermined by rodents."²² The marsh itself constrained human abilities to reshape it.

Like the Swartwouts, Spencer Driggs envisioned vast agricultural fields in the Meadowlands. He did not believe that the Swartwouts' failure indicated that large-scale reclamation in the Meadowlands was beyond the bounds of possibility. He blamed the muskrats that dug through the Swartwouts' embankments, and that was a problem that Driggs believed he could solve. He developed an iron dike system, a continuous wall of cast-iron plates inserted into the center of earthen embankments, to strengthen the dikes against tidewater and mammalian assault. In 1867, Driggs and his investors formed a land reclamation company which began to construct his iron dike system around the peninsula between the Passaic and Hackensack rivers and up Sawmill Creek, in an effort to exclude the tide from the same land that the Swartwouts had attempted to drain fifty years earlier. Illustrations in *Frank Leslie's Illustrated Newspaper* showed that it was a

²¹ See Hunter Research, Inc., *Historic Context Development*, 5-7 – 5-14 and Wright, "Hackensack Meadowlands," 58-61 for a discussion of the Swartwouts' efforts.

²² Wright, "Hackensack Meadowlands," 61.

massive project (Figure 5). The newspaper projected that because of the land's proximity to New York City, once reclaimed, its value would increase to at least \$1,000 per acre.

The newspaper predicted that,

the success of this undertaking will induce land-holders everywhere to reclaim their waste lands, and as there are a million acres of marsh lands within fifty miles of New York city, the value of such land, reclaimed and rendered richly productive and taxable, can hardly be estimated.²³

This report indicates that in the mid to late-nineteenth century, at least some agriculturalists, investors, and journalists imagined that all of the Meadowlands' wetlands could be put to productive agricultural use.²⁴

Driggs's project was the largest attempt at reclamation for agricultural purposes ever undertaken in the Meadowlands, and while it also ultimately failed, the undertaking impacted the marsh's existing topography. In an 1896 report, State Geologist C. C. Vermeule showed that in the portions of the Meadowlands that had been embanked, the land had sunk by several feet below its normal level.²⁵ This is because the soils compressed and without the tide depositing fresh sediments twice daily, the land subsided. This subsidence allowed water to collect in areas of lower elevation and drainage efforts lost all effectiveness. Thus, by the end of the nineteenth century, decades of attempts at large-scale reclamation for agricultural purposes left behind a vastly altered wetland and a legacy of "sunken meadows."²⁶

²³ "The New System of Reclaiming Lands," 138.

²⁴ See Hunter Research, Inc., *Historic Context Development*, 5-17 – 5-21 and Wright, "Hackensack Meadowlands," 61-65 for a discussion of Driggs's efforts.

²⁵ Geological Survey of New Jersey, *Map of Hackensack Meadows to Illustrate Report on Drainage by C.C. Vermeule* (Geological Survey of New Jersey), 1896, Hackensack Meadowlands Papers, Fairleigh Dickinson University Digital Archives.

²⁶ Wright, "Hackensack Meadowlands," 61.

Draining the Meadows²⁷

In their unsuccessful efforts to turn the Meadowlands' wetlands into agricultural spaces, the Swartwouts and Driggs unintentionally created one of the worst mosquito breeding environments in New Jersey. The mosquitos that began their lives in the Meadowlands terrorized their human neighbors each summer. In August 1907, a *New York Times* reporter described the mosquitos as a "buzzing torture to the people of Staten Island, Jersey City, and Hoboken."²⁸ In August 1904, *The New York Times* reported that "Hoboken let out a wail of pain the other day after having been tortured for four days with such swarms as even Hoboken has not known in the past."²⁹ In the early twentieth century, killing the nettlesome mosquitoes became a new rationalization for draining the Meadowlands' wetlands.

The Meadowlands' fate may have been determined in India in August 1897 when British physician Ronald Ross cut into the stomach tissue of a mosquito that had fed four days earlier on the blood of a malaria patient. The small parasite he found inside profoundly affected the ways in which humans managed wetland environments, for that parasite proved to be the final link in a long-examined theory of a mosquito-to-man cycle of malaria transmission. This connection between mosquitoes and malaria made the

²⁷ This section is taken, in part, from Chapter 5D of Hunter Research, Inc., *Historic Context Development: Hackensack Meadowlands Drainage Systems and Features, Hackensack Ecosystem Restoration Project, Hudson and Bergen Counties, New Jersey*, prepared for Mabbett & Associates, Inc., Bedford, MA and United States Army Corps of Engineers, New York District, New York, New York, February 2010, which the author wrote while employed by Hunter Research, Inc., Trenton, New Jersey. It is used here with the permission of Hunter Research, Inc.

²⁸ "A War of Elaborate Dimensions is Being Waged Against the King of Pests in New York Suburbs," *New York Times*, August 4, 1907, ProQuest Historical Newspapers (96768576).

²⁹ "Mosquitos Very, Very, Bad: Jersey Meadows, Newly Ditched, Worse – Wail Widespread," *New York Times*, August 29, 1904, ProQuest Historical Newspapers (96398851).

elimination of the pest the primary concern of physicians and public health officials who used this public health argument time and again to persuade governments to fund mosquito-eradication projects.

In 1900, New Jersey State Entomologist John B. Smith initiated what became one of the nation's most successful anti-mosquito campaigns. Smith identified several species of mosquitoes in New Jersey that carried malaria, and he realized that they bred in particular locations within the state – primarily in standing brackish water of salt marshes. Smith realized that controlling the insects' breeding grounds provided the key to eliminating the mosquito problem in New Jersey, and he was the first scientist in the country to seriously propose a system of water management as the primary means of mosquito control. Smith took his cause to New Jersey's state legislature where he convinced the governing body to pass a law in 1906 that directed the New Jersey Agricultural Experiment Station to locate and drain all mosquito-breeding salt marshes in the state.

Early mosquito control work in the Meadowlands began later that year and within a year, wetlands around Jersey City were successfully drained. Other municipalities followed suit and undertook limited and local drainage projects of their own. Early mosquito control progressed in this piecemeal way throughout the state with little success until 1912 when Governor Woodrow Wilson signed legislation authorizing the formation of county-level mosquito commissions in New Jersey to coordinate mosquito control work.³⁰

³⁰ See Thomas J. Headlee, *The Mosquitos of New Jersey and Their Control* (New Brunswick: Rutgers University Press, 1945), Andrew Spielman and Michael D'Antonio, *Mosquito: A Natural History of our*

The Hudson and Bergen County Mosquito Commissions undertook an extensive drainage program in the Meadowlands. Building upon the work of John B. Smith, the Commissions always emphasized draining wetlands with a system of ditches, supplemented by dikes, tide gates, and pumps as the most effective method of mosquito control (Figure 6). The extent of mosquito ditching in the Meadowlands is astonishing. By the early 1930s, workers had dug over four hundred miles of drainage ditches in Bergen County alone.³¹ New ditching in Hudson County peaked in 1939 when its Commission cut about 105 miles of ditches in a single year.³²

Even after insecticides like DDT joined the Mosquito Commissions' arsenals, they only supplemented existing mosquito control efforts. Chemicals never totally replaced water management as the primary means of controlling mosquitoes on the salt marshes of northern New Jersey. In fact, in 1957, the Bergen County Mosquito Commission reported that the previous year it had cut just over two miles of *new* ditching.³³ Even in the era of DDT, Bergen County officials continued to report on the effectiveness of their water management efforts, claiming that "no mosquito control operation can hope to succeed without a broad-based policy of basic drainage." Without it, they "never could have met the peak loads encountered every season."³⁴ Because it

Most Persistent and Deadly Foe (New York: Hyperion, 2001), and G. M. Patterson, "John B. Smith Chronology," Rutgers New Jersey Agricultural Experiment Station, 2016, <http://vectorbio.rutgers.edu/jb-smith-chronology.php>, for a history of mosquito control in New Jersey.

³¹ Steinberg, *Gotham Unbound*, 262.

³² *Ibid.*, 361.

³³ New Jersey Mosquito Extermination Association, *Proceedings, Forty-Fourth Annual Meeting, New Jersey Mosquito Extermination Association* (Atlantic City, NJ, 1957), 177.

³⁴ New Jersey Mosquito Extermination Association, *Proceedings, Forty-Ninth Annual Meeting, New Jersey Mosquito Extermination Association* (Atlantic City, NJ, 1962), 207.

proved so effective, manipulation of the Meadowlands' water and tidal flow continued to be the primary means of mosquito control through the twentieth century.

The mosquito drainage efforts utterly changed the Meadowlands' hydrology and allowed *Phragmites australis*, or the common reed, to flourish in the Meadowlands in the first half of the twentieth century. *Phragmites*, an aggressive perennial wetland grass, spread even more after the Oradell Dam was built in 1922.³⁵ *Phragmites* grows tall, in dense stands supported by a network of underground rhizomes which gives it a competitive advantage against other plant species and makes it especially adept at living in disturbed environments. Unlike native salt marsh grasses like *Spartina alterniflora* (cord grass), and *Spartina patens* (salt hay), *Phragmites* can live in various levels of water, both fresh water and brackish water, and it can withstand high levels of pollution. It was particularly suited to live in the Meadowlands where it outcompeted *Spartina* and other native grasses.³⁶ As a result of water manipulation in the Meadowlands, by the mid-twentieth century, much of the Meadowlands' plant biodiversity disappeared.

Despite these ecological changes, the mosquito control effort also laid the groundwork for a reconsideration of the Meadowlands' potential. The mosquito problem had contributed to the perception of the Meadowlands as nothing more than a boggy and dangerous swamp, something to be avoided. Yet in 1919, one report noted that,

³⁵ Located on the Hackensack River, approximately fifteen miles upstream from the Meadowlands, the Oradell Dam drastically reduced the amount of fresh water that flowed into the lower Hackensack River and allowed salt water from Newark Bay to come further upstream than it previously had. This effectively transformed the lower parts of the Hackensack into the brackish estuary that it is today. It also increased pollution in the Meadowlands. The tide, that after 1922 came further upstream, brought with it Newark Bay's pollution and waste (see Steinberg, *Gotham Unbound*, 263).

³⁶ Molly S. Geller, "Phragmites: Life Preserver of the Salt Marsh," *Underwater Naturalist* 7 no. 3 (1972): 4-5.

“drainage ditches have helped considerably in the amelioration of the wild marsh conditions.” The report continued, “this land has become extremely valuable for railroad terminals and factory sites, as much as \$4,000 per acre having been paid for some of it.”³⁷ As the constant annoyance of mosquitos and threats of mosquito-borne illnesses began to subside, people could reimagine this place not as an unhealthy swamp, but as potentially developable land.

Creating Land

In the early twentieth century, regional planners reimagined the Meadowlands, long considered a wasted space, as a potential answer to New York City’s growing problems. One significant problem was that increased shipping overtaxed New York City’s port facilities. In 1914, seventy-six million tons of freight moved into and out of the region by rail and forty-five million tons moved into and out of New York City’s port by water.³⁸ This magnitude of freight caused a logistical problem in and around the port of New York; it was a problem of transportation geography. In the nineteenth century, the large railroad companies had built their main freight terminals on New Jersey’s Hudson River waterfront while shipping terminals operated on the New York side of the river. Barges carried goods across the Hudson River between the railroad and port terminals, but as freightage increased, congestion and backups occurred on both sides of the river and into New York Harbor. As the city grappled for solutions to this and other

³⁷ Steinberg, *Gotham Unbound*, 262.

³⁸ New York, New Jersey Port and Harbor Development Commission, *Joint Report with Comprehensive Plan and Recommendations* (Albany, NY: J. B. Lyon Company, 1920), 5.

problems, planners turned to outlying areas like the Hackensack Meadowlands and began to think of them as part of Manhattan's urban footprint.³⁹

To create developable ground for port and other transportation facilities, engineers turned northeastern New Jersey's wetlands into fast land. The wetlands around Newark were the first to be sacrificed in this way as they gave rise to Port Newark. The City of Newark dredged a canal inland from Newark Bay and used the spoils from this project to fill wetlands along the channel. The newly-made land provided a foundation for Port Newark's docks and warehouses. The city filled other parts of Newark's wetlands as it expanded the Port in the 1920s and later for the construction of the Newark Airport. By the mid-twentieth century, the area once known as the Newark Meadows had completely disappeared under land fill to serve New York's commercial and transportation needs.⁴⁰

In part to build on Newark's efforts, in 1917 New York and New Jersey established a Joint Harbor Commission to address the logistical problems in New York's Port in a more comprehensive way. The plan it produced called for expansion of shipping and rail facilities throughout the metropolitan area and noted that the region's wetlands "offer[ed] unrivalled opportunities for development as auxiliary ports." The plan identified the Hackensack Meadowlands as suitable for this type of development. In the Meadowlands, the plan called for the extension of rail lines, construction of a waterfront belt line, and deepening of shipping channels. The core of the plan was never

³⁹ Steinberg, *Gotham Unbound*, 184.

⁴⁰ Stephen Marshall, "The Meadowlands Before the Commission: Three Centuries of Human Use and Alteration of the Newark and Hackensack Meadows," *Urban Habitats* 2 (2004): 11; Steinberg, *Gotham Unbound*, 279.

implemented due to reticence of the railroad companies, but the ideas underlying the plan – that New York City’s problems needed to be considered in a regional fashion and that the region’s wetlands provided an important part of the solution – remained.⁴¹

In 1922, influential leaders of New York’s business and professional communities formed the Regional Plan Association (RPA) to produce a comprehensive guide for development of the entire New York City metropolitan region. In 1929, it published the *Regional Plan of New York and its Environs*. The RPA and its plan remained committed to New York City’s physical and economic growth. It argued that the best way to assure that growth was by eliminating congestion, which it viewed as the primary threat to the city’s health and success. To do this, the planners proposed to relieve congestion in the urban core by spreading population and industry over a larger area and developing new urban cores beyond Manhattan in a process it called “recentralization.” The new urban cores would be self-sustaining, they would combine industrial and economic activities with social necessities like housing, recreational facilities, and schools, and they would be linked to each other and to Manhattan by beltway transportation networks.⁴²

The marshes surrounding New York City were crucial to RPA’s recentralization plans. The *Regional Plan of New York and its Environs* specifically encouraged development of new urban communities in open areas surrounding New York City, including the Hackensack Meadowlands. The Meadowlands, the plan said, “should be

⁴¹ New York, New Jersey Port and Harbor Development Commission, *Joint Report*, 29-30, 354-355, quote from p. 29.

⁴² Committee on Regional Plan of New York and Its Environs, *The Graphic Regional Plan: Atlas and Description*, Volumes 1 and 2 (New York: Regional Plan of New York and Its Environs, 1929); David A. Johnson, “Regional Plan of New York and Its Environs,” in *Encyclopedia of American Urban History*, ed. David R. Goldfield (Thousand Oaks, CA: Sage Publications, 2007), 661.

regarded as of prime importance in connection with the prosperity and expansion of the whole Region, and particularly of the City of New York.”⁴³ The Meadowlands were close to Manhattan, were already served by transportation networks, and were surrounded by existing development, but the Meadowlands themselves had been “kept in a practically undeveloped state by natural conditions.”⁴⁴ For urban planners, this provided an unblemished base on which a model industrial city could rise. But construction of the “model industrial city” would require the complete destruction of the Meadowlands’ wetlands. The new city, the *New York Times* declared, would stand as a “mausoleum over their remains.”⁴⁵

The industrial city that RPA envisioned in the *Regional Plan of New York and its Environs* was never built in the Meadowlands. However, the plan remains an important expression of the changing ways in which the Meadowlands were perceived. The *Regional Plan* viewed the Meadowlands’ wetlands as a resource to be developed in support of regional urban planning and economic development, and that understanding held strong through the twentieth century. As historian Ted Steinberg argues, because of the *Regional Plan*, “marshlands across the New York metropolitan area would no longer be seen as unique, individual places but as a collective resource awaiting the hand of development.”⁴⁶ The Meadowlands had long been thought of as a region that could be used for the benefit of New York City’s economic market, but by the mid-twentieth

⁴³ Committee on Regional Plan, *The Graphic Regional Plan*, 311.

⁴⁴ *Ibid.*, 540.

⁴⁵ Warner, “The Spacious City,” Envisioned on New Jersey’s Wide Meadows,” *New York Times*, February 15, 1931, ProQuest Historical Newspapers (99149055).

⁴⁶ Steinberg, *Gotham Unbound*, 189.

century, it was increasingly thought of as *part* of New York City. This marked an important perceptual shift in the way that New Yorkers, and some New Jerseyans, imagined the Meadowlands' geography and its relationship to the city.

In the early twentieth century, New York City's population boom and the expansion of automobile infrastructure also helped to reshape both the imagined and physical geography of northeastern New Jersey. Completion of the Holland Tunnel beneath the Hudson River in 1927 enabled automobile commuters to easily move between New York City and New Jersey. In the 1930s, the George Washington Bridge, Pulaski Skyway, and Lincoln Tunnel joined that first crossing (Figure 7). Together these tunnels, roads, and bridges enabled a new geography of work and home to develop in the greater metropolitan area as tens of thousands of people moved into northeastern New Jersey and commuted into the city. Between 1920 and 1940, the population of Bergen County alone nearly doubled, with much of this population living on the upland areas surrounding the Meadowlands.⁴⁷ Within the Meadowlands, this new transportation infrastructure with its easy highway access to New York City, encouraged development, if only its wetlands could be turned into fast land.

Land making took several forms in the Hackensack Meadowlands. Early efforts at converting the Meadowlands' wetlands into developable land primarily relied on filling them with dredged material, dug out from the bottom of the region's waterways. The wetlands on the peninsula between the Hackensack and Passaic rivers were converted to upland in this way early in the twentieth century for shipping, warehousing,

⁴⁷ "Historical Population Trends in Bergen County (1900-2010), <http://www.co.bergen.nj.us/documentcenter/view/653>.

and industrial uses. In addition to dredge spoils, land makers in the Meadowlands used material excavated during construction of the Hudson River tunnels, debris from building construction, and even New York City's garbage. As early as 1909, the *Newark Evening News* reported that "New York rubbish is being turned into Jersey soil."⁴⁸ Perhaps the most magnificent New York "rubbish" to be turned into "Jersey soil" were the granite columns that once adorned New York City's Pennsylvania Railroad Station. In 1964 when that station was demolished, a construction company carted thirty of its columns to a North Bergen lot on the eastern side of the Meadowlands to use them in a land reclamation project for an industrial park development.⁴⁹ Other evidence of land filling activities is borne out in land records. In court records of a 1948 land dispute involving two business partners in Ridgefield Park, the plaintiff testified that in 1945 he had leveled the land with a bulldozer, filled it with municipal garbage and industrial waste, and covered that with clean earth.⁵⁰ Though such land making projects could be expensive, the enormous growth in the New York City metropolitan area, and the continued assumptions that equated growth with progress, justified the cost for many developers.

The Turnpike Conquers the Meadowlands

Through the first half of the twentieth century, wetlands in the Meadowlands were lost to individual land filling projects like that described above at a rate of about one

⁴⁸ Marshall, "The Meadowlands Before the Commission," 11.

⁴⁹ "Penn Station Columns Dumped in Jersey: Doric Splendor has an Ignoble Ending in the Meadows," *New York Times*, October 9, 1964, ProQuest Historical Newspapers (115908357).

⁵⁰ Sebastian Ruta v. Eugene Werner Jr., 1 N.J. Super. 455 (1948), http://www.leagle.com/decision/19484561NJSuper455_1367.xml/RUTA%20v.%20WERNER.

hundred acres per year. In the 1950s, that rate doubled. The culprit was the New Jersey Turnpike.⁵¹

Constructed between 1950 and 1952, the northern part of the original New Jersey Turnpike (today's Eastern Spur) crossed the length of the Meadowlands from Kearny, through Secaucus, North Bergen, to Ridgefield Park (see Figure 7). It caused perhaps the greatest ecological change in the Meadowlands in the twentieth century. Construction engineers dumped over five and a half million cubic yards of rock, sand, and dirt, to create the road bed for the ten-mile stretch of highway through the heart of the Meadowlands. The *New York Times* reported that "from 6 o'clock in the morning until midnight a fleet of 220 heavy-duty trucks moves in a seemingly endless procession as formerly useless marshland is transferred into a solid base for the multi-lane highway."⁵² Detritus from highway traffic also blighted the marsh. The "toxic fallout" from traffic into the watershed included litter, copper, rubber, oils, and brake material.⁵³ More significantly, the highway's embankments impeded tidal flow, changing the Meadowlands' hydrology.⁵⁴

In addition to those direct and immediate changes, the new highway also made the Meadowlands more easily accessible to the population centers of the New York metropolitan area. Interchanges at Secaucus and Ridgefield Park allowed motorists to connect to other major thoroughfares like Route 3, the Lincoln Tunnel, and Pulaski

⁵¹ Quinn (1997), Marshall (2004), and Steinberg (2014), all argue the significant impact of the New Jersey Turnpike on the Meadowlands' ecology.

⁵² Joseph O. Haff, "Construction Men Rush Turnpike Over Jersey Marshes for '51 Use: Rushing Construction on Northernmost Segment of New Jersey Turnpike," *New York Times*, August 9, 1950, ProQuest Historical Newspapers (111630143).

⁵³ Quinn, *Fields of Sun and Grass*, 167.

⁵⁴ Steinberg, *Gotham Unbound*, 267.

Skyway and encouraged industrial and commercial development in the Meadowlands. In the 1950s and 1960s, rural sections of Secaucus and wetlands throughout the district gave way to warehouses, truck bays, freight yards and terminals, and other uses associated with the transportation network and distribution of goods. In 1957, Industrial Parks, Inc. planned to build distribution and warehousing facilities for General Tire and Rubber Company on 350 acres in East Rutherford.⁵⁵ Empire Industrial Park, Lyndhurst Industrial Park, Metro Industrial Center, and Ridgefield Industrial Park are just a few of many similar developments that were built in the Meadowlands by 1970. Meanwhile, like the tunnels and highways of the 1930s, the Turnpike encouraged even more residents to move to Bergen and Hudson counties.

Even as the new transportation infrastructure made the Meadowlands more accessible, it also rendered the Meadowlands' wetlands largely invisible. Except for a handful of hunters and trappers who had grown up using the Meadowlands, most people's daily lives remained very distant from the wetlands. The residential districts of the municipalities sat on the slight hills and ridges on the edges of the Meadowlands. Local residents tended to pay little attention to the Meadowlands except for their potential to increase the tax base through development.

The Turnpike itself symbolized a technological conquest of Meadowlands' nature. Travelling at sixty-five miles an hour, many motorists were largely unaware of the wetlands. Author and naturalist John R. Quinn writes, "surely the notion that the Hackensack river marshes are a part of nature . . . escapes the average New Jersey

⁵⁵ Milton Honig, "Major Efforts Being Considered to Reclaim Jersey Meadowland," *New York Times*, May 26, 1957, ProQuest Historical Newspapers (114100665).

turnpike motorist, idling, say, among the fumes of his fellows at the Exit 18W toll plaza, gazing absently at the roadside litter and the wind-rippled reeds beyond.”⁵⁶ (Figure 8).

American Studies scholars Angus Kress Gillespie and Michael Aaron Rockland would agree. In their cultural study of the New Jersey Turnpike, they use the highway’s bridges over the Passaic and Hackensack Rivers to argue that the Turnpike represents “the total triumph of the built environment over the natural environment.”⁵⁷ They argue that turnpike designers, whose only goal was the efficient movement of vehicles from one point to another, made no effort to draw motorists’ eyes to the surrounding landscape. The bridges’ architecture is so understated that motorists are often unaware that they have even crossed a river. The Turnpike erased the rivers by obscuring them.

The Turnpike also helped to erase a landform called Laurel Hill, known locally as Snake Hill. Formed in a geological event nearly two hundred million years ago, the once two-hundred-foot tall Laurel Hill covered over one hundred acres in Secaucus stretching from what is now the west side of the Turnpike all the way to the Hackensack River. At times it held the Hudson County Jail, almshouses for the poor, a tuberculosis hospital, and a psychiatric institution, all of which had been abandoned by the 1950s. In the early 1950s, much of Laurel Hill was quarried away in preparation for construction of the New Jersey Turnpike. By the 1960s, developers who saw great potential in Laurel Hill levelled much of the rest of it to make way for new development. In 2002, a *New York Times* reporter described the remaining piece of Laurel Hill as “little more than a rocky

⁵⁶ Quinn, *Fields of Sun and Grass*, 4.

⁵⁷ Angus Kress Gillespie and Michael Aaron Rockland, *Looking for America on the New Jersey Turnpike* (New Brunswick, NJ: Rutgers University Press, 1992), 33.

shoulder for New Jersey Turnpike to lean on.”⁵⁸ According to Secaucus town historian Dan McDonough, this is the greatest assault to Laurel Hill – Turnpike motorists’ daily disregard of it. They drive past without a thought as to what was once there.⁵⁹

A Wasteland?, or the “Most Valuable Acreage in the World”?

The unique combination of accessibility yet separateness that the Turnpike created, removed the Meadowlands’ wetlands from people’s lived experience. This allowed the Meadowlands to become “the site for necessary but unaesthetic functions in the urban scheme of things,” like solid waste disposal.⁶⁰ When New York City stopped providing waste removal services to its businesses in 1957, they turned to private haulers, many of whom had ties to organized crime. Haulers avoided landfill tipping fees by dumping at the nearest available locations. Its proximity to the city, low population density, and acres of open space made the Meadowlands particularly attractive for both legal and illegal dumping.⁶¹ In 1957, almost six acres were given over to landfilling every month in East Rutherford alone.⁶² A decade later, the Meadowlands held eleven sanitary landfills that received 29,469 tons of residential, commercial, and industrial waste each week from New Jersey municipalities and parts of New York state. These eleven landfills covered 1,170 acres and former landfills covered an additional 1,500

⁵⁸ Richard Lezin Jones, “Humbled Mountain Offers a Mine of History, and Prehistory,” *New York Times*, March 31, 2002, ProQuest Historical Newspapers (432012863).

⁵⁹ Ibid.

⁶⁰ Goldman and Mattson, *Hackensack Meadowlands Comprehensive Land Use Plan*, 21.

⁶¹ Robert Ceberio and Ron Kase, *New Jersey Meadowlands: A History* (Charleston: The History Press, 2015), 52-53.

⁶² Steinberg, *Gotham Unbound*, 269.

acres.⁶³ When the wind blew the wrong way in the summer, Meadowlands residents had to go inside to escape the smell of rotting garbage. To borrow a term from environmental justice scholars and activists, the Meadowlands became a “sacrifice zone” that enabled the New York metropolitan area to function. As a repository for unsightly developments, industry, and waste, the estuarine ecosystem was sacrificed in the name of urban expansion.

The word “wasteland” had been used for centuries to describe America’s wetlands, but by the 1960s, use of the word to describe the Meadowlands stemmed from the literal mountains of waste that sat atop the region’s wetlands. Paul Ylvisaker, a state government official, said of the Meadowlands, it “is New Jersey’s front door; right now it is a doormat that says ‘Welcome, but hold your nose and be careful where you step.’”⁶⁴

Despite the spread of garbage and unsightly warehouse developments, the Regional Plan Association’s vision for the Meadowlands never faded. In some planning circles, a hope remained that a grand city could be built on the Meadowlands, or at least that its value as developable real estate could be realized. Because of its extensive acreage and location near New York City, in 1959 New Jersey Governor Robert B. Meyner estimated that if the Meadowlands could be fully reclaimed, the land would be worth billions of dollars. He called the Meadowlands “potentially the most valuable

⁶³ Zurn Environmental Engineers, *Analysis of Alternative Solid Wastes Management Systems for the Hackensack Meadowlands District*, prepared for Hackensack Meadowlands Development Commission, Lyndhurst, NJ, May 1970, II-2 – II-4.

⁶⁴ Paul N. Ylvisaker, “Hackensack Meadowlands – Stagnation or Renaissance,” (lecture, Bergen County Chamber of Commerce Dinner, Creskill, NJ, October 15, 1968), 6.

acreage in the world.”⁶⁵ Planners and officials in favor of reclamation efforts repeated that claim throughout the 1960s.

In 1967, the New Jersey State Chamber of Commerce led two hundred businessmen and state and local officials on a tour of the Meadowlands. The *New York Times* reported on their trek, summarizing the common understanding of the Meadowlands,

they passed 25 miles of grimmy [sic] factories and warehouses, steamy marshlands, landfill operations, auto graveyards, ponds of sludge and hills of industrial waste. Altogether, they toured thousands of acres of outwardly mean and inhospitable land across the Hudson River from Manhattan.⁶⁶

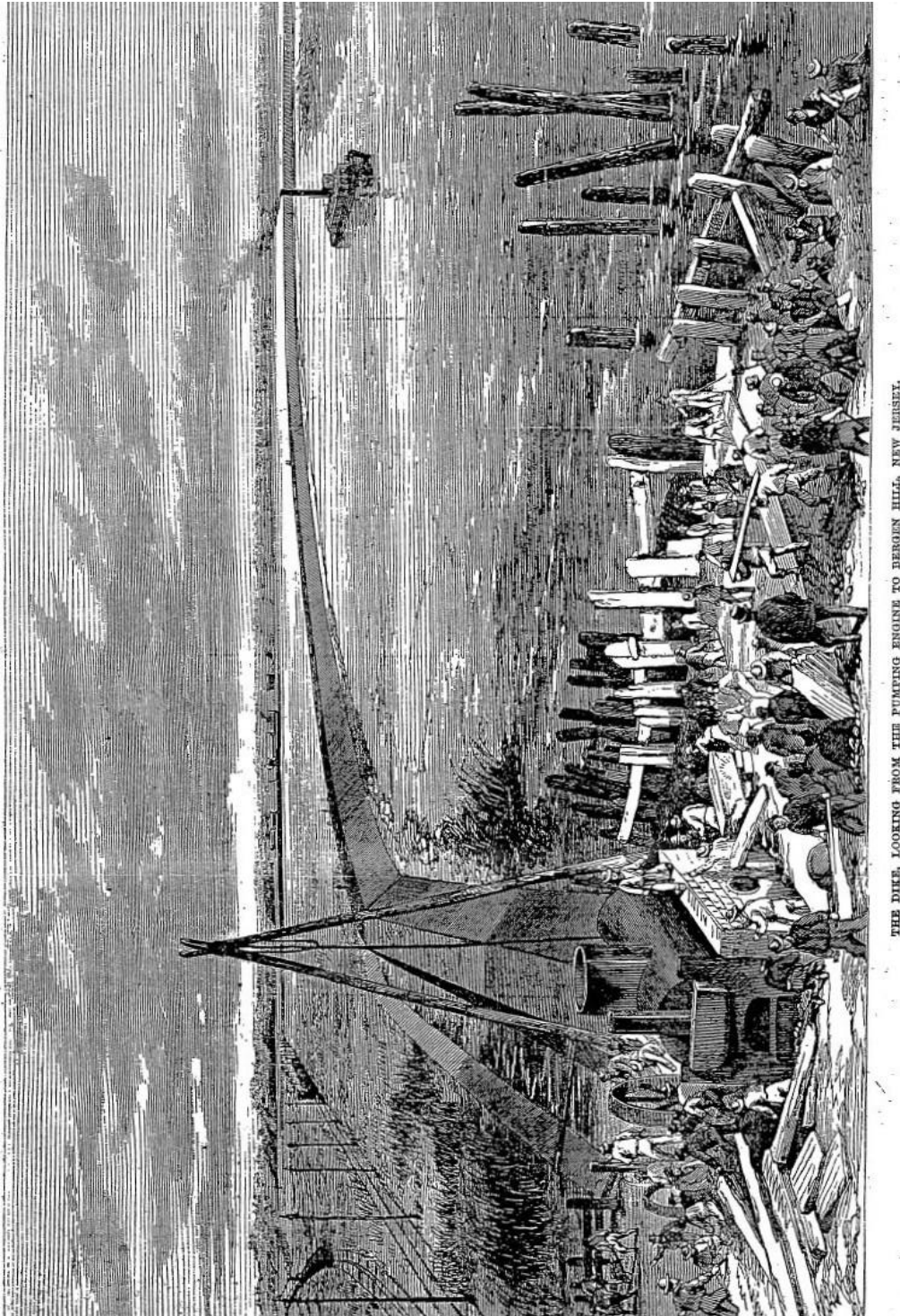
But, at the same time, the fact that the Chamber of Commerce tour occurred in the first place revealed that a new image of the Meadowlands had begun to develop and gain strength over the previous decade. Business people in the Meadowlands region saw value in the open space of the Meadowlands. It was not the value that the space provided as a sacrifice zone for the ugly parts of urban life. Instead, its value lay with its potential for development. The Meadowland had become “real estate.” The nearly three-hundred-year effort at trying to obliterate the Meadowlands had not been completely successful, and the wetlands that remained existed as the last undeveloped land in the world’s largest metropolitan area.

By the end of the 1960s, two very different views of the Meadowlands co-existed. One saw the open space as a wasteland; the other viewed it as real estate. In neither view

⁶⁵ George Cable Wright, “Meyner to Press Plan on Meadows,” *New York Times*, March 12, 1959, ProQuest Historical Newspapers (114671900).

⁶⁶ Walter H. Waggoner, “200 Brave Bleakness and Rain to Tour Jersey Meadowlands,” *New York Times*, October 22, 1967, ProQuest Historical Newspapers (117733548).

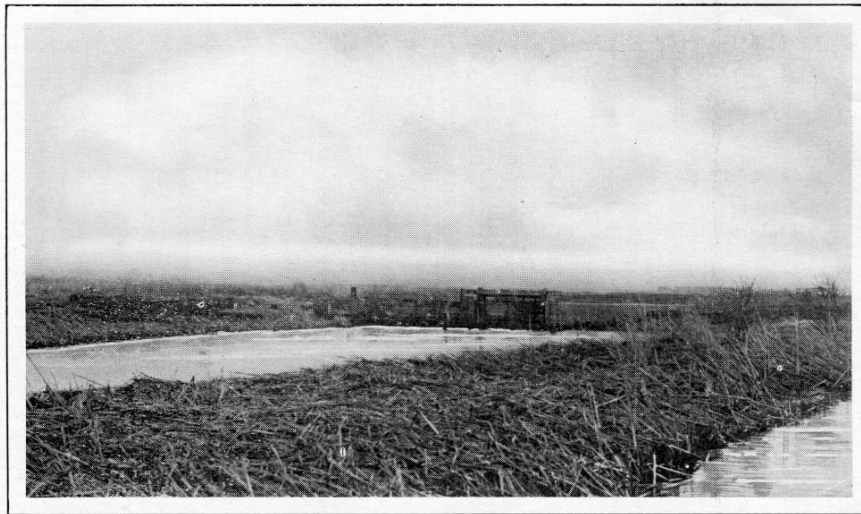
did the Meadowlands' wetlands have any intrinsic value. However, as real estate, the Meadowlands' wetlands gained value if they were usefully reclaimed. Yet, as history had shown, similar plans for comprehensive reclamation had failed four decades earlier. However, in the 1920s and 1930s, there had been no real strong political apparatus to make large-scale reclamation a reality. That would change in 1968.



THE DIKE, LOOKING FROM THE PUMPING ENGINE TO BERGEN HILL, NEW JERSEY.

Figure 5. Spencer Driggs's iron dike system under construction.

Source: "The New System of Reclaiming Lands," *Frank Leslie's Illustrated Newspaper*, November 16, 1867, 136.



Moonachie Creek Tide-Gate.

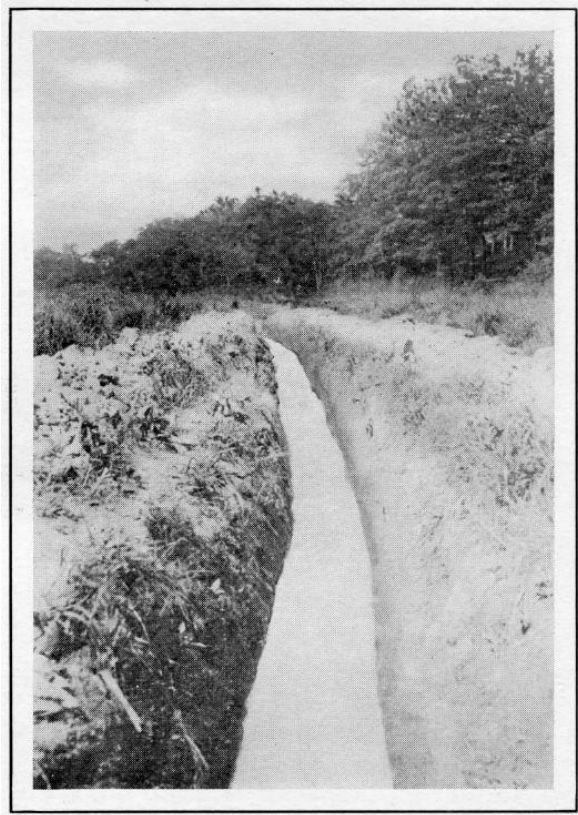


Figure 6. Mosquito drainage infrastructure, Bergen County.

Source: Bergen County Mosquito Extermination Commission, *Third Annual Report*, 1917.

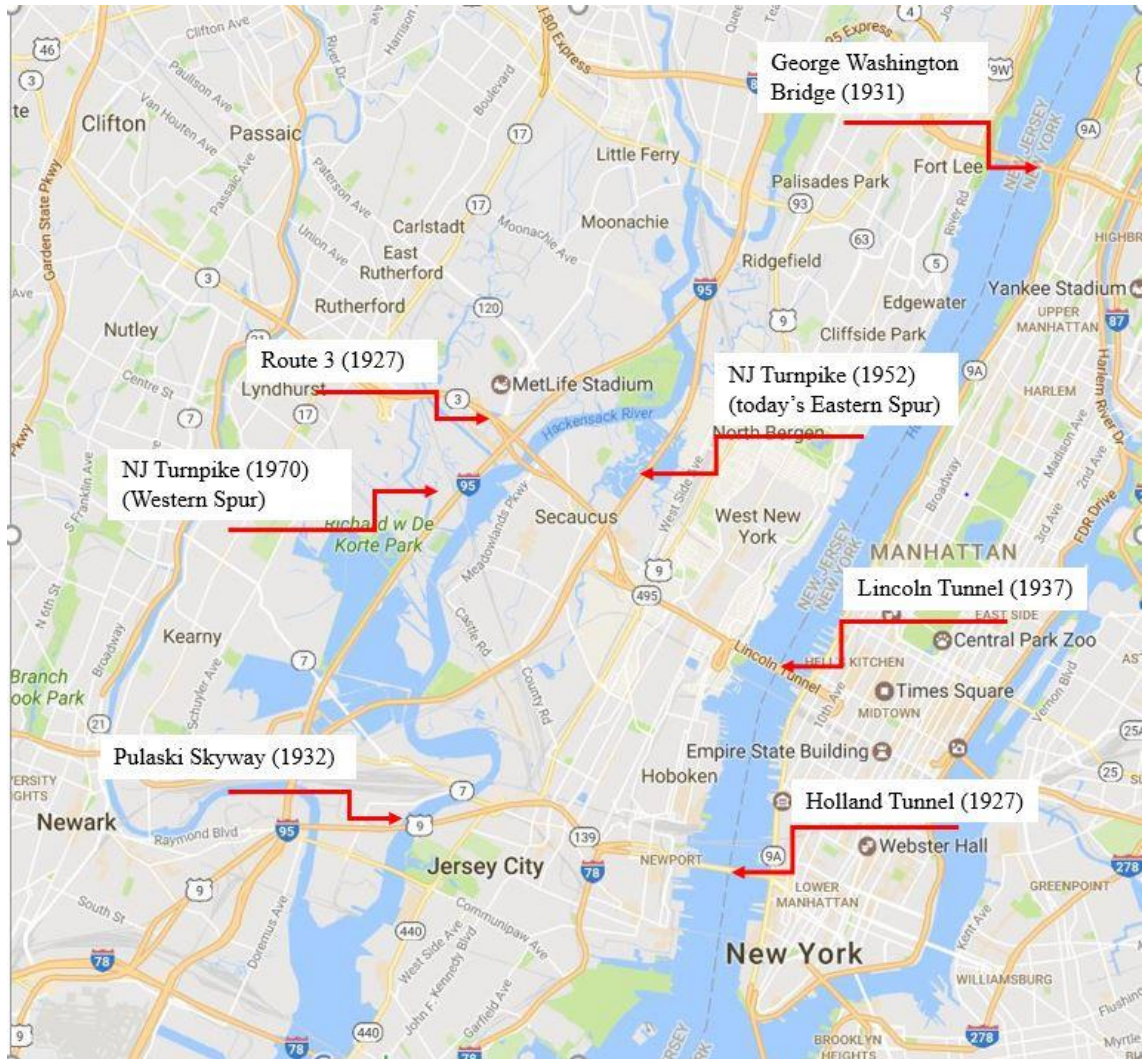


Figure 7. Major twentieth century transportation corridors in the Meadowlands.

Source: Base map from Google Maps, 2017.



Figure 8. Idling near New Jersey Turnpike Exit 18W.

Source: Photos by author, May 16, 2014.

ENVISIONING A NEW MEADOWLANDS

In 1968, the Meadowlands landscape was one of landfills, warehouses, industry, transportation corridors, and polluted wetlands. Those who viewed the wetlands as potential real estate knew that the garbage, pollution, and haphazard development limited the region's full development potential. Comprehensive development schemes had been considered since the Regional Plan Association's regional development plan in the 1920s, but due to a lack of political force, none had been successfully implemented.

However, as the New Jersey Turnpike and its connections to existing Hudson River crossings enabled people to live in New Jersey and commute to the city, development pressures on the Meadowlands only increased. New Jersey planners came to envision the Meadowlands as a livable community. Planners urged New Jersey's politicians to pass legislation that would enable a comprehensive development of the Meadowlands into a residential space.

These planning efforts in the Meadowlands occurred at the same time that environmentalists started to realize the impact of modern industrial societies on the environments they inhabit. As such, the planning scheme that emerged in the early 1970s not only reimagined an industrial wasteland as a residential space, it also grappled with balancing economic development with environmental preservation. It envisioned an urban estuarine space in which human and non-human natural needs, development and preservation could be balanced.

A City on the Reeds

Paul N. Ylvisaker, a champion for America's cities, advisor to Lyndon Johnson's War on Poverty, and as of 1967, the head of New Jersey's newly-created Department of Community Affairs, quickly became a trusted leader in New Jersey. New Jersey's citizens recognized him for his commitment to justice and moral government. Amid race riots in Plainfield in 1967, Ylvisaker had run in front of a National Guard convoy shouting, "Stop! Stop! This is a peaceful community."¹ One community activist later recalled of Ylvisaker, "he is a fine man, somebody you can talk sensible to. You can reach him and his staff any time. They sit down and talk to you like good human beings. I like that."² In 1970, Princeton University bestowed upon Ylvisaker an Honorary Doctorate noting, "untainted by cynicism, he has managed to lift the sometimes tawdry mechanics of government to a moral adventure dedicated to the service of the human heart."³ As head of the Department of Community Affairs, Ylvisaker brought his visionary leadership to the Meadowlands, where he pushed for regional planning to solve the Meadowlands' development problems.

Those development problems had been shaped by a history of local zoning control. Since the early twentieth century, American land use decisions have largely been made at the local level through municipal zoning codes.⁴ Because the municipal tax

¹ Bruce Lambert, "Paul Ylvisaker, 70, Educator and Urban Planner," *New York Times*, March 20, 1992, ProQuest Historical Documents (108954971).

² Virginia M. Esposito, "Paul Ylvisaker: A Biographical Profile," in *Conscience and Community: The Legacy of Paul Ylvisaker*, ed. Virginia M. Esposito (New York: Peter Lang Publishing, Inc., 1999), xxvi.

³ *Ibid.*, xv.

⁴ See Sonia Hirt, *Zoned in the USA: The Origins and Implications of American Land-Use Regulation* (Ithaca, NY: Cornell University Press, 2014) for a history of American municipal zoning.

base in New Jersey rested heavily on private development, the state's municipalities jealously guarded their rights to control land use. Fourteen different municipalities contained portions of the Meadowlands within their borders and each relied on Meadowlands development to support and expand its own tax base. For example, by 1968 only twenty-five percent of Carlstadt's meadows had been developed, but that development provided half of the town's ratables. Developers in East Rutherford constructed five new warehouses in a three-month period; this development provided the borough with one and a half million dollars in tax assessments. In 1967 new Meadowlands construction in Secaucus added twenty million dollars to that town's tax rolls. For Carlstadt, East Rutherford, Secaucus, and many other municipalities, the Meadowlands provided the only land available for new development and they used it. As *The Record* reported in December 1968, "almost daily, a new factory or warehouse is nearing completion, while another is begun."⁵ With a significant amount of tax money at stake, the system of home rule encouraged municipalities to make land use decisions based on individual fiscal considerations rather than on regional needs. This had created a landscape of scattered warehouses, truck terminals, and industrial development.

But for Ylvisaker and other planners, the type of development that the municipalities encouraged was precisely the problem. Regional planners argued that the land was being "wasted" by reclamation methods which supported low-grade industrial development.⁶ This development pattern threatened opportunities for residential and recreational growth – two things that planners believed were increasingly necessary in the

⁵ Edward J. Flynn, "Time Has Passed Meadowlands By," *Hackensack (NJ) Record*, December 18, 1968.

⁶ Ibid.

rapidly growing New York metropolitan area. Projections made in 1968 revealed that by the early 1980s, in addition to increased industrial and commercial space, northern New Jersey would require 200,000 new residential units and 5,000 additional acres of park and recreational space. If the Meadowlands were developed “properly,” it could be the key to meeting the demands of this projected growth.⁷

As early as 1956, Ylvisaker had identified population growth as one of the problems facing all metropolitan areas. He argued that nearly all future increases in population would fall within the existing metropolitan areas that were already “congested and decaying.”⁸ How could governments properly plan for and accommodate a growing urban population? With an approach that harkened back to the Regional Plan Association’s “recentralization,” Ylvisaker embraced the planning concept of “new towns,” or fully planned communities built outside of existing cities. He understood that the value of open space lay in its potential for development. Ylvisaker noted that “we have leapfrogged over an awful lot of land in our metropolitan areas which could be sites for sizeable new towns” and argued that “new towns on open land, then, are one form of the dream we ought to speed along.”⁹ He believed that the government should assemble and prepare tracts of land for large developments that would then be developed by private companies. Ylvisaker also argued that the form of these new towns should account for the shifting economy in the United States, which was becoming more service-oriented in

⁷ State of New Jersey Department of Community Affairs, *The Hackensack Meadowlands 1968* (Trenton, NJ: Division of State and Regional Planning, 1968), 11.

⁸ Paul N. Ylvisaker, “Commencement Address to Swarthmore High School,” in *Conscious and Community: The Legacy of Paul Ylvisaker*, ed. Virginia M. Esposito (New York: Peter Lang Publishing, Inc., 1999), 10.

⁹ Paul N. Ylvisaker, “New Towns – Old Cities” (lecture, Institute of Urban America, Columbia University, January 23, 1968), Papers of Paul N. Ylvisaker, Box 21, Harvard University Archives, 7.

the 1960s. He argued that “the urban consumer, whether downtown or exurban, is properly demanding that the place he lives in give him access to the whole network of services which a family needs these days for decent living.”¹⁰ New cities, Ylvisaker believed, should be planned in a way that brought people together with key services – housing, employment, medicine, and education.

Ylvisaker put this new town planning concept into practice in the Meadowlands. He envisioned a new Meadowlands, one that challenged the status quo. In the large expanse of undeveloped wetlands, Ylvisaker imagined a modern twenty-first century city that would house up to 300,000 new residents, of mixed economic circumstances. The city he envisioned would be a “balanced urban complex” that brought together people and services; his Meadowlands city included industrial and recreational areas, schools, hospitals, social welfare centers, and transportation facilities. Ylvisaker conceived of this new city as a way to help relieve some of the physical and social pressures in existing urban centers by providing housing and employment opportunities in greater numbers than that which could be accommodated in existing cities and suburbs. But rather than serving simply as a safety valve, Ylvisaker noted, “this would be the first time in history that social and physical planning on this scale would go hand in hand.”¹¹ For Ylvisaker, the Meadowlands’ vacant wetlands provided the room to control and shape the processes of urbanization.

¹⁰ Ibid., 6.

¹¹ Ronald Sullivan, “City of 300,000 is Urged for Meadows,” *New York Times*, May 15, 1967, ProQuest Historical Newspapers (118058070).

Ylvisaker's plan was revolutionary. The Meadowlands had been described as "a dank, desolate waste of rustling swamp grass, almost uninhabited except by mosquitos and frogs," "25 miles of grimmy [sic] factories and warehouses, steamy marshlands, landfill operations, auto graveyards, ponds of sludge and hills of industrial waste," and as "something forgotten by civilization."¹² This was hardly a place fit for human habitation. But Ylvisaker saw beyond the Meadowlands' current landscape. As a *New York Times* reporter noted, Ylvisaker was "the first important official in a key position to conceive of the meadows as a place primarily for people."¹³ This is what made Ylvisaker's vision for the Meadowlands more likely to be executed than that of the Regional Plan Association. As the well-respected Commissioner of the Department of Community Affairs, Ylvisaker could mobilize the political apparatus necessary to carry out his plan.

The Hackensack Meadowlands Reclamation and Development Act

Ylvisaker used his position and the reputation he had built among government officials, legislators, and citizens to advance legislation to make his vision a reality. He advocated creation of a state-level department that would assume all zoning and planning control over the Meadowlands. In 1967 Ylvisaker worked with Alfred W. Kiefer, a State Senator from Bergen County, to bring the Hackensack Meadowlands Title and

¹² Arthur Warner, "The Spacious City Envisioned on New Jersey's Wide Meadows," *New York Times*, February 15, 1931, ProQuest Historical Newspapers (99149055); Walter H. Waggoner, "200 Brave Bleakness and Rain to Tour Jersey Meadowlands," *New York Times*, October 22, 1967, ProQuest Historical Newspapers (117733548); Edward J. Flynn, "Time Has Passed Meadowlands By," *Hackensack (NJ) Record*, December 18, 1968.

¹³ Ronald Sullivan, "City of 300,000 is Urged for Meadows," *New York Times*, May 15, 1967, ProQuest Historical Newspapers (118058070).

Development Act (S. 518) before the New Jersey Senate. The bill made no concessions to home rule. It created a new state agency to control development, which would be overseen by a board of seven state government appointees and four local representatives, with Meadowlands mayors serving in a strictly advisory capacity. The proposed agency would hold all zoning rights in the Meadowlands and have strong development rights of its own. In recognition of the municipalities' reliance on development for their tax base, the legislation included a complicated tax-sharing formula by which financial risks and benefits of regionally-planned development would be divided between the fourteen Meadowlands municipalities.¹⁴

As might be expected, Kiefer's bill faced strong local opposition. Meadowlands mayors and other local officials used the legislative debates on S. 518 to argue vehemently against what they perceived as a violation of home rule. They understood the Kiefer bill as both a usurpation of their land use planning rights and an attack on local taxation rights. The Secaucus Town Council passed a resolution in opposition to the bill claiming that it would "deprive the governing body of the Town of Secaucus of its right and responsibility to tax and to decide that the use to which several thousands of acres of land in Secaucus can be put to."¹⁵ Edwin A. A. Muller, Borough Attorney for Ridgefield argued that "Ridgefield has completely zoned and planned this area and we would not

¹⁴ Clifford A. Goldman, "The Hackensack Meadowlands: The Politics of Regional Planning and Development in the Metropolis" (PhD diss., Princeton University, 1975), 139-141.

¹⁵ *Public Hearing Before Senate Committee on Air and Water Pollution and Public Health on Senate Bill No. 518 (Hackensack Meadowlands Title and Development Act)*, Vol. 3 (June 28, 1967) (Statement of Charles Krajewski, Secaucus Councilman), 91-92.

like anything on the part of any other authority to interfere with our plans for the development. We also are concerned with the question of ratables and taxes.”¹⁶

As Muller’s testimony suggests, the mayors also rejected the very premise that a regional approach was necessary for comprehensive Meadowlands development. Several municipal representatives pointed to the industrial developments already completed in their Boroughs to show that they were already doing an effective job without state control. Dominick Presto, counsel to the Borough of Carlstadt, said of Carlstadt’s development, the borough “feels that it is doing an excellent job at it, as evidenced by the great number of industries which have located in Carlstadt and the great number of industries that are knocking at our doors to come in.”¹⁷ Joseph J. Jialdini, Councilman of North Bergen, highlighted a reclamation project in that town where land formerly underwater now held 584,604 square feet of building space, assessed in 1967 at \$1,806,300.¹⁸ He went on to give similar statistics for five other industrial developments in the town, and he noted that,

we didn’t wait for anybody to tell us what to do; we didn’t wait for some master plan, and we didn’t wait for any state agency to develop the land. We went out and sold the land to prospective buyers; we sold the land to people who wanted a little private ownership and went out there and put these beautiful buildings there.¹⁹

¹⁶ *Public Hearing on Senate Bill No. 518*, Vol. 1 (Statement of Edwin A. A. Muller, Borough of Ridgefield Attorney), 3A.

¹⁷ *Ibid.*, (Statement of Dominick Presto, Counsel, Borough of Carlstadt), 46.

¹⁸ *Public Hearing on Senate Bill No. 518*, Vol. 3 (Statement of Joseph J. Jialdini, Councilman, North Bergen), 64.

¹⁹ *Ibid.*, 65.

Councilman Jialdini echoed sentiments expressed by other municipal officials – that the municipalities were already successfully developing their Meadowlands in line with local knowledge and prerogatives.

Given the history of local opposition to regional planning in the Meadowlands, Kiefer had introduced the Hackensack Meadowlands Title and Development Act with no assumption that it would pass, and it did not.²⁰ But while the state legislature predictably defeated the measure, debates over the legislation served to draw out the lines of opposition. Here it is important to note that the debates revealed a strong commitment to development of the Hackensack Meadowlands on all sides. No one questioned *whether* the Meadowlands should be developed, the questions were *for what purposes* and *by whom*. From any perspective, development of the Meadowlands was perceived to be inevitable. In his opening statement at the legislative hearings on S. 518, Senator Kiefer laid out the goals of the hearings, “the question that we have to deal with is the proper handling of the development, the long-range planning, for the reclamation of the Hackensack Meadowlands.”²¹ For Kiefer, the primary question centered on how that Meadowlands development should proceed. That development, without a doubt, involved the complete reclamation of the Meadowlands’ wetlands. The battle lines were not drawn between those who supported development and those who opposed development; instead they were drawn between proponents of home rule who guarded the rights of municipalities to develop the Meadowlands along industrial lines and proponents of regional development who envisioned a residential future for the region.

²⁰ Goldman, “The Hackensack Meadowlands,” 147.

²¹ *Public Hearing on Senate Bill No. 518*, Vol. 1 (Statement of Alfred W. Kiefer, Senator, 13th District), 4.

Senators Frank Guarini and Fairleigh S. Dickinson Jr. resurrected the failed Meadowlands bill in the next state legislative session. In February 1968, the senators introduced the Hackensack Meadowlands Reclamation and Development Act (S. 477). The final version of this bill made several significant concessions to the Meadowlands communities. It called for a seven-member Commission with six members appointed from Bergen and Hudson counties and unlike the Kiefer bill, the Dickinson-Guarini bill gave the Meadowlands communities a strong veto power over the Commission's decisions.²²

Paul Ylvisaker and the Department of Community Affairs strongly supported the Hackensack Meadowlands Reclamation and Development Act. In September 1968, the Department of Community Affairs distributed a promotional piece in support of the bill. Titled *The Hackensack Meadowlands 1968*, it clearly reflected Ylvisaker's vision of a "new town." A sketch titled "Meadowlands of Today," (Figure 9) shows the Meadowlands as it existed in September 1968: a worn-out road, flanked by a twisted and broken non-descript billboard, crosses a dark landfill as it heads towards the Manhattan skyline. But, on the adjacent page another sketch shows the "Meadowlands of the Future" (Figure 10). In this birds-eye view, the Hackensack River is centered in the frame. A park with a large pavilion reaches toward the western bank of the Hackensack River, leading to a marina from which boaters enjoy clear river waters. Single-family houses adjacent to the water are connected to the park with wide curving roadways. On the eastern bank, sleek, modern office buildings overlook the Hackensack River. A wide-

²² Goldman, "The Hackensack Meadowlands," 165-174.

open space between the river community and Manhattan shows the ease of access between the metropolitan center and this new community. A companion sketch also entitled “Meadowlands of the Future” (Figure 11) depicts a modern development with sleek office buildings linked presumably to Manhattan by the rail line shown in the foreground. In this new Meadowlands, there are no signs of landfills, or of industry, or of non-descript warehouses, or trucking terminals. Instead, there are offices, recreational facilities, and homes.²³ This marked a significant shift in thinking. Previously, the Meadowlands were seen as a place for indiscriminate dumping and for tucking away the less cosmetic parts of urban society. But here, proponents of the bill saw it as a place for people to live.

Even with strong local opposition, S. 477 passed both houses of the state legislature, and Governor Richard J. Hughes signed the Hackensack Meadowlands Reclamation and Development Act on January 13, 1969. The bill created the Hackensack Meadowlands Development Commission (HMDC), defined the boundaries of the Meadowlands District, and gave the HMDC control of Meadowlands development within the District. The HMDC had zoning rights within the area of its jurisdiction, and the power to plan and implement a development program for the Meadowlands. The legislature tasked the HMDC with a three-fold mandate: to plan for the orderly development of the Meadowlands, to provide for continued solid waste disposal, and to preserve the “delicate balance of nature.”²⁴

²³ State of New Jersey Department of Community Affairs, “The Hackensack Meadowlands 1968,” 20-21, 23.

²⁴ *Hackensack Meadowlands Reclamation and Development Act with Digest* (New Jersey: Hackensack Meadowlands Development Commission, 1969).

The passage of the Hackensack Meadowlands Reclamation and Development Act was remarkable. As Clifford Goldman (himself Acting Executive Director of the Meadowlands Commission from 1969 to 1972) later argued, the legislators “violated the strongest traditions of New Jersey politics – they breached home rule over the objections of the local political representatives.”²⁵ Goldman argues that the bill’s success can be explained, in part, by Ylvisaker’s leadership. Debates during the legislative process and the legislation itself put forth a vision for Meadowlands development only in the broadest terms. The specifics of the development would be left to the Meadowlands Commission, and as Commissioner of the Department of Community Affairs, Ylvisaker would automatically become the Chairman of the HMDC. The community trusted Ylvisaker and Goldman argues that this fact alone was enough to ease some uncertainty over the final shape of the Meadowlands development plan and garner support for the bill.²⁶ Ylvisaker’s biographer, Virginia Esposito, also noted that Ylvisaker’s leadership helped push the bill towards success. She says that on the Meadowlands issue,

Paul would painstakingly but successfully employ the commonsense strategy he had used so well so often – organize the power structure and community action groups. He brought all the Meadowlands participants together – local, city, regional, state and federal – in full view and with the participation of the public.²⁷

According to Goldman, the bill also succeeded because advocates of regional planning successfully characterized themselves as visionaries and their opponents as short-sighted defenders of narrow development interests. Assemblyman Herbert M.

²⁵ Goldman, “The Hackensack Meadowlands,” iv.

²⁶ *Ibid.*, 185.

²⁷ Esposito, “Paul Ylvisaker,” xxviii.

Rinaldi described an early defeat of S. 477 in the Assembly's Republican caucus as "a disgrace for New Jersey and a victory for all of the selfish, parochial interests in the state."²⁸ Ernest Erber, New Jersey director of the Regional Plan Association, said that the bill was "defeated by little men who vote their fears rather than their hopes."²⁹ Later, testifying in favor S. 477, Mayor William McDowell of North Arlington told the State Senate Committees on Agriculture and Conservation & Natural Resources that "this area is just too vast to just let it go in a hodge-podge, piecemeal, local, selfish, parochial interest because we can see immediate gains."³⁰ At the same hearing, Joel Jacobson of the New Jersey Industrial Union Council of the AFL-CIO warned that "we must not permit . . . small men from small towns to thwart the development of the meadowlands and the great social and economic benefits which will be derived therefrom."³¹ When the legislature finally passed the Meadowlands Act, a *New York Times* editor wrote that it was "the culmination of a century-long fight by progressive forces in the Garden State against apathy and parochialism."³² A new vision for the Meadowlands had won.

The "Delicate Balance of Nature"

The legislature called on its newly-created Hackensack Meadowlands Development Commission to do three things: to oversee the orderly and comprehensive

²⁸ Ronald Sullivan, "Meadows Project Killed in Jersey," *New York Times*, June 21, 1968, ProQuest Historical Newspapers (118288076).

²⁹ Walter H. Waggoner, "Meadows Defeat Spurs Supporters," *New York Times*, June 22, 1968, ProQuest Historical Newspapers (118259476).

³⁰ *Public Hearing Before Committees on Agriculture, Conservation, & Natural Resources on Senate Bill No. 477 (Hackensack Meadowlands Reclamation and Development Act)* (March 26, 1968) (Statement of William McDowell, Mayor of North Arlington), 47.

³¹ *Ibid.*, (Statement of Joel Jacobson), 70.

³² "Future of the Jersey Meadows," *New York Times*, November 27, 1968, ProQuest Historical Newspapers (118412444).

development of the Meadowlands, to manage the mounting solid waste that was dumped in the Meadowlands on a daily basis, and “to consider the ecological factors constituting the environment of the meadowlands and the need to preserve the delicate balance of nature . . . to avoid any artificially imposed development that would adversely affect not only this area but the entire State.”³³ The third part of this tripartite mandate is particularly interesting, largely because most of the discourse about the Meadowlands as an ecosystem in the late 1960s included the word “dead.” A 1954 survey of the wetlands of New Jersey conducted by the United States Fish and Wildlife Service ranked the Meadowlands among lowest-valued wetland in the state in terms of its ecological value for waterfowl and other wildlife.³⁴ In December 1968, *The Record* described the Meadowlands as a “breeding grounds of mosquitos and rats; a giant garbage dump; a mattress for the state’s busiest roadway; the shorelines embracing a dead river.”³⁵ Ylvisaker’s own belief that “because of pollution, the Hackensack River can support no life at all,” in fact, guided his calls for its reclamation and development.³⁶ In countering some early support for preservation of the Meadowlands as a nature reserve, Ylvisaker argued that it was too late. He said, “we have already killed all the fish in the Hackensack and we have wiped out all the cedar forests in the Meadows and we have

³³ *Hackensack Meadowlands Reclamation and Development Act with Digest* (New Jersey: Hackensack Meadowlands Development Commission, 1969).

³⁴ United States Fish and Wildlife Service, *Wetlands of New Jersey*, Office of River Basin Studies, Region V, Boston, Massachusetts, 1954.

³⁵ Edward J. Flynn, “Time Has Passed Meadowlands By,” *Hackensack (NJ) Record*, December 18, 1968.

³⁶ Paul N. Ylvisaker, “The Meadowlands What’s Next,” *Bergen* 3 (February 15, 1969): 5.

annihilated just about everything that moves out there except the rats and the mosquitos.”³⁷

This understanding of the Meadowlands ecosystem explains why there was little environmentalist involvement or comment on the Hackensack Meadowlands Reclamation and Development Act. As Clifford Goldman notes, “conservation had not been an issue in the passage of the legislation since it was generally believed that the Meadowlands had nothing worth conserving.”³⁸ Only two voices emerged during the legislative hearings on S. 477 that contested the bill on environmental grounds. Mrs. G. Kingsley Noble of the Bergen Community Museum and Garden and Conservation Department of the Englewood Women’s Club and Ruth Ballou of New Jersey Citizens for Clean Air both expressed concerns about the implications of increased development on the region’s open space and pollution levels.³⁹

Yet, the final version of the bill contained the mandate that the HMDC protect the “delicate balance of nature.”⁴⁰ Perhaps this was in response to concerns raised by other state agencies about protecting the region from air and water pollution, as Senator Kiefer alluded to in his introduction to the hearing on the failed S. 518.⁴¹ Although Goldman suggests that Senator Fairleigh Dickinson’s experience as a member of several conservation groups may have persuaded him to include this provision, Dickinson’s own

³⁷ Paul N. Ylvisaker, “Hackensack Meadowlands – Stagnation or Renaissance,” (lecture, Bergen County Chamber of Commerce Dinner, Creskill, NJ, October 15, 1968), 2.

³⁸ Goldman, “The Hackensack Meadowlands,” 289.

³⁹ *Public Hearing on Senate Bill No. 477* (Statements of Mrs. G. Kingsley Noble and Ruth Ballou), 67A, 84A.

⁴⁰ *Hackensack Meadowlands Reclamation and Development Act with Digest* (New Jersey: Hackensack Meadowlands Development Commission, 1969).

⁴¹ *Public Hearing on Senate Bill No. 518*, Vol. 1 (Statement of Alfred W. Kiefer), 14.

words seem to belie this interpretation.⁴² To a *New York Times* reporter, Dickinson described Meadowlands development as a battle between humans and their environment. He said, “to have an open area this close to the biggest metropolitan center in the world and not use it properly would be a tragedy. It would show that man cannot control his environment.”⁴³ These are the words of a man who viewed the open space of the Meadowlands as real estate. He wanted to develop the Meadowlands, not preserve them in any sort of natural state. So while the final legislation included the mandate, it provided no real clear explanation of exactly what preservation of the “delicate balance of nature” meant in a highly polluted, highly developed urban estuary.

The idea of a “balance of nature” in the field of ecology is rooted in Frederic Clements’s 1916 studies on plant succession. Clements argued that habitats changed through a fixed developmental sequence toward a final climax stage. Once a habitat reached its climax formation, Clements believed that it would remain in a state of equilibrium, barring any disturbance. Plant biologist Michael G. Barbour argues that “the Clementsian landscape is a balance of nature, a steady-state condition maintained so long as every species remains in place.”⁴⁴ Having experienced the destruction wrought by over-plowing the Great Plains, Clements was acutely aware of the negative effects that humans could have on a landscape and he called disturbed ecological communities “disclimaxes.” In other words, Clements made a very strong distinction between a

⁴² Goldman, “The Hackensack Meadowlands,” 289.

⁴³ Walter H. Waggoner, “Meadows Defeat Spurs Supporters,” *New York Times*, June 22, 1968, ProQuest Historical Newspapers (118259476).

⁴⁴ Michael G. Barbour, “Ecological Fragmentation in the Fifties,” in *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (New York: W. W. Norton & Company, 1996), 235.

“natural” environment and one that was a product of human intrusions. For Clements, humans were always disturbers of the natural world. By separating humans from nature, Clements’s climax theories used primitive nature as a measure against which degradation by civilization could be contrasted.⁴⁵ Though largely discredited by scientists by the mid-twentieth century, the ecological idea of a balanced nature disrupted by humans remained a powerful cultural and political construct, and it in fact shaped the majority of federal environmental laws enacted in the 1970s.⁴⁶

To what extent this understanding influenced the legislators who included “the delicate balance of nature” in the Meadowlands bill is unclear. Internal HMDC documents suggest that in the earliest days of its work, the Commission struggled to interpret the delicate balance mandate. A document titled “Refinement of Goals and Objectives” interprets the clause to mean the inclusion of appropriate landscaping around buildings, the planting of trees and other vegetation, retention of topography (like Laurel Hill which had been steadily chipped away for decades). Almost as an afterthought, it mentioned the notion that some land along the Hackensack River should be kept in a natural state to provide food and habitat for fish, migratory birds, and other wildlife.⁴⁷ Another document titled “The Meadowlands Open Space Concept,” which dates to sometime between 1969 and 1970, suggests that open space could provide a way to protect that balance. The document suggested that a linear park along the Hackensack

⁴⁵ Sharon Kingsland, *The Evolution of American Ecology, 1890-2000* (Baltimore: The Johns Hopkins University Press, 2005), 148-150.

⁴⁶ Jonathan Baert Wiener, “Beyond the Balance of Nature,” *Duke Environmental Law & Policy Forum* 7, no.1 (Fall 1996): 2.

⁴⁷ Hackensack Meadowlands Development Commission, “Refinement of Goals and Objectives,” in Material Relating to the Establishment and Early Activities of the Hackensack Meadowlands Development Commission, New Jersey State Library, Trenton.

River running the length of the Meadowlands District could shape the development around it while providing recreational areas and protection against floods and runoff damages.⁴⁸ These documents indicate two very different ways in which the early HMDC staff interpreted their environmental mandate: one, a simple nod to trees and landscaping and two, a vision in which the environment is a more integral feature to be considered in the comprehensive planning for the district.

In the first years of the HMDC's work, the staff struggled to interpret the agency's mandate to protect the balance of nature. But as the HMDC began the work of creating its first management plan for the Hackensack Meadowlands, one staff member's philosophy on urban nature came to influence the agency's overall vision for the Meadowlands. He was Chester (Chet) Mattson, a young "historian-philosopher turned ecologist."⁴⁹

An Ecological Perspective: Chet Mattson and the Comprehensive Land Use Plan

"Chet Mattson, fearless leader, semicolon. A man who thought book-length and brought it forth in whole-formed paragraphs. An environmentalist who beat down the forces arrayed against him in words and passion." This is how another early HMDC staff member described Chet Mattson in 2007.⁵⁰

⁴⁸ "The Meadowlands Open Space Concept," in Material Relating to the Establishment and Early Activities of the Hackensack Meadowlands Development Commission, New Jersey State Library, Trenton.

⁴⁹ George James, "The Wilderness That Won't Die," *Hackensack (NJ) Sunday Record*, October 18, 1970.

⁵⁰ James Kocis, "Cromakill Creek: Chet Mattson," October 29, 2007, <http://cromakillcreek.blogspot.com/2007/10/chet-mattson.html>.

Mattson, a Massachusetts native, met Paul Ylvisaker while taking an urban studies course at the Massachusetts Institute of Technology. In the summer of 1969, Ylvisaker brought Mattson to New Jersey to work for the Department of Community Affairs. Here, Mattson became so excited by the work of the Meadowlands Commission that he stayed in New Jersey and in 1970, the HMDC hired the twenty-nine-year-old to lead the Commission's environmental planning efforts.⁵¹

From the moment he stepped foot in the Meadowlands, Mattson argued for a perceptual shift in the way that people thought about its wetlands. Chet Mattson advocated a more nuanced understanding of the relationship between humans and the Meadowlands than had previously been articulated. He understood that two histories with two sets of values, one human and one non-human, intersected in the marsh. The Meadowlands' human history was marked by various attempts at reclamation, each acre filled was a testament to American "progress." This history encouraged a philosophy in which using the land "properly" meant using it up. But a growing understanding of the importance of estuarine ecology in the late 1960s and early 1970s reoriented some toward the Meadowlands' natural history. This history points to millennia during which salt and fresh water have mixed in the Meadowlands, where tides have flowed in and out of the Hackensack River, where marsh grasses have grown, providing the core of the estuarine ecosystem. In this thinking, environmental values are most important and using the land for development is tantamount to an ecological catastrophe. "Progress" becomes a dirty word. But Mattson did not see the Meadowlands as a space in which *either* human *or*

⁵¹ George James, "The Wilderness That Won't Die," *Hackensack (NJ) Sunday Record*, October 18, 1970.

natural forces should prevail, in the Meadowlands, he saw the natural and the human as two intertwined histories. Mattson argued that planners must account for both histories and their attendant values, if there was any hope for solving the problems of the Meadowlands.⁵²

For Mattson, thinking ecologically about the Meadowlands meant respecting and attending to both human and ecological values. In March 1970, Mattson wrote,

an ecological plan has as its goal the meeting of human needs which find themselves expressed in an estuary; and the meeting of estuarine needs which find themselves expressed in the center of the country's most highly urbanized region. It is obvious that these values are in conflict. It is all too obvious that men have been in conflict with nature for too long. The challenge, as the New Jersey Legislature delivers it, is to *apportion this precious land wisely among very real human needs and very crucial environmental needs* [emphasis added].⁵³

This wise apportioning of land, he argued, was the definition of “balance” in an urban ecosystem.

Here Mattson very pointedly spoke to rising voices in the environmental movement. Some argued that *all* of the remaining Meadowlands must be protected from development because they claimed that “there is a crisis in the biosphere and because the estuary is critical.”⁵⁴ Mattson countered that the region also faced an urban crisis and the realities of urbanization required that some land would be given over to development. The real challenge was to figure out how to build in an ecologically important wetland ecosystem, or as he said, “how to bring the heretofore untrammelled course of

⁵² Chester Mattson, “The Hackensack Meadowlands – An Ecological Perspective,” (unpublished manuscript, August 1970), New Jersey State Library, Trenton, NJ.

⁵³ Chester Mattson, “Draft: An Ecological Plan for the Hackensack Marsh-Estuary,” p. 14, in Estuary: Memo to Clifford Goldman from Chet Mattson on Waterfowl Management, January 9, 1970, 1970-008, MERI.

⁵⁴ Mattson, “An Ecological Perspective,” 16.

urbanization within the perview [*sic*] of intelligent ecological restraints.”⁵⁵ The problem boiled down to one question – how can we use the land without using it up?

The HMDC’s *Comprehensive Land Use Plan*, issued in October 1970, tried to answer that question. As part of the planning process, Chet Mattson began to build an ecological profile of the Meadowlands, the results of which challenged the understanding of the Meadowlands as a “dead” ecosystem. Being relatively new to this landscape himself, he sought out local knowledge and found a twenty-seven-year-old resident of Little Ferry named Don Smith. Smith had grown up trapping and hunting in the Meadowlands. At age eleven, he caught his first muskrat and that gave him the “fever.” At fourteen he started hunting pheasant and duck. The Meadowlands was young Smith’s life. He recalled,

I had a Chesapeake Bay retriever and she’d wait for me, you know how dogs tell time, right? She’d wait by the window and the school bus would pull up at the corner of Washington Avenue and Liberty Street and she’d sit there, my mother would say, the tail going. And I’d get off the bus, cross the street, come in the house, put down my books, if I brought books home, pick up the gun, put on my boots, and her and I would go to the meadows. Every day of the hunt. It was home from school to the meadows. Then if it was trapping season, I would trap before school and after school. I’d go down the meadows at five in the morning with a flashlight checking traps, get home, change, go to that corner, wait for the school bus, go to school. So it was an activity that obviously I loved and enjoyed. But it was, I didn’t realize it at the time, it was planting the seeds for my future.⁵⁶

Smith continued these activities as a young adult and he gained intimate knowledge of the Meadowlands and its wetlands by using them.

⁵⁵ Mattson, “Draft: An Ecological Plan,” 15.

⁵⁶ Don Smith, interview with author, March 17, 2016, Lyndhurst, NJ.

In 1970, Smith had been lamenting the changes that development had wrought in his Meadowlands, where he saw acres of wetlands subsumed by development. He questioned what could stop the destruction. Then his phone rang. He recalled,

I get a call from a Chet Mattson who was working with the early Commission and he wanted someone to show him around from the natural point of view of things. So we took him out in a boat duck huntin', left in the dark one morning up in Carlstadt and took him around and showed him places I thought were the more important parts of the meadows that were functioning wetlands and so forth.⁵⁷

The trip marked the beginning of a “curious friendship” between Smith and Mattson. Curious, because while the Commission’s promise to protect the marsh encouraged Smith, he also saw himself as the “marsh guard, watching the commission to see it doesn’t abuse its privileges.” But, he and Mattson’s “mutual respect for the meadows and Nature created [a] bond” and Mattson later made Smith’s guard position official when he hired Smith to be the Commission’s naturalist and water pollution monitor.⁵⁸

While Mattson gathered local knowledge from people like Don Smith, the Commission also hired scientists to formally survey and evaluate the Meadowlands District for potentially functioning wetlands. Between July and October 1970, George T. Potera observed and collected data from the Kingsland and Sawmill Creek marshes. Bordered on the north and south by railroad lines, on the west by landfills, on the east by the Hackensack River, and bisected by the western spur of the New Jersey Turnpike, the Kingsland-Sawmill Creek marsh had a unique history. Diked at some point in the nineteenth or early twentieth century for agricultural purposes, the marsh had largely

⁵⁷ Don Smith, interview with author.

⁵⁸ George James, “The Wilderness That Won’t Die,” *Hackensack (NJ) Sunday Record*, October 18, 1970.

been drained until a hurricane breached the dikes in 1950, reintroducing tidal flow. Potera found that despite the fact that the wetland was ecologically stressed and suffered from chronic pollution, it also showed a high rate of productivity when compared to other East Coast marshes; it held a diverse and dense population of phytoplankton and a variety of birds. In a single August day, Potera counted eighty-six egrets, and on several occasions he observed more than four hundred sandpipers from a single viewing station. In total, Potera noted forty-three different species of birds, making this part of the study a high point for him and leading him to the conclusion that the Kingsland and Sawmill Creek areas could feasibly be set aside as a wildlife refuge. Potera did note some important problems in the Kingsland-Sawmill Creek area, like chronic pollution and dissolved oxygen levels that limited biologic use, but he also concluded that these problems were not permanent. He believed that with a program of environmental restoration on the Hackensack River, the Kingsland-Sawmill Creek marsh could be improved.⁵⁹

Dr. E. E. McNamara of Lehigh University had also been studying the ecological potential of various marsh tracts in the Meadowlands District, and he came to similar conclusions regarding Kingsland-Sawmill Creek. McNamara concluded that this area was the single most ecologically valuable piece of wetland in the District. He pointed to a particular circumstance that occurred with the construction of the Turnpike to show that the area's problems were not permanent. Fill from the Turnpike had raised the elevation of the mudflats to the east, and *Spartina* marsh grass was taking root. This showed

⁵⁹ George T. Potera, "A Preliminary Ecologic Study and Evaluation of a Section of the Hackensack Meadowlands," November 1970, Report 1970-003, MERI.

McNamara that a deliberate restoration program could be implemented in the Kingsland-Sawmill Creek marsh. Thus, McNamara recommended that the marsh be saved, not for its existing value but for its *potential*.⁶⁰

Environmentalists and other area residents also attested to the ecological viability of the Meadowlands by highlighting the life that did exist there. Speaking to his own experience paddling the Meadowlands, D. W. Bennett of the American Littoral Society said, “there is life along the banks, in the water, on the creek and river bottoms and in the reeds – killifish, grass, shrimp, mussels, crabs and barnacles. There are marsh grasses, songbirds, wading birds and waterfowl.”⁶¹ In a letter to *The Record*’s editor, Jim Macaluso of Saddle Brook said that despite the pollution in Carlstadt’s wetlands, “the abundance of wildlife made up for any unpleasantness.” He reported that in two hours in the marsh, he saw owls, egrets, hawks, muskrat, a cockbird pheasant, and other wildlife.⁶²

All of this served to counter the prevailing image of a “dead” Meadowlands. Don Smith knew that the Meadowlands supported life, he had caught over a thousand muskrats a year there.⁶³ George Potera showed that the Kingsland-Sawmill Creek marsh supported what he characterized as “a moderately dense, viable, but abbreviated aquatic ecosystem,” and both Potera and McNamara determined that the degraded nature of the wetlands that they studied was not a permanent situation.⁶⁴ In fact, the Meadowlands were far from dead; they were “ecologically salvageable.” This understanding

⁶⁰ Goldman, “The Hackensack Meadowlands,” 304-305.

⁶¹ *Public Hearing on Proposed Master Plan Stage II Before the Hackensack Meadowlands Development Commission* (February 25, 1972) (Statement of D. W. Bennett), 31.

⁶² Jim Macaluso, letter to the editor, *Hackensack (NJ) Record*, August 31, 1970.

⁶³ Don Smith, interview with author.

⁶⁴ Potera, “A Preliminary Ecologic Study,” 31.

challenged the old justification for total reclamation and development of the Meadowlands. Instead, an ecologically salvageable ecosystem had potential value as open space. Perhaps even more significantly, that space could be imagined as an integral part of development plans. This idea informed the HMDC's planning process in the Meadowlands and became the underlying premise of the Commission's *Comprehensive Land Use Plan*. That plan stated, "any worthwhile plan for the Meadowlands depends first upon restoration of the environment."⁶⁵

Like Paul Ylvisaker had two years previously, HMDC planners envisioned the creation of a new city on the Meadowlands, one that would house 185,000 people in 70,000 new residential units. But this plan relied on environmental restoration and incorporated open space into the development plans. The plan called for innovative design and construction techniques to protect the District's wetlands. It proposed the idea of clustered development; each cluster would contain 2,500 units constructed on piles over the water, overlooking a 1,500-acre conservation and wildlife reserve that would run the length of the district on either side of the Hackensack River.⁶⁶

An image included in the *Comprehensive Land Use Plan* shows a vision of the island clusters (Figure 12). In the artist's rendition, the marsh and river are central. The artist's perspective is from the bank of the Hackensack River looking across the river and wetlands at the residential clusters in the background. A flock of wading birds feed in the river between the bank and a clump of marsh grass while gulls soar in the sky above.

⁶⁵ Clifford Goldman and Chester Mattson, *Hackensack Meadowlands Comprehensive Land Use Plan* (Lyndhurst, NJ: Hackensack Meadowlands Development Commission, 1970), 5.

⁶⁶ *Ibid.*, 40.

But, in this image the river is not just for the birds, people are shown enjoying the Hackensack as well. A sailboat skirts the edge of the marsh grass on the left side of the image and several sailboats move through the water that separates the two island residential clusters. A canoer paddles the river on the right side of the image. Here the Hackensack River is far from “dead” – it supports avian and human life.⁶⁷ In this new vision, HMDC planners reimagined the Hackensack River and surrounding wetlands as healthy and vital to residential use of the Meadowlands and residential use was imagined as vital to the clean-up of the river. Chester Mattson told a *New York Times* reporter, “we plan housing in clusters near the river edge so the river will have to be cleaned up to make the housing area habitable. Then the housing will provide the tax base to pay for such things as sewer plants that will be needed to keep the water areas clean.”⁶⁸ In this vision, preservation and development did not simply coexist, they were synergistic.

The plan also proposed a central commercial and business center called Berrys Creek Center, to be developed along Berrys Creek Canal. Again, the water was central. The plan said that Berrys Creek Center “should have all the charm of Venice’s San Marco Plaza,” and added, it would “be a focal point in the changed perception of the Meadowlands.”⁶⁹ In an artist’s rendition of Berrys Creek Canal (Figure 13), a wide promenade along the river is foregrounded. All along the promenade, well-dressed men and women enjoy afternoon strolls and conversation while overlooking the Hackensack River. Sleek, modern buildings stand on the opposite bank, while a flock of gulls soars

⁶⁷ Ibid., 41.

⁶⁸ David Bird, “Meadowlands Plan Will Help Ecology,” *New York Times*, November 24, 1970, ProQuest Historical Newspapers (119006495).

⁶⁹ Goldman and Mattson, *Comprehensive Land Use Plan*, 42.

overhead, showing that the Meadowlands can accommodate the needs of a modern economy and the needs of wildlife.⁷⁰

The *Comprehensive Land Use Plan* put forth an image of a Meadowlands that was ecologically salvageable. The plan acknowledged the current perception of the Hackensack as a “dead” river but rested on the belief that the Hackensack River could be cleaned. The plan states, “we believe that a half dead river should be given life not given up.”⁷¹ But the plan also rejected the idea that protection of environmental values required that development be stopped altogether. Instead, it argued that the real question “is whether man can respect his environment yet live pleasantly in close proximity to the industrial sinews of his civilization.”⁷² The plan answered in the affirmative.

Creating a New Meadowlands: The Master Plan of 1972

The *Comprehensive Land Use Plan* laid out the vision for the Meadowlands; the HMDC’s final Master Plan implemented that vision. The HMDC had no money with which to purchase land, and it created its Master Plan before federal legislation protecting wetlands existed. Yet, early staff, particularly Don Smith and Chet Mattson, took seriously the HMDC’s mandate to protect the Meadowlands’ environment. Smith later recalled that he and many of the other early HMDC staff members “would have loved to preserve it all,” but they had to work within the confines of the legislative mandate. “So,” he said, “we had to do what we could do with what we had to do it with . . . a lot of

⁷⁰ Ibid., 43.

⁷¹ Ibid., 5.

⁷² Ibid.

it was innovative, a lot of think-tanking going on to get things done without spending money, which we didn't have."⁷³ The Master Plan that they created used new zoning techniques and environmental controls to shape the urbanization process and to protect wetlands and open space.⁷⁴

Containing Garbage at Kingsland-Sawmill Creek

"If the Meadowlands are fully developed, where do we put all our garbage?"⁷⁵

Richard J. Sullivan, the Director of the New Jersey Department of Health's Division of Clean Air and Water, had asked this most basic question during the legislative hearings on the Hackensack Meadowlands Title and Development Act (S. 518) in 1967. Because one of the responsibilities given to his newly-created Division was the regulation of solid waste disposal in the state, Sullivan had a keen interest in the matter of trash. He argued before the legislature that any land use regulations for the Meadowlands must provide for the disposition of solid waste, claiming that if the Meadowlands landfills were closed "we would have a major problem on our hands and I have no idea what the solution to it would be."⁷⁶

Bowing to the Division of Clean Air and Water, municipalities, and private haulers that relied on the Meadowlands' dumps, the legislature required the HMDC to

⁷³ Don Smith, interview with author.

⁷⁴ Hackensack Meadowlands Development Commission, *Master Plan: Hackensack Meadowlands District Zoning Regulations*, December 28, 1971, Hackensack Meadowlands Papers, Fairleigh Dickinson University Digital Archives; Hackensack Meadowlands Development Commission, *Open Space Plan for the Hackensack Meadowlands*, 1972, Hackensack Meadowlands Papers, Fairleigh Dickinson University Digital Archives; Hackensack Meadowlands Development Commission, *Master Plan: Wetlands Order Procedures and Guidelines*, November 8, 1972, MERI.

⁷⁵ *Public Hearing on Senate Bill No. 518*, Vol. 3 (Statement of Richard J. Sullivan), 74.

⁷⁶ *Ibid.*, 85.

continue to accept at least the amount of garbage that was dumped in the Meadowlands when the bill was passed. As of 1968, the Meadowlands' eleven landfills had a remaining capacity of only sixteen million tons, a capacity that would be met within seven and a half to ten years.⁷⁷ Meanwhile population growth and increasing affluence lead to a steep increase in per capita waste generation. In 1970, the average American produced three and a quarter pounds of waste daily, an increase of over twenty-one percent from the previous decade and these numbers held true in northern New Jersey.⁷⁸

Garbage provided the first real test of the reality of the residential vision put forth in the HMDC's *Comprehensive Land Use Plan*. Persistent odors and dump fires precluded any residential development near the landfills. But perhaps more importantly, as the plan suggested, "the perception of the Meadowlands could not be transformed as long as the dominant view from roadsides and hillsides was the spread of garbage mounds."⁷⁹ Continued dumping in the Meadowlands was incompatible with its residential future.

Garbage most immediately threatened the Kingsland-Sawmill Creek marsh, the same wetland that George Potera and E. E. McNamara had found was one of the most ecologically important areas in the Meadowlands District. In 1968, before the HMDC was created, Lyndhurst Township had signed a lease with Viola Landfill and other garbage hauling companies to dump on a 440-acre tract in the Kingsland-Sawmill Creek

⁷⁷ Zurn Environmental Engineers, *Analysis of Alternative Solid Wastes Management Systems for the Hackensack Meadowlands District*, prepared for Hackensack Meadowlands Development Commission, State of New Jersey, May 1970, p. II-5.

⁷⁸ Eileen McGurty, "Solid Waste Management in 'The Garbage State: New Jersey's Transformation from Landfilling to Incineration,'" in *New Jersey's Environments: Past, Present, and Future*, ed. Neil M. Maher (New Brunswick, NJ: Rutgers University Press, 2006), 34.

⁷⁹ Goldman "The Hackensack Meadowlands," 329.

marsh. Because early scientific research was revealing the ecological importance of the Kingsland-Sawmill Creek marsh, when Viola applied to the Commission for a permit to begin dumping at its Avon Landfill site, the HMDC denied the company's request.⁸⁰

The HMDC used a creative tool to challenge the spread of garbage – the state's riparian claims, or the state's right to all lands currently or formerly covered by the mean high tide. Though the HMDC had real concern about the effects of dumping in a wetland, it did not reject Viola's permit application on environmental grounds. Instead, the HMDC argued that because it was a riparian area, Lyndhurst did not actually hold title to the site. Therefore, the Township's lease with Viola was not valid.⁸¹

Viola ignored the ruling and began to construct embankments in preparation for landfilling activities, forcing the HMDC to seek an injunction in New Jersey's Superior Court. There, Viola argued that its customers relied solely on the Meadowlands landfill and forecasted a garbage crisis in northern New Jersey if the court limited Avon Landfill's expansion. Convinced by this argument, the Superior Court ruled that the company could open a portion of the landfill, pending a full hearing before the HMDC. The fallacy of Viola's argument that the Avon landfill was the only place to dump waste was revealed when a flood breached the newly-constructed dikes around the landfill in October 1970, forcing the company to cease dumping there and to find additional capacity in its existing landfills. As Clifford Goldman, the first Acting Executive Director of the Meadowlands Commission, later recalled, "the Commission's technical

⁸⁰ Ibid., 331-332.

⁸¹ Ibid.; "Court to Decide Dump Site Dispute," *Hackensack (NJ) Record*, Southwest Edition, October 1, 1970.

judgments had been confirmed by events.” When HMDC Commissioners issued a final denial of the permit, Viola did not appeal. The HMDC had succeeded in protecting the Kingsland-Sawmill Creek marsh and the vision put forth in its Land Use Plan. By using the riparian claims argument, the HMDC forced the question of landfilling before the court, but without a conclusive court ruling, the window remained open for other challenges.⁸²

A second challenge to Kingsland-Sawmill Creek began in 1971 when the Meadowlands’ largest landfill operator, Municipal Sanitary Landfill Association (MLSA) applied to the HMDC for a permit to allow it to extend its landfills into the Kearny side of the Kingsland-Sawmill Creek wetland. Taking a different approach in this case, the HMDC rejected MLSA’s request to extend into the wetlands, but instead allowed the company to increase the height of its existing landfills. This allowed the landfill to extend its capacity for another six years, while protecting adjacent wetland tracts. MLSA appealed the decision in court, but the Appellate Court ruled in favor of the HMDC, giving the Commission the firm judicial backing for its power to limit landfill expansion into wetlands that it had lacked in the Viola case.⁸³

By the end of 1971, the HMDC had successfully contained the extension of landfills into wetland areas. The Viola and MLSA decisions together had important implications. Without purchasing an acre of land, and before federal legislation protected wetlands, the HMDC had protected the entire Kingsland-Sawmill Creek marsh from waste disposal plans that had been put in motion even before the HMDC was created.

⁸² Goldman, “The Hackensack Meadowlands,” 332-338, quote from p. 336.

⁸³ *Ibid.*, 338-344.

For its actions, the HMDC gained support from residents in Kearny who opposed landfilling operations in their town and from environmentalists who watched the HMDC vigorously fight a powerful private industry in the name of protecting the environment.⁸⁴ The success here cannot be overstated. When asked about the projects of most importance in the early years of the HMDC, Don Smith said, “the Sawmill Creek will always be top, top of the list. To have stopped all that from being filled with garbage was monumental.”⁸⁵

Innovative Zoning as Environmental Control

The HMDC provided an added layer of protection to the Kingsland-Sawmill Creek wetland when it promulgated its zoning regulations in December 1971. To protect the most valuable wetland acreage in the District, the HMDC created a Marshland and Open Water Preservation Zone. In response to the scientific studies undertaken on the Kingsland-Sawmill Creek marsh that showed that this area was particularly valuable and able to be restored, the Commission moved that entire wetland tract out of residential zoning and placed it under the protection of the Marshland Preservation Zone, which permitted only scientific study, nature observation and related construction. With this zoning code, the HMDC could use its power to protect certain ecologically valuable lands from development. It protected 2,210 acres with this type of zoning.⁸⁶

⁸⁴ Ibid., 344-345.

⁸⁵ Don Smith, interview with author.

⁸⁶ Hackensack Meadowlands Development Commission, *Master Plan Zoning Regulations*, VI-3 – VI-4; Hackensack Meadowlands Development Commission, *Hackensack Meadowlands District Official Zoning Map*, adopted November 8, 1972, Hackensack Meadowlands Papers, Fairleigh Dickinson University Digital Archives.

Because the HMDC saw that several large undeveloped tracts remaining in the Meadowlands were the key to implementing a unified development scheme, it zoned these tracts as Specially Planned Areas (SPAs) which would be protected from piecemeal development, ensuring that land was used in the most efficient manner to promote the vision of the *Comprehensive Land Use Plan*. A developer wishing to build in an SPA had to submit a comprehensive development plan for the entire site before any development could begin.⁸⁷

Within the SPAs, the HMDC used the forces of development to extract open space preservation. In Parkside Residential SPAs, developers had to devote thirty-five percent of the land to public open space. In Island Residential SPAs, this requirement increased to fifty percent. To ensure that the highest quality wetlands were protected, the Zoning Regulations worked in concert with the HMDC's Open Space Map, which mapped out the most ecologically viable wetlands in the district. In this way, the HMDC ensured that each acre of developed land in the plan brought with it at least one acre of open space protection, making a total of 5,450 acres of open space protected in various forms, from wetland and open water preservation to residential parks. The Master Plan working in concert with the Open Space Map ensured that this open space was created in a systemic fashion, rather than by a piecemeal basis.⁸⁸ As Donald Borg said at a public hearing on the Master Plan, "the concept behind this plan is to make open space an integral part of the fabric of life woven into the Meadowlands District."⁸⁹

⁸⁷ Hackensack Meadowlands Development Commission, *Master Plan Zoning Regulations*, VII-1.

⁸⁸ *Ibid.*, VII-4 – VII-5, VII-11 – VII-16.

⁸⁹ *Public Hearing on Proposed Master Plan Stage II*, (February 25, 1972) (Statement of Donald Borg), 38.

The Master Plan's Zoning Regulations also promulgated very specific building restrictions. In the Island Residential areas, the regulations required developers to build residential and commercial structures on man-made islands or on piles and platforms on man-made lagoons adjacent to the river, in a manner that would not cause ecological damage to surrounding marshland. The regulations were meant to protect the existing waterways and creek beds and permit tidal inundation of the surrounding wetlands.⁹⁰

The Wetlands Order

Because of the work of Chet Mattson, George Potera, E. E. McNamara and other scientists, and local residents like Don Smith, the HMDC also recognized that the Hackensack Meadowlands was a key part of the larger Hudson-Raritan estuarine ecosystem; its waters connected the Meadowlands with New York Bay and the Atlantic Ocean. Even in its degraded state, the Meadowlands played an important role in the aquatic food system, served as habitat for a number of species, protected the region from flood damage, and diluted untreated wastewater. So, the Commission also adopted a Wetlands Order on November 8, 1972 that offered even stronger protections for the District's remaining wetlands. Within the Specially Planned Areas, the Wetlands Order required developers to prepare a Wetland Environmental Impact Assessment that addressed air quality, water supply, noise, energy supply, and transportation. As part of the assessment, the developer had to prepare an ecological inventory of land form, vegetation, wildlife, water quality, and marine productivity in consultation with HMDC

⁹⁰ Hackensack Meadowlands Development Commission, *Master Plan Zoning Regulations*, VII-11 – VII-14.

staff and an assessment of the potential disturbance from construction activities. The Wetlands Order prohibited alteration of existing waterways.⁹¹ This strengthened previous zoning requirements that required a developer to dedicate at least fifty percent of its planned residential and commercial area to open space in the form of public recreational facilities, landscaped areas, pedestrian and bicycle paths, marinas and docks, open-water lagoons, and marsh.⁹²

The HMDC used these innovative zoning and regulatory tools both to extract open space protections from developers and to integrate environmental decisions into the development process.⁹³ Until 1973, these regulations were simply ideals, existing only on paper. Would they work? Could a development and a viable marsh coexist? Would developers want to build houses in the Meadowlands and would people want to live there? A development called Harmon Cove, proposed in 1973 by Hartz Mountain Industries, provided an early test of the feasibility of this part of the Master Plan.

Harmon Cove

Hartz Mountain Industries had its roots in 1926 when German Jewish immigrants Max and Gustiv Stern arrived in New York City with five thousand canaries. They sold the birds to the John Wanamaker department store and over the next decade and a half, the Sterns returned to Germany to purchase more canaries to sell to other large retailers.

⁹¹ Hackensack Meadowlands Development Commission, *Master Plan: Wetlands Order Procedures and Guidelines*, November 8, 1972, p. 7-11, 13-16, 18.

⁹² Hackensack Meadowlands Development Commission, *Master Plan Zoning Regulations*, VII 14 - VII-16.

⁹³ Chester P. Mattson, "Innovative Zoning as an Environmental Control Technique," (paper, Ramapo College Land Use Conference, March 28, 1973), p. 29, M Doc 1973.006, MERI.

Eventually, the Sterns purchased their own store front in New York City and began to produce and sell birdseed and then a full range of pet products. In 1966, looking for room to expand the family's growing pet supply business, Max's son Leonard bought a tract in Bayonne, New Jersey on which he developed a large warehousing facility. Here, the younger Stern was able to take advantage of Bayonne's location near the growing interstate highway system, the Port of New York and New Jersey, and Newark Airport. With the success of his Bayonne venture, Stern saw a future in warehouse development and set his sights beyond the Hudson River to the then largely undeveloped Hackensack Meadowlands.⁹⁴

In the 1960s, just before passage of the Hackensack Meadowlands Reclamation and Development Act, Hartz Mountain Industries purchased 1,250 acres on the Hackensack River in the Secaucus Meadowlands for about \$8,000 an acre. Their development project would change the landscape and character of the Meadowlands. Hartz initially planned to expand its warehousing project to the large tract of wetland it had just purchased, but the creation of the Hackensack Meadowlands Development Commission and the adoption of its Master Plan foiled the company's plans. A sprawling development of warehouses conflicted with the HMDC's newly-drafted Land Use and Master Plans.⁹⁵

Hartz Mountain's land in Secaucus was located between the Hackensack River and the current Meadowlands Parkway in an area that the HMDC had designated as

⁹⁴ Robert Ceberio and Ron Kase, *New Jersey Meadowlands: A History* (Charleston: The History Press, 2015), 76-78.

⁹⁵ *Ibid.*, 78.

“Specially Planned Area Island Residential 1” (SPA IR-1). The land was therefore subject to the planning and zoning regulations that required a comprehensive large-scale mixed-use plan, with structures on man-made islands or on piles and platforms on man-made lagoons adjacent to the river so as to avoid ecological damage to surrounding wetland. Because the HMDC wanted to create compact developments, it required developers to construct multi-unit housing with no fewer than twenty residential units per acre; no single-family or two-family structures were permitted. And fifty percent of the land was to be set aside as open space. Hartz’s warehouse plans conflicted with the new regulations.⁹⁶

HMDC staff refused to depart from the new vision for the Meadowlands as codified in the Master Plan. So Hartz reworked its warehousing plans to fit the new vision. In 1973 the company came back to the HMDC with a mixed-use residential development called Harmon Cove.⁹⁷ On 257 acres along the Hackensack River in Secaucus, Hartz then proposed a twenty-five-million-dollar project to build ten three-story apartment buildings with a total of 632 residential units and 113 two-story town houses, a ten-story office building, and a hotel and conference center complex. In line with the Master Plan, Hartz proposed to build its residential and commercial structures on a series of landfilled “keys” jutting into the Hackensack River from its eastern bank.

⁹⁶ Hackensack Meadowlands Development Commission, *Master Plan Zoning Regulations*, VII-11-16; Hackensack Meadowlands Development Commission, *Official Zoning Map*.

⁹⁷ Ceberio and Kase, *New Jersey Meadowlands*, 80-81.

Each key would hold an apartment house and townhouses with direct access to the Hackensack, where boats could moor at docks directly in front of the residences.⁹⁸

Though the HMDC did ultimately grant Hartz Mountain Industries some variances related to housing mix and commercial development, the Commission held fast to the philosophy and governance underlying its ecological plan for the Meadowlands. Attentive to traffic and pollution concerns, it refused to grant Hartz's request for a variance to defer provision of mass transit facilities.⁹⁹ Hartz also complied with the HMDC's requirements that it conduct an ecological inventory of the SPA IR-1 site. During 1973, the company conducted field investigations of the site in which it mapped vegetation types, inventoried wildlife, and monitored water quality. Hartz used this inventory to select the most valuable portion of the property to preserve – altogether over one hundred acres along the river would be preserved as open marsh in addition to open space and recreational facilities within the developed parts of SPA IR-1. Hartz also agreed to develop a fourteen-and-a-half-acre public park with a boat launch and boardwalks for nature observation at the northern end of SPA IR-1. Hartz's environmental inventory revealed high bacterial concentrations from raw sewage flow from existing Secaucus residences. At its own expense, Hartz agreed to tie these residences into the existing municipal sewage treatment system, thus halting this fecal assault on the region's water. As Hartz Mountain's representatives pointed out in a letter

⁹⁸ Hackensack Meadowlands Development Commission, *Decision on Application of Hartz Mountain Industries for Approval of a General Plan for Island Residential I, Specially Planned Area in Secaucus, New Jersey*, September 11, 1974, Hackensack Meadowlands Papers, Fairleigh Dickinson University Digital Archives; Jon Clemens, "A \$25-Million Community," *Hackensack (NJ) Record*, September 12, 1974.

⁹⁹ Ibid.

to the EPA, there were no state or local funds available to do this. In Hartz's estimation, the only hope for the river lay with them, the private developer.¹⁰⁰

Harmon Cove was a grand experiment and it was a risky endeavor for both sides. Hartz Mountain Industries took an incredible gamble in proposing the first residential development to be built in the Meadowlands District without, as the company's President Leonard Stern said, "one penny of public funding on marsh that only five years ago was considered to be undevelopable."¹⁰¹ For the HMDC, Hartz's proposal tested the HMDC's ecological vision for the Meadowlands and tested the strength and flexibility of the Master Plan's zoning regulations. In its decision to approve Hartz's plan, the HMDC was grateful for,

the opportunity to realize a key piece, yet untried, of the Plan's vision: that people, by finding the River beautiful, choose to live next to it as that river's advocates and friends, rather than, by finding it abhorrent, back their factories in its direction only to discover it, eventually, as a drainage problem for a vast, industrial park. We believe that even a partial success here will result in a net gain for housing.¹⁰²

But, could the trajectory of Meadowlands development actually be shifted from industrial warehousing to residential living space? And could it do so in a way that respected both the needs of the marsh and the needs of a growing urban community?

In September 1974, many remained unsure, but optimistic, about the outcome of this experiment. In response to the HMDC's approval of Hartz's permit application for Harmon Cove, *The Record's* editorial board wrote,

¹⁰⁰ James A. Schmid to Harold Rosen and Eugene Heller, November 1, 1974, Hartz Mountain Folder, Box 7 Hartz Mountain and Legal Files, MERI.

¹⁰¹ Jon Clemens, "A \$25-Million Community," *Hackensack (NJ) Record*, September 12, 1974.

¹⁰² Hackensack Meadowlands Development Commission, *Decision on Application of Hartz Mountain Industries*, 55.

we won't know for sure . . . whether it is possible to preserve a hundred acres of marshland in the middle of an apartment complex until the apartments are actually built . . . we can't know on the basis of last week's decision whether the commission will realize its vision for the meadowlands, or even for this small piece of it. But at least the vision remains in place, after six long, tough years. It's an encouraging sign.¹⁰³

That vision did become a reality at Harmon Cove. Governor Brendan Byrne broke ground on the development on March 4, 1975 and the townhouses were occupied by the end of the year.

Harmon Cove was, indeed, a success. As the HMDC had hoped, residents oriented their lives toward the river and they appreciated the access that Harmon Cove provided. An ad for Harmon Cove showed houses on the edge of the Hackensack River with a sailboat passing by. Riverfront town houses came with docks and residents spoke of waterskiing and boating on the river and the recreation-oriented life that Harmon Cove allowed them.¹⁰⁴ Harmon Cove also helped to change the entire image and perception of the Secaucus Meadowlands. In 1979, Joseph Alfieri, a Secaucus real estate broker, said that Harmon Cove had helped his town to "overcome the stigma of garbage dumps." He noted that in the five years since Hartz began building Harmon Cove, real estate values had increased more rapidly than in the five preceding years.¹⁰⁵ In 1977 Secaucus Mayor Paul Amico called Secaucus "the prestige town in Hudson County."¹⁰⁶ Writing forty years after Hartz Mountain broke ground on Harmon Cove, Robert Ceberio and Ron Kase still concluded that "Hartz Mountain Industries was the engine that moved the

¹⁰³ "Moving Ahead in the Meadows," *Hackensack (NJ) Record*, September 16, 1974.

¹⁰⁴ Display Ad, *New York Times*, May 15, 1977, ProQuest Historical Newspapers (123322907).

¹⁰⁵ Ellen Rand, "Harmon Cove is Going Skyward," *New York Times*, January 21, 1979, ProQuest Historical Newspapers (121005819).

¹⁰⁶ Robert Hanley, "Thriving Secaucus, Its Pig Farms Gone, Coming Up to Sniff," *New York Times*, May 6, 1977, ProQuest Historical Newspapers (123342306).

entire Meadowlands region from a forgotten marsh crossed by the turnpike into a dynamic piece of the New York Metropolitan Area.”¹⁰⁷ By 1976, the editor of the Newark’s *Star-Ledger* could confidently proclaim that “there’s a different aroma over the Meadowlands, and it’s the sweet smell of success.”¹⁰⁸

Conclusion

Through its planning processes, the HMDC created a unique vision of what preservation in a degraded, urban estuary could look like. It made the argument that, far from dead, the Hackensack River and its Meadowlands could be salvaged ecologically. Once clean, the river and wetlands would be an asset, rather than an obstacle to development. The *Comprehensive Land Use Plan* imagined people living, working, and recreating on the banks of the Hackensack River. In creating this vision, the plan challenged an existing understanding of the human relationship to nature that suggested that any intrusion of people into nature caused harm. In quite a different vision, the HMDC envisioned the new Meadowlands’ residents as stewards of their marshy home.

The HMDC argued that development was not anathema to preservation. In fact, it was foolish to suggest that development could be halted in an urban wetland located fewer than five miles from Times Square and impossible to end development in light of the HMDC’s legislative mandate that called for the comprehensive development of the region. As Chet Mattson argued, “one cannot be an environmentalist at the Hackensack

¹⁰⁷ Ceberio and Kase, *New Jersey Meadowlands*, 79.

¹⁰⁸ James T. Prior, “The Meadowlands Miracle,” *New Jersey Business* (December 1976): 72.

Meadowlands Development Commission and be against development.”¹⁰⁹ The challenge was to figure out how both imperatives could be met. Chet Mattson suggested “we need to rethink how our homes, jobs, highways, and open spaces will be produced and intermingled. We need desperately to rethink and reshape the force of urbanization.”¹¹⁰ For the HMDC that meant imposing innovative zoning techniques to shape development and using development to extract open space protections.

The HMDC’s planning efforts coincided with a growing national environmental movement. In 1968, only two people who testified before the New Jersey State Legislature spoke about environmental issues. Two years later, when the HMDC released the first stage of its Master Plan for the Meadowlands, nearly half of those who testified before the Commission in regards to the plan brought up environmental concerns, and they offered their own ideas for what constituted “balance” in an urban estuary.

¹⁰⁹ Mattson, “Innovative Zoning,” 33.

¹¹⁰ Ibid.

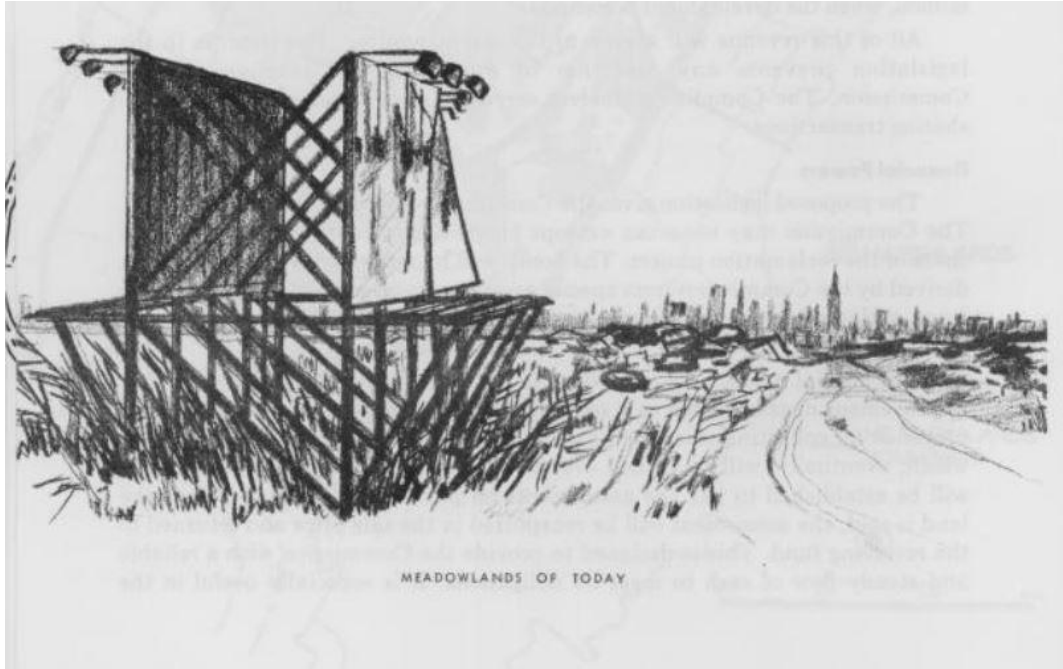


Figure 9. "Meadowlands of Today."

Source: State of New Jersey Department of Community Affairs, *The Hackensack Meadowlands 1968* (Trenton, NJ: Division of State and Regional Planning, 1968), 20.



Figure 10. "Meadowlands of The Future."

Source: State of New Jersey Department of Community Affairs, *The Hackensack Meadowlands 1968* (Trenton, NJ: Division of State and Regional Planning, 1968), 21.



Figure 11. “Meadowlands of The Future.”

Source: State of New Jersey Department of Community Affairs, “The Hackensack Meadowlands 1968” (Trenton, NJ: Division of State and Regional Planning, 1968), 23.



Figure 12. Artist's Rendition of Island Residential Clusters

Source: Clifford Goldman and Chester Mattson, *Hackensack Meadowlands Comprehensive Land Use Plan* (Lyndhurst, NJ: Hackensack Meadowlands Development Commission, 1970), 41.



Figure 13. Artist's Rendition of Berrys Creek Center.

Source: Clifford Goldman and Chester Mattson, *Hackensack Meadowlands Comprehensive Land Use Plan* (Lyndhurst, NJ: Hackensack Meadowlands Development Commission, 1970), 43.

RESISTING A GROWTH AGENDA

The creation of the Hackensack Meadowlands Development Commission (HMDC) and its early planning efforts in the late 1960s and early 1970s coincided with a growing national environmental movement. In contrast to earlier twentieth century movements, which grew out of concern about the overuse of resources or emphasized aesthetic qualities, this environmentalism was sparked by the realization that humans were part of the natural world, that human life depended on the environment, and that human activities had detrimentally impacted that environment. Several highly publicized environmental catastrophes spurred the movement. In 1962, Rachel Carson's *Silent Spring* proved the lasting effects of synthetic pesticides; in January 1969 the nation experienced its largest oil spill to date from a blowout on an oil platform in the Santa Barbara Channel; and that summer chemical pollution in Cleveland's Cuyahoga River ignited. Towns surrounding the Meadowlands experienced their own major environmental emergency in November 1966, when smog covered the New York metropolitan area for three days. The *New York Times* published a photograph on its front page showing Lower Manhattan shrouded in smog with a headline, "Smog Here Nears the Danger Point; Patients Warned." In 1967 the paper reported that the smog event had killed 168 people and warned that countless others would continue to suffer from its ill effects. Four years later smog covered the entire eastern seaboard from Boston to Washington D. C.¹

¹ "Smog Here Nears the Danger Point; Patients Warned," *New York Times*, November 25, 1966, ProQuest Historical Newspapers (117486858); David Bird, "November Smog Killed 168 Here: Study Shows 24 Died

These events created a sense of environmental urgency and crisis that fueled the environmental movement. Environmentalists framed their concerns as quality of life issues. As they came to understand that pollution, in all its forms, was deadly, some began to critique their growth-oriented modern society. While this capitalist critique was strongest among a growing radical sector of the movement, even mainstream groups like the Sierra Club used the term “no growth” to describe their position.²

In the Meadowlands, environmentalists also began to challenge the unquestioning devotion to growth which had resulted in so much loss of the Meadowlands’ wetlands in the nineteenth and twentieth centuries. Their voices first emerged at a public hearing on the HMDC’s First Stage Master Plan early in January 1970. This portion of the Master Plan placed ten thousand acres into “planning areas” on which development would be halted in order to protect those areas from premature development that could conflict with the final planning process.³ Despite the temporary freeze on development, individual citizens and representatives of local and national environmental organizations used the public hearings to express concern about the HMDC’s seemingly pro-growth agenda. Alan J. Miller, the National Audubon Society’s Mid-Atlantic States Representative, told the HMDC that his organization believed that “a freeze on all development in the area in which you have control is an absolute necessity. Let’s not keep chipping off another piece in our ignorance.”⁴ D. W. Bennett, Conservation

a Day Over a Period of a Week,” *New York Times*, October 27, 1967, ProQuest Historical Newspapers (117857969).

² J. Brooks Flippen, *Nixon and the Environment* (Albuquerque: University of New Mexico Press, 2000), 137.

³ *Public Meeting of the New Jersey Hackensack Meadowlands Development Commission* (January 6, 1970) MERI.

⁴ *Ibid.*, (Statement of Alan J. Miller, Mid-Atlantic States Representative, National Audubon Society), 93.

Director for the American Littoral Society, agreed that “the best use for the Hackensack Meadows is to preserve as much as possible, beginning with all of it, as open space, and its most important role should be non-development.”⁵ Either one supported development in the Meadowlands, or one supported preservation of the wetlands, there could be no compromise position. Bennett explained this thinking,

a person is called an idealist if he urges preservation of an area such as the Meadows for some of its natural, open space values, when the Meadows have been called the single most valuable piece of undeveloped real estate in the world. And a person is called a realist if he espouses development of all land so that growth can be achieved. I submit that the two words should be switched around. I think an idealist is a person who thinks that, especially in densely populated, densely industrialized New Jersey, more development, more industry, more concentration of people, more power, and more of everything, should be our goal. A realist, on the other hand, knows that the proper future for the metropolitan region, for New Jersey, and for the Meadows is to first slow down, then to stop, and finally to reverse the drive for what we now call progress.⁶

For Bennett and the others who testified, the only way to restore any “balance” of nature in a heavily assaulted urban estuary was to stop any further assault. In the case of the Meadowlands, that meant an end to all development.

Two issues in the early 1970s catalyzed environmentalists to argue for an end to development: the HMDC’s proposal to build a garbage incinerator and the New Jersey Sports and Exposition Authority’s plans to build a sports complex on 750 acres of wetlands. Concern over these two proposals spilled over into concerns on the HMDC’s final Master Plan, even though the HMDC had envisioned that Master Plan and its zoning and wetlands regulations as a way to protect the balance of nature and control the effects

⁵ Ibid., (Statement of D. W. Bennett, Conservation Director, American Littoral Society), 115.

⁶ Ibid., 119-120.

of urban growth in the estuary. Shaped by a growing sense of imminent environmental crisis, environmentalists increasingly saw the Master Plan as part of a pro-growth agenda that threatened all life in the region. In their opposition to the incinerator, Sports Complex, and Master Plan, environmentalists offered their own interpretation of what “balance” meant in an urban estuary. Because the Meadowlands had been assaulted for centuries and development overtook acres of wetland each day, the scales, they argued, had been heavily tipped to over-development, over-pollution, and over-use. They suggested any nod to “balance” in the Meadowlands would require a complete end to development. The Meadowlands’ wetlands were not vacant space that could be used to redirect and shape the process of urbanization, instead this open space needed to be protected to provide a buffer against those forces of urbanization. Total preservation of the wetlands as open space, environmentalists argued, was the only answer to solve the environmental crisis wrought by rampant growth.

The “Illogical Incinerator”: Trading the Air for the Land

In the early 1970s, air pollution was one of the most troublesome and dangerous environmental problems in America’s cities. Residents of the New York metropolitan area had suffered through two devastating smog events since the mid-1960s and by 1970, exhaust from the nation’s 100 million automobiles and emissions from industrial sources were well-known causes of health-threatening air pollution.⁷

⁷ Flippen, *Nixon and the Environment*, 65.

Environmentalists in New York and New Jersey blamed the region's poor air quality on its overdevelopment and feared that the HMDC's development plans would only increase air pollution. Several who testified at the HMDC's public hearings on the First Stage Master Plan framed their concerns in reference to pollution's effects on human health. In her testimony, Dr. Roslyn Barbash of Teaneck spoke of her patients' complaints of clogged noses and heavy chests upon return to northeastern New Jersey from "cleaner air states." She warned of the "insidious, long range effects" of pollution on otherwise healthy populations and asked, "are our children the respiratory cripples of tomorrow? Exposed to the toxins and dusts of our badly polluted air, will they be the future bronchitics [sic], emphysema cases, chronic asthmatics?"⁸ Alan J. Miller of the National Audubon Society asked, "how much more air pollution can this area take? . . . Do we have to wait until 4,000 people die as happened in London in the 1950's before we do something about it?"⁹ Drs. Murray Weinstock and J. Ladenheim warned *The Record's* readers about the increased pollution that would come with Meadowlands development and cautioned that "the effects of pollution and crowding on the cardiovascular, pulmonary, and nervous systems are just beginning to be appreciated."¹⁰ Anne Hunter, of Better Air for Bergen ended her testimony before the HMDC with the plea, "I beseech the Commission to summon enough strength to withstand the economic pressures for the greater goal of a quality survival."¹¹

⁸ *Public Meeting* (January 6, 1970) (Statement of Dr. Roslyn Barbash), 4.

⁹ *Ibid.*, (January 6, 1970) (Statement of Alan J. Miler), 86.

¹⁰ Murray Weinstock and J. Ladenheim, letter to the editor, *Hackensack (NJ) Record*, December 15, 1970.

¹¹ *Public Meeting* (January 6, 1970) (Statement of Anne Hunter, Better Air for Bergen), 35.

Even as the region suffered from the effects of air pollution, the solid waste issue had also reached “crisis” levels. In 1972, Commission staff member James McCoy predicted that at the current dumping rates, the Meadowlands would be “a garbage civilization” within two years. With 7,000 tons of waste dumped each day in the Meadowlands, the height of all its landfills had risen from thirty-five to fifty feet in only two years. McCoy lamented, “we have a damn mountain of garbage in a 3,000-acre area and the mountain is getting higher all the time.”¹² The HMDC had taken actions to limit the extension of landfills at the Kingsland-Sawmill Creek marsh, but in light of its legislative mandate to provide for garbage disposal, any limit on landfill dumping required finding an alternative disposal method.

By this time, several consultants had already studied the Meadowlands’ garbage problem and concluded that incineration provided the most reliable, long-term solution. The Arthur D. Little Company’s report to the HMDC forecast that to meet its legislatively mandated waste disposal requirements, the HMDC would need an incinerator that could burn ten thousand tons of garbage per day. This was four times the capacity of the largest incinerator in the world at that time. Realistically, the HMDC believed it could construct a system that could burn five thousand tons a day. Even then, an incinerator would not be the end of the Meadowlands’ garbage problem. The Meadowlands took in garbage from all of northern Jersey and parts of New York, and in the five years in which the incinerator would be under construction, projected waste from those existing sources was expected to rise by sixteen thousand tons a week. Each ton

¹² Pranay Gupte, “Garbage Dump in ‘State of Emergency,’” *New York Times*, March 5, 1972, ProQuest Historical Newspapers (119387858).

deposited further stressed both the estuarine ecosystem and the Commission's development plans. The Meadowlands Commission needed to act.¹³

In August 1971, the HMDC announced plans to construct a \$100 million incinerator on an industrial tract on the banks of the Hackensack River in Kearny. After visiting an incinerator in Chicago, the HMDC's Chief Engineer, Richard Harries, and a representative from the Public Service utility company devised a plan by which steam from the incinerator could be used to fuel the boilers at Public Service's Kearny generating station. Harries also studied possible reuses for the ash and slagged tailing residue from the incinerator, finding market uses for both materials. The HMDC's analyses of projected air pollution from the incinerator concluded that incineration would not add substantially to the region's air pollution. Pollution control technology would limit the particulates that the incinerator put into the air; the Public Service generator would produce less pollution when upgraded to run on steam; smoke from landfill fires would cease; and outdated incinerators elsewhere in the region could shut down. Similar incineration plants in Europe and Chicago functioned well and their pollution levels met regulations. Moreover, by centralizing control of waste disposal, the HMDC would be better suited to implement reuse and recycling plans. Most significantly, the incinerator would allow the HMDC to end dumping, thereby protecting existing wetlands and residential development plans. HMDC staff even envisioned parks or golf courses on top of closed landfills.¹⁴

¹³ Clifford A. Goldman, "The Hackensack Meadowlands: The Politics of Regional Planning and Development in the Metropolis" (PhD diss., Princeton University, 1975), 347-349.

¹⁴ *Ibid.*, 354-360.

HMDC staff firmly believed that the incinerator was the best solution to its garbage crisis. Incineration would reduce the volume of waste material and produce byproducts which could be used as fill for future development. While he did express concern over the potential of increased air pollution from the incinerator, Acting Executive Director Clifford Goldman argued that “we are losing approximately one acre of new meadowland a day to garbage.” This threatened the development potential of the Meadowlands. Without incineration, he predicted that “before the decade is over there’d be no Meadowland to develop.”¹⁵ The mountains of garbage would continue to grow, threatening the realization of the vision put forth in the Master Plan. Residential development and wetland conservation would be an impossibility without incineration.

The HMDC gained support for its incineration plan from the Environmental Protection Agency (EPA) and the press. An EPA report released in March 1972 used a computer-based regional air pollution model to show that particulate emissions from the incinerator would be negligible. Its analysis demonstrated that the proposed incinerator was capable of meeting federal air pollution standards and was an acceptable solution to the garbage problem. *The Record*, the local newspaper that the HMDC most often consulted to gain a sense of the public’s reactions to their policies, largely supported the incineration plan. Its editorial board praised the HMDC for tackling the garbage problem head-on. *The Record* agreed with the HMDC on the necessity of containing the landfills, writing “it would be madness to squander any more of the declining reserve of virgin meadows for a garbage landfill” and it said, “the incinerator seems – at the present level

¹⁵ Ronald Sullivan, “Huge Incinerator Planned in Jersey: Unit Would Burn the Refuse Now Dumped in Meadows,” *New York Times*, March 5, 1971, ProQuest Historical Newspapers (119150746).

of development of the trash disposal industry – the best answer to a question that we all wish didn't have to be asked.”¹⁶

Here, though, *The Record* may not have been accurately reading or representing the pulse of the public and the environmental community in northern New Jersey, which grew increasingly defiant in its opposition to the incinerator. To them, it seemed as though the HMDC was willing to sacrifice the region's air in order to achieve its development goals. Goldman even conceded that “in its most essential terms, our decision is a trade-off – the land for the air.”¹⁷

In February and March 1972, some environmentalists registered their opposition to the incinerator at public hearings on the Master Plan. Concern centered on the question of how thoroughly the HMDC had considered alternatives, especially recycling. Dr. Charles J. Cole, a biologist, asked, “what is it that convinces you that large-scaled recycling is undesirable?”¹⁸ Joseph Mongelli of Better Air for Bergen and Charles Cooper, a student at Fairleigh Dickinson University, offered similar criticism, both arguing for recycling and resource recovery as an alternative.¹⁹ Other concerns rested on the increase in pollution from the incinerator. Beatrice Shapiro of Hudson County Citizens for Clean Air cited the experience of an Army Corps of Engineers' incinerator in Jersey City which had failed to live up to its promises as “the cleanest, non-polluting

¹⁶ Goldman, “The Hackensack Meadowlands,” 364-370, quote from p. 369 and 370.

¹⁷ Ronald Sullivan, “Huge Incinerator Planned in Jersey: Unit Would Burn the Refuse Now Dumped in Meadows,” *New York Times*, March 5, 1971, ProQuest Historical Newspapers (119150746).

¹⁸ *Public Hearing on Proposed Master Plan Stage II, Before the Hackensack Meadowlands Development Commission* (March 1, 1972) (Statement of Dr. Charles J. Cole), 60.

¹⁹ *Public Hearing on Proposed Master Plan Stage II* (March 2, 1972) (Statement of Joseph Mongelli), 12-13; *Public Hearing on Proposed Master Plan Stage II* (February 25, 1972) (Statement of Charles Cooper), 133-134.

incinerator of its kind” and now required a million-dollar investment to bring it up to the state’s air pollution standards.²⁰

By October 1972, an unusual group had formed to challenge the proposed incinerator. In September, Alan J. Miller of the National Audubon Society, along with representatives from other conservation groups, had met with a Mr. Scudder, a president of a paper company in Hackensack. Both the paper company and the Audubon Society shared an interest in fighting the proposed incinerator – the paper company to protect recyclable paper material on which it depended, the conservationists to protect the air. Both sought to work toward a recycling program as an alternative to incineration. During the meeting, the paper companies agreed to fund a public relations campaign to alert people in the region to the dangers posed by incineration.²¹ Calling themselves the Committee on Resource Recovery, companies from the paper recycling industry joined forces with the North Jersey Conservation Foundation, National Audubon Society, New York City Environmental Action Coalition, New Jersey Citizens for Clean Air, and the Save Our Meadowlands Coalition to fight the incinerator. In addition to a public education campaign, the Committee pursued two other goals: to delay the HMDC’s final recommendation for incineration and to develop alternative solutions using the concepts of recycling and resource recovery.²² In support of its first goal, the Committee issued a nearly full-page ad in the *New York Times* titled, “Monster in the Meadows.” The ad

²⁰ *Public Hearing on Proposed Master Plan Stage II*, (March 2, 1972) (Statement of Beatrice Shapiro), 50.

²¹ Alan J. Miller, August & September Reports, p. 7, Alan J. Miller Folder, Box B373, National Audubon Society Records, New York Public Library.

²² James M. Staples, “Citizens, Industry Fight Incinerator,” *New York Times*, October 15, 1972, ProQuest Historical Newspapers (119538956).

named the proposed incinerator “Illogical Incinerator” and depicted it as a large, angry, garbage-hungry monster. “Illogical Incinerator” overtook the entire Meadowlands and even came in close range to people’s homes. Its chimneys belched thick black smoke. Accompanying text warned readers of the estimated 4,560 tons of hydrochloric acid gas emissions and questioned the efficacy of supposed pollution control systems. It read,

now, if any of you are skeptical that a monstrous, complicated piece of equipment never before built, can guarantee a pollutant control system never before tested to the magnitude contemplated here, and you’re worried about the quality of air we’re forced to breathe now...maybe we’re making some friends.²³

The incinerator was never built. Although the Committee on Resource Recovery did cause a stir in the media, Clifford Goldman argued that “they were merely flaying the corpse [of the incinerator plan] with their strident cartoon advertisements.” Goldman believed that the plan had really met its end during a September 1971 meeting when the State Treasurer introduced a counter-proposal for an alternative system of waste disposal – a trash compacting and baling device that was being marketed by an influential Republican businessman. According to Goldman, local environmental activists and organizations that had mobilized in opposition to the incinerator, simply became “the tools with which the [political] opposition to the Commission’s waste disposal plans built their legitimate cover.”²⁴

²³ Committee on Resource Recovery, “To Whom It May Concern: A Monster is Being Conceived in the Hackensack Meadowlands,” *New York Times*, October 15, 1972, ProQuest Historical Newspapers (119540602).

²⁴ Goldman, “The Hackensack Meadowlands,” 378.

Goldman later recalled that by 1973, with the collapse of the incinerator plan, “the fate of the land use plan and the new perception of the Meadowlands was precarious.”²⁵ Garbage had been contained for the moment, but there was no real alternative plan in place. The incinerator plan had withered, leaving no real short-term alternative but to continue landfilling. Nonetheless, the HMDC had made clear its intention that valuable marshland would not be again turned over to dumping – both to protect estuarine ecosystems and to protect its own development plans. How that would be implemented remained unclear.

Despite the plan’s demise, the 1971 incinerator proposal remains an important episode in the story of preservation efforts in the Meadowlands. Urban planner Eileen McGurty argues that environmental considerations did not drive the push for incineration, instead it was driven by development policy.²⁶ This may be true, but early HMDC environmental planning staff understood development and preservation to be interdependent. By providing an alternative to garbage dumping, the incinerator would help create a more pleasant environment that would draw residents, who in turn would strive to clean and protect the environment. The strong opposition to the incinerator among some health professionals and environmental organizations, though, showed a growing opposition to Meadowlands development in any form. Then, right on the heels of the garbage issue came another test of the Master Plan that again sparked

²⁵ Ibid., 377.

²⁶ Eileen McGurty, “Solid Waste Management in ‘The Garbage State:’ New Jersey’s Transformation from Landfilling to Incineration,” in *New Jersey’s Environments: Past, Present, and Future*, ed. Neil M. Maher (New Brunswick, NJ: Rutgers University Press, 2006), 29.

environmentalists' reactions. In May 1971, the state legislature passed a bill to construct a giant sports complex on wetlands in the heart of the Meadowlands District.

The Meadowlands Sports Complex

By the late 1960s, Governor William Cahill had made it his mission to bring a major league sports team to the Hackensack Meadowlands. He believed that a New Jersey sports team would help to give the state its own identity and catalyze development of the Meadowlands.²⁷ A Meadowlands stadium could be, as one reporter noted, a “cornerstone of a Xanadu on the swamps.”²⁸ In March 1971, Governor Cahill asked the New Jersey Legislature to pass the New Jersey Sports and Exposition Authority Act to create an independent Sports Authority to oversee the construction of the Meadowlands Sports Complex. That bill passed on May 3, 1971. As proposed, the complex contained a horse-racing track, indoor arena, a hotel and other amenities, and a stadium to house the New York Giants football team, which Cahill had successfully lured to New Jersey from its previous home at Yankee Stadium.²⁹

The Act had significant ramifications for the Hackensack Meadowlands District – it threatened the HMDC's planning capacity and the wetlands protections it had been developing. The Act allowed the Sports Authority to take up to 750 acres of wetlands in the Meadowlands District for its own purposes. In doing so, it removed this acreage from

²⁷ Fox Butterfield, “Cahill Foresees Giants' Move Attracting Capital to Speed Meadowlands Project,” *New York Times*, August 27, 1971, ProQuest Historical Newspapers (119263173).

²⁸ Robert Lipsyte, “Hackensacked,” *New York Times*, August 28, 1971, ProQuest Historical Newspapers (119221003).

²⁹ Ronald Sullivan, “Cahill Says the Giants May Move to Jersey,” *New York Times*, March 25, 1971, ProQuest Historical Newspapers (119286057).

the HMDC's oversight. Other than a provision which required the Sports Authority to "consult with" the HMDC and the New Jersey Department of Environmental Protection (NJDEP) on ecological factors while developing the Sports Complex, the legislature wrote no environmental protections into the bill.³⁰

Environmentalists challenged this usurpation of the HMDC's powers to regulate land use in the Meadowlands District. While they had certainly expressed some concerns with the development agenda that the Commission was advancing as part of its master planning process, environmental groups like the National Audubon Society did note that the HMDC's plan at least ensured the preservation of some marsh land.³¹ On April 12, 1971, the National Audubon Society's Alan J. Miller testified before the New Jersey Senate Judiciary Committee on the fruitful outcomes of ongoing conversations between environmentalists and the HMDC. He said, "during this period that the Hackensack Meadowlands Commission has been formed, they have just at this point considered the ecological necessities of open space and have at least considered saving 10 per cent of the meadows for conservationists."³² At the same hearing, Betty Little of Citizens for Conservation argued that the HMDC had "great expertise and it would be more desirable to continue with that Commission than to supersede it with this one."³³ From their

³⁰ "Case Comments: Environmental Law – New Jersey Sports and Exposition Authority Act – Applicability of Public Trust Doctrine to Proposed Sports Complex – Act Held to Mandate Hearing on Environmental Impact of Project," *Rutgers Law Review*, 26 no. 4 (Summer 1973): 872-873.

³¹ National Audubon Society, "Proposal for Gigantic Sports & Exposition Complex Could Doom Hopes for Saving at Least Part of the Hackensack Meadowlands," *Audubon Leader* Special Bulletin, April 19, 1971, Hackensack Meadowlands Folder, Box B180, National Audubon Society Records, New York Public Library.

³² *Public Hearing Before Senate Judiciary Committee on Senate Bill No. 2175 (Creating the New Jersey Sports and Exposition Authority)* (April 12, 1971) (Statement of Alan J. Miller, Mid-Atlantic States Regional Representative, National Audubon Society), 72.

³³ *Ibid.* (Statement of Betty Little, Coordinator, Citizens for Conservation), 63.

perspective, by removing a sizeable piece of land from the Meadowlands District, the Sports Complex proposal directly threatened the capacity of the HMDC to protect the Meadowlands. On April 19, 1971, the *Audubon Leader* warned its readers of the potential dangers inherent in the new law and predicted a crisis for the Meadowlands if the law passed. The newsletter warned, “up until last week environmentalists have had reason to expect orderly planning, and protection of at least a part of the marsh. But now a new proposal for a gigantic complex of sports arenas and exposition halls threatens to destroy the Meadowlands’ last chance.”³⁴

Environmentalists also began to question priorities and values as they were playing out in legislative and policy decisions regarding the Meadowlands. The *Audubon Leader* listed a litany of things that the Hackensack Meadowlands offered to people in the region. In a remarkable rewrite of the ways the Meadowlands had been described in the past, the publication called the Meadowlands “the largest expanse of open space left within the smog-ridden, traffic choked, densely populated megalopolis” and noted it offered fresh air, an escape from urban places, outdoor recreation opportunities, and a space for nature education. Audubon asked its readers, “should such priorities as these take second place to luring the Giants away from New York? If the Giants must move, is this the place to put a stadium?”³⁵ The National Audubon Society did not simply pose these questions in its newsletters. It sought to establish the supremacy of environmental values through the court system.

³⁴ National Audubon Society, “Proposal for Gigantic Sports & Exposition Complex.”

³⁵ *Ibid.*

*New Jersey Sports &
Exposition Authority v. McCrane*

In September 1971, the National Audubon Society and several other plaintiffs challenged the constitutionality of the New Jersey Sports and Exposition Authority Act in New Jersey Superior Court. Represented by Lyndhurst attorney Alfred Porro, Jr., Audubon challenged the Act on explicitly environmental grounds. First, Porro used the Sports Complex issue to make the case that tidal wetlands were protected under the Public Trust Doctrine, the principle that the state holds rights to certain resources, namely those which are finite and irreplaceable, in trust for public use. The Public Trust Doctrine, as it developed in American jurisprudence, is derived from the Magna Carta which asserted the public's rights to all lands under England's navigable waters. American courts have maintained that in most instances the states cannot divest itself of public trust land unless it can demonstrate that doing so is necessary for the benefit of the public.³⁶

In an argument similar to that of the HMDC's in the Viola landfill case, Porro argued that the state owned part of the land in East Rutherford that had been chosen for the Sports Complex site under its riparian rights and he made the claim that the public's rights to those riparian lands were protected by the Public Trust Doctrine. Therefore, the bill's transfer of the land to the Sports and Exposition Authority for stadium and racetrack development violated that doctrine, as such use was not in the public interest. He argued that the Act also violated both the New Jersey Constitution and state statute

³⁶ "Four Units Close Ranks on Ecology," *New York Times*, April 16, 1972, ProQuest Historical Newspapers (119377218); Bernard S. Cohen, "The Constitution, The Public Trust Doctrine, and the Environment," *Utah Law Review* (June 1970): 388 -391.

which dedicated funds from the sale or lease of riparian lands to the support of public schools.³⁷ Conservationists like David F. Moore of the North Jersey Conservation Foundation feared that such transfer of publicly-owned riparian lands in the stadium bill set a dangerous precedent that would further erode state protection of an already threatened resource.³⁸

On behalf of Audubon, Porro also argued that the United States Constitution protected citizens' rights to a clean environment. Porro made the argument that the unenumerated rights protected by the Constitution's Ninth Amendment included the rights within the Public Trust Doctrine and that the Fourteenth Amendment protected that right from being abridged by the states. In this case, Porro argued that the Ninth and Fourteenth Amendments protected riparian lands in the Meadowlands and that, because they were part of the public trust, the state had a responsibility to protect these lands from environmental degradation. With respect to the Hackensack Meadowlands, implementation of that right required, he argued, that the Meadowlands remain in their natural state as any development would destroy their riparian values. Therefore, the Sports Authority Act, in permitting the construction of the Meadowlands Sports Complex on wetlands, violated this Constitutional right.³⁹ In essence, here, Porro attempted to force the court to determine that environmental rights were civil rights, protected by the Constitution.

³⁷ *New Jersey Sports & Exposition Authority v. McCrane et al.*, 61 N.J. 1, 292 A.2d 545 (1972) http://www.leagle.com/decision/19726261NJ1_162/N.J.%20SPORTS%20&%20EXPOSITION%20AUTHORITY%20v.%20McCRANE#.

³⁸ David F. Moore, "The State We're In," September 15, 1971, Box 77, North Jersey Conservation Foundation, Peter H. B. Frelinghuysen Papers, Department of Rare Books and Special Collections, Princeton University Library.

³⁹ *McCrane et al.*, 61 N.J. 1, 292 A.2d 545.

On November 15, 1971, Superior Court Judge Morris Pashman issued his ruling which declared that the New Jersey Sports and Exposition Authority Act was constitutional. Because, he argued, “sports are vital in building spirit and national pride,” Judge Pashman found that the construction of a sports complex was indeed in the public interest and therefore the use of state-owned riparian lands did not violate the public trust, as long as the Sports Authority compensated the state for the tidelands it had taken.⁴⁰ Pashman sidestepped any real determination on the environmental issues brought by Audubon by simply dismissing Porro’s claims that environmental rights had been violated. Pashman argued that the statute itself protected environmental considerations in that it required the Sports and Exposition Authority to consult with both the HMDC and the NJDEP to determine the type, character, and location of the project in order to ensure that the environmental balance of the Meadowlands was maintained.⁴¹

After hearing arguments on appeal in February and March, 1972, the New Jersey Supreme Court also unanimously upheld the constitutionality of the New Jersey Sports and Exposition Authority Act, though the majority opinion did set conditions in place to protect citizens’ rights to due process on environmental issues. The Supreme Court found that the Sports and Exposition Authority statute did require consultation with the HMDC and NJDEP on site selection, and ruled that the “informal conferences” that had proceeded to date were insufficient to protect citizens’ rights. Instead, the Sports Authority must convene a full formal hearing with both agencies and give due notice to

⁴⁰ Ibid.

⁴¹ Ibid.

the public.⁴² This hearing, the court ruled, would be enough to satisfy the environmental interest in the case. Regardless, as Alfred Porro had noted following the lower court decision, the three-way consultation was still only advisory in nature. No outcome of the negotiation was legally binding on the Sports Authority.⁴³

Three justices offered separate written opinions, concurring with the overall constitutionality of the Act but dissenting with respect to discreet portions of the ruling. Only Justice Frederick W. Hall commented upon the environmental and ecological arguments put before the court. Hall noted that the trial court had summarily rejected the plaintiff's constitutional argument as it related to environmental rights, and the Superior Court's majority opinion only mentioned environmental arguments as they related to procedural aspects of the Authority's activities. But, Hall felt that environmental arguments made by Porro and Audubon held special significance when brought forth in reference to the most densely populated portion of the most densely populated state in the country. Though he concurred with the majority opinion, Hall used his dissent to say more about the environmental issues brought to bear in the case.⁴⁴

Hall's dissent rested on three concerns: the strength of public hearings, the idea of balanced development, and the issue of the public interest.⁴⁵ Like Porro, Justice Hall had misgivings about the court's statements regarding the consultations to be held between the Sports Authority and the HMDC and NJDEP. Hall agreed that the statute required

⁴² "Court Upholds Law for Sports Complex in Jersey," *New York Times*, May 13, 1972, ProQuest Historical Newspapers (119574656); *McCrane et al.*, 61 N.J. 1, 292 A.2d 545.

⁴³ Alfred A. Porro, Jr. to Chaplin B. Barnes, March 14, 1972, Hackensack Meadowlands Folder, Box B180, National Audubon Society Records, New York Public Library.

⁴⁴ *McCrane et al.*, 61 N.J. 1, 292 A.2d 545.

⁴⁵ *Ibid.*

consultation and he agreed with the court's requirement for formal hearings, but he questioned the substantive nature of the proposed hearings. In his dissent he wrote, "what disturbs me is the tone of the opinion in speaking of it. I gain the impression therefrom that while the agencies must go through the motions, the proceeding can be a perfunctory, cut and dried one, with a foreordained result, with which no court would disagree."⁴⁶ In Hall's opinion, the requirement for public consultation could not be limited simply to the siting of the Sports Complex, as the majority opinion decided, but instead such hearings should be held throughout the process as the type and character of the project developed.⁴⁷

On the issue of use of state-owned riparian lands, Hall noted that the state's rights and interest in these lands had not historically been enforced. But as increased industrial development and rising populations increasingly disturbed this vanishing resource, the state and courts have a requirement to protect the public interest in those tidelands that remain. Whereas Hall accepted the use of tidelands for some public uses – those that are water dependent, like piers and boating docks, or important public uses like construction of bridge abutments – he did not agree with the taking of tidelands in the instance before the court. He argued that the fact that the lands in question will be used to promote a public purpose, in this case a football stadium, was not sufficient to satisfy the public trust.⁴⁸

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Ibid.

Hall's commentary on the environmental considerations of the case is significant in that he argued for the importance of wetlands and that the Meadowlands' wetlands deserved *more* protection because of its history of human use. In discussing the importance of wetlands, Hall cited the Wetlands Act of 1970 which declared that wetlands were "one of the most vital and productive areas of our natural world." Passed two years before the federal Clean Water Act, New Jersey's Wetlands Act protected the "ecological balance" of the state's coastal wetlands from pollution and from activities related to dredging and filling, but its provisions specifically excluded the Hackensack Meadowlands. However, Hall used the language of the Wetlands Act and the language of the Hackensack Meadowlands Reclamation and Development Act requiring protection of the balance of nature to show legislative intent to protect all tidal wetlands, regardless of ownership.⁴⁹

In fact, he said, the pressures of urbanization had so thoroughly impacted the Meadowlands that that place required a stricter standard of protection than other coastal wetlands. In arguing that interagency hearings should expressly deal with the legislative requirement to protect "the delicate environmental balance" of the Meadowlands, Hall made no qualms about his preference stating, "I should think the latter ought to have primary consideration...because destruction of the natural state cannot be later undone." This, of course, was increasingly evident in the Meadowlands which had lost over half of its original wetlands. Hall wrote,

Modern man has finally come to realize — I hope not too late — that the resources of nature are not inexhaustible. Water, land and air cannot be misused or abused without dire present and future consequences to all

⁴⁹ Ibid.

mankind. Undue disturbance of the ecological chain has its devastating effect at far distant places and times. Increased density of population and continuing residential, commercial and industrial development are impressing these truths upon us. We trust solution of our problems in this vital area can be aided by modern technology and the expenditure of money, but it seems evident that we must also thoroughly respect the balance of nature.⁵⁰

Here, Hall echoed much of what environmentalists in the Meadowlands had been saying – that precisely because of its history, the Meadowlands must be at the forefront of environmental preservation efforts. And in the last line, he also suggests that an answer to the Meadowlands’ environmental problems just might lie in restraint. Though Hall refused to take any firm stance on the question of Ninth Amendment protection of environmental rights, his dissent remained significant for the environmentalists’ battle against the Sports Complex. According to Porro, it “laid the basis for us for a very substantial future outlook” as it left the door open for a possible appeal to the United States Supreme Court on environmental issues.⁵¹

As early as December 1971, the Audubon Society had already discussed the possibility of taking the case to the United States Supreme Court in an effort to force a legal determination at the federal level that under the Public Trust Doctrine, tidal wetlands must be preserved for the people. In a *New York Times* interview, Alan J. Miller pointed to the national importance of this issue. He said, “what applies for the Hackensack Meadowlands also goes for the Connecticut shore and San Francisco Bay. It’s high time for a Federal determination that the citizen has a right to a clean

⁵⁰ Ibid.

⁵¹ Alfred A. Porro, Jr. to Alan Miller, May 19, 1972, Hackensack Meadowlands Folder, Box B180, National Audubon Society Records, New York Public Library.

environment.”⁵² On a local level, if the court ruled in Audubon’s favor, it would in essence end any development in the tidal portions of the Meadowlands and force the HMDC to embrace its role as a preservation organization.⁵³

That case never came to fruition, and perhaps of more immediate importance was the state court ruling requiring that the New Jersey Department of Environmental Protection and the HMDC hold a formal environmental hearing. This quasi-judicial hearing, at which each side presented its case and was subject to cross-examination began on July 10, 1972.⁵⁴ While the National Audubon Society and its attorney no longer believed that they would be able to stop construction of the Sports Complex, they used the Joint Hearing as a venue in which to fight for some very real changes to the Sports Complex plans.⁵⁵

One of the major questions raised during the hearings was whether environmental factors were sufficiently considered during the process of site selection for the Sports Complex. Not surprisingly, the hearing officers concluded that they were. In June 1970, the HMDC had contracted with a planning firm to study the feasibility of six sites within the district for potential construction of sports facilities using five criteria: size of at least six hundred acres, bedrock no further than eighty feet below the surface, a site of rectangular or square shape, accessibility of highways and mass transit, and the presence

⁵² “Four Units Close Ranks on Ecology,” *New York Times*, April 16, 1972, ProQuest Historical Newspapers (119377218).

⁵³ Alan J. Miller, Monthly Reports, filed February 14, 1972, p. 4, Alan J. Miller Folder, Box B373, National Audubon Society Records, New York Public Library.

⁵⁴ Gary Rosensweig, “Sports Complex Hearing: Sports Authority Environmental Assessment Hearings – Working Paper,” July 6, 1972, Report No. 1972-014, MERI.

⁵⁵ Memorandum, Richard L. Plunkett to Dr. Stahr, September 5, 1972, Hackensack Meadowlands Folder, Box B180, National Audubon Society Records, New York Public Library.

of fill on the site. Based on the established criteria, and with consideration of availability of sewerage, water, and electricity to the site, the firm recommended site number 6-6A, a site on Berrys Creek in East Rutherford, which the Sports Complex adopted on July 13, 1971. Jack McCormick and Associates prepared an Environmental Impact Assessment, as required by the National Environmental Policy Act of 1969, for all of the alternative sites. Using all of the previously mentioned criteria and the stipulation that the utilization of the site should not upset the Meadowlands' environmental balance, McCormick agreed with the initial assessment that site 6-6A was the most appropriate. The hearing officers found that McCormick's study provided sufficient evidence for the suitability of site 6-6A.⁵⁶

McCormick's study also found that construction of the Sports Complex on site 6-6A would severely impact vegetation, wildlife, and natural drainage, arguing that biological productivity in the wetland portions of the site would be reduced by more than ninety-five percent. The report also predicted that, among other impacts, increased paving would reduce habitat for both breeding and migrating bird populations and that fox, muskrat, and weasels would be eliminated from the site. In mitigation for these impacts, McCormick suggested that the Sports Authority redesign their plans to preserve the Berrys Creek Tidal Marsh on the western part of the site.⁵⁷ Anticipating environmental opposition at the hearing, and hoping to head it off, the Sports Authority

⁵⁶ Hackensack Meadowlands Development Commission and New Jersey Department of Environmental Protection, *In the Matter of the Hearings Held on the Proposed Sports Complex in the Hackensack Meadowlands (July 10, 1972 Through August 11, 1972) – Hearing Officers' Report and Recommendations*, p. 6-15, Hackensack Meadowlands Papers, Fairleigh Dickinson University Digital Archives.

⁵⁷ *Ibid.*, 16-17.

adopted this recommendation, announcing on June 25, 1972, its plans to set aside and restore one hundred and thirty acres on Berrys Creek, for the construction of an environmental education center. The NJDEP and HMDC formalized this requirement in their Hearing Officers' Report.⁵⁸

This was a remarkable turn of events in the Meadowlands. In contrast to the Kingsland-Sawmill Creek marsh, Berrys Creek was nowhere near a "healthy" marsh. The NJDEP and HMDC noted that due to diking, ditching, pollution, garbage, and land filling operations, the Berrys Creek marsh "has collapsed and has been replaced by a low-quality, common reed grassland."⁵⁹ With high heavy metal concentrations in its sediments, and high concentrations of nitrates and phosphates leaching into the marsh from adjacent landfills, Berrys Creek was far from pristine. In fact, McCormick found that this marsh was the most heavily impacted portion of the larger Meadowlands District, which itself was one of the most heavily impacted coastal wetlands along the Atlantic seaboard. Just a few years earlier, legislators and planners had used the contaminated nature of Meadowlands as justification for filling it. In a sharp reversal from this viewpoint, the NJDEP and HMDC report wrote,

thus it might seem tempting to conclude that filling in the tidal marsh is justifiable, but we concur with Dr. McCormick's admonition that the Berrys Creek Tidal Marsh should not be 'covered, filled, dredged, or otherwise tampered with'. . . The forms of life and vegetation present in the Berrys Creek Marsh justify its preservation.

⁵⁸ "Ecology Center Planned at Jersey Stadium Site," *New York Times*, June 26, 1972, ProQuest Historical Newspapers (119379891).

⁵⁹ Hackensack Meadowlands Development Commission and New Jersey Department of Environmental Protection, *In the Matter of the Hearings Held on the Proposed Sports Complex*, 19.

The report went further. It argued that because of the degraded status of the marsh, the Sports Authority could not simply let it alone. Instead, the project required active intervention. Because the arsenic, cadmium, and mercury in the Berrys Creek sediments posed a danger to the Berrys Creek Marsh and the Hackensack Meadowlands as a whole, they must be removed. The NJDEP and HMDC recommended that the Sports Authority follow McCormick's scraping protocol, in which a minimum of six inches of marsh bottom be removed.⁶⁰

In a continuing commitment to bring the public in contact with the marsh, the NJDEP and HMDC also required that the Sports Authority fund and maintain an Environmental Education Center. They recommended that the environmental center serve three purposes – a center for public study and appreciation of the marsh ecosystem, a center for formal scientific study of the ecosystem, and a home base for on-going monitoring of effects by the Sports Complex on the ecosystem.⁶¹ On September 15, 1972, the HMDC and NJDEP issued the Hearing Officers' Report, approving the Sports Complex plans provided that the Sports Authority adopt the recommendations enumerated in the report.

Meanwhile a coalition of environmental, urban, and other civil groups shared the National Audubon Society's opposition to the Sports Complex. They coalesced under the name Save Our Meadowlands Coalition and protesters from that group met Governor Cahill at the Sports Complex site when he arrived to break ground on November 30, 1972. The Coalition wanted to end any development in the already overpopulated and

⁶⁰ Ibid., 20.

⁶¹ Ibid., 21-22.

over-polluted Meadowlands, a proposal that seemed ridiculous to those championing the Sports Complex. Later, Senator Ray Bateman described the scene that day, “it was in the middle of this freaking, steamy, smelly, miserable swamp...we were all making speeches to ourselves, and around us there were [sic] a circle of environmentalists who were screaming and yelling how bad this project was going to be to this beautiful area.”⁶²

Opposition to the HMDC Master Plan

The incinerator and the Sports Complex provided two very concrete and visible threats around which local and national environmental organizations consolidated their opposition in 1971 and 1972. These threats occurred as the HMDC was finalizing its Master Plan for the Meadowlands. In November 1970, the HMDC had released its *Comprehensive Land Use Plan* outlining its vision for a Meadowlands that balanced residential and commercial development with environmental preservation. In December 1971, just three months after it had announced its incineration plan and only one month after the Superior Court ruled on the constitutionality of the Sports and Exposition Authority Act, the HMDC published its Master Plan Zoning Regulations through which it would implement that vision. The HMDC held public hearings on the proposed Master Plan in February and March 1972, the same months in which the New Jersey Supreme Court heard arguments in the Sports Complex case. The arguments made against the incinerator and Sports Complex – that such developments threatened clean air and open space – spilled over into an argument against the Master Plan itself. To many

⁶² Robert Ceberio and Ron Kase, *New Jersey Meadowlands: A History* (Charleston: The History Press, 2015), 98.

environmentalists, the Sports Complex and Master Plan became synonymous and interchangeable in their perceived destruction of Meadowlands.

Testimony from environmentalists given before the HMDC at hearings on the Master Plan, held in February and March 1972, conveyed a real sense of environmental crisis. In their telling, the Meadowlands environment was on the brink of imminent collapse due to over-development, overpopulation, and over-use of natural resources. Joseph Mongelli, a member of Better Air for Bergen, Recycling Solid Wastes in Bergen County, and New Jersey Citizens for Clean Air and Water, summarized a Massachusetts Institute of Technology study that concluded, in Mongelli's summation, that "mankind faces an uncontrollable and disastrous collapse of its society within a hundred years, unless it moves speedily to establish global equilibrium in which growth of population in [sic] industrial output are halted." In the Meadowlands, Mongelli argued, the only answer was to "conserve everything."⁶³ Reino Warnio, an architect and planner, echoed Mongelli's stark distinction between conservation and development when he said, "it seems that our progress-oriented society seems to be rushing headlong to choking itself literally and not only figuratively . . . Progress. Must it always be at the expense of Nature?"⁶⁴

These voices argued that in the face of an urban assault, the best value to which the Meadowlands could be put was preserved open space. Vivian Li, a student leader for Ridgewood-Ho-Ho-Kus Students for Environmental Action, argued that the

⁶³ *Public Hearing on Proposed Master Plan Stage II* (March 2, 1972) (Statement of Joseph Mongelli), 11, 13.

⁶⁴ *Public Hearing on Proposed Master Plan Stage II* (March 1, 1972) (Statement of Reino Warnio), 27.

Meadowlands had the potential to become one of the nation's greatest wildlife preserves and this value was more important than the short-term financial gain to be had by development. She told the HMDC Commissioners, "I think that the finest tribute you can make to posterity would be to revise the Meadowlands into a viable marshland and study grounds."⁶⁵ Christopher Letts, a resident of Tenafly agreed, arguing that urbanization had divorced people from their environment, to the detriment of society. For him, the Meadowlands held the potential to reverse this course by providing a place where city dwellers could make contact with nature. To this end, he argued that all of the remaining Meadowlands should remain as open space and ominously warned of the finality of development, "never can we turn a housing project back into a viable marsh."⁶⁶ Margaret Mastice of North Bergen called the plan to build a city to house 400,000 people "environmental suicide."⁶⁷ Barbara Eisler echoed all of these fears. She asked the Commission, "when will we realize the truth of an unknown conservationist's dire prediction, 'Once developed – forever destroyed,'" and she perhaps made the clearest statement against the underlying premise of the HMDC's *Comprehensive Land Use Plan*, "it is impossible to both preserve and develop a marsh."⁶⁸

Even as the HMDC hammered out the final details of its Master Plan, environmentalists began to question the very premise that underlined that plan – balance. The legislation that created the Meadowlands gave the new Commission a tripartite

⁶⁵ *Public Hearing on Proposed Master Plan Stage II* (February 25, 1972) (Statement Vivian Li, Ridgewood-Ho-Ho-Kus Students for Environmental Action), 28.

⁶⁶ *Ibid.*, (Statement of Christopher Letts), 51.

⁶⁷ *Ibid.*, (Statement of Margaret Mastice), 215.

⁶⁸ *Ibid.*, (Statement of Barbara Eisler), 99, 94.

mandate – comprehensive development, garbage disposal, and protection of the “delicate balance of nature.” The Meadowlands Commission had interpreted balance to mean a fair distribution between acreage devoted to preservation and acreage devoted to environmentally-friendly development. But environmentalists and citizens like Joseph Mongelli, Reino Warrnio, and Barbara Eisler directly challenged the idea that preservation and development could co-exist in an urban wetland. The choices were progress or nature, housing or a marsh; development equaled destruction.

A Promise of Preservation Broken?

This environmentalist criticism aside, the HMDC’s accomplishments in the early 1970s were remarkable. The Commission used innovative tools like zoning and riparian claims to protect the Meadowlands’ wetlands. Its actions preventing the extension of landfills into the Kingsland-Sawmill Creek Marsh preserved what was arguably the most viable marsh in the Meadowlands District. The recommendation put forth in the Hearings Officers’ Report on the Sports Complex that the Sports Authority acquire and restore the Berrys Creek Marsh showed that the HMDC would fight to protect even seemingly degraded wetlands. Water quality throughout the Meadowlands was improving and the HMDC worked with Hartz Mountain Industries to build the Meadowlands’ first residential development at Harmon Cove. Given these accomplishments and the HMDC’s commitment to preservation, how is it that by 1978 a

New York Times reporter could say that “it’s difficult these days to see the reeds for the commerce”?⁶⁹

Part of the answer lies in the intense development that happened in the early years of HMDC oversight. Historian Ted Steinberg characterized the years between 1966 and 1976 as “the most unsparing attack in its recorded history.”⁷⁰ Much of the latter part of this development happened as a direct result of the Sports Complex. Like many of its supporters had hoped, it catalyzed development. A publication in 1976 called “Meadowlands Miracle” noted that “every sporting event in the Sports Complex calls attention to the rebirth of the Meadowlands – it is a free ad pointing to this Phoenix rising from the ashes of the garbage dumps.”⁷¹ The article supported this with statistics. Since the Sports Authority had been created, nearly \$160 million in new construction had taken place in the Meadowlands district. The Meadowlands Chamber of Commerce reported that inquiries into the Meadowlands rose from just a few to fifty per month in 1976, the year that the completed Giants Stadium opened to the public. HMDC Executive Director William McDowell proclaimed that the success of the Sports Complex in spurring development throughout the District, in fact, cut in half the time needed to carry out the Commission’s entire development plan.⁷²

Other statistics bear out the conclusion that development skyrocketed in the first half of the 1970s. Development activity quadrupled between 1969 and 1974. In 1969 the

⁶⁹ Fred Ferretti, “Meadowlands: Has the Blueprint Faded?,” *New York Times*, December 10, 1978, ProQuest Historical Newspapers (123573102).

⁷⁰ Steinberg, *Gotham Unbound*, 276.

⁷¹ James T. Prior, “The Meadowlands Miracle,” *New Jersey Business* (December 1976): 73.

⁷² *Ibid.*, 73, 76.

HMDC reviewed seventy-five projects. In 1974 that number had increased to 350.⁷³ Newly-issued certificates of occupancy in 1973 totaled \$20,279,433, that number increased by two million dollars in 1974 and that by over sixteen million in 1975 when new certificates of occupancy totaled \$38,765,318.⁷⁴ In the first ten months of 1976, \$53.4 million worth of certificates of occupancy were issued, already making that year the most productive since the Commission took over, even though the year had not yet ended.⁷⁵ The HMDC argued that this interest and commitment on the part of developers was a sign of the “vitality of the Hackensack Meadowlands” and showed that “environmental improvements resulting from the Master Plan have occurred.”⁷⁶ But, this came at the expense of wetlands.

Though the HMDC had instituted new regulations and restrictions on development, it also did a lot to streamline the development process. Real estate developer Charles Klatskin said that the HMDC removed the “‘politics’ out of the land development.”⁷⁷ After 1969, developers dealt with one central agency that laid out a cohesive set of development guidelines and no longer had to deal with petty quarrels at the municipal level that had often stymied development. Hartz Mountain, in particular, had cultivated a close working relationship with the Hackensack Meadowlands Development Commission, and especially Executive Director William McDowell, an early proponent of development in the Meadowlands who was appointed to the head of

⁷³ Hackensack Meadowlands Development Commission, *1974 Annual Report*, p. 2, Hackensack Meadowlands Papers, Fairleigh Dickinson University Digital Archives.

⁷⁴ Ibid.; Hackensack Meadowlands Development Commission, *1975 Annual Report*, p. 1, Hackensack Meadowlands Papers, Fairleigh Dickinson University Digital Archives.

⁷⁵ Prior, “The Meadowlands Miracle,” 74.

⁷⁶ Hackensack Meadowlands Development Commission, *1975 Annual Report*, 2; *1974 Annual Report*, 3.

⁷⁷ Steinberg, *Gotham Unbound*, 276.

the agency in March 1972. Leonard Stern highlighted Hartz's relationship with McDowell and the HMDC in the groundbreaking for Harmon Cove and warned against any politically-based attempts to interfere with the Commission. He said, "our success with this project was due in large part to the help of William D. McDowell, executive director of the Hackensack Meadowlands Development Commission . . . We would view with great apprehension any political interference with the commission or its possible demise."⁷⁸ Richard Johnston of the Meadowlands Chamber of Commerce also had high praise for McDowell. He said, "for the first time representatives of business are being asked to participate in meetings with the HMDC."⁷⁹ The relationship that developed between the development community and the HMDC in the early 1970s had long-lasting effects on environmentalists' perception of the HMDC. Feeling that the HMDC had simply become a tool to help the developers, environmentalists derisively claimed that HMDC actually stood for "Hartz Mountain Development Commission."⁸⁰

Perhaps the most significant outcome of the Sports Complex episode came in environmentalists' view of and relationship with the HMDC. At the very outset of the Sports Complex proposal, representatives from the North Jersey Conservation Foundation, National Audubon Society, Citizens for Clean Air, and North Jersey Group of the Sierra Club had spoken of the "productive give and take between environmentalists and the Commission" and warned that the creation of an independent Sports Authority

⁷⁸ "Byrne Breaks Ground for Hartz Mountain Complex," *New York Times*, March 5, 1975, ProQuest Historical Newspapers (120214106).

⁷⁹ Prior, "The Meadowlands Miracle," 76.

⁸⁰ Steinberg, *Gotham Unbound*, 278.

would undermine the HMDC.⁸¹ Although the HMDC staff had opposed the Sports Complex project privately, they never expressed these concerns publicly. The Commission staff had helped to negotiate the preservation of Berrys Creek, but, again, took no public credit. Moreover, the Commission had lost authority and control over the Sports Authority site. Goldman argues that,

the Commission lost credibility with conservationists who were willing to concede that, given its mandate, it was sensitive to the environment, but who now found that it was weak. The sports complex episode cost the Commission dearly. . . . From then on, the Commission with its 20,000 acres was over-shadowed by the sports complex on 750 acres.⁸²

All of this created a negative feeling among environmentalists toward the HMDC and by the 1980s, many environmentalists viewed the HMDC as an enemy of the environment.

Conclusion

In 1969, the New Jersey Legislature had mandated the Hackensack Meadowlands Development Commission to protect the delicate balance of nature. In the first five years of HMDC oversight in the Meadowlands District, the HMDC, national environmental organizations, local activists, and the courts struggled to define what “balance” meant in a heavily impacted urban estuary. Embracing an ethic that understood that a history of equating growth and progress put the nation on the brink of an ecological collapse, environmentalists argued for a total end to development in the Meadowlands. Because the scales had been tipped heavily in favor of development in the Meadowlands,

⁸¹ North Jersey Conservation Foundation, National Audubon Society, New Jersey Audubon Society, Citizens for Clean Air, Sierra Club North Jersey Group, “Proposal for Gigantic Sports and Exposition Complex Could Doom Hopes for Saving at Least Part of the Hackensack Meadowlands,” April 15, 1971, Box 77, North Jersey Conservation Foundation, Peter H. B. Frelinghuysen Papers, Department of Rare Books and Special Collections, Princeton University Library.

⁸² Goldman, “The Hackensack Meadowlands,” 264-265.

“balance,” they said, required the complete preservation of any remaining wetlands and open space. Any suggestion that development and preservation could coexist was anathema to environmentalists who viewed places like the Meadowlands as sitting at the center of an imminent environmental collapse.

Yet, despite Justice Frederick Hall’s warning that the destruction of nature cannot be undone, the New Jersey courts ruled that development and preservation could be balanced. In their hearings on the Sports Complex plans, the HMDC and NJDEP determined that impacts to vegetation, wildlife, and wetlands could be mitigated with the preservation and restoration of the severely polluted Berrys Creek Marsh. This compromise defined a newly developing idea of “balance.” It indicated that wetlands loss in one area could be compensated for with preservation in another area and that with human intervention, degraded wetlands could be restored.

Environmentalists, state agencies, and courts debated the meaning of the balance of nature in the Meadowlands just months before Congress passed the Federal Water Pollution Control Act Amendments of 1972. As the United States Army Corps of Engineers and the Environmental Protection Agency struggled to implement that law in the nation’s wetlands in the 1970s and 1980s, those federal agencies offered their own interpretations of what balance meant in a heavily impacted urban wetland.

IMPLEMENTING THE CLEAN WATER ACT:
A CONFLICT OVER THE VALUE OF URBAN WETLANDS

In 1972, Congress passed the Federal Water Pollution Control Act Amendments, commonly known as the Clean Water Act, which created a layer of federal jurisdiction over the nation's waterways. As federal agencies implemented the Clean Water Act over the course of the 1970s, three agencies came to have direct oversight of wetlands development in the Meadowlands – New Jersey's Hackensack Meadowlands Development Commission (HMDC), which had recently adopted its first Master Plan for the Meadowlands District, the United States Army Corps of Engineers, and the United States Environmental Protection Agency (EPA). All three agencies viewed their oversight responsibilities in the Meadowlands differently and from within the context of their unique legislatively-guided missions. The Army Corps traditionally viewed itself as an agency responsible for economic development, the EPA understood its primary mission to be environmental protection, and the HMDC's tripartite mandate required it to attend to both of those needs.

After Congress passed the Clean Water Act in 1972, questions remained over which of the nation's waterways the Act regulated. Wetlands were not clearly and unquestionably included under the provisions of the Clean Water Act until Congress passed Amendments to the Act in 1977. The Clean Water Act divided oversight responsibilities of wetlands fill between the United States Army Corps of Engineers and the EPA and in the 1980s these two agencies struggled to navigate implementation of the Act's regulations. In the Hackensack Meadowlands, the implementation of the Clean

Water Act pitted the EPA against the Army Corps, HMDC, and real estate developers as they tried to figure out the most appropriate uses for the Meadowlands' wetlands.

Due to its location in the center of the New York City metropolitan area, the Meadowlands had faced enormous development and environmental pressures since the nineteenth century. Much of its wetlands had been filled and what remained were heavily polluted. Despite this, in the 1970s, environmental organizations had started to fight for preservation of the remaining wetlands as the last open space in the region, as a bulwark against increased development. But, private landowners expected to develop their land according to plans they had prepared before the Clean Water Act had passed. As such, as the agencies implemented the Clean Water Act in the Meadowlands they had to determine which land use would be prioritized in the urban estuary.

Two developments proposed in the Meadowlands in the 1980s – a residential development by Hartz Mountain and a warehouse development by Russo Development Corporation – particularly challenged the agencies to answer this question. Debates among the HMDC, Army Corps, EPA, and developers over these two projects show that the Clean Water Act provoked a broader discussion over what constitutes a natural space, and one worthy of preservation.

The EPA and Army Corps: Conflict in an Urban Wetland

Though President Richard Nixon was no real friend of the environment, he was a politically calculating leader who recognized the ground swell of popular support for environmental protection evidenced in the massive Earth Day protests of April 22, 1970.

To capitalize on this, between 1969 and 1971, Nixon helped to advance a number of federal legislative initiatives that created the legal framework that governs the environment to this day. The National Environmental Policy Act (NEPA) of 1969 was one of the most important pieces of legislation from this era. With its requirement that developers of federally-funded or federally-permitted projects prepare an Environmental Impact Statement that is subject to public comment, NEPA established the citizens' role in environmental policymaking. This would become one of the most effective tools used by environmental advocates in the Meadowlands, and nationwide, into the twenty-first century.¹

The single most significant piece of legislation to impact the nation's wetlands to come out of this legislative agenda was the Clean Water Act. Though Nixon, who by 1972 felt that the environment no longer provided him any further political advantages, had vetoed the Clean Water Act, Congress passed it over his veto, thereby giving wetlands advocates their most powerful legal tool. Section 404 of the Clean Water Act created a regulatory framework that required the United States Army Corps of Engineers to issue permits for any discharge of dredged or fill material into the country's navigable waters.

Because the Clean Water Act otherwise focused strictly on environmental protection, and gave regulatory oversight to the Environmental Protection Agency (EPA), this was an interesting move. Ever since Congress passed the River and Harbors Act in 1899, the Army Corps' primary regulatory mission was to protect navigation. Congress

¹ J. Brooks Flippen, *Nixon and the Environment* (Albuquerque: University of New Mexico Press, 2000).

wanted to honor this tradition, but in response to the environmental movement of the 1970s, many Congressional leaders also felt uneasy about giving the responsibility for protecting the environmental qualities of the nation's waterways to such an economically-minded agency. So to balance navigational needs with environmental protection, in Section 404 (c) of the Act, Congress granted the EPA the authority to veto any Army Corps permit if a project threatened water quality, fisheries, habitat, or recreational areas. Section 404 (b)(1) also required the EPA to promulgate binding guidelines to advise the Army Corps in its evaluation of permit applications. Section 404, therefore, represents a Congressional compromise aimed at balancing protections for economic and environmental values, while protecting the Army Corps' historic regulation of activities affecting navigation. However, the bifurcation of oversight between two agencies with very different missions pitted these agencies against one another and created immediate controversy over the implementation of the Section 404 regulatory program.²

The Army Corps and EPA understood their responsibilities under Section 404 in nearly opposite ways. The Army Corps viewed it in purely economic terms. Because Congress vested all regulatory oversight in the Clean Water Act *except* for Section 404 to the EPA, the Assistant Secretary for the Army for Civil Works described Section 404 as a "carve out." He presumed that Congress actually meant to protect his agency's authority over navigable waterways as granted to it under the Rivers and Harbors Act. Therefore, the Army Corps initially interpreted its new responsibilities in the strictest manner and

² Shannon J. Kilgore, "EPA's Evolving Role in Wetlands Protection: Elaboration in *Bersani v. U.S. EPA*," *Environmental Law Reporter* 18 ELR 10479 (1988), <http://elr.info/sites/default/files/articles/18.10479.htm>.

narrowly applied the Section 404 program to only traditionally-defined navigable waters – lakes, large rivers, and intercoastal waterways. On the other hand, the EPA and environmentalists understood Section 404 as part of the Clean Water Act's broader environmental protection program and as a mandate to protect all waters from haphazard filling. In 1975, the United States District Court for the District of Columbia in *Natural Resources Defense Council, Inc. v. Callaway* upheld this broader interpretation. The District Court ruled that Congress indeed intended Section 404 to protect all waters of the United States, including tributaries that fed into navigable waterways and wetlands. The *Callaway* case forced the Army Corps to implement Section 404 in line with the EPA's interpretation of the statute.

Many of the Army Corps' leaders, however, believed that wetlands protection went against the agency's mission to promote economic development and in 1975 it undertook a massive public relations campaign to undermine the broader interpretation of Section 404 by highlighting the implications of the expanded program. It issued a press release that exaggerated the impacts that Section 404 would have on private property and economic growth. By claiming that the Act would force every farmer or rancher who wanted to put small inland wetlands into agricultural production to file for a permit, the Army Corps sought to provoke a vast public outcry against the *Callaway* ruling. It did not expect the strong response from environmentalists that it received. After reviewing the voluminous public comment, the Corps issued a new set of regulations which stressed that the Corps would comply with the *Callaway* decision and work with the EPA to ensure implementation of EPA guidelines for wetlands permitting. The Corps followed

through on this commitment in 1976 when it denied a permit to a developer to fill a mangrove swamp on Florida's Marco Island. The following year, Congress explicitly included wetlands in the jurisdictional scope of Section 404 when it revised the Clean Water Act. After 1977, wetlands were firmly protected under Section 404.³

The new congressional regulations and the Army Corps' Marco Island decision demonstrated that environmentalists had the power to shape the Army Corps' Section 404 program in favor of wetlands and proved to environmentalists that the Corps had committed to using Section 404 to protect wetlands. In the waning years of the 1970s, the Army Corps enjoyed the support of environmentalists as it implemented the Section 404 permitting program.⁴ But that productive relationship between the Army Corps and environmentalists soured after President Ronald Reagan took office in 1981. The Reagan administration operated under the belief that regulations impeded economic growth, and it used the budget and agency rulemaking processes as means to gut environmental protections and put formerly protected areas to more traditional economic use. The nation's coastal wetlands sat on the frontline of this assault. In 1981, Reagan appointed William R. Gianelli, previously his State Water Director in California, as Assistant Secretary of the Army in charge of civil works. Gianelli's primary goal for his tenure at the Army Corps was to eviscerate the Section 404 program. Gianelli and the federal administration implemented measures to reduce delays in permitting for wetlands fill projects. They gave more authority to the states, issued more general permits without

³ Ann Vileisis, *Discovering the Unknown Landscape: A History of America's Wetlands* (Washington D.C.: Island Press, 1997), 254-264

⁴ Jeffrey K. Stine, "Regulating Wetlands in the 1970s: U.S. Army Corps of Engineers and the Environmental Organizations," *Journal of Forest History* 27 no. 2 (1983): 60-75.

requiring individual project review, limited administrative appeals, and reduced mitigation requirements. The concept of mitigation had existed since the Fish and Wildlife Coordination Act of 1934 attempted to compensate for waterfowl habitat destroyed by the construction of dams by enhancing habitat elsewhere. In 1969, NEPA extended mitigation requirements to all federally-funded or federally-permitted projects, including projects permitted under Section 404 of the Clean Water Act. Weakened mitigation plans became increasingly used during the Reagan administration as federal agencies sought to accelerate permit approvals. These changes received little challenge from EPA administrator Anne Gorsuch, who shared the administration's belief that economic growth and environmental protection were contradictory goals. Congress and the courts had given the Army Corps and the EPA the responsibility to protect wetlands, but under the early years of the Reagan administration, agency leaders on all sides rejected the very notion that Section 404 was a wetlands protection program.⁵

The administration did face push back. In early 1983, a series of management scandals in the EPA forced Reagan to replace Gorsuch with William Ruckelshaus, who had been the first administrator of the EPA under Richard Nixon. Unlike Gorsuch, Ruckelshaus held a strong respect for, and commitment to, the agency's regulatory mission and he believed that Section 404 was a critical part of the government's environmental protection program. Under Ruckelshaus and his successor Lee Thomas, the EPA more forcefully, albeit judiciously, asserted its oversight role in the Section 404

⁵ Vileisis, *Discovering the Unknown Landscape*, 275-277, 322-323.

process and it began to utilize the veto power Congress gave it in Section 404 (c) to protect wetland acreage.⁶

As of 2015, the EPA had only used its veto power under Section 404 (c) thirteen times. It issued eleven of those vetoes between 1981 and 1990 – including one for a project proposed in the Hackensack Meadowlands. The eleven permit applications that the EPA vetoed were for projects located in ten different states, affecting anywhere from thirty-two to 3,000 acres of wetlands, and were issued at various stages of project development. In all cases, the EPA issued its vetoes on grounds of unacceptable adverse environmental impacts and in four cases, the EPA found that the development's goals could have been fulfilled on alternative, non-wetland sites. When project developers challenged the EPA's veto in federal courts, the courts upheld the EPA's veto in all instances.⁷

One of these vetoes was tested in a series of federal court cases known as the *Bersani* decisions, argued between 1985 and 1988. In 1983, the Pyramid Companies had proposed to build a shopping mall in Massachusetts. It considered, and dismissed, an upland site and instead planned to build on fifty acres of wetland in South Attleboro known as Sweedens Swamp. Pyramid planned to mitigate the environmental impact of its wetland development by creating artificial wetlands elsewhere. The Army Corps issued the fill permit, despite the fact that the EPA's Section 404 guidelines required that a permit be denied if any non-wetland alternative site existed. In its decision, the Corps

⁶ Ibid., 278.

⁷ Michael C. Blumm and Elisabeth Mering, "Vetoing Wetland Permits Under Section 404(c) of the Clean Water Act: A History of Inter-Federal Agency Controversy and Reform," *UCLA Journal of Environmental Law & Policy* 33 no. 2 (2015): 243-245.

assessed Pyramid's project in its entirety and argued that the creation of wetlands off-site negated the environmental impact to Sweedens Swamp, a degraded wetland.⁸

The EPA disagreed with this decision and used its authority under Section 404 to veto the permit. In its decision, the EPA stated,

EPA encourages mitigation efforts when there are no practicable alternatives other than filling in a wetland for a particular project and the project does not cause significant degradation to aquatic resources. . .[I]t is unacceptable to trade the certain benefits provided by this functioning wetland for the uncertain benefits of a large scale wetland creation. The language, regulations, and purpose of section 404 all point to a fundamental principle: The degradation or destruction of special aquatic sites, such as wetlands, should be avoided if there are practical alternatives.⁹

According to EPA guidelines, a practicable alternatives assessment must occur in advance of any consideration of mitigation. Mitigation was never a suitable excuse for destroying wetlands when a project could be built elsewhere, especially when the scientific efficacy of the creation of artificial wetlands remained unproven. Pyramid challenged the EPA's veto in federal court and two federal courts – the District Court for the Northern District of New York in 1987 and the Second Circuit Court of Appeals in 1988 – confirmed the EPA's decision.¹⁰

These federal court decisions significantly strengthened EPA's oversight of the Section 404 process. The courts not only upheld the EPA's right to issue a veto, but they broadened the EPA's authority over Section 404 review by giving it the discretion to review the Corps' alternatives analyses. The decisions also implicitly upheld the EPA's

⁸ Kilgore, "EPA's Evolving Role in Wetlands Protection."

⁹ Ibid.

¹⁰ Ibid.

reasoning for its veto – that the existence of a practicable alternative required that a permit be denied regardless of mitigation plans. It affirmed the EPA’s position that mitigation should only be used for absolutely unavoidable impacts – mitigation cannot be used as justification for wetland development. Moreover, the very location and character of Sweedens Swamp held special significance. As one legal commentator said shortly after the final court ruling, “that EPA chose Sweedens Swamp as a place to assert this policy is encouraging, because the swamp is neither unusually important or beautiful, nor does it harbor rare or exotic wildlife — it is simply a good wetland habitat.”¹¹

The EPA’s use of its veto power in this way reflected new research reported by the National Wetlands Inventory in 1982 that revealed that in the course of the nation’s history, the United States had given fifty-four percent of its national wetlands over to agriculture and development. Between 1954 and the 1970s, the country lost its wetlands at a rate of nearly half a million acres each year. The National Wetlands Inventory report created a sense of urgency regarding wetlands loss among federal resource agencies and encouraged the EPA to more forcefully protect the acreage that remained, regardless of its aesthetic value.¹²

The Sweedens Swamp case demonstrates that by the mid-1980s, the EPA stood firm in its commitment to protect the nation’s wetlands. Even in cases where the EPA did not issue a veto, it used the threat of a veto to accomplish its goals. In the Hackensack Meadowlands, Hartz Mountain Industries proposed a residential development called The Villages at Mill Creek in 1985, just two years after Pyramid

¹¹ Ibid.

¹² Vileisis, *Discovering the Unknown Landscape*, 271-274.

launched its Sweedens Swamp project. Like Sweedens Swamp, The Villages at Mill Creek site became a project over which the Army Corps and EPA clashed in their interpretations of the Clean Water Act, and there, the dispute also raged over the practicable alternatives analysis. In the Meadowlands, a highly altered, highly polluted urban wetland, the debate hinged on the determination of the value of wetlands. Could compromised wetlands, like those found in urban places, continue to provide ecosystem services? Were they worthy of protection under the Clean Water Act? Like the Pyramid Companies, Hartz Mountain Industries answered those questions in the negative. It argued that development was acceptable precisely because the wetlands were degraded and that mitigation projects could make up for wetland losses. The EPA countered with the practicable alternatives arguments it had made in Sweedens Swamp, but in the Meadowlands it even more forcefully argued for the value of seemingly degraded wetlands.

The Villages at Mill Creek

On March 27, 1985, Hartz Mountain Industries announced that it had applied to the Hackensack Meadowlands Development Commission (HMDC) for a permit to build The Villages at Mill Creek – 2,800 townhouses on 160 acres in Secaucus, between the New Jersey Turnpike, Route 3, and Mill Creek (Figure 14). In 1985 the company had little reason to believe that it would face anything but success with its second residential development in the Meadowlands. Hartz had profited tremendously with Harmon Cove in the 1970s. Its first finished units had sold out in a weekend and by 1985 Harmon Cove townhouses were selling for up to \$180,000. The HMDC lauded Harmon Cove as the

ideal development in the Meadowlands and The Villages at Mill Creek proposal emulated Harmon Cove's design – residences clustered around shallow lagoons and canals. Citing a dire need for housing in the Meadowlands, both the HMDC and Secaucus Mayor Paul Amico strongly supported Hartz's Mill Creek development. There had been no new residential construction in the Meadowlands District since Harmon Cove, and such construction lagged far behind the level called for by the HMDC's Master Plan.¹³

But despite this support and the company's previous success, just ten years after it broke ground on Harmon Cove, Hartz Mountain Industries had a very different experience with its new proposal. By 1990, the New York District of the United States Army Corps of Engineers described the proposal as "one of the most controversial Section 404 permit actions in the nation" because of the regulatory fights between the developer, the HMDC, the Army Corps, and EPA, which centered on differences in opinion on the quality of the wetlands potentially impacted.¹⁴ By 1996, these fights played a part in Hartz Mountain Industries' decision to abandon its plans for The Villages at Mill Creek. The development would never be built.

To comply with NEPA and the Clean Water Act's Section 404 permitting process, Hartz Mountain Industries hired TAMS Consultants, Inc. to analyze the existing conditions of The Villages at Mill Creek site and assess the project's environmental impact. TAMS concluded that in its current state, The Villages at Mill Creek site was

¹³ Neal Allen, "Hartz Plans More Town Houses Seeks Approval for 2,800 Condos," *Hackensack (NJ) Record*, March 28, 1985, Access World News; Paul Davidson, "Hartz Told to Build More Condos," *Hackensack (NJ) Record*, September 7, 1986, Access World News.

¹⁴ R. M. Danielson to Constantine Sidamon-Eristoff, August 24, 1990, Folder Hartz Mountain – Villages at Mill Creek, Box 7 Hartz Mountain and Legal Files, MERI.

“degraded,” had “a substantially reduced environmental value,” and was “of relatively low waterfowl and wildlife habitat value.”¹⁵ Because *Phragmites australis*, or the common reed, covered ninety to ninety-five percent of the site, TAMS concluded that few aquatic species could utilize the site.¹⁶

Common wisdom in the 1970s and 1980s held that the presence of dense stands of *Phragmites* indicated that a marsh had degraded, that it could no longer support wildlife, and that ecological conditions in the marsh had irreversibly changed. *Phragmites* was viewed as an evil, invasive weed while *Spartina alterniflora*, a native marsh grass was widely hailed as a more valuable grass (Figure 15).¹⁷ This conclusion was based, in part, on an assessment of each plant’s biological productivity, or a calculation of the energy created via the process of photosynthesis. In the Meadowlands, scientist George Potera found that the average *Spartina* marsh produced 5.4 tons per acre and the average stand of *Phragmites* produced 4.3 tons per acre.¹⁸ Moreover, because *Spartina* disintegrates in the winter, its debris adds more energy into the marsh ecosystem while the *Phragmites*’ nutrients remain trapped in the dried reeds and rhizomes.¹⁹ Negative conclusions about *Phragmites* were also based, in part, on the structural changes to the marsh that *Phragmites* caused. Because it is so dense, *Phragmites*’ stems trap sediments that move

¹⁵ Thomas J. O’Connor to Joseph J. Seebode, September 15, 1988, Folder Hartz Mountain – Villages at Mill Creek, Box 7 Hartz Mountain and Legal Files, MERI.

¹⁶ Memorandum, G. Barrie Heinzenknecht to Thomas O’Connor, September 15, 1988, Folder Hartz Mountain – Villages at Mill Creek, Box 7 Hartz Mountain and Legal Files, MERI.

¹⁷ Erik Kiviat, e-mail message to author, January 5, 2017.

¹⁸ George T. Potera, “A Preliminary Ecologic Study and Evaluation of a Section of the Hackensack Meadowlands,” November 1970, Report 1970-003, MERI, 12-13.

¹⁹ Molly S. Geller and Hilda Belman, “The Role of *Phragmites* in a Disturbed Estuary,” (paper given at the National Association of Biology Teachers Convention, Chicago, October 16, 1971), 8, Hackensack Meadowlands Papers, Fairleigh Dickinson University Digital Archives.

in and out of the marsh on the tide. As this sediment is deposited, land builds up, and the marsh becomes higher and drier.²⁰

Perhaps the most utilized argument against *Phragmites* in the 1970s and 1980s came from the United States Fish and Wildlife Service in its belief that *Phragmites* provided poor habitat for ducks and other waterfowl. Fish and Wildlife Service scientists observed the influence of *Phragmites* in coastal wetlands habitats in its Atlantic coast wildlife refuges. At Forsythe National Wildlife Refuge on New Jersey's Atlantic Coast, where *Phragmites* covered eight hundred acres, the Fish and Wildlife Service found that wildlife use on that acreage was "low." It attributed this to the poor nutritional quality of the *Phragmites* plant vis-à-vis native marsh grasses. At Prime Hook National Wildlife Refuge on the coast of Delaware, dense stands of phragmites covered nearly thirty-four percent of the refuge. Here, the Fish and Wildlife Service concluded that "encroachment of phragmites has caused a significant decline in wildlife use, up to 80%."²¹

These observations guided Fish and Wildlife Service policy in coastal marshes. In 1989, the Service implemented a Waterfowl Management Plan that called for the control of *Phragmites* with herbicides, mechanical removal, water manipulation, and fire.²² However, it formulated these eradication plans without strong empirical ecological evidence of *Phragmites*' impact on a wetland ecosystem. As biologists Judith Weis and

²⁰ Molly S. Geller, "Phragmites: Life Preserver of the Salt Marsh," *Underwater Naturalist* 7 no. 3 (1972): 5, 9.

²¹ Thomas J. O'Connor to Joseph J. Seebode, September 15, 1988, Folder Hartz Mountain – Villages at Mill Creek, Box 7 Hartz Mountain and Legal Files, MERI.

²² Diana H. Cross and Karen L. Fleming, "Control of Phragmites or Common Reed," *Fish and Wildlife Leaflet* 13.4.12 (1989).

science writer Carol Butler argue, many experts “relied on negative feelings . . . rather than scientific evidence to declare that the plant was undesirable.”²³

Those same negative feelings regarding the ecosystem effects of *Phragmites* guided assessments of The Villages at Mill Creek site. In its reports to Hartz and the Army Corps of Engineers, TAMS used the Fish and Wildlife Service’s commentary on the influence of *Phragmites* at Forsythe and Prime Hook to support its conclusions about the Mill Creek site. After three years of observation of wildlife on that site, TAMS found that it “ha[d] suffered similar (if not identical) invasion of Phragmites [as did Forsythe and Prime Hook]. The same concurrent decline in wildlife and waterfowl utilization has occurred.”²⁴

Hartz Mountain Industries’ development proposal and Army Corps permit application rested on the assumption that because it was covered by *Phragmites*, the existing wetland system at Mill Creek was highly degraded and of very low environmental value. But it also hinged on the belief that the company could enhance wetlands elsewhere to compensate for the direct loss of wetlands that it would fill to build The Villages at Mill Creek. Hartz argued that it had been particularly successful in this latter endeavor elsewhere in the Meadowlands. In 1985, in mitigation for a commercial development called Harmon Meadow, Hartz had undertaken a marsh enhancement project in the sixty-three-acre Western Brackish Marsh, located just upriver from the proposed Mill Creek site. The Western Brackish Marsh had nearly identical baseline

²³ Judith S. Weis and Carol A. Butler, *Salt Marshes: A Natural and Unnatural History* (New Brunswick, NJ: Rutgers University Press, 2009), 153.

²⁴ Memorandum, G. Barrie Heinzenknecht to Thomas O’Connor, September 15, 1988, Folder Hartz Mountain – Villages at Mill Creek, Box 7 Hartz Mountain and Legal Files, MERI.

conditions to The Villages at Mill Creek site. It too had been completely overtaken by dense stands of *Phragmites* which had raised the elevation of the marsh. At the Western Brackish Marsh, Hartz and its consultants employed a marsh mitigation plan that involved the chemical elimination of *Phragmites* with the herbicide RODEO and reseeded with *Spartina alterniflora*, excavating canals to direct water from Mill Creek into the marsh, and creating raised areas to support shrubs and trees. By 1988, TAMS consultants reported that the Western Brackish Marsh mitigation effort had met its goals; *Phragmites* had been eliminated, *Spartina* stands had taken root and flourished, and habitat had been created – species counts showed that twice as many avian species utilized the mitigated site in comparison to those counted on an adjacent unmitigated site.²⁵

In 1987, Hartz announced that it would implement restoration plans, akin to those undertaken at the Western Brackish Marsh, to enhance ninety-two acres of wetland in South Secaucus in mitigation for the ninety-seven acres it proposed to fill at The Villages at Mill Creek site.²⁶ In response to comments from the Army Corps of Engineers, Hartz later added twenty-two additional acres in the Anderson Marsh to this original proposal, bringing the total area proposed for mitigation at the South Secaucus and Anderson Marsh sites to 113.98 acres (see Figure 14).²⁷

²⁵ Thomas J. O'Connor to Joseph J. Seebode, September 15, 1988, Folder Hartz Mountain – Villages at Mill Creek, Box 7 Hartz Mountain and Legal Files, MERI; Stephen Hix and Christine Ross, "Restoration of a Tidal Marsh in the Hackensack Meadowland Region" (unpublished manuscript, 1988), Report 1988-088, MERI.

²⁶ Charles M. Sennott, "Hartz Offers Housing and Wetland Cleanup," *Hackensack (NJ) Record*, June 25, 1987, Access World News.

²⁷ Thomas J. O'Connor to James M. Mansky, October 6, 1987, Folder Hartz Mountain – Villages at Mill Creek, Box 7 Hartz Mountain and Legal Files, MERI.

TAMS argued that Hartz's mitigation efforts would actually increase the overall wetlands values of the project area. It used the United States Fish and Wildlife Service's Habitat Evaluation Procedure (HEP) to assess the current conditions of The Villages at Mill Creek, South Secaucus, and Anderson Marsh sites and to analyze the effects of its proposed mitigation. The Fish and Wildlife Service had developed HEP to provide a methodology by which planners could assess a project's environmental impact in compliance with the new federal regulatory framework of the early 1970s. The HEP methodology rests on the idea that habitat quality for selected species can be quantified. The Fish and Wildlife Service developed a series of Habitat Suitability Indexes for individual species which model species-habitat relationships. These models consider specific habitat requirements, like food and nesting needs, and produce a number between zero and one that indicates habitat suitability. This number can then be multiplied by the area of available habitat to produce a number of Habitat Units, an output which communicates both quality and quantity of habitat and can be compared and used to predict the impact of proposed actions on both species and habitat.²⁸

TAMS Consultants, Inc. used various fish and avian species in its HEP analysis for The Villages at Mill Creek site and the South Secaucus and Anderson Marsh mitigation sites: striped bass, blueback herring, inland silverside, clapper rail, great egret, and red-winged blackbird. TAMS's calculation of the combined Average Annual Habitat

²⁸ "Habitat as a Basis for Environmental Assessment, 101 ESM," September 15, 1980, Division of Ecological Services, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C.

Units for the three sites before and after the proposed fill on The Villages at Mill Creek Site showed a net increase in wetlands values by 123%.²⁹

With TAMS's calculations in hand, Hartz made the argument to the HMDC and Army Corps of Engineers that its proposed development would actually help to improve the Meadowlands' environment. But Hartz also argued that its development was the *only* way to improve the Meadowlands environment. Again, the company looked to the work it had done in mitigation for the Harmon Meadow commercial development. There Hartz had invested five million dollars of private funds into the mitigation program – a level of funding that had been unavailable in the public sector.³⁰ As part of its Villages at Mill Creek development, Hartz would completely fund the mitigation of the South Secaucus and Anderson Marsh sites and pay twenty-million dollars in fees to the Secaucus Municipal Utilities Authority to upgrade the plant's sewage treatment capabilities. The company argued that without The Villages at Mill Creek, funding for that marsh restoration and revenue for sewage treatment would be lost.³¹

Even before it made the additional mitigation changes, Hartz Mountain Industries had gained the support of the HMDC and many in the local community precisely because it linked residential development with environmental cleanup. At a public hearing held by the Army Corps on June 24, 1987, HMDC Executive Director Anthony Scardino predicted that “this project will serve as a national model for cooperation between the

²⁹ Memorandum, G. Barrie Heinzenknecht to Thomas O'Connor, September 15, 1988, Folder Hartz Mountain – Villages at Mill Creek, Box 7 Hartz Mountain and Legal Files, MERI.

³⁰ “Summary of Villages at Mill Creek Project,” Folder Hartz Mountain – Villages at Mill Creek, Box 7 Hartz Mountain and Legal Files, MERI.

³¹ Thomas J. O'Connor to William J. Muszynski, September 14, 1988, Folder Hartz Mountain – Villages at Mill Creek, Box 7 Hartz Mountain and Legal Files, MERI.

public and private sector. It will solve housing needs and pay for the cleanup of an area that has been assaulted by human waste."³² HMDC Chairman Leonard Coleman argued that the heavily polluted Meadowlands could not be remediated without the funding that new construction on wetlands would provide.³³ *The Record's* editorial staff agreed, concluding that, "the trade-off strikes us as reasonable."³⁴ The underlying assumption here is, of course, that in a heavily polluted urban estuary, preservation and development must be inextricably tied together – that a developer should pay for restoration in exchange for development rights and that overall environmental cleanup required a sacrifice of some wetlands.

The Army Corps of Engineers also agreed. On January 30, 1989, its New York District issued a permit to Hartz that allowed the company to fill 97.41 acres of tidal wetlands for the construction of The Villages at Mill Creek with the requirement that the developer rehabilitate 134.1 acres of wetland and conduct studies to ensure the mitigation's success.³⁵ Of the permit approval, Colonel Marion J. Caldwell of the Army Corps of Engineers said, "complete compliance with all conditions and requirements of the corps permit would not only bring urgently needed housing to the region but would also allow important environmental enhancement in the Hackensack meadowlands

³² Charles M. Sennott, "Hartz Offers Housing and Wetland Cleanup," *Hackensack (NJ) Record*, June 25, 1987, Access World News.

³³ Lindy Washburn, "Meadows Dispute May Cool," *Hackensack (NJ) Record*, November 13, 1987, Access World News.

³⁴ "Housing: Have a Hartz," *Hackensack (NJ) Record*, July 8, 1987, Access World News.

³⁵ New York District, Corps of Engineers, Department of the Army Permit, Public Notice No. 12871-86-1044-RS to Hartz Mountain Development Corporation, January 30, 1989.

region.”³⁶ However, to the EPA this sacrifice of urban wetlands seemed to be nothing but a direct violation of the Clean Water Act.

Despite the Army Corps’ strong support for projects like The Villages at Mill Creek, the Corps and Hartz had to contend with the EPA, which had the authority to veto any Army Corps permit issued under Section 404 (c) of the Clean Water Act. In the EPA’s Region Two office (covering New Jersey, New York, U.S. Virgin Islands, and Puerto Rico), they faced a formidable opponent in Christopher Daggett. EPA administrator William Ruckelshaus appointed Daggett, who had previously served as New Jersey Governor Thomas Kean’s Cabinet Secretary, to lead EPA’s Region Two in 1984. Although Governor Kean described Daggett as “a committed environmentalist,” other environmentalists in New Jersey initially criticized his appointment due to Daggett’s lack of experience in environmental management.³⁷ But under Daggett’s leadership, the EPA’s Region Two office became a major force in wetlands management and regulation in the Meadowlands.

Daggett proved to be environmentalists’ greatest ally in Meadowlands development controversies. He took a staunchly anti-development stance in the Meadowlands, telling reporters in 1987 that “at some point there’s got to be a limit to development before you get real ecological damage in that area.”³⁸ This signaled an about-face in policy from a regional office that until this point had routinely rubber-

³⁶ Tom Groenfeldt, “U.S. Split on Meadowlands Plan,” *Hackensack (NJ) Record*, January 31, 1989, Access World News.

³⁷ Leo H. Carney, “The Environment: New EPA Official,” *New York Times*, August 26, 1984, ProQuest Historical Newspapers (122506594).

³⁸ Robert Hanley, “Environmentalists’ Tough Balancing Act in Meadowlands,” *New York Times*, August 15, 1987, ProQuest Historical Newspapers (110662665).

stamped development permits in the region. By holding up development projects with a strict application of Section 404 of the Clean Water Act, Daggett and his successors used the Region Two office's oversight role to protect the Meadowlands' remaining wetlands. The Villages at Mill Creek permit proposal sat at the center of this strategy and at the center of what became a nearly decade-long conflict between the Army Corps, HMDC, and EPA as Daggett's office threatened to veto the Army Corps' permit, should it issue one.

Daggett used his authority under the Clean Water Act's Section 404 (c) to challenge the Army Corps' implementation of Section 404 (b)(1) guidelines in the Meadowlands. As of 1980, these guidelines required, in part, that the Corps or the developer prove that no "practicable alternative" to the proposed wetland fill existed that would have a lesser environmental impact than the proposed project. Many of the controversies in the Meadowlands revolved around the question of whether a practicable alternative existed.

Since the project's inception, Daggett had indicated to both Hartz and the Army Corps that he intended to withhold his office's review of the project until Hartz had proven that it could not find a suitable alternative site that did not require filling wetlands.³⁹ Despite Hartz's and the Army Corps' contentions to the contrary, and through various iterations of the project and permit applications, the EPA maintained that the company had continually failed to prove that the wetlands site was the only possible

³⁹ Robert Hanley, "Environmentalists' Tough Balancing Act in Meadowlands," *New York Times*, August 15, 1987, ProQuest Historical Newspapers (110662665).

site on which it could meet its development goals.⁴⁰ Daggett reasserted the argument that his counterpart in Massachusetts had made in the Sweedens Swamp case – mitigation cannot be used as justification for wetland development without substantial proof that no alternative site exists. In a statement that directly countered the HMDC and Hartz’s claims that The Villages at Mill Creek site had to be sacrificed in order to restore the more valuable South Secaucus and Anderson Marsh sites, Daggett said “I’m not sure that the way to fix bad wetlands is to concede some of them to development.”⁴¹

But even more significantly, based on its own ecological research, the EPA questioned Hartz’s characterization of The Villages at Mill Creek site as “degraded.” Herein lay the crux of the disagreement between the EPA and the Army Corps. The two disagreed on the interpretation of the site’s wetlands values.⁴² Where Hartz saw a dense stand of loathsome *Phragmites* and a degraded and ecologically dead wetland, the EPA argued that even a *Phragmites* wetland could adequately perform wetland functions, most importantly in its ability to improve water quality throughout the Meadowlands. Therefore, in the EPA’s estimation, a loss of any wetlands, whether in a primary native state or characterized by invasive species, had undesirable repercussions for the greater ecosystem.⁴³

⁴⁰ Tom Groenfeldt, “U.S. Split on Meadowlands Plan,” *Hackensack (NJ) Record*, January 31, 1989, Access World News.

⁴¹ Bob Narus, “The Environment,” *New York Times*, April 10, 1988, ProQuest Historical Newspapers (110563232).

⁴² Constantine Sidamon-Eristoff to Colonel Ralph M. Danielson, September 13, 1990, Folder Hartz Mountain – Villages at Mill Creek, Box 7 Hartz Mountain and Legal Files, MERI.

⁴³ Matthew Goldstein, “Hartz Plan Foes Set Back Army Will Not Block Project,” *Hackensack (NJ) Record*, August 22, 1989, Access World News.

The EPA did not evaluate The Villages at Mill Creek site solely on its ability to provide habitat, but instead considered the ability for the wetland to perform ecological functions. The agency disagreed with TAMS's methodology and the consultant's resulting assessment of wetlands values.⁴⁴ In 1986 the EPA Region Two had led a joint effort with the Army Corps of Engineers to assess the remaining wetlands in the Meadowlands to construct an ecological baseline upon which anticipated environmental impacts from proposed development projects could be based. This Advanced Identification process, or AVID, used the Corps' own Wetland Evaluation Techniques (WET) method to analyze and quantify twenty-three wetland functions in 147 wetland areas comprising 7,576 acres, or ninety-two percent, of the Hackensack Meadowlands.⁴⁵ Each wetland area was characterized as "high," "moderate," or "low," indicating the probability that a wetland could perform each identified function. Because it looked at ecosystem functioning as a whole rather than simply at habitat and species, this method went beyond the HEP analysis that TAMS used in its assessment of the project area, and the EPA's initial findings contradicted TAMS' conclusions. Far from being useless for wildlife, EPA found that The Villages at Mill Creek site had a "high" value for waterfowl and a "moderate" value for wildlife in general. This finding contradicted Hartz's claim

⁴⁴ Constantine Sidamon-Eristoff to Colonel Ralph M. Danielson, September 13, 1990, Folder Hartz Mountain – Villages at Mill Creek, Box 7 Hartz Mountain and Legal Files, MERI.

⁴⁵ Wetland functions assessed were: "groundwater recharge and discharge, floodflow alteration, sediment stabilization, sediment/toxicant retention, nutrient removal/transformation, production export, aquatic diversity/abundance, general fish habitat, general wildlife habitat, general waterfowl habitat, wildlife diversity/abundance, and a number of waterfowl functions." See Maguire Group Inc., *Final Report Functional Assessment of Wetlands in New Jersey's Hackensack Meadowlands*, prepared for U.S. Environmental Protection Agency, Region II, December 1989, p. 1.

that *Phragmites* marshes provided little ecological value. Instead, the EPA concluded that The Villages at Mill Creek site had “high” ecological value.⁴⁶

This fundamental disagreement between the EPA on one side, and Hartz Mountain Industries and the Army Corps of Engineers on the other side, over the value of a *Phragmites* wetland delayed the permitting process for The Villages at Mill Creek for nearly a decade. The EPA held fast to its claim that the wetland was valuable and continued to threaten a veto of the permit. It was not until Hartz reduced the amount of proposed fill to sixty-eight acres and increased its mitigation plans to cover 244 acres that the EPA dropped its threatened veto. This was in 1993, eight years after Hartz Mountain Industries had first proposed the development at The Villages at Mill Creek.⁴⁷

Russo Development Corporation

Russo Development Corporation was one of the most productive warehouse developers in the Meadowlands in the 1980s. In 1984 alone, the company built 600,000 square feet of warehouse space with another 230,000 square feet in the works in 1985. This type of commercial development thrilled Carlstadt’s mayor, as warehouse developments paid substantial taxes – Russo paid \$9.4 million in municipal taxes in 1984 – while only minimally straining municipal services.⁴⁸

But, between 1981 and 1985, the company illegally filled fifty-two acres of wetlands in Carlstadt, inciting additional conflict between the Army Corps and the EPA.

⁴⁶ Ibid.; John Mooney, “EPA Deals Potential Death Blow to Major Hartz Housing Project,” *Hackensack (NJ) Record*, June 1, 1991, Access World News.

⁴⁷ William J. Muszynski to Colonel Thomas York, January 28, 1993, Folder Hartz Mountain – Villages at Mill Creek, Box 7 Hartz Mountain and Legal Files, MERI.

⁴⁸ Neal Allen, “Carlstadt,” *Hackensack (NJ) Record*, January 27, 1985, Access World News.

Claiming that it was unaware of the requirement to secure permits from both state and federal authorities, Russo filled and developed forty-four acres and filled eight-and-a-half additional acres without securing the necessary Army Corps permits under Section 404 of the Clean Water Act. Once the Army Corps discovered the illegal fill, it issued a cease and desist order to the company. Despite this, Russo announced in 1985 that it intended on filling the remaining five acres of its parcel in order to complete its warehouse development. The Army Corps agreed to overlook the company's transgression and proposed to issue permits for all of the fill – a retroactive permit for the original fill and a new permit for the remaining five acres – in exchange for a commitment from Russo to restore unspecified wetlands acreage it owned elsewhere in the Meadowlands District and to permanently preserve twenty-three acres in the Troy Meadows of the Passaic River basin, located one and a half miles to the southwest, outside of the Meadowlands District. The Corps required Russo to assess the wetlands values of the current site and compensate for fifty-percent of the lost wetlands value.⁴⁹

As it had in The Villages at Mill Creek permitting process, the EPA argued against the validity of exchanging mitigation for wetlands destruction. In March 1988, the Region Two Office of the EPA under Christopher Daggett vetoed the Army Corp's permit. This veto was the first and only time that the EPA had ever exercised its veto power in Region Two. It had threatened a veto in The Villages at Mill Creek site, but in

⁴⁹ Blumm and Mering, "Vetoing Wetland Permits Under Section 404(c)," 263-265; Lawrence J. Jensen, *Final Determination of the U.S. Environmental Protection Agency's Assistant Administrator for Water, Concerning Wetlands Owned by the Russo Development Corporation in Carlstadt, New Jersey Pursuant to Section 404(c) of the Clean Water Act* (March 21, 1998), 1-2, <https://www.epa.gov/sites/production/files/2015-05/documents/russofd.pdf>.

the Russo case, it used it. In addition to blocking development on the five-acre parcel, Daggett's office also called for Russo to remove fill on a portion of its original site upon which the company had not yet built. Because the wetland values on the land it had already developed were irrevocably lost, the EPA also required Russo to provide mitigation for the fill and development that it had already undertaken.⁵⁰

In its veto decision, the EPA challenged the Army Corps and Russo's methods and conclusions about the Russo site's pre-fill and existing ecological conditions. The Corps had assessed the Russo tract's pre-fill state as having low per acre wetlands value due to the dominant *Phragmites* cover, which it claimed provided poor habitat and biological productivity. The EPA concluded that the developer's assessment of the original vegetation on the site was merely an assumption based on the general predominance of *Phragmites* throughout the Meadowlands rather than on any kind of site-specific research. Instead, an EPA botanist and wildlife biologist conducted their own investigation into the site's historic vegetative cover. They used a complex method of field investigations, analysis of stereo-paired aerial photographs taken in 1978 that allowed them to see a magnified, three-dimensional image of marsh grasses, as well as conducting interviews with people like the HMDC's Don Smith who had intimate life-long knowledge of the Meadowlands. Their research showed that far from being a homogenous stand of dense *Phragmites*, the Russo site had been covered by a mix of wetland types – wet meadow, mixed emergent, and wooded – that was a rarity in the modern Meadowlands. In addition to *Phragmites* cover on the north, west, and south

⁵⁰ Eve Markowitz, "EPA Vetoes Wetlands Permit Army Corps Had Approved the Development of Five Acres," *Hackensack (NJ) Record*, March 23, 1988, Access World News.

edges of the site, the EPA researchers found that fifty-two other plant species including sedges, rushes, cattail, and duckweed, had inhabited the site before Russo's fill. This rare mix of wetland types and diverse vegetation made the Russo tract particularly valuable within the context of the Meadowlands.⁵¹

The EPA researchers also posited that this diverse wetland parcel had the ability to support a more diversified wildlife population than the Army Corps and Russo had suggested. Using a wetlands evaluation method developed by ecologists Francis C. Golet and Joseph S. Larson in 1976 that accounted for wetland type, size, habitat, cover, vegetation, and water chemistry, the EPA concluded that both the fifty-seven-and-a-half-acre tract and the five-acre tract had "the potential to provide high value wildlife habitat." An EPA survey of the five acres of wetlands that remained on the Russo site confirmed the scientific evaluation. Surveying the five-acre parcel, EPA scientists counted one hundred six separate species; significantly that count included four species listed as threatened in New Jersey. The United States Fish and Wildlife Service also rated the Russo site as suitable habitat for the Northern Harrier, a bird that had been observed on nearby wetland tracts and that New Jersey classified as a state listed endangered species. Losses of migratory and wintering habitat directly caused the decline in these species' populations and the EPA predicted that the loss of the Russo site had already and would continue to contribute to this cumulative adverse impact on avian populations.⁵²

The EPA also found Russo's proposed mitigation plan deficient. EPA researchers had proved the plan's premise – that the Russo site was a monotypic stand of *Phragmites*

⁵¹ Jensen, "Final Determination," 9-10, Figure 2, Table 1.

⁵² Ibid., 13-15, Table 2.

– to be false. The site supported a much wider diversity of wildlife than Russo suggested, therefore its assessment of the site’s existing wetland value was inaccurate. Moreover, the EPA understood the important habitat role that the Russo site played within the context of the greater Meadowlands. Its findings stated that prior to filling, the mix of wetland types on the Russo site had contributed to wildlife diversity throughout the Meadowlands District and that Russo’s plan to mitigate for fifty percent of the wildlife habitat value was inadequate compensation for the adverse impact to the entire region’s wildlife. Therefore, the EPA could not approve the plan and it issued a formal veto.⁵³

In defense of the veto, Christopher Daggett again warned of the damaging ecological effects of cumulative development of the Meadowlands’ wetlands and made the case for protecting even small pieces of remaining wetlands acreage. In response to his office’s decision on the Russo warehouse development, he declared that the EPA was “willing to go to the wall to protect the Meadowlands.”⁵⁴ Implicit in this declaration was Daggett’s belief that the EPA could more properly protect wetlands in the Meadowlands District than could the HMDC. In the past, Daggett had criticized the HMDC for allowing too much development in its comprehensive plan. Now the EPA used its veto power to wrest control of wetlands decisions in the Meadowlands away from the HMDC and to challenge the very nature of wetlands preservation in the Meadowlands as it had developed by the 1980s – the coupling of preservation and economic development.

⁵³ Ibid., 265.

⁵⁴ Bob Narus, “The Environment,” *New York Times*, April 10, 1988, ProQuest Historical Newspapers (110563232).

This declaration and the EPA's veto particularly troubled the HMDC's Chairman, Leonard Coleman, Jr. The EPA's understanding of Section 404 as a mandate to protect wetlands by prohibiting development underpinned the veto. But Coleman expressed his opposition to that interpretation of the Clean Water Act at an EPA hearing in 1987,

Section 404 of the Clean Water Act does not prohibit development in wetlands. Far from it. Instead, like our State law [the Hackensack Meadowlands Reclamation and Development Act], it recognizes that development is necessary to our economic health and establishes a permitting program to authorize discharges of fill material. . . The goal of Section 404 is to minimize adverse environmental effects that can result when filling is necessary, not prohibit development altogether.⁵⁵

The HMDC could not embrace the EPA's no-development view as it conflicted with the HMDC's own legislative mandate to provide for economic development and solid waste disposal while protecting the environment. In his message to the EPA, Coleman highlighted the very real environmental successes that the Meadowlands Commission had celebrated within the confines of its mandate. With protective zoning and innovative waste management plans, it preserved the 440-acre Kingsland marsh, the 1,400-acre Sawmill Creek Wildlife Management Area, and the 300-acre Kearny freshwater marsh, all previously slated for landfilling. Its zoning requirements had extracted over 1,400 acres of open space from developers, and water quality in the Hackensack River and its tributaries was improving. Even groups like The Nature Conservancy applauded the HMDC's success in balancing development and environmental needs.⁵⁶

⁵⁵ Leonard S. Coleman, Jr. "Official Statement for the Record of Leonard S. Coleman, Jr., Commissioner of the Department of Community Affairs, Chairman of the Hackensack Meadowlands Development Commission at the U.S. Environmental Protection Agency, Region II, Public Hearing, Lyndhurst, New Jersey," November 5, 1987, p. 3, Box 36 Legal, MERI.

⁵⁶ *Ibid.*, 6-13.

Coleman also argued that the EPA's use of Section 404 (c) threatened his agency's very ability to carry out its legislative mandate to plan for the Meadowlands District in a comprehensive way. The Commission had been created to move away from the environmentally and economically dangerous local zoning practices that had threatened the Meadowlands in the 1950s, but now, he said, use of the Section 404 (c) veto on a case-by-case basis amounted to "Federal spot-zoning," which was "the very antithesis of HMDC's efforts at advanced comprehensive planning."⁵⁷

Russo Development Corporation challenged the EPA's veto in the United States District Court for the District of New Jersey. In two cases, *Russo Development Corporation v. Thomas et al.* (1987) and *Russo Development Corporation v. Reilly* (1991), the District Court upheld the EPA's veto. The EPA did not reconsider its veto until Russo amended its mitigation plans to include preservation of sixteen acres in Ridgefield, New Jersey by deed and payment of \$700,000 for future mitigation projects in the District. This was in September 1995, ten years after Russo's initial application to the Army Corps for an after-the-fact permit.⁵⁸

A Compromise: The Special Area Management Plan

The Villages at Mill Creek and Russo Development Company permitting sagas show that the Army Corps, EPA, and HMDC independently pursued different agendas in the Meadowlands. Part of the problem stemmed from the fact that the HMDC approved

⁵⁷ Ibid., 17.

⁵⁸ Blumm and Mering, "Vetoing Wetland Permits Under Section 404(c)," 263-265; United States Environmental Protection Agency, Modification of the March 21, 1988, Russo Development Corporation Section 404(c) Final Determination, 60 Fed. Reg. 47568 (September 13, 1995).

its Master Plan just months before Congress passed the Clean Water Act of 1972 and the Plan and the Act were in conflict from the beginning. As the Clean Water Act's Section 404 regulations were implemented and refined, it came to focus more on wetlands protection, but in the Meadowlands, the majority of land available to the HMDC to carry out its development objectives was also wetland. Moreover, the EPA and the Army Corps each understood Section 404 differently. As *The Record's* Matthew Goldstein said of The Villages at Mill Creek fiasco, "the HMDC, citing a need for housing, supports the residential development. The EPA opposes the plan because it would destroy too many acres of wetlands. And the Army Corps of Engineers is still reviewing the project's merits and its impact on the environment."⁵⁹ Conflicts like these caused by regulatory chaos led to long and drawn-out permitting processes in the Meadowlands and nearly ground development to a halt. Between 1983 and 1987, no final Section 404 permits were issued in the District.⁶⁰

Leonard Coleman could not sit idly by while the conflict over federal regulation prevented his agency from carrying out its development mandate. So in December 1986, Coleman went to the EPA and called for the HMDC and the federal agencies to work together to forge a comprehensive plan for wetlands permitting in the Meadowlands rather than relying on a permit-by-permit approach. His initial appeal failed due to interagency squabbling and it was not until September 14, 1988 that the HMDC, New Jersey's Department of Environmental Protection (NJDEP), EPA, Army Corps, and

⁵⁹ Matthew Goldstein, "Some Fear Fate of Unspoiled Meadowlands," *Hackensack (NJ) Record*, May 31, 1990, Access World News.

⁶⁰ Coleman, Jr., "Official Statement," 16.

National Oceanic and Atmospheric Administration (NOAA) entered into an agreement to prepare a Special Area Management Plan (SAMP) for the Hackensack Meadowlands.⁶¹

The Special Area Management Planning process was authorized by the 1980 Amendments to the Coastal Zone Management Act (CZMA). Though it recognized the reality of competing interests in the nation's coastal zone, the CZMA's primary objective was to protect the coastal zone's natural resources.⁶² The 1980 Amendments to the CZMA reinforced this goal when Congress created the Special Area Management Planning process to "provide for natural resource protection and reasonable coastal-dependent economic growth."⁶³ By getting all of the federal and state agencies on the same page in their interpretation and implementation of the Clean Water Act, the primary goal of the SAMP in the Meadowlands was to bring more consistency to the chaotic permitting process and align HMDC master planning with Section 404 regulations.⁶⁴

To do this, the agencies envisioned the SAMP as a blueprint for the Meadowlands that would balance environmental and economic needs in the District. Because the Meadowlands' environment had been assaulted for centuries, the Meadowlands needed environmental restoration through a coordinated program of remediation and preservation. But the HMDC also concluded that the Meadowlands District needed at least 14,000 housing units, over twenty-four million square feet of office space, nine

⁶¹ Coleman, Jr., "Official Statement," 15-16.

⁶² Vileisis, *Discovering the Unknown Landscape*, 268.

⁶³ Coastal Zone Management Improvement Act of 1980, Pub. L. No. 96-464, 94 Stat. 2060 (1980).

⁶⁴ United States Environmental Protection Agency, United States Army Corps of Engineers, National Oceanic and Atmospheric Administration, New Jersey Department of Environmental Protection, and Hackensack Meadowlands Development Commission, *Draft Environmental Impact Statement on the Special Area Management Plan for the Hackensack Meadowlands District, New Jersey: Executive Summary* (June 1995), 1.

million square feet of warehouse and distribution space, and two-and-a-half-million square feet of commercial space. The primary goal of the SAMP was to delineate areas in the Meadowlands where wetlands would be preserved and areas that could be sacrificed for needed development, while ensuring no net loss of wetlands values.⁶⁵

The EPA's Advanced Identification process and its classification of the remaining wetlands acreage informed the SAMP process. The agencies hoped to create a more coordinated effort towards evaluating Section 404 permit applications and to also give developers a clearer indication of which wetlands should be protected and which could potentially be built upon. A "high" rating would signify to developers that they would face a nearly impossible battle in getting a permit from the federal agencies while a "low" rating would signify that if they passed the Section 404 review process, a project would be permitted.⁶⁶

The Army Corps and EPA in partnership with NOAA, NJDEP, and HMDC began to prepare an Environmental Impact Statement (EIS) to assess the impact of various land use strategies. The agencies considered alternative development sites outside of the Hackensack Meadowlands and six development schemes within the boundaries of the Meadowlands District. The "Upland Growth Alternative" placed all proposed development entirely on vacant upland, the "Redevelopment Alternative" relied on converting blighted lots into new developments, the "Highway Corridor Alternative"

⁶⁵ Ibid., ES-8 – ES-16.

⁶⁶ Meg Lundstrom, "EPA Promises Action by Fall on Wetland Permits," *Hackensack (NJ) Record*, January 31, 1988, Access World News; *Public Hearing in Re: Draft Environmental Impact Statement, General Permit, Special Area Management Plan, Hackensack Meadowlands District, N.J., Before the U. S. Environmental Protection Agency, Region II and U. S. Army Corps of Engineers, New York District* (August 29, 1995) (Statement of Mary Anne Thiesing, Marine and Wetlands Protection Branch, U. S. Environmental Protection Agency, Region II), 14-16.

focused growth along existing highways, the “Dispersed Development Alternative” decentralized growth in small developments throughout the district, and the “Growth Centers Alternative” clustered development in large scale mixed-use developments in central nodes in the District. A final alternative involved no action. For each of these alternatives the EIS considered the impact on wetlands, threatened and endangered species and habitats, water quality, aquatic resources, terrestrial resources, transportation, air quality, and cultural resources.⁶⁷

In addition to analyzing various development alternatives, the SAMP agencies also assessed options for implementing an Environmental Improvement Program in the District. As of 1995, five sewage treatment plants, fifty industrial sources, three power plants, runoff from three Superfund sites and six hazardous waste sites, several combined sewer overflows, and leachate from over one thousand acres of abandoned and improperly closed landfills impacted the waters of the Hackensack Meadowlands. The HMDC estimated the total cost for environmental remediation at nearly \$900 million dollars. While the federal Superfund program had subsidized some hazardous waste remediation, and financing for specific landfill closures had been secured through tipping fees at active landfills, the majority of proposed environmental improvements like wetland preservation and restoration and the proper closing of abandoned landfills remained unfunded. The SAMP agencies expressed the problem in no uncertain terms, “adequate resources are not currently available to reverse the extensive damage the

⁶⁷ United States Environmental Protection Agency et al., *Draft Environmental Impact Statement on the Special Area Management Plan*, ES-24 – ES-26.

*District has experienced, damage that has serious continuing negative impacts on the natural aquatic and terrestrial systems [italics in original].”*⁶⁸

After six years of negotiations between the HMDC, EPA, Army Corps, and the New Jersey Department of Environmental Protection, the HMDC released a Draft Environmental Impact Statement (DEIS) of the SAMP to the public in 1994. Its “hybrid” land use plan consisted of parts of the various alternatives studied and called for 13,920 housing units, 32.9 million square feet of office and warehouse space, 2.7 million square feet of commercial space, and improvements to transportation infrastructure in order to meet the region’s development needs over the following twenty years. The plan allowed for development of 1,850 acres of land in specific areas of the Meadowlands District in order to accomplish these goals. Of those 1,850 acres, 842 acres required wetland fill, much of that was in conjunction with The Villages at Mill Creek site and a parcel known as the Empire Tract in Carlstadt on which a \$2.5 billion dollar “minicity” was planned. In mitigation for the 842 acres of fill, the SAMP called for forty-five acres of wetland to be artificially created and 3,400 acres to be restored. The District’s remaining wetlands acreage would be protected by zoning, acquisition, and transfer of development rights. This amounted to eighty-eight percent of the District’s remaining wetlands (Figure 16).⁶⁹

The SAMP created several key regulatory products. One was the issuance of a general permit for twelve development projects in the Meadowlands District that would impact a total of eighty-five acres of wetlands. Other projects that adhered to the

⁶⁸ Ibid., ES-11 – ES-12, quote on ES-33.

⁶⁹ Ibid., ES-45, ES-72, ES-74; Tom Topousis, “Charting the Next 20 Years of Growth: Future of Meadowlands, Federal, State Agencies Back Master Plan,” *Hackensack (NJ) Record*, April 11, 1995.

requirements laid out in the SAMP's land use plan would be eligible for an accelerated permit process that would relieve the developer from Section 404's requirement to prove that no practicable alternatives existed. In order to mitigate for any development impacts, the SAMP also created mitigation banks, large areas where mitigation could be completed in advance and from which developers could buy mitigation credits. These banks and other environmental improvements would be funded by developers who would be required to pay an environmental cleanup fee on every square foot of development approved under the plan.⁷⁰

With this regulatory framework, the SAMP created a new vision by which the HMDC and its federal partners would protect the "delicate balance of nature" in the Meadowlands. By allowing fill on 842 acres of wetlands, it cemented the idea that environmental restoration of an urban estuary required the sacrifice of some wetlands. It reinforced mitigation as the primary mechanism for preservation. It validated the idea that wetlands could be characterized as high or low quality and that degraded wetlands could only be fixed with human intervention.

Perhaps most critically, because it proposed to pay for its environmental improvement program with development fees, the SAMP financially linked preservation and restoration with development. Development and environmental restoration had been theoretically linked from the HMDC's beginning. Chet Mattson and the early HMDC staff knew that changing the future of Meadowlands development required environmental

⁷⁰ *Public Hearing, Special Area Management Plan* (August 29, 1995) (Statement of Joseph Seebode, Chief of the Regulatory Branch, New York District of U. S. Army Corps of Engineers), 7-9 and (Statement of Mary Anne Thiesing), 23.

cleanup. But under the SAMP, development became the mechanism by which that cleanup would happen. Development became absolutely critical to environmental restoration and without it, the SAMP warned, “decades of environmental degradation in the District will remain unaddressed.”⁷¹

Officials from every agency involved and local leaders throughout the Meadowlands District praised the innovative methods with which the SAMP proposed to deal with the Meadowlands’ economic and environmental problems. Anthony Scardino, Executive Director of the HMDC, pointed out that the District contained three Superfund sites, over 150 hazardous waste sites, and dozens of abandoned landfills. He argued that the ecosystem could not combat that level of damage on its own, nor did the HMDC have the level of funding necessary for large-scale environmental remediation.⁷² He called the plan “a state-of-the-art approach to reversing the degradation in what has been the country’s most severely assaulted wetlands area.”⁷³ The new regional director for the EPA’s Region Two agreed, saying that “the plan proves that economic development and environmental protection are not mutually exclusive and can in fact be synergistic.”⁷⁴

The SAMP seemed reasonable to many. The process brought all of the agencies to the same table. The plan’s Environmental Improvement Program extracted funding from developers to tackle the Meadowlands’ pollution problems, and although it called

⁷¹ United States Environmental Protection Agency et al., *Draft Environmental Impact Statement on the Special Area Management Plan*, ES-34.

⁷² *Public Hearing, Special Area Management Plan* (August 29, 1995) (Statement of Anthony Scardino), 36-37.

⁷³ Thomas J. Lueck, “State Seeks to Preserve More Meadowlands, With Developers Picking Up Part of the Bill,” *New York Times*, April 30, 1995, ProQuest Historical Newspapers (109456362).

⁷⁴ Tom Topousis, “Meadowlands Revival – Agency, Environmentalists at Odds over Best Approach,” *Hackensack (NJ) Record*, October 15, 1995, Access World News.

for 842 acres of wetlands fill, this was a drastic reduction from the fill that was allowed under the 1972 Master Plan. Back in 1975, a *New York Times* reporter had assessed the progress of the 1972 Master Plan in the three years since it had been adopted and looked toward the future of the Meadowlands under that original plan. He wrote, “the plan seemed sensible and progressive enough. The only problem was that the Meadowlands had a history of defeating all sensible and progressive plans.”⁷⁵ Perhaps the reporter’s predictions then, are better suited as a forewarning to the fate of the SAMP.

⁷⁵ Peter Hellman, “In the Big Dump: A Sweet Smell of Success,” *New York Times Magazine*, January 26, 1975, ProQuest Historical Newspapers (120504067).

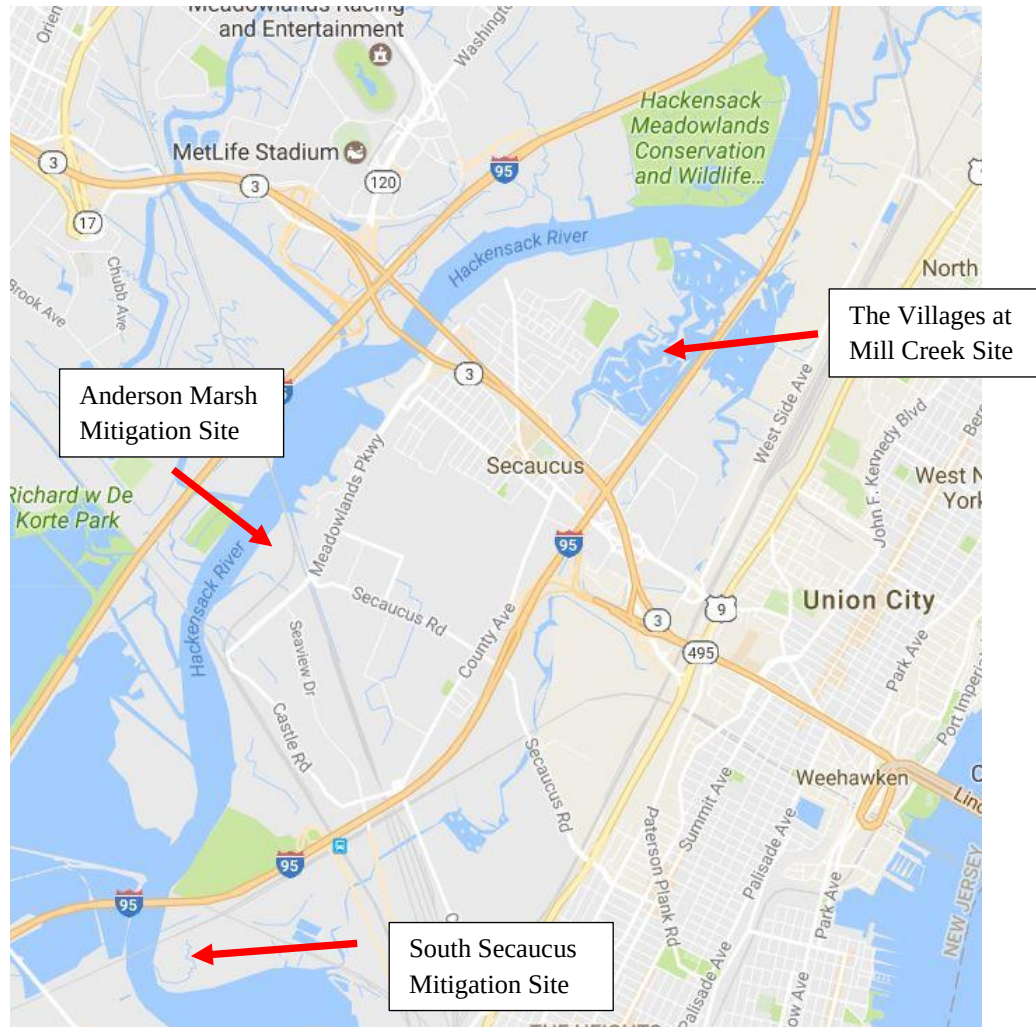


Figure 14. Locations of The Villages at Mill Creek Site and South Secaucus and Anderson Marsh Mitigation sites.

Source: Base map from Google Maps, 2017.



Figure 15. *Phragmites australis* (top) and *Spartina alterniflora* (bottom, foreground) in the Meadowlands.

Source: Photos by author, June 21, 2014.

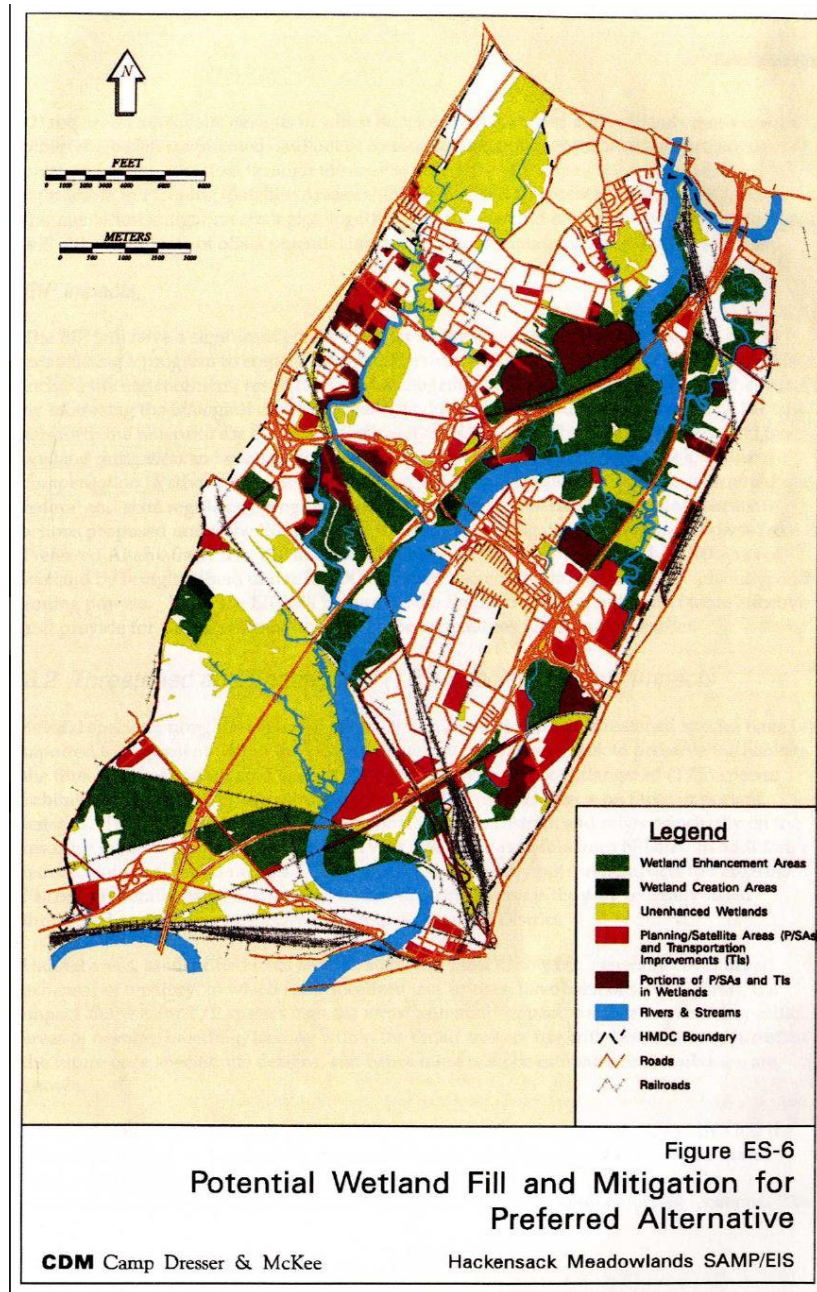


Figure 16. Potential Wetland Fill and Mitigation for Preferred Alternative, Hackensack Meadowlands SAMP/EIS.

Source: United States Environmental Protection Agency et al. *Draft Environmental Impact Statement on the Special Area Management Plan for the Hackensack Meadowlands District, New Jersey: Executive Summary*, June 1995, p. ES-45.

“WE DREW A LINE IN THE MARSH”:

CITIZEN STEWARDSHIP IN THE MEADOWLANDS

By the late 1970s, the environmental accomplishments of the Nixon era had diminished the general sense of impending environmental crisis that Americans had felt in the early part of the decade. Environmental debates then moved from protests in the streets and the front page of newspapers to the legal and technical arena. As historian J. Brooks Flippen said, “lawyers with briefcases replaced protesters with signs, while debate often centered on the minutia of science.”¹ The debates over The Villages at Mill Creek and Russo Development Corporation’s warehouse developments show that Flippen’s characterization of environmentalism certainly held true in the Hackensack Meadowlands, where in the 1980s, lawyers for Hartz Mountain Industries and Russo Development and government officials from at least four different state and federal agencies debated the biological productivity of *Phragmites* vis-à-vis that of *Spartina*, the habitat needs of the black duck, and the proper ways to define and analyze wetland values.

These interagency debates also provided a breeding ground for a new class of environmental activists in the Meadowlands – the citizen stewards. Citizen stewardship, as one scholar of environmental studies defines it, is “the acceptance by citizens of their responsibility for creating sustainable relationships between humans and natures.”² John

¹ J. Brooks Flippen, *Nixon and the Environment* (Albuquerque: University of New Mexico Press, 2000), 222.

² Catherine Phillips, “Cultivating Practices: Saving Seed as Green Citizenship,” *Environments* 33 no. 3 (2005): 41.

Barry, a leading theorist on ecological citizenship, argues that such stewardship involves re-embedding people in their environments, and as such, citizen stewards are uniquely positioned to bridge local knowledge and use of an environment with the government officials who make decisions about that environment. They can cultivate people's environmental values and connection to place and connect that to the public policy process.³

Such stewardship becomes particularly important at times in which citizens do not believe that their governments are acting in the public's best interest. In the 1990s, this certainly seemed to be the case with wetlands. On the national level, a conservative Republican majority took control of Congress in 1994. In line with the Republican Party's "Contract With America," which promised to protect Americans' individual property rights, the House of Representatives passed a bill that would require the government to compensate landowners if the Clean Water Act's regulations devalued private property. Though this bill did not pass the Senate, the politics in Washington rattled many people who cared about America's wetlands as they began to doubt the federal government's commitment to protect these places.⁴ Those who had watched the Meadowlands disappear under developers' fill in the years since the New Jersey State Legislature created the Hackensack Meadowlands Development Commission (HMDC),

³ John Barry, "Vulnerability and Virtue: Democracy, Dependency, and Ecological Stewardship," in *Democracy and the Claims of Nature: Critical Perspectives for a New Century*, ed. Ben A. Minteer and Bob Pepperman Taylor (Lanham, MD: Rowman & Littlefield Publishers, 2002), 138.

⁴ Ann Vileisis, *Discovering the Unknown Landscape: A History of America's Wetlands* (Washington D.C.: Island Press, 1997), 330-331.

also questioned the HMDC's commitment to the third part of its mandate, "the preservation of the delicate balance of nature."⁵

The concept of a citizen steward provides a useful way to think about the environmental activists who found their voices in the public meeting halls of the Environmental Protection Agency (EPA), Army Corps of Engineers, and the HMDC in the 1990s. Their fight started against something seemingly tedious – a government planning document, the Special Area Management Plan (SAMP). That document, which called for 842 acres of wetlands fill, signified to them that the government, at all levels, had abdicated its responsibility to protect the Hackensack Meadowlands' ecological resources. It fell to citizens then, those who lived by the Meadowlands, who knew the marsh and used the marsh, to fill that void. With their unique ability to cultivate a sense of place in the Meadowlands, to use those values to influence the established structures of the political and regulatory establishment, and to hold that establishment accountable to the people, these activists reinvigorated the public debate over the environmental future of the Hackensack Meadowlands.

Citizen Stewards

Margaret Utzinger had been advocating for the Hackensack River since the 1970s when she held small meetings around her kitchen table with the few others who shared her hope that the Hackensack could be saved.⁶ She did not trust that the Hackensack

⁵ *Hackensack Meadowlands Reclamation and Development Act with Digest* (New Jersey: Hackensack Meadowlands Development Commission, 1969).

⁶ Andrew Willner, "Hackensack Meadowlands Book Proposal" (unpublished draft manuscript, n.d.), 26.

Meadowlands Development Commission was protecting citizens' interests along the river so in 1984, she founded one of the first local grassroots groups to focus its attention solely on the Hackensack Rivershed. An early and vocal advocate for the Meadowlands, Utzinger's Hackensack River Coalition filled *The Record's* letters to the editor pages with missives meant to expose the government's failure to protect the river, to educate the public and politicians on the functions that wetlands provided, and to awaken people to the valuable estuary "in [their] own backyard."⁷ A constant, but often lone warrior, later Meadowlands' activists credited Utzinger with "[keeping] that ember burning from the Seventies all the way into the Nineties, while the newer generation got its act together."⁸

Andy Willner picked up Margaret's torch. One hot summer day in the late 1980s, Willner decided to take his young daughter to a Staten Island, New York beach on New York Bay. Willner knew the area well; he and business partner Michael Kortchmar owned a small boatyard facing the Verrazano Narrows where they built and repaired wooden boats. As a former schooner captain on a ship that sailed out of New York's South Street Seaport, Willner knew the New York Bay's waters intimately. To him, the Bay was "gorgeous looking water, one of the most beautiful places on earth;" but its beautiful surface disguised a toxic soup. Willner wanted to cultivate the same love for the Bay in his daughter, but he knew that the polluted water made swimming impossible. "So," he recalled, "I had an old plastic dingy and I filled it with water and she splashed

⁷ Margaret Utzinger, letters to the editor, *Hackensack (NJ) Record*, August 8, 1985, February 26, 1986, and February 13, 1987, Access World News.

⁸ Andrew Willner, interview with author, August 4, 2015, Kearny, NJ.

around in it and I had the hose over my head. And I think that was the turning point.”

Willner knew that he needed to heal the Bay.⁹

A model for doing just that already existed in New York’s Hudson River Valley where a fisherman and concerned citizen, Robert H. Boyle, had brought together a coalition of commercial and recreational fishermen in the 1960s to fight Hudson River polluters. Boyle’s underlying philosophy held that the Hudson belonged to the people and he took his fishermen to testify against projects that threatened their river. The Hudson River Fishermen’s Association arrived at government meetings brandishing science, law, and personal connections to the river as their weapons. That early group evolved into Hudson Riverkeeper, Inc. with John Cronin appointed as the “Riverkeeper” in 1983. By the 1990s, Cronin’s Hudson Riverkeeper served as a nation-wide model for the protection of at least two dozen other rivers.¹⁰ When Willner decided that he needed to protect his Bay, he contacted John Cronin who put him in touch with Dery Bennett of the American Littoral Society. With financial assistance from both organizations, Willner founded the NY/NJ Baykeeper late in 1989.¹¹

A few months later, on January 2, 1990, an underwater pipeline from the Exxon refinery in Linden, New Jersey ruptured, leaking 500,000 gallons of oil into the Arthur Kill, the waterway that separates New Jersey from Staten Island. Willner recalled that he phoned Dery Bennett at home, and asked, “what do I do?” Bennett replied, “I don’t

⁹ Ibid.

¹⁰ John Cronin and Robert F. Kennedy, Jr., *The Riverkeepers: Two Activists Fight to Reclaim Our Environment as a Basic Human Right* (New York: Touchstone, 1997), 17-34.

¹¹ Andrew Willner, interview with author.

know, nothing like this has ever happened before, why don't you just show up?" So Willner went to the Arthur Kill.¹²

Willner remembered a press conference later that summer at which officials claimed that, because the Arthur Kill was already terribly polluted and devoid of life, the oil spill had not caused lasting environmental damage. Willner vocally disagreed. In his recollection, he told the people gathered at the press conference,

"I know that that's incorrect." I said, "this is an estuary, it's all part of one big system and we have the same fish and birds here as we have everywhere else." And people said, "how do you know that?" I said, "because I've studied the ecology of the area, I don't have specifics, and I know where to get them if you'll give me a couple of hours I can get you all the facts you need." And then they started asking more and more questions. And that was the headline, not that the [officials] said it was good, but that the Baykeeper said it wasn't, that there was significant damage.¹³

In response to the oil spill, Willner articulated one of the key arguments that he would later bring into the fight for the Meadowlands – that, no matter what anybody said, life existed among the reeds. With his frank language and willingness to speak the truth without concern for whom in power he might offend or provoke, Willner quickly became the environmental voice in press coverage of the spill and its aftermath. It was then that Andy Willner felt he had officially become the "Baykeeper."¹⁴

Bill Sheehan came to be Willner's friend and ally in the Meadowlands. Sheehan had lived his entire life on the upland in Secaucus and as a child, he spent most of his free

¹² Ibid.

¹³ Ibid.

¹⁴ Ibid.; See the following for news reporting on the aftermath of the oil spill: Nicholas Veronis, "Lingering Oil Spills Viewed as Deadly," *Newark (NJ) Star-Ledger*, May 23, 1990, Access World News; Eve Markowitz, "Oil Spills in Kill Van Kull 260,000 Gallons are Leaked, First Mate Charged," *Newark (NJ) Star-Ledger*, June 8, 1990, Access World News; Al Frank, "Tanker's Oil Hits Local Beaches," *Newark (NJ) Star-Ledger*, June 9, 1990, Access World News; Al Frank, "Coast Guard Convenes Inquiry as Divers Scour Bottom of Kill Van Kull," *Newark (NJ) Star-Ledger*, June 12, 1990, Access World News.

time with a fishing rod in hand on the edge of the Hackensack River. He knew the Meadowlands through its fish. “I’m a fisherman,” he says, “I’m not, you know book taught. I know what I know from being here.”¹⁵ Sheehan, who worked as a dispatcher and driver for a Hudson County taxi company, had watched his Meadowlands disappear under developers’ fill in the 1970s and 1980s, and he was angry.¹⁶ So when Andy Willner and the NY/NJ Baykeeper advertised for people to join a boat program called the Baykeeper Auxiliary, Bill Sheehan answered the call.¹⁷

Bill Sheehan is most comfortable at the helm of his boat where he can often be found sporting a Hawaiian shirt, a baseball cap, and sunglasses. Sheehan has fashioned himself as a mariner, a pirate of sorts, and as the guardian of the Hackensack River.

Willner remembered that in those early years he and Sheehan,

just did ridiculous things . . . we started doing these ecotours without any hope that anybody would even show up, and on Billy’s totally illegal pontoon boat and there was no reason that he should be able to take anybody, his Captain title was totally bogus, he just liked calling himself Captain, and we started taking people out.¹⁸

After volunteering with the Baykeeper, Captain Bill, as he is now widely known, set out on his own and created the Hackensack Estuary and River Tenders (H.E.A.R.T.), the first environmental organization to focus solely on the Hackensack Meadowlands.

H.E.A.R.T. was incorporated as Hackensack Riverkeeper, Inc. in 1997. A taxi dispatcher by day, an environmental watchdog by night, so to speak, Sheehan became the

¹⁵ Robert Sullivan, *The Meadowlands: Wilderness Adventures on the Edge of a City* (New York: Anchor Books, 1998), 192.

¹⁶ Bill Sheehan, interview with author, April 13, 2015, Hackensack, NJ.

¹⁷ Andrew Willner, interview with author.

¹⁸ Ibid.

unmistakable face of Meadowlands environmental advocacy.¹⁹ In 1996, he told a reporter, “Here I am, 45 years old . . . I reinvented myself.”²⁰

Margaret Utzinger, Andy Willner, Bill Sheehan, and others concerned about the ecological integrity of the Meadowlands’ wetlands found the Special Area Management Plan (SAMP) utterly abhorrent. Willner’s NY/NJ Baykeeper and Sheehan’s Hackensack Riverkeeper, Inc. organizations became the most vocal opponents to the SAMP. From their reading of it, the plan presupposed that preservation could only be funded through development; it promoted mitigation as an acceptable compromise for wetlands fill; and most significantly, it sacrificed 842 acres of wetlands in order to accomplish its development goals. All of this, they said, violated the very tenets of the Clean Water Act and the Coastal Zone Management Act (CZMA).

At 592 acres, Carlstadt’s Empire Tract was the largest of the tracts proposed for fill and development in the SAMP. In the early twentieth century, the Bergen County Mosquito Commission constructed dikes and tide gates to dry the tract in an attempt to eradicate mosquito breeding grounds. Since that time, the Empire Tract had remained cut off from tidal flow, and a dense stand of *Phragmites* had overtaken previously existing *Spartina* marsh grasses.²¹ Yet, by the late 1980s, the Empire Tract remained the largest undeveloped piece of land in the Meadowlands District (Figure 17).

¹⁹ Tina Traster, “A Conservationist at Work; River Watch; Trying to Save the Meadowlands,” *Hackensack (NJ) Record*, October 8, 1996, LexisNexis Academic.

²⁰ Ibid.

²¹ Hunter Research, Inc., *Historic Context Development: Hackensack Meadowlands Drainage Systems and Features, Hackensack Ecosystem Restoration Project, Hudson and Bergen Counties, New Jersey*, prepared for Mabbett & Associates, Inc., Bedford, MA and United States Army Corps of Engineers, New York District, New York, New York, February 2010, Figure 5.15.

Empire Ltd., the corporation that had purchased the land in 1961, had plans in place since 1987 to build a “mini-city” of thousands of housing units, office buildings, restaurants, stores, and theaters on its Empire Tract. Carlstadt residents had strongly criticized the development because it would virtually double the Borough’s population and strain existing infrastructure.²² Others in the region joined Carlstadt’s residents in protest in 1994 when Empire partnered with the Mills Corporation of Arlington, Virginia to build the retail portion of the development. At nearly one and a half million square feet, Mills Corporation’s Meadowlands Mills Mall would have been the largest shopping mall east of the Mississippi River. To support the development, Mills’ plan called for a minimum wetland fill of 134 acres; it was the single largest Section 404 permit application since Congress passed the Clean Water Act in 1972.²³

As appalling as that proposal was to environmentalists, in a way it also proved to be a gift. Andy Willner later said, “if the Mills Corporation hadn’t come along we probably would have had to invent them.”²⁴ He had had difficulty rallying public support against something as seemingly innocuous as a planning document. Willner remembered only a dozen or so people who regularly attended hearings and meetings on the SAMP in the early 1990s. But a mega-mall in a state full of malls (Paramus’s Garden State Plaza, itself over a million square feet, was already located less than ten miles from the Empire

²² Nina Berman, “Mini-City Envisioned in Meadows,” *Hackensack (NJ) Record*, December 18, 1991, Access World News.

²³ Edward Lloyd et al., *Comments filed on Behalf of Natural Resources Defense Council (NRDC), Environmental Defense, Inc., NY/NJ Baykeeper, New Jersey Chapter of the Sierra Club, New Jersey Audubon Society, Hackensack Riverkeeper, Natural Resources Protective Association, and National Water Keeper Alliance, In the Matter of Draft Environmental Impact Statement, Meadowlands Mills Project Proposed by Empire, Ltd., Public Notice Number: 95-07440-RS* (October 11, 2000), 2.

²⁴ Andrew Willner, interview with author.

Tract) proved to be a clear and easily vilified enemy. The Meadowlands Mills Mall was, in Willner's words, "such a wonderful, egregiously horrible target."²⁵ The proposed mall embodied suburban northern New Jersey's problems in the 1990s – corporatization, over-congestion, and sprawl. As one Bergen County resident wrote to *The Record*, "Bergen County needs another mall like I need purple hair."²⁶

After Mills' proposal in 1994, environmentalists fought for protection of the Meadowlands on two different, but related, fronts – a battle against the SAMP and a battle against Meadowlands Mills Mall. In fact, a NY/NJ Baykeeper press release once referred to the Mall as "nothing but warmed over SAMP."²⁷ Regardless of the target, their core demand remained the same: they would not allow one more square inch of wetlands in the Hackensack Meadowlands to be given over to development. Of the Riverkeeper and Baykeeper's fight against "some of the most powerful, well-connected developers in the nation," Willner said, "we drew a line in the marsh and dared them to cross it."²⁸ Utzinger, Willner, and Sheehan followed a two-pronged approach to achieving this goal: they forged a constituency by connecting (or reconnecting) people to the nature that they knew existed in the Meadowlands and they engaged with the bureaucratic system to force the EPA, Army Corps, and HMDC to honor their responsibility to protect urban estuaries as part of the public trust by properly applying

²⁵ Ibid.

²⁶ George H. Morgan, Instant Feedback, *Hackensack (NJ) Record*, September 26, 2002, LexisNexis Academic.

²⁷ NY/NJ Baykeeper, "Action Alert/Media Alert: Hackensack Meadowlands Under Attack Again," n.d., Mills Binder, Records of Hackensack Riverkeeper, Inc., Hackensack, NJ.

²⁸ Hackensack Riverkeeper and NY/NJ Baykeeper, "Action Taken by Meadowlands Commission Kills SAMP: Conservationists Celebrate Victory in the Hackensack Meadowlands," news release, January 23, 2002, http://www.hackensackriverkeeper.org/pr_archive/SAMP_RELEASE.html.

the Clean Water Act and the Coastal Zone Management Act to the Hackensack Meadowlands.

Finding Nature in an Industrial Swamp

In the early 1990s, many people who lived or worked in the Meadowlands region remained largely unaware of the 8,000 acres of wetlands that existed right in their backyard. Those who traveled through the Meadowlands typically did so at sixty miles per hour or more on the region's raised highways, barely glancing at the ecosystem below. Beyond a few trappers, hunters, and fishermen, very few people regularly used the Meadowlands. Despite the improvements in the region's water and air quality, the containment of garbage, and the preservation of places like Sawmill Creek that had occurred since the HMDC began to manage the land in 1969, the entrenched understanding that the Meadowlands was one continuous garbage dump, or as in Margaret Utzinger's words, an industrial "no man's land," persisted.²⁹

Bill Sheehan founded H.E.A.R.T. to reverse that perception, to introduce people in the Meadowlands communities to "the positive attributes of the river an[d] the marsh."³⁰ Sheehan committed himself and his organization to overturning the long history of imagining this place either as a dumping ground or as real estate, useful only if developed. He wanted to introduce (or reintroduce) people to their estuarine environment, to prove that nature existed in the Meadowlands, that it was not, as many

²⁹ Nicholas Veronis, "Lingering Oil Spills Viewed as Deadly," *Newark (NJ) Star-Ledger*, May 23, 1990, Access World News.

³⁰ Bill Sheehan, "Captain's Corner," *H.E.A.R.T. Beat* 1 no. 1 (January 1995): 1.

people thought, “an unredeemable post-industrial swamp.”³¹ Sheehan wanted everyone who lived near the Hackensack Meadowlands to think of the place as their very own national park. From a six-seat pontoon boat, Sheehan spread his message up and down the Hackensack River. He took everyone who was interested out on the water to show them the marsh grasses, egrets, cormorants, muskrat, flounder, carp, and other life that existed in the wetlands. In doing so, his broader goal was to build an “enlightened” constituency that would join him in the fight to save the Meadowlands.³²

As word of Sheehan’s eco-tour program spread, a number of journalists joined him on the river and began to write about nature in the Meadowlands for the first time. Stories about Sheehan and the Meadowlands became common fare in *The Secaucus Reporter*, *The Record*, *The Star-Ledger*, and even *The New York Times* by the middle of the decade. Two authors also wrote book-length narratives of their own experiences in the Meadowlands. In 1997, John R. Quinn, an artist, naturalist, and Meadowlands Commission employee, published *Fields of Sun and Grass: An Artist’s Journal of the New Jersey Meadowlands*. The following year, Robert Sullivan, who had grown up near the Meadowlands but had moved to Portland, Oregon as an adult, published *The Meadowlands: Wilderness Adventures on the Edge of a City*. Part travel narrative, part colorful history, part natural field guide, a reviewer from *USA Today* claimed that

³¹ Hackensack Riverkeeper and NY/NJ Baykeeper, “Action Taken by Meadowlands Commission Kills SAMP: Conservationists Celebrate Victory in the Hackensack Meadowlands,” news release, January 23, 2002, http://www.hackensackriverkeeper.org/pr_archive/SAMP_RELEASE.html.

³² Bill Sheehan, “Captains Corner,” *Hackensack Riverkeeper Tidelines*, 1 (October 1997): 1.

Sullivan's book "does for the Meadowlands, where creeks can be the color of antifreeze, what Thoreau did for Walden Pond."³³

In the mid-nineteenth century, Henry David Thoreau developed particular ideas about nature and wilderness that shaped generations of American thought. From Walden Pond, outside of Concord, Massachusetts, Thoreau described nature as a place separated and very different from the city. It was a place where humans could and should go to escape the pressures of settled society and to experience a sense of inward contemplation.³⁴ While he found this kind of sojourn near his home in Concord, in *Walking*, Thoreau commented on the continual pull he felt toward the West. His famous line, "eastward I go only by force; but westward I go free" is followed with "thither no business leads me."³⁵ For Thoreau, although he never travelled further west than Minnesota, the West of his imagination signified freedom, particularly freedom from the burdens of commercial and industrial society. Furthermore, he clearly linked nature and wilderness with the West. He wrote, "the West of which I speak is but another name for the Wild and what I have been preparing to say is that in Wildness is the preservation of the world."³⁶ Thus, Thoreau constructed an idea of nature that placed it in opposition to human commerce and settlement, he suggested that nature provided a respite from and the last remaining bulwark against the harmful aspects of civilization, and he placed true nature in the West. This conception of nature and wilderness took powerful hold in

³³ Sullivan, *The Meadowlands*, front cover.

³⁴ Roderick Nash, *Wilderness and the American Mind*, Fourth Edition (New Haven: Yale Nota Bene, 2001), 89.

³⁵ Henry David Thoreau, *Walking*, (Project Gutenberg Ebook, 2008), <http://www.gutenberg.org/files/1022/1022-h/1022-h.htm>.

³⁶ Ibid.

American thought and culture. As historian Roderick Nash argues, Thoreau “cut the channels in which a large portion of thought about wilderness subsequently flowed.”³⁷

These channels flowed all the way to the late twentieth century Meadowlands where writers and environmentalists took existing Thoreauvian understandings of nature and wilderness and recast them to fit a seemingly un-wild place.

As is evident from the title of Sullivan’s book, he and the chorus of other voices that emerged in the latter part of the 1990s, described the Meadowlands as a “wilderness.” In 1995, a reporter for *The Record* portrayed the Meadowlands as “an 8,500-acre wilderness of rivers, creeks, and marshes teeming with wildlife.”³⁸ For Andy Willner, these acres were “the last place in this estuary, except for Jamaica Bay, where there’s an opportunity to get out on a river and see wilderness.”³⁹ In a letter to the editor, Karen Siletti urged *The Record*’s readers to get out of their cars to “see just how beautiful a wilderness the meadowlands is. Urban, yes, by virtue of its location. But beautiful nevertheless.”⁴⁰ David Herszenhorn for the *New York Times*, reported that environmentalists saw the Meadowlands as the “last great unprotected wilderness area in the New York region.”⁴¹ The Meadowlands may have been an “urban wilderness” or the “ugliest wilderness,” as headlines described it, but it was a wilderness, nonetheless.

³⁷ Nash, *Wilderness and the American Mind*, 84.

³⁸ “Exploring the Hidden Meadowlands,” *Hackensack (NJ) Record*, August 27, 1995, Access World News.

³⁹ Tom Topousis, “Reclaiming the Meadows – Natural Habitat is Scarred and Stressed,” *Hackensack (NJ) Record*, July 9, 1995, Access World News.

⁴⁰ Karen L. Siletti, letter to editor, *Hackensack (NJ) Record*, July 17, 1995, Access World News.

⁴¹ David M. Herszenhorn, “Fighting Over the Ugliest Wilderness: Developer’s Megamall Plan Forces Decision on Meadowlands’ Future,” *New York Times*, March 16, 1998, ProQuest Historical Newspapers (109923722).

Much like Thoreau, in *Walden*, constructed Walden Pond as a place very separate from Concord, writers' and activists' use of wilderness language to describe the Meadowlands served to conceptually establish the Meadowlands as separate from and as the antithesis of its surrounding urban space. In his narrative, Robert Sullivan entered the Meadowlands on a bus through a cut in the rocks that he says "separate[s] New York from New Jersey and the Meadowlands from the rest of the world."⁴² In Sullivan's telling, the Meadowlands remained somehow purer than its surroundings. He canoed through a part of the Meadowlands, fittingly called Walden Swamp, which he said, "seemed pristine in comparison to adjacent arenas and racetracks and parking lots."⁴³ Here Sullivan did not use the word "pristine" to suggest that Walden Swamp existed in some completely unaltered natural state; in other parts of his narrative, Sullivan is quite direct about the residue of human use in the Meadowlands. For example, Sullivan writes of his and his friend Dave's paddle through Kearny Marsh, "we saw more carp, more muskrats, mudflats covered with sandpipers, and the frozen-in-time remains of a snapping turtle that appeared to have been decapitated by a train just as it had crawled up out of the marsh." He continues with a catalogue of a different sort, "we also saw a Thermos, three unopened cans of Pepsi, a beach chair sitting on another island, and a Seven Seas Red Wine Vinegar salad dressing spill."⁴⁴ In describing the Meadowlands as "pristine," Sullivan used the word to contrast Walden Swamp with its more altered surroundings.

⁴² Sullivan, *The Meadowlands*, 13.

⁴³ *Ibid.*, 87.

⁴⁴ *Ibid.*, 82.

Furthermore, Walden Pond and Walden Swamp were both remarkably different from the nearest urban setting because in both cases when humans were present, they were only visitors, they did not remain. Thoreau described the solitude of his home at Walden Pond, “my nearest neighbor is a mile distant . . . I have my horizon bounded by woods all to myself . . . for the most part it is as solitary where I live as on the prairies.”⁴⁵ People visited Thoreau, but they were just that – visitors. In contemplating the Meadowlands, Sullivan noted a similar lack of people, “I marvel that on the edges of the Meadowlands there are places that are stuffed with people . . . but that in the middle of the Meadowlands there are acres and acres of land where there aren’t any people at all.”⁴⁶ On his journey across the Meadowlands, Sullivan repeatedly noted the paucity of people he and his friend Dave encountered. In Kearny, they passed a bridge tender, who Sullivan said “would be the only human we would encounter traveling across the marsh that day.”⁴⁷ When Sullivan did encounter people he wrote about them in a way that indicated that the humans were out of place in the landscape,

I drove west down a road bordered by factories and warehouses and ten-foot-tall reeds and only once saw a human: a speed-walking woman with kinky, orangeish hair and a deep salon tan who was wearing wraparound mirrored sunglasses and neon-colored Nikes and a bright pink suit that stood out like the plumage of a tropical songbird as it swished past the monochromatic reeds.⁴⁸

This woman was clearly an intruder in the reedy landscape.

⁴⁵ Henry David Thoreau, *Walden, or, Life in the Woods* (New York: A. A. Knopf, 1996), 116.

⁴⁶ Sullivan, *The Meadowlands*, 18.

⁴⁷ *Ibid.*, 79.

⁴⁸ *Ibid.*, 60.

John Quinn's writing also paints the Meadowlands as a non-human space. The Wilderness Act of 1964 defined wilderness as "an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain" and Quinn said, "this great tidal marsh surely qualifies." Though thousands of people travelled by car and train through the Meadowlands every day, he contended,

any adventurer who attempted a safari on foot would soon feel very much alone there. Among the impenetrable thickets of twelve-foot-high reeds a horizon cannot be seen, and many a would-be bushwhacker has become marooned in the dense, reedy fastness of the northern Meadowlands, assaulted by mosquitoes and greenhead flies and mired in the low-tide mud.⁴⁹

To *The Star-Ledger*, Quinn described what he called the "paradox of the Meadowlands." He said, "you can get out there and be by yourself and yet surrounded by the most densely populated area in the region. It's what we call urban wilderness."⁵⁰

If Thoreau put wilderness in the West, Sullivan and other writers brought it back East, to what Sullivan described as "America's *first* West." Sullivan described his journey from Portland, Oregon to the Meadowlands as "a reverse commute to the already explored land that has become, through negligence, through exploitation, and through its own chaotic persistence, explorable again."⁵¹ In doing so, Sullivan used western language and imagery to describe this eastern place. For Sullivan, the Meadowlands landscape invoked images of Montana and other western places,

if you wander around in the Meadowlands for any amount of time, if you move from one unattractive attraction to the next, then you soon realize that

⁴⁹ John R. Quinn, *Fields of Sun and Grass: An Artist's Journal of the New Jersey Meadowlands*. (New Brunswick, NJ: Rutgers University Press, 1997), 3.

⁵⁰ Ana M. Alaya, "Finding Paradise Amid Commotion," *Newark (NJ) Star-Ledger*, November 7, 2001, Access World News.

⁵¹ Sullivan, *The Meadowlands*, 14-15.

outside of the swamp grass, the sky is the most predominant feature of the Meadowlands. The area's undevelopability has kept it relatively free of skyscrapers and tall buildings. All over the Meadowlands, there is uninterrupted panorama. It's Big Sky Country East.⁵²

In another work, Sullivan described a photo of a woman skimming for mosquitos along the Hackensack River, "the wind in the mosquito dipper's hair, for instance, speaks to the feeling the Meadowlands gives a visitor on a sunny spring day – a feeling that says *Yellowstone Valley in Montana!* [italics in original]"⁵³ Regarding Laurel Hill, the only naturally raised landform in the Meadowlands, Sullivan wrote, "the landscape is like something out of Arizona or the South Dakota Badlands."⁵⁴ (Figure 18). Western landscapes were also brought to bear on some of the Meadowlands more toxic features. Sullivan quoted Janette Abel, a New Jersey Department of Environmental Protection employee who oversaw cleanup of the once-burning PJP Landfill. She said, "when it was burning, this was Dante's *Inferno* out here. There were flames everywhere and it was like Yellowstone with geysers of steam and smoke."⁵⁵ David Wheeler, author of *Wild New Jersey: Nature Adventures in the Garden State*, also used western imagery to describe the Meadowlands' landfills when he wrote that they rose "like a mountain range" from the marsh below.⁵⁶

Sullivan also employed the traditions of romanticized western exploration in describing his adventures in the meadows. He imagined himself and his travelling companion, Dave, as a modern day Lewis and Clark, portaging their canoe up over tide

⁵² Ibid., 60-61.

⁵³ Robert Sullivan and Joshua Lutz, *Meadowlands* (Brooklyn: PowerHouse Books, 2008).

⁵⁴ Sullivan, *The Meadowlands*, 15.

⁵⁵ Ibid., 151.

⁵⁶ David Wheeler, *Wild New Jersey: Nature Adventures in the Garden State* (New Brunswick, NJ: Rivergate Books, 2011), 56.

gates.⁵⁷ Sullivan brought the people he and Dave encountered in the meadows into their western adventure story, too. At one point, having found themselves utterly lost near Peach Island Creek, Sullivan and Dave “eased their canoe into a soupy brown liquid across from a toxic clean-up site” only to find themselves at another dead end. Dave and Sullivan’s sense of panic increased with every “Hazardous” sign they passed, until a security guard named Ed approached the wayward travelers. They loaded their canoe into Ed’s pickup truck, and Ed safely returned them to their starting point. Gratefully, Sullivan recalled, “Ed was our Sacagawea.”⁵⁸

Finally, these writers and activists encouraged New Jerseyans to think about the Meadowlands as their own wilderness. An ad for Sheehan’s eco-cruises touted, “if your family likes adventure and nature, but your trip to the rain forest isn’t imminent, consider an ‘eco-cruise’ on the Hackensack River.”⁵⁹ Karen Siletti, of the Hackensack River Canoe Club argued that the Meadowlands was worth saving “for the half-million people who live next to it and can’t afford to travel to Yellowstone National Park.”⁶⁰ Willner and Sheehan also likened the Meadowlands to western national parks when they wrote in a *Record* opinion piece, “instead of looking to Yosemite or the Grand Canyon for our excursions to the Great Outdoors, we now know we need look no farther than our own back yard for wilderness and eco-adventure.”⁶¹ Sullivan’s book echoes these sentiments.

⁵⁷ Sullivan, *The Meadowlands*, 76, 90.

⁵⁸ *Ibid.*, 91.

⁵⁹ “Ecology on the Hackensack,” *The Parent Paper*, n.d., clipping in Book 4, Records of Hackensack Riverkeeper, Inc., Hackensack, NJ.

⁶⁰ Tom Topousis, “Urban Wilderness – A Sanctuary Among the Hustle and Bustle,” *Hackensack (NJ) Record*, August 27, 1995, Access World News.

⁶¹ Andy Willner and Bill Sheehan, “Celebrating an Environmental Victory,” *Hackensack (NJ) Record*, March 23, 2003, LexisNexis Academic.

Early in his story, Sullivan described his arrival at Newark Airport. He watched people wearing the latest from Patagonia's outdoor collection, carrying backpacks loaded with top-of-the-line gear, boarding planes for places like Yellowstone or Yosemite. But Sullivan was headed east, to the Meadowlands, a place that he thought of as an "undesignated national park."⁶² By pointing out that nature did in fact exist in the Meadowlands, Sullivan and the others made a subtle critique of the American urge to flee west to experience nature, and in drawing comparisons between the Meadowlands and western places traditionally understood as wilderness, they challenged the ways that urban New Jerseyans ignored the nature right around them.⁶³

It is interesting to note that these writers used the wilderness trope to describe the Meadowlands at the very moment that scholars like William Cronon warned of the "trouble with wilderness."⁶⁴ Cronon argued that by encouraging us to "adopt too high a standard for what counts as 'natural,'" the wilderness idea as it had developed in American thought and culture "may teach us to be dismissive or even contemptuous of such humble places and experiences" such as those environments in which people actually lived and worked.⁶⁵ Cronon asks, "how can we take the positive values we associate with wilderness and bring them closer to home?"⁶⁶ This rethinking of wilderness is exactly what environmentalists like Bill Sheehan and Andy Willner, and

⁶² Sullivan, *The Meadowlands*, 57.

⁶³ John Peterson, "Re-Envisioning the City: A Narrative Analysis of Urban Nature Writing and the Los Angeles River" (PhD diss., Claremont Graduate University, 2009), 140.

⁶⁴ William Cronon, "The Trouble with Wilderness, or Getting Back to the Wrong Nature," *Environmental History* 1, no. 1 (1996): 7-28.

⁶⁵ *Ibid.*, 22.

⁶⁶ *Ibid.*, 23.

journalists and authors like John R. Quinn and Robert Sullivan were doing in the mid-1990s.

By describing the Meadowlands with familiar wilderness language, writers and environmentalists invested the Meadowlands with the attractive qualities that many Americans had previously only found in western landscapes and other seemingly more “natural” places. In doing so, they began to do exactly what Cronon called for in “The Trouble with Wilderness.” They enlarged the definition of wilderness and dismantled the imagined disconnect between nature and city that Americans inherited from Thoreau, even as they used Thoreauvian language. They proved that nature was, in fact, present in this “degraded” place. Wilderness did not have to be pristine, it did not have to be far away, and it could exist in proximity to urban places. This expansion of the definition of nature provided a crack through which people in the 1990s could begin to reconnect with the long-forgotten Meadowlands. It provided a framework in which people could understand and begin to value the Meadowlands as an ecological resource.

Protecting Urban Wetlands

This appreciation of the Meadowlands as a natural space provided the foundation for the development of a type of ecological stewardship of the Meadowlands that John Barry theorizes. Barry, who studies the relationship between environment and citizenship, understands ecological stewardship as an ethic that recognizes humans’ vulnerable connection to nature and that prioritizes sustainable uses of the environment over destructive ones. It is a forward-looking ethic that seeks to protect future

generations' environmental interests. Barry also sees ecological stewardship as a mode of citizenship that conveys a sense of responsibility toward the environment, that encourages one to identify as a "citizen-in-society-in-environment," and that pushes for democratization of environmental decision-making processes.⁶⁷ This mode of citizenship was especially critical to protecting America's twentieth-century wetlands, when government agencies, facing development pressures, seemed to neglect their responsibilities to protect wetlands. In the 1970s, the National Audubon Society had tried unsuccessfully to use the judicial system to hold governments accountable for protecting wetlands as part of the public trust. In the 1990s, environmentalists such as Andy Willner and Bill Sheehan took their case directly to the public and empowered citizens to assert their legal right to a clean, healthy, and accessible urban estuary.

The HMDC's support for projects like The Villages at Mill Creek suggested to Sheehan that the agency had abandoned its legislative mandate to protect the environment, and instead, as he said, had "become the business agent for a select group of developers" who threatened to bury the wetlands under townhouses and commercial complexes.⁶⁸ To Sheehan, the proposed development at Mill Creek simply represented the most recent episode in a long history of HMDC acquiescence to the filling of the wetlands where he had played as a child, or from where he fished as an adult. Sheehan knew that there were other fisherman who used the marsh, and that as a group, the people who used the marsh had the biggest stake in protecting its natural resources. He reached

⁶⁷ Barry, "Vulnerability and Virtue," 135, 137-139, quote from p. 144.

⁶⁸ Bill Sheehan to Dominick Presto, November 16, 1994, Secaucus E.A.C. Binder, Records of Hackensack Riverkeeper, Inc., Hackensack, NJ.

out to them to create a constituency of people to fight against specific developments like The Villages at Mill Creek and the SAMP in its entirety.⁶⁹

In February 1995, Captain Bill secured a booth at an outdoors sportsmen's show at the Meadowlands Convention Center, which itself was located on part of the Mill Creek marsh that had been filled by Hartz to build the office and shopping complex called Harmon Meadow. He hung up a map of the area, and on it he posted a sign that said, "You are standing on what was once vital wildlife habitat. Be kind to the ghosts of the critters who once called it home." Sheehan wanted to talk to fishermen who fished the greater Hudson-Raritan estuary, of which the Meadowlands were a part. He wanted to show them the parts of the marsh that had been lost already and to educate them on the importance of the Hackensack watershed to the region's fisheries. He came armed with a petition that called for saving Mill Creek and the rest of the Meadowlands from further development, and he gathered 1,100 signatures to pressure the HMDC to stop issuing development permits.⁷⁰ Over the next several months, Sheehan continued to build a constituency to fight against The Villages at Mill Creek. He and members of the newly-created Secaucus Environmental Advisory Committee leafleted neighborhoods and put articles in the local papers highlighting the importance of the marsh and encouraging residents to attend public hearings on The Villages at Mill Creek permits. He was

⁶⁹ Bill Sheehan, interview with author; *Public Hearing, Special Area Management Plan*, (August 31, 1995) (Statement of Bill Sheehan, H.E.A.R.T), 118.

⁷⁰ Al Sullivan, "Up in Arms: Environmentalist Organizes Area Fishermen Against Development," *The Secaucus (NJ) Reporter*, February 26, 1995.

successful. At one New Jersey Department of Environmental Protection hearing, sixty residents showed up to speak in opposition to the development.⁷¹

After a decade of planning and investment, facing increasingly difficult permitting odds and a growing public backlash, Hartz Mountain Industries ultimately decided to abandon its plan to build townhouses on Mill Creek. In 1996, the company agreed to sell its 140-acre wetland parcel to the HMDC. In a statement that attested to the power of Secaucus citizens, Hartz said that its decision was based in part on “acceding to a public need.”⁷² Once it had ownership of the Mill Creek Marsh, the Meadowlands Commission removed *Phragmites* and excavated portions of the marsh, which both allowed tidal inundation and revealed the stumps from the Atlantic White Cedar swamp that once existed there. With later construction of boardwalks, what had been slated for fill and development is now open and accessible to the public (Figure 19). Today, Bill Sheehan remembers this as one of the earliest environmental victories in the Meadowlands, one that he says was accomplished by politically mobilizing people who used the marsh.⁷³

NY/NJ Baykeeper and Hackensack Riverkeeper also encouraged a sense of citizen ownership of the Hackensack Meadowlands and the greater Hudson-Raritan estuary. In October 1996, in his oral testimony before the Army Corps regarding the Meadowlands Mills Mall, Bill Sheehan reminded the Army Corps officials that “the

⁷¹ Bill Sheehan, interview with author; Al Sullivan, “Disputed Villages: Residents Get Their Hearing; But Say They Weren’t Heard,” *The Secaucus (NJ) Reporter*, December 3, 1995.

⁷² Peter J. Sampson, “N.J. Buys 186 acres in Meadows; Hartz, Environmentalists Hail Deal,” *Hackensack (NJ) Record*, September 19, 1996, Access World News.

⁷³ Bill Sheehan, interview with author.

Hackensack River is a living resource that belongs to all of us[,] any decisions that are made by the USACOE are made on our behalf.”⁷⁴

This sense of ownership derived from an intimate knowledge of place. In an action alert put out in 1999, Hackensack Riverkeeper reminded its readers of the knowledge that grew from their personal experiences in the Meadowlands, “birders, conservationists, environmentalists, and sportsmen do not need an explanation on the value of coastal wetlands and wildlife habitat. We know all these things already.” The alert urged them “to put your knowledge into action” by attending three upcoming public hearings held by the HMDC to consider variances for the Meadowlands Mills project. The alert continued with a reminder that, “the Mills Corporation must be shown that they cannot just come to our watershed and destroy our wetlands.”⁷⁵ The NY/NJ Baykeeper issued a similar call. Baykeeper published a pamphlet entitled *The Public Trust*

Doctrine: Taking Back What is Rightfully Yours in which it reminded the public that,

the Hudson-Raritan Estuary legally belongs to you. It does not belong to polluters, land developers, the Army Corps of Engineers or any other government agency. Now, it’s time to assert your public rights over private privilege. It’s time for all of us to take back the bay.⁷⁶

The pamphlet encouraged citizens to use their knowledge of the watershed to identify and report polluters, illegal developments, and attempts to block access, and it urged citizens to assert their rights under the Public Trust Doctrine at public hearings and meetings.⁷⁷

⁷⁴ Bill Sheehan, “Oral Testimony Regarding the Meadowlands Mills Mall Project, USACOE Public Notice #95-7440-RS,” October 17, 1996, Mills Binder, Records of Hackensack Riverkeeper, Inc., Hackensack, NJ.

⁷⁵ Hackensack Riverkeeper, “Action Alert: Meadowlands Pot Coming to a Boil,” March 1999, Mills Binder, Records of Hackensack Riverkeeper, Inc., Hackensack, NJ.

⁷⁶ NY/NJ Baykeeper, *The Public Trust Doctrine: Taking Back What is Rightfully Yours* (Highlands, NJ: NY/NJ Baykeeper, 2004), <http://dx.doi.org/doi:10.7282/T31G0KVG>.

⁷⁷ Ibid.

With communications and statements like these, the Riverkeeper and Baykeeper provided an important link between the public and policy process. They cultivated a sense of public ownership in the marsh and a sense of responsibility to demand that government oversight agencies respect that ownership.

**Building in an Urban Wetland:
A Violation of Federal Law?**

At its core, environmentalists' fight for the Meadowlands was premised on the belief that the Army Corps, EPA, and HMDC's proposed actions in the SAMP and their support for the Meadowlands Mills Mall violated their responsibility under the Public Trust Doctrine by differentially applying the provisions of the Coastal Zone Management Act (CZMA) and the Clean Water Act to urban wetlands.⁷⁸ In 1990, the Army Corps had agreed with the EPA to allow mitigation only if there were no other alternatives to filling wetlands.⁷⁹ But this was not happening in the Meadowlands. There developers were proposing to fill hundreds of acres for non-water dependent development.

In its overall concept, the Meadowlands' SAMP violated the CZMA, Andy Willner argued. Though it recognized the reality of competing interests in the nation's coastal zone, the CZMA's primary objective was to protect the coastal zone's natural resources.⁸⁰ Amendments to the CZMA enacted in 1980 reinforced this goal when it created the Special Area Management Planning process to "provide for natural resource

⁷⁸ Al Sullivan, "You Gotta Have Heart: Hackensack River Gets Its Own Environmental Group," *The Secaucus (NJ) Reporter*, January 15, 1995.

⁷⁹ Vileisis, *Discovering the Unknown Landscape*, 325.

⁸⁰ *Ibid.*, 268.

protection and reasonable coastal-dependent economic growth.”⁸¹ Congress clearly intended the Special Area Management Planning process to be a coastal and wetland protection program, but Andy Willner realized almost immediately that the word “preservation” was absent from early drafts of the Meadowlands’ SAMP. He remembered bringing this to the public’s and agencies’ attention,

I read the plan that was being developed for the Meadowlands and they had forgotten the one thing that was important in a Special Area Management Plan, and that was the word preservation. They took it out of the EIS [Environmental Impact Statement] for the Special Area Management Plan, the SAMP. And that was the first thing I said in a public meeting. I said how can you have a public hearing on . . .the scoping for an environmental impact statement if your language is incorrect?⁸²

Citizens such as Ian McPherson later echoed Willner’s concerns. At the 1995 Army Corps and EPA hearing on the SAMP’s Draft Environmental Impact Statement (DEIS), McPherson said, “the SAMP promotes a plan for development designed to yield environmental improvements as a by-product. Shouldn’t the SAMP’s by-product be its prime objective?”⁸³ In its privileging of development over resource protection, Willner and McPherson argued, the SAMP clearly conflicted with the CZMA’s goals.

Furthermore, the type of development that the SAMP called for also violated both the CZMA and the Clean Water Act. Again, the 1980 Amendments to the CZMA said that a SAMP could allow “reasonable *coastal-dependent* economic growth [emphasis added].”⁸⁴ Yet, in its preferred alternative, the Meadowlands SAMP called for three clusters of development that included residences, offices, and commercial and

⁸¹ Coastal Zone Management Improvement Act of 1980, Pub. L. No. 96-464, 94 Stat. 2060 (1980).

⁸² Andrew Willner, interview with author.

⁸³ *Public Hearing, Special Area Management Plan* (August 31, 1995) (Statement of Ian McPherson), 107.

⁸⁴ Coastal Zone Management Improvement Act of 1980, Pub. L. No. 96-464, 94 Stat. 2060 (1980).

distribution space. Kathy Fay of the Environmental Defense Fund pointed out to the Army Corps and EPA representatives at their 1995 public hearing that none of these proposed developments in the SAMP was even “water dependent,” let alone “coastal dependent.”⁸⁵ Steve Barnes, who worked as the Conservation Director for Willner’s NY/NJ Baykeeper, also reminded the hearing officers that federal law required coastal dependency to be the primary consideration when authorizing wetland fill for development.⁸⁶

Environmentalists also used this argument to fight against Mills Corporation’s permit to fill wetlands for construction of its mall. The presumption under the Clean Water Act’s Section 404 (b)(1) guidelines is that upland alternative sites exist for all non-water-dependent projects. If a developer cannot prove that no other practicable alternative exists, then by federal law, the Army Corps must deny the section 404 permit. In October 2000, a group of environmental attorneys submitted comments to the Army Corps on behalf of eight environmental organizations: The Natural Resource Defense Council, Environmental Defense, Inc., NY/NJ Baykeeper, New Jersey Chapter of the Sierra Club, New Jersey Audubon Society, Hackensack Riverkeeper, Natural Resources Protective Association, and the National Waterkeeper Alliance (hereafter, Environmental Commenters). To prove that Mills Corporation had failed to consider practicable alternatives, the Environmental Commenters submitted a list of twelve sites, both in and out of the Meadowlands District, that could accommodate Mills’ development proposal.

⁸⁵ *Public Hearing, Special Area Management Plan* (August 29, 1995) (Statement of Kathy Fay, Environmental Defense Fund), 60.

⁸⁶ *Public Hearing, Special Area Management Plan* (August 31, 1995) (Statement of Steve Barnes, Conservation Director for NY/NJ Baykeeper), 99.

These sites included existing vacant upland tracts, abandoned landfills, and other brownfield remediation sites. The Environmental Commenters concluded that because Mills had failed to prove that the Empire Tract was the only practicable site, the Army Corps had the legal responsibility to deny the Section 404 permit.⁸⁷ According to a *Star-Ledger* report, Richard Kane, of the New Jersey Audubon Society, argued that Mills' application to fill hundreds of acres for such a clearly non-water-dependent development, "stands the Clean Water Act on its head." He also warned that if the Army Corps granted Mills' permit, in violation of the Clean Water Act and the CZMA, it would set a precedent that could endanger wetlands nationwide.⁸⁸

Rethinking *Phragmites*

Environmentalists also argued that nothing in the Clean Water Act and the CZMA indicated that their provisions applied only to wetlands of a certain type or quality.⁸⁹ Yet those in support of filling wetlands for development continued to assert that the wetlands to be filled were "degraded" (i.e. dominated by *Phragmites*) and therefore useless. But as the EPA's Christopher Daggett did a decade before, environmentalists and wetland scientists in the mid- to late-1990s and early 2000s questioned the scientific validity of the negative feelings about *Phragmites* that had dominated wetlands-planning discourse since the 1970s. A survey of scientific literature on *Phragmites* completed in 1999 and published the following year, revealed the reed's ecological benefit to some species,

⁸⁷ Lloyd et al., *Comments filed In the Matter of Draft Environmental Impact Statement*, 38-47.

⁸⁸ Ana M. Alaya, "Merits of Megamall in the Meadowlands Stoke the Emotions," *Newark (NJ) Star-Ledger*, August 30, 2000, Access World News.

⁸⁹ Greg Remaud, interview with author, August 3, 2015, Keyport, NJ.

remarked on the detrimental effects of the reed on other species, noted that scientific data on *Phragmites* marshes remained incomplete, and warned wetlands managers to avoid making decisions based on partial data.⁹⁰

In the late 1990s and early 2000s, the science on *Phragmites* was developing at the same time that the Mills project moved through its permitting process. The questions surrounding *Phragmites* became a particular sticking point in the controversy that developed around the Meadowlands Mills Mall. Mills Corporation argued that because the Empire Tract was dominated by a monotypic stand of *Phragmites*, it was no longer a functioning wetland. Erik Kiviat, a wetlands ecologist who had spent three decades studying wetlands in the New York City region, said that the authors of Mills' DEIS seemed to have "felt if they repeated often enough that common reed is a bad plant, everyone would actually believe this."⁹¹ In their response to Mills' DEIS, the Environmental Commenters called the claim that *Phragmites*-dominated marshes were degraded beyond functioning, the "largest inaccuracy" in the document; it was not based on ecological fact.⁹² The Environmental Commenters supported their claim that the Empire Tract provided valuable wetlands functions by marshalling scientific research to show that the Tract provided critical habitat, that it protected the region from flooding, that it improved water quality, and provided open space.⁹³

⁹⁰ L.A. Meyerson et al., "A Comparison of *Phragmites australis* in Freshwater and Brackish Marsh Environments in North America," *Wetlands Ecology and Management* 8 (2000): 89-103.

⁹¹ Lloyd et al., *Comments filed In the Matter of Draft Environmental Impact Statement*, 5.

⁹² *Ibid.*, 4.

⁹³ *Ibid.*, 4-18.

By the time that Mills published its DEIS in 2000, Richard Kane had completed several studies of the Meadowlands that began to counteract the dominant view of *Phragmites*. In 1994 and 1995 Kane led a team of researchers, including Bill Sheehan who volunteered use of his pontoon boat, that surveyed the length of the Hackensack River to identify areas of critical habitat for migratory birds. The study identified twelve important sites in the Meadowlands, including sites dominated by *Phragmites*.⁹⁴ The Moonachie Creek site, which included the Empire Tract, supported at least fourteen resident and forty migratory avian species, including the threatened Yellow-crowned Night Heron and the endangered Northern Harrier. This piece of marsh served as particularly significant habitat because of its location in the central part of the Meadowlands. Because it connected the marshes on the upper and lower parts of the Hackensack River, the *Migratory Bird Report* warned that any development on the Moonachie Creek site would fragment the marsh and endanger critical habitat function.⁹⁵ The Berrys Creek site contained a Northern Harrier nest site and it was used by an “extraordinary number of migrant species.” Like the Moonachie site, the report noted the value of the size and location of the Berrys Creek site. It, too, linked lower and upper river marshes to provide a ribbon of continuous habitat in the heart of the Meadowlands.⁹⁶ The report showed similar bird use of other *Phragmites*-dominated marshes. Environmentalists used Kane’s findings in the *Migratory Bird Report* to

⁹⁴ Richard Kane and David Gtithens, *Hackensack River Migratory Bird Report With Recommendations for Conservation* (Bernardsville, NJ: New Jersey Audubon Society, 1997), 1-2.

⁹⁵ *Ibid.*, 11-12, 26.

⁹⁶ *Ibid.*, 17-18.

challenge developers' and agencies' claims that *Phragmites* provided little habitat value.

In fact, the reed supported a variety of avian species, both resident and migratory.⁹⁷

Other studies suggested that *Phragmites* provided comparable habitat when compared with *Spartina* marshes. Researchers from Rutgers University who studied the Saw Mill Creek Marsh, where both *Spartina* and *Phragmites* marshes existed in close proximity to one another, found that benthic organisms like fiddler crabs and grass shrimp showed no higher preference for *Spartina* over *Phragmites*. For these species, the detritus of *Phragmites* provided a sufficient food source.⁹⁸ Other studies showed that several faunal species used *Phragmites* as cover during storms or as protection from prey, that muskrats fed on *Phragmites* rhizomes, and that insect density could be higher on a *Phragmites* marsh. Data collected from the Connecticut River's estuary showed the *Phragmites* marshes there provided adequate habitat and nutritional sources for aquatic and terrestrial invertebrates and for the mummichog, a small killifish.⁹⁹ And a study conducted by scientists from NOAA's Center for Coastal Fisheries and Habitat Research and the United States Fish and Wildlife Service showed no significant difference in nekton use of *Phragmites* salt marshes vis-à-vis *Spartina* salt marshes in the Chesapeake Bay.¹⁰⁰

⁹⁷ Greg Remaud, interview with author.

⁹⁸ Judith S. Weis, "Some Recent Research in the Meadowlands," *New Jersey Flows* 4 no. 1 (Summer 2003): 3.

⁹⁹ L.A. Meyerson et al., "A Comparison of *Phragmites australis*," 98-100.

¹⁰⁰ David L. Meyer, John M. Johnson, and John W. Gill, "Comparison of Nekton Use of *Phragmites australis* and *Spartina alterniflora* marshes in the Chesapeake Bay, USA," *Marine Ecology Progress Series* 209 (January 2001): 71-84; As opposed to plankton, aquatic species that are carried along by tides or currents, nekton are aquatic species that actively swim and therefore move independently from the tides. Sharks, turtles, squids, and crabs are all examples of nekton.

Studies showed that *Phragmites* marshes provided other ecosystem services as well. *Phragmites* is particularly good at improving water quality. The reed could efficiently absorb and retain nitrogen and phosphorous from surrounding water, more so than other wetlands plants. Because of its unique rhizome structure, it could also trap metal contaminants in its roots. Therefore, *Phragmites* was more effective than *Spartina* at removing metal contaminants from the marsh. For these reasons, Rutgers' Dr. Judith Weis concluded that *Phragmites* played important roles in distressed urban wetland ecosystems and was not the "evil plant" it was once thought to be.¹⁰¹

The Environmental Commenters to Mills' DEIS used the abovementioned studies, and others, to prove that even though it was covered with dense *Phragmites*, the Empire Tract was a functioning wetlands ecosystem. The Empire Tract supported a disproportionately high number of bird species compared to the rest of the Meadowlands. Although the tract covered only six percent of the total area of the Meadowlands District, forty-five percent of the total number of bird species that were known to utilize the Meadowlands were observed on the site. This included thirteen state-listed threatened or endangered species, several of which, they contended, would disappear from the Meadowlands entirely if Mills were allowed to fill the Empire Tract. The Environmental Commenters also showed that Mills' DEIS underrepresented faunal species on the site. Dr. Erik Kiviat found several macroinvertebrates that were not counted in the DEIS and he noted that their presence was "directly due to reed" being present on the site.¹⁰²

¹⁰¹ Judith S. Weis, "Some Recent Research in the Meadowlands," 3.

¹⁰² Lloyd et al., *Comments filed In the Matter of Draft Environmental Impact Statement*, 7-10, quote from p. 10.

Scientific studies submitted by the Environmental Commenters also showed that the Empire Tract improved the health of the Hackensack River. Portions of the Hackensack River adjacent to the Empire Tract tested below established limits for both heavy metal concentration and fecal coliform bacteria while other parts of the river, further from the site, showed higher levels of contamination. The Environmental Commenters interpreted this data as revealing the effects of the vegetation on the Empire Tract. The Empire Tract itself was occasionally affected by contamination from storm water runoff, but because its *Phragmites* filtered the stormwater, those contaminants never reached the Hackensack River.¹⁰³

By the late 1990s and early 2000s, wetlands scientists also argued that in wetlands, size and interconnectedness mattered. This was especially true for wetlands' habitat functions, which decreased disproportionately as wetland acreage was reduced. In her comments to the Army Corps regarding the Meadowlands Mills Mall project, biologist Lisa Windham wrote, "over the past 20 years, landscape ecologists have consistently demonstrated that the maximum diversity of a patch is geometrically reduced with decreases in patch size." Studies have also shown that surrounding development can impact biodiversity on even highly functioning wetland habitat. Because of the wetlands' water filtering function, the health of rivers and oceans that are part of the greater estuarine ecosystem also depends on a contiguous, functioning wetland upstream.¹⁰⁴

The Empire Tract's size and location made it a particularly critical piece of wetlands to protect. It was the largest remaining contiguous tract of wetland in the

¹⁰³ Ibid., 15-16.

¹⁰⁴ Ibid., 11-12, quote from p. 12.

Meadowlands District and because of its location in the central part of the Meadowlands it served as a corridor that connected the northern and southern parts of the Meadowlands District. The Environmental Commenters argued that the diversity of species recorded on the site “is able to persist within this otherwise heavily urbanized environment in large part because the Tract is part of an unbroken wetlands system.”¹⁰⁵ Moreover, its location in the Atlantic Flyway, an important migratory bird corridor, made the tract important to bird species throughout North and South America. The Environmental Commenters argued that the data on wildlife usage alone proved that the Empire Tract was “disproportionately important to the entire regional ecosystem.”¹⁰⁶ In its comments on the development plan, the United States Fish and Wildlife Service said that filling the tract “would eviscerate the heart of the Meadowlands wetland complex.”¹⁰⁷ Yet, the Mills Corporation’s DEIS completely ignored the tract’s size and location. This, the Environmental Commenters said, was a critical mistake, and one that threw into question the entire mitigation scheme presented in the DEIS.

Mitigation as Preservation?

Since the late 1970s, Meadowlands development had been premised on the idea that a loss of degraded wetlands through fill could be compensated with the creation or enhancement of other, higher quality wetlands elsewhere. Because the Empire Tract was nothing but a dense stand of *Phragmites*, so Mills said, the logic of mitigation held that the preservation of more pristine wetland acreage elsewhere in the Meadowlands would

¹⁰⁵ Ibid., 11.

¹⁰⁶ Ibid., 7.

¹⁰⁷ Ibid., 11-12.

better serve the District's overall wetland functioning more so than would saving the Empire Tract. However, the science that demonstrated the ecological benefits of *Phragmites* and revealed the importance of large, interconnected wetlands challenged the very idea of mitigation as an environmental protection strategy in the Hackensack Meadowlands.¹⁰⁸

By the late 1980s, scientists had begun to question whether wetlands functions could actually be artificially created or enhanced. By then, researchers knew that wetlands needed to do more than simply “provid[e] a landing strip for ducks,” as some had thought back in the 1930s when the Fish and Wildlife Coordination Act first implemented the concept of mitigation. Even when considering wetlands' habitat functions alone, scientists now knew that an entire chain of species was required for proper food, shelter, and breeding requirements. This did not even account for the more complicated functions of flood protection, aquifer recharge, and water quality improvement.¹⁰⁹

The very effectiveness of mitigation had been questioned during the public debates on the SAMP. At the SAMP hearing in 1995, Dennis Schwayda, Conservation Chairman of the New Jersey Chapter of the Sierra Club argued that even if removing *Phragmites* was a wise goal, it would not work in the long term. He said that the plan “may remove the phragmites for a while, but they'll be back. In fact, in 20 years, I

¹⁰⁸ Ibid., 12.

¹⁰⁹ Vileisis, *Discovering the Unknown Landscape*, 324.

guarantee they will be back. Taxpayers will have wasted \$90,000 per acre, sacrificed 840 acres of wetlands and we'll be back to square one."¹¹⁰

Even if mitigation programs worked, those opposed to the SAMP argued that such plans could never address the environmental impacts caused by fragmenting the marsh. At the SAMP hearing, David Kirby of the Secaucus Environmental Advisory Committee warned that the SAMP's fragmentation of the marsh would hamper the wetland's ability to provide habitat and support region's fisheries.¹¹¹ Pamela Weber-Leaf of the Natural Resources Defense Council also expressed concerns about fragmentation. She argued that the SAMP did not consider the location of wetlands it proposed to fill and she felt that "too many developers have been promised too small pieces of the total pie." Instead, she claimed that wetlands' ecological functions would be better protected if larger portions of the marsh could be preserved.¹¹²

The Mills Corporation's mitigation plan included the restoration of 380 acres of nearby wetlands.¹¹³ But, Environmental Commenters in the Mills case argued that nothing could compensate for the loss of wetlands in the Empire Tract. The fact that the Tract remained as the largest remaining contiguous piece of wetlands in a heavily urbanized area made the wetlands on the Empire Tract "more valuable than an isolated acre of pristine wetlands."¹¹⁴ Moreover, they argued that Mills' proposed fill would

¹¹⁰ *Public Hearing, Special Area Management Plan* (August 31, 1995) (Statement of Dennis Schwayda, Conservation Chairman, New Jersey Chapter of Sierra Club), 137-138.

¹¹¹ *Public Hearing, Special Area Management Plan* (August 29, 1995) (Statement of David Kirby, Secaucus Environmental Advisory Committee), 181.

¹¹² *Ibid.*, (Statement of Pamela Weber-Leaf, Natural Resources Defense Council), 234.

¹¹³ Michael Casey, "Hearing on Giant New Mall Today; Permit Needed to Fill Wetland Acres," *Hackensack (NJ) Record*, September 11, 1996, LexisNexis Academic.

¹¹⁴ Lloyd et al., *Comments filed In the Matter of Draft Environmental Impact Statement*, 6.

fragment this important wetland, forever breaking the Meadowlands' chain of interconnected wetlands. "By their nature," they argued, "these impacts are not mitigable."¹¹⁵

This all points to a problem that environmentalists found with the entire underlying premise of development plans in the Meadowlands. Beyond its violation of the Clean Water Act and the CZMA, the SAMP and Mills Mall plans violated the HMDC's own mandate that required the agency to protect the "delicate balance of nature." The SAMP defined balance in terms of support for both economic development and preservation and it sought to achieve this balance by allotting some acreage to each of those objectives. However, environmentalists like Willner and Sheehan argued before the EPA and Army Corps that this approach ignored the centuries-long history of wetlands losses in the Meadowlands. At its hearing on the Meadowlands Mills proposal, Sheehan asked the Army Corps,

How could a balance be struck when you consider this permit unless you take into account all of the historical impacts that have taken place in the past? . . . What we have left today is a mere 7,000 acres of variously impaired wetlands . . . I am a reasonable person but it would appear that any chance we may have had to strike a balance was lost years ago and the basic principles of compromise will only tip the scales against any possible restoration and preservation[,] it is for this reason that you should return the application stamped permit denied.¹¹⁶

Andy Willner had made the same argument against the SAMP. Because more than sixty percent of the Meadowlands' wetlands had already been destroyed, any talk of "balance," Willner said, required that the "scales, so weighted in favor of development, must be

¹¹⁵ Ibid., 12.

¹¹⁶ Bill Sheehan, "Oral Testimony Regarding the Meadowlands Mills Mall Project, USACOE Public Notice #95-7440-RS," October 17, 1996, Mills Binder, Records of Hackensack Riverkeeper, Inc., Hackensack, NJ.

tipped back to an unbiased measure by favoring preservation.”¹¹⁷ Richard Kane of the New Jersey Audubon Society agreed. In a 2015 interview with the author, Kane explained what he saw as the problem with approaches to conservation in the Meadowlands, “now if you take a loaf and you do balancing by cutting the loaf in half, then the next time you come back to the loaf there’s only fifty percent of it.” In this way, he said, the estuary was slowly disappearing under a policy that prioritized supposed “balance.” Balance, Kane said, was not an ecological concept; it was a political term used to make wetlands development seem less harmful.¹¹⁸

The Meadowlands did suffer very real environmental problems though. The remaining wetlands acreage had survived through centuries of ditching, diking, and landfilling, but that history had left a legacy of pollution, leaching landfills, and toxic sediments that ultimately needed to be fixed to truly restore and protect the estuary. Here two people who each thought of themselves as environmentalists strongly disagreed on the best to solutions.

Bill Sheehan argued that the Meadowlands would fix themselves, if only it was left alone. He pointed to places like the Kingsland-Sawmill Marsh where a dike had been constructed in the nineteenth or early twentieth century to drain the wetlands for agricultural purposes. In 1950, a storm broke through the dike, allowing water to overflow the marsh. Within twenty years, the re-watering of the marsh had altered the vegetation in the area. *Spartina alterniflora* began to grow, *Phragmites* density was

¹¹⁷ *Public Hearing, Special Area Management Plan* (August 29, 1995) (Statement of Andrew Willner, NY/NJ Baykeeper), 206.

¹¹⁸ Richard Kane, interview with author, August 5, 2015, Stewartsville, NJ.

reduced, open water areas formed at high tide, and a more diverse marsh began to develop.¹¹⁹ Sheehan's philosophy was, "if the river's coming back on its own, then who am I to question the river?"¹²⁰

Don Smith of the HMDC disagreed with Sheehan's hands-off approach. He believed that "human intervention caused the problem out there today . . . So, it [needs] human intervention to bring it back."¹²¹ Smith did agree with Sheehan that some areas were functioning well, like Saw Mill Creek, and they should be left alone. But in some places, centuries of human alterations of the marsh through diking, ditching, mosquito control activities, and landfilling had dewatered the marsh, had disconnected it from the tides, raised the land, and allowed for *Phragmites* to move in. He said in parts of the marsh, "the only way the fish can get into some of those Meadows is if you carried them in with a wheelbarrow."¹²² Those areas, he said, no longer functioned as wetlands.

Like Sheehan, Smith's own lived experience in the Meadowlands informed the way he thought about its future. He remembered as a kid, seeing thousands of Green-wing teal in the Secaucus Meadowlands, but they disappeared when *Phragmites* overtook the marsh grass. After Hartz Mountain Industries had implemented a mitigation program, though, Smith once again saw 1,500 some ducks. He witnessed the increase in biodiversity and productivity on mitigated sites and he truly believed that a program of mitigation – of removing *Phragmites* and grading the marsh – was the appropriate answer

¹¹⁹ George T. Potera, "A Preliminary Ecologic Study and Evaluation of a Section of the Hackensack Meadowlands," (unpublished manuscript, November 1970), p. 2, Report 1970-003, MERI.

¹²⁰ Sullivan, *The Meadowlands*, 194.

¹²¹ Don Smith, interview with author, March 17, 2016, Lyndhurst, NJ.

¹²² *Public Hearing, Special Area Management Plan* (August 29, 1995) (Statement of Don Smith, Hackensack Meadowlands Development Commission), 286.

to the Meadowlands' problems. Without human intervention, Smith said, any areas protected from development would simply go "downhill."¹²³ Smith loved the Meadowlands and told the EPA and Army Corps hearing officers at the SAMP hearing that "in my heart, to some degree, it's unfortunate that development has to be the source to do it. But it seems to be the only way to get it done and it is important that that be done."¹²⁴

Smith and Sheehan obviously disagreed about the role that humans should play in fixing the Meadowlands. Both men accused the other of wanting to turn back time to some imaginary pristine past – Smith characterized Sheehan as the guy at a meeting who stands up to say, "I'm not gonna be happy until I can stand on the shore of the Hackensack and see the same thing that the Indians saw."¹²⁵ Yet both Sheehan and Smith's views of restoration were actually an acknowledgement of the long human history in the marsh. Both, in a way, argued that because of its history of abuse, any effort at forging a future for the Meadowlands required one to meet the marsh as it presently existed. For Sheehan, that meant accepting *Phragmites*, even though it was an invasive and much-maligned plant. For Smith, it meant accepting the degraded nature of the marsh and working to fix it.

Here, two different ethics regarding humans' responsibilities to their environment emerged in the Meadowlands in the 1990s as environmentalists grappled with the obvious ecological effects of an urban, industrial history. Both knew that humans had

¹²³ Sullivan, *The Meadowlands*, 196-197.

¹²⁴ *Public Hearing, Special Area Management Plan*, (August 29, 1995) (Statement of Don Smith), 289-290.

¹²⁵ Sullivan, *The Meadowlands*, 198-199.

caused the Meadowlands' problems. Sheehan and Willner understood any continued human intervention in the marsh as simply another episode in the long line of human abuse of the Meadowlands. In the late 1990s, they criticized restoration efforts in the Meadowlands. When author John R. Quinn, Andy Willner, and Bill Sheehan boated through an area of mitigated marsh, Willner told Quinn, "it's a shame when you get in here and see the devastation that mitigation has caused."¹²⁶ Instead of human intervention, they argued, it was now time for restraint.

Smith's ethic, on the other hand, says that the history of human abuse puts a very different responsibility on humans. If humans did not intervene, he said, it is "the bobolink, all the birds . . . the turtle . . . and the freshwater marsh, the least bitterns, the railbirds" that lose. He said that in forgoing mitigation efforts, "you are making a choice to deprive them of that habitat."¹²⁷

Conclusion

A human history was embedded in the wetlands that remained in the Hackensack Meadowlands by the late 1990s. Over four centuries of Euro-American use, the Meadowlands had been diked, drained, and filled; nearly two-thirds of its wetlands were gone. Warehouses, landfills, houses, and stores stand on former wetlands. Much of this construction took place before 1977 when Congress unambiguously applied the full power of the Clean Water Act to wetlands. Some construction occurred after 1977, with

¹²⁶ Quinn, *Fields of Sun and Grass*, 223.

¹²⁷ Don Smith, interview with author.

developers enhancing wetlands elsewhere to compensate for the “degraded” wetlands that they took in the name of economic development.

That the government conceptualized and categorized “degraded” wetlands as such and allowed them to be filled, incensed those who used and appreciated the environmental values of the Meadowlands. They feared that such action set a dangerous precedent for the Hackensack Meadowlands and other urban estuaries. Greg Remaud, of the NY/NJ Baykeeper, summarized the dangers of this biased application of the law,

we were really concerned about both the loss of land in the Meadowlands [and] the precedent being set, saying well, these wetlands aren’t really good quality so therefore you can fill *them* . . . so if you live in a pristine area and you have nice healthy unthreatened, unimpacted wetlands, you can’t touch those, but if you live in an urban area where almost by definition there’s going to be impact through water quality, through nearby development, through industrialization, you’re saying you can fill *those* . . . So what are the implications, not only here but in other places? Do you just start saying well these aren’t good enough wetlands so therefore you can fill ‘em?¹²⁸

Here, Remaud expressed a well-founded concern of urban environmentalists who saw that environmental laws were being used to protect only typically understood wild spaces, while excluding and undervaluing urban nature.

Bill Sheehan, Andy Willner, and their allies understood that a history of human (ab)use did not allow the government to disregard a wetland. Instead, they believed that the quality of the marsh at any given time should not disqualify it from conservation efforts. Despite centuries of impact, Sheehan, Willner, and others showed that nature did exist in the Meadowlands and that its nature could fulfill the same sorts of human needs and speak to the same values that large, Western, more seemingly “pristine” places could

¹²⁸ Greg Remaud, interview with author.

fulfill. Though a history of water alteration and pollution had utterly transformed the marsh's plant ecology, scientists proved that the new ecology had value, too.

Environmentalists brought that science and the public's environmental values to the HMDC, Army Corps, and EPA's public hearings on projects that would impact the marsh. At those hearings, they persistently argued that a history of human use did not relieve the government of its legal responsibility to implement environmental protection laws.

In April 1999, the HMDC and its partner agencies issued a revised draft of the Special Area Management Plan, which reduced the acreage to be filled by half. Yet, *The Record* reported that Mills Corporation planned no alterations to its proposal. If the government had hoped to assuage the environmental opposition, that plan failed. Willner remembered the HMDC asking him, "what are you ready to give up?" He recalled the rest of the conversation as follows,

I said not one inch. And they said, that's unreasonable. And I said, no it's not, you've already taken most of it, you know, the rest of it belongs to the people and the critters that live there. And they said, that's your position, that's your negotiating position, not one square inch. I said yes. And they said, you know you can't win if you don't compromise. And I said, yes we can.¹²⁹

Willner and Sheehan did not back down from the line they drew in the marsh.

Over the course of the 1990s, they built a constituency of thousands of people who mobilized in opposition to the SAMP and Meadowlands Mills Mall. That support would pay off in the twenty-first century.

¹²⁹ Andrew Willner, interview with author.

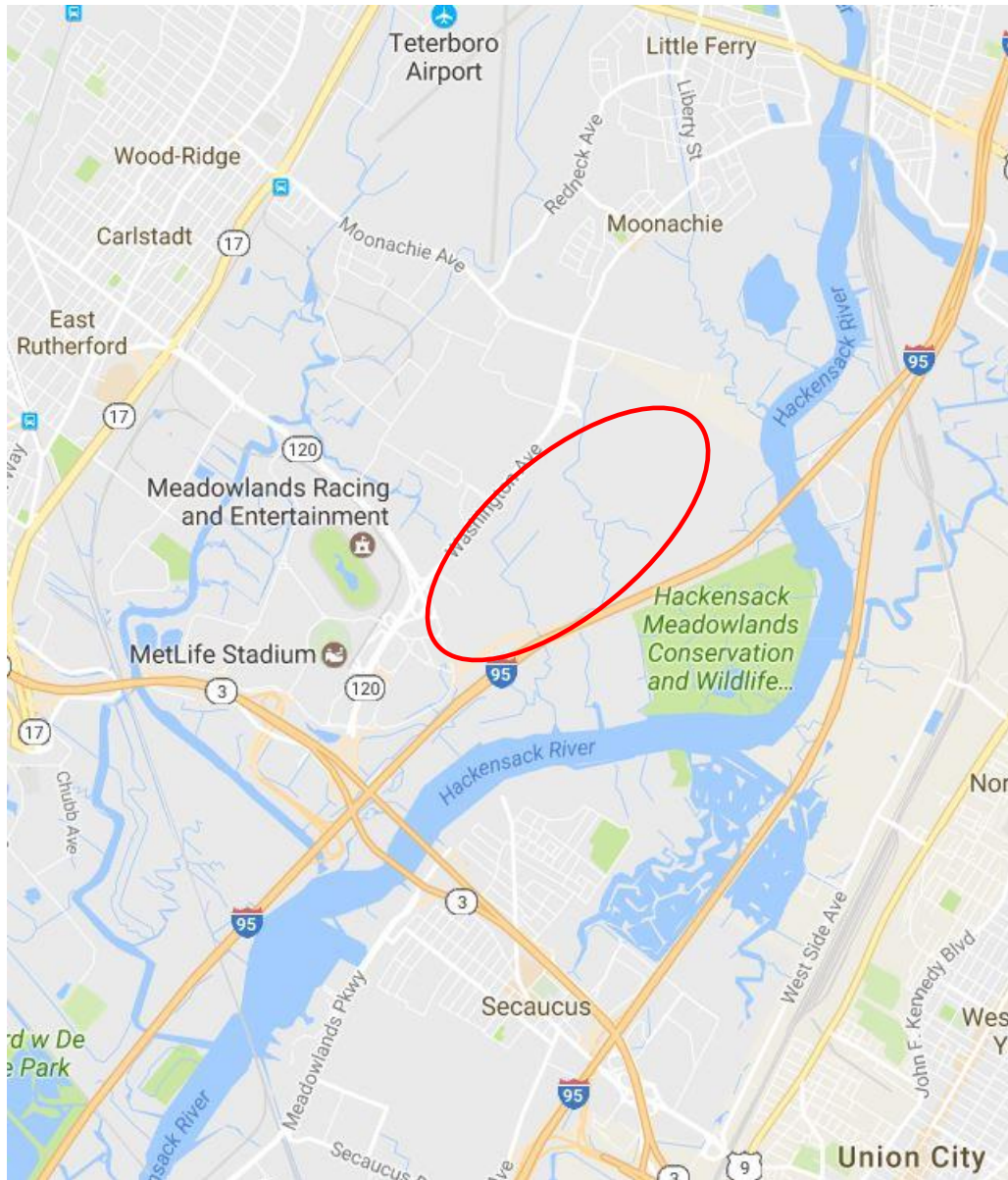


Figure 17. Location of Empire Tract (general area circled).

Source: Base map from Google Maps, 2017



Figure 18. Laurel Hill.

Source: Photo by author, May 20, 2014.



Figure 19. Mill Creek Marsh, Secaucus, NJ.

Source: Photos by author, May 20, 2014

“THE PEOPLE’S VICTORY IN THE MARSH”

Political Support for Preservation

By the end of the twentieth century, Andy Willner and Bill Sheehan were able to leverage the constituency that they had helped build into significant political support for Meadowlands preservation. They used postcard mailings, then email blasts to reach out to the Meadowlands communities; they organized people in the community to testify against the Special Area Management Plan (SAMP) and Meadowlands Mills Mall at Hackensack Meadowlands Development Commission (HMDC), Environmental Protection Agency (EPA), and United States Army Corps of Engineers public hearings. Sheehan’s outreach to local civic organizations even inspired two members of the New Jersey State Federation of Women’s Clubs to collect over 1,700 signatures on petitions in opposition to the Mills Mall project.¹ Willner estimates that because of environmentalists’ advocacy, over ten thousand people commented negatively on the final version of the SAMP.²

By the turn of the twenty-first century, enough of the public supported preservation efforts that it became politically expedient for elected officials to officially stand behind Meadowlands preservation. In 2000, Meadowlands environmentalists gained an important political ally. When President George W. Bush appointed New Jersey Governor Christine Todd Whitman to lead the EPA, the Republican President of

¹ J. D. S., “Women’s Club Conservationists Take Aim at Mills Mall Project,” *Hackensack Riverkeeper Tidelines* (Spring 1999): 7.

² Andrew Willner, interview with author, August 4, 2015, Kearny, NJ.

the New Jersey State Senate, Donald T. DiFrancesco, assumed the role of Acting Governor to carry out her term. He planned to mount his own gubernatorial run in 2001 and, recognizing his lack of pro-environmental credentials, DiFrancesco focused on the Meadowlands as a place where he could make a name for himself on environmental issues.³ The Acting Governor invited Bill Sheehan and others from the Meadowlands to meet with him at the State House in Trenton and Sheehan used these meetings as an opportunity to tell DiFrancesco “the stories of the Meadowlands.”⁴

On March 19, 2001, Andy Willner was on vacation in Florida when he received a call from Sheehan. DiFrancesco planned to go to the offices of the Meadowlands Commission the next day to speak about the Mills project and he wanted Sheehan and Willner to be there. Environmentalists who had been in meetings with the DiFrancesco and Mills Corporation’s lobbyists expected the Acting Governor to express his opposition to Meadowlands Mills Mall. One environmentalist, speaking on a condition of anonymity, perhaps expected more than a simple statement of opposition. He or she told a *Record* reporter, “if [DiFrancesco] does everything we’re expecting him to do, it would be the largest single victory for the environment in New Jersey since the Pinelands were saved.”⁵ Willner recalled that after hanging up the phone, “I immediately went to the airport . . . I was still wearing stuff from Florida, and I had nothing prepared, but I wasn’t

³ Andrew Jacobs, “DiFrancesco Seeks to Save Meadowlands: Asks Mall Builder to Look Elsewhere,” *New York Times*, March 21, 2001, ProQuest Historical Newspapers (92146388).

⁴ Bill Sheehan, interview with author, April 13, 2015, Hackensack, NJ.

⁵ Alex Nussbaum and Charles Stile, “DiFrancesco Will Oppose Huge Mall, 4 Sources Say; Major Victory for Foes of Meadowlands Plan,” *Hackensack (NJ) Record*, March 20, 2001, LexisNexis Academic; In 1978, Congress designated New Jersey’s Pinelands, 1.1 million acres of heavily forested land in southern New Jersey as the nation’s first National Reserve.

gonna miss the Governor coming out and saying that he was in favor of preservation as opposed to development.”⁶

DiFrancesco had gathered representatives from the HMDC, the Chamber of Commerce, and the business community outside the Meadowlands Commission’s offices. Sheehan speculated that the business community assumed that he and Andy were there to “stink up their event,” but in a clear nod to the theme of his awaited message, DiFrancesco placed Sheehan and Willner next to him at the podium.⁷ When he found himself standing next to the Acting Governor, at the end of a vacation cut short, Willner could only be thankful that a colleague had brought him a Baykeeper jacket to cover up his Hawaiian shirt.⁸

The Acting Governor spoke. He told the crowd, “based on what we know about this project, I am convinced that the project should be built somewhere else.”⁹ Sheehan somewhat gleefully recalled, “you could hear the veins popping in people’s heads,” as the reality of what DiFrancesco had said settled among those in the business community.¹⁰ Richard Fritzky, president of the Meadowlands Regional Chamber of Commerce said that he felt betrayed by the Acting Governor. “It’s bad governance, and it shows really bad faith,” he told a reporter.¹¹ But for those in the environmental community, DiFrancesco’s stand marked a turning point in the conversation about preserving the Meadowlands. The

⁶ Willner, interview with author.

⁷ Sheehan, interview with author.

⁸ Willner, interview with author.

⁹ Alex Nussbaum, “Governor to Appoint Panel on Future of Meadowlands,” *Hackensack (NJ) Record*, March 21, 2001, LexisNexis Academic.

¹⁰ Sheehan, interview with author.

¹¹ Andrew Jacobs, “DiFrancesco Seeks to Save Meadowlands, Asks Mall Builder to Look Elsewhere,” *New York Times*, March 21, 2001, ProQuest Historical Newspapers (92146388).

Acting Governor based his assessment solely on the damage that filing the largest remaining contiguous piece of wetlands in the District would cause to the Meadowlands' ecosystem. Because the Acting Governor's opposition likely meant that state and local agencies would withhold the necessary permits, his pronouncement virtually ended Mills' plans to build on the Empire Tract. As DiFrancesco shaped policy from the podium, he made it clear that New Jerseyans would no longer think about the Meadowlands' wetlands as undeveloped real estate. Instead, they were valuable natural resources worthy of preservation.¹²

In a press release declaring an environmental victory in the Meadowlands, Bill Sheehan gave all of the credit to the citizens that mobilized in opposition to the Meadowlands Mills Mall project. He called DiFrancesco's announcement "a vindication for the many thousands of people who submitted comments, signed petitions, sent letters, faxes, emails or made phone calls on behalf of the Meadowlands." He continued, "today, the truth has defeated the speculator, the bureaucrat, and the sound bite."¹³ This statement showed the power of citizen stewardship in the Meadowlands. Citizens who cared about their wetlands and felt a connection to the Meadowlands held their government accountable to uphold its responsibilities under the public trust and federal environmental law.

¹² Alex Nussbaum, "Governor to Appoint Panel on Future of Meadowlands," *Hackensack (NJ) Record*, March 21, 2001, LexisNexis Academic.

¹³ Hackensack Riverkeeper, "VICTORY! DiFrancesco Says 'No' to a Mega-mall on Wetlands and Supports Meadowlands Preservation," press release, March 20, 2001, http://www.hackensackriverkeeper.org/pr_archive/meadowlandsvictory.html.

The Acting Governor's announcement also shifted the entire conversation regarding the balancing of development and preservation in the Meadowlands that had been ongoing since the 1970s. Richard Kane later recalled that the moment was "critical," that it "changed the direction" and made conservation in the Meadowlands "respectable."¹⁴ Andy Willner found that DiFrancesco's leadership inspired other political leaders to get behind Meadowlands preservation. Willner said that after the Acting Governor's speech, "of course then everybody jumped on the band wagon. Which was great! . . . It was a *gigantic* victory, *gigantic*."¹⁵

One of those supporters was United States Representative Steve Rothman. Rothman had expressed his lack of support for the Meadowlands Mills Mall as early as 1996 when he first ran for Congress, and environmentalists had been pressing him to sponsor a bill to preserve the remaining wetlands. He did not take a forceful stance on that issue until after DiFrancesco's pronouncement.¹⁶ At a press conference on the banks of the Hackensack River on April 11, 2001, the same day that American Rivers listed the Hackensack as one of the nation's most threatened rivers, Rothman publicly endorsed the addition of the Meadowlands, particularly the Empire Tract, to the United States Fish and Wildlife Service's National Wildlife Refuge system.¹⁷

Old feelings about the Meadowlands died hard though, and even the United States Fish and Wildlife Service argued that the Meadowlands were "too expensive, too

¹⁴ Richard Kane, interview with author, August 5, 2015.

¹⁵ Willner, interview with author.

¹⁶ "Steve Rothman: 9th District Candidate, House of Representatives," *Hackensack (NJ) Record*, October 4, 1996, LexisNexis Academic.

¹⁷ Alex Nussbaum, "Green Future is Natural for Meadowlands," *Hackensack (NJ) Record*, April 12, 2001, LexisNexis Academic.

polluted” and “not ecologically valuable enough” to warrant the extraordinary expense it would cost to add the District to its refuge system. The agency’s chief, Dan Ashe, said that there were “better opportunities elsewhere to make a much bigger impact.”¹⁸ Despite the Fish and Wildlife Service’s rejection of the Meadowlands for its own system, on June 5, 2001, agency representatives participated in a meeting of environmental groups and local, state, and federal agencies, at which all parties committed to finding other ways to help protect the region.¹⁹ In the following months, Congressman Rothman made good on his promise to use his seat on the House Appropriations Committee to secure funding for Meadowlands protection efforts. On November 28, 2001, President George W. Bush signed an appropriations bill that included over one million dollars for an Army Corps study of preservation options in the Meadowlands and for future land acquisition of valuable Meadowlands parcels, potentially including the Empire Tract. With this appropriations bill, Congressman Rothman had secured the first federal funding ever allocated for land acquisition in the Meadowlands.²⁰

Another significant sign that the tide was turning in the Meadowlands came on August 27, 2001, when Acting Governor DiFrancesco signed legislation to change the Hackensack Meadowlands Development Commission’s name to the New Jersey Meadowlands Commission. By removing the word “development,” the legislature

¹⁸ Alex Nussbaum, “Feds Rule Out Acquiring Meadowlands; But Coalition Vows to Find Other Options,” *Hackensack (NJ) Record*, June 6, 2001, LexisNexis Academic.

¹⁹ *Ibid.*

²⁰ Ana M. Alaya, “Millions Cleared for Meadowlands Park,” *Newark (NJ) Star-Ledger*, November 29, 2001, Access World News.

institutionalized in the agency a demand that environmentalists had pushed for decades – that development should not be the agency’s primary mandate.²¹

The events of 2001 marked a significant turning point in the Meadowlands. DiFrancesco and Rothman’s leadership had changed the conversation. These political leaders took a vocal stand in favor of preservation and used their positions to change policy at the state and national levels. Officials no longer talked about how many acres in the Meadowlands they could develop. Instead, as Bill Sheehan told reporters after the June meeting, “the main message to get out to the public is that we’re now working together to get the area preserved.”²²

“The People’s Victory”: Xanadu and the Empire Tract

Still, as of that meeting in early June 2001 when government agencies and local groups committed to wetlands protection, a gigantic mall still threatened the single largest remaining piece of contiguous wetland in the Meadowlands District. Acting Governor DiFrancesco made it clear that he did not intend to abandon the mall project altogether; he committed to finding an alternative site for Mills’ development. He found an opening in the New Jersey Nets basketball team’s threatened departure from the Meadowlands Sports Complex’s Continental Arena. For years, the Nets’ owners had expressed their desire to leave the Meadowlands for a new, as yet unbuilt, stadium in the

²¹ Christopher Daggett, of the Environmental Protection Agency, Region Two argued for a similar name change back in 1987. See Robert Hanley, “Environmentalists’ Tough Balancing Act in Meadowlands,” *New York Times*, August 15, 1987.

²² Alex Nussbaum, “Feds Rule Out Acquiring Meadowlands; But Coalition Vows to Find Other Options,” *Hackensack (NJ) Record*, June 6, 2001, LexisNexisAcademic.

City of Newark, and on June 7, 2001, DiFrancesco proposed state funding to help make that move a reality.²³ To some Bergen County officials, this seemed to promise nothing but economic distress for the Meadowlands region, which would lose one of its primary economic drivers. To allay those concerns, in the legislative bill that he put forward to fund the Newark arena, DiFrancesco also included funding for a Meadowlands redevelopment project, making construction of the Newark arena and redevelopment of the Continental Arena site two sides of the same legislative coin.²⁴ That bill, which grew in a typical pork-barrel way, garnered opposition from taxpayers and ultimately died in the State Assembly Appropriations Committee.²⁵ However, while it was no longer tied to a publicly-financed Newark arena, the idea of Meadowlands redevelopment had gained momentum.

DiFrancesco never intended for the Continental Arena site to remain empty. Instead, he and his successor Jim McGreevey, who took office in 2002, joined the long line of people who envisioned a new future for the Meadowlands. DiFrancesco imagined a new Meadowlands Complex that would no longer be simply an “event destination.” Rather, the Continental Arena site would be home to a “Disney-like village” encouraging daily use as a shopping and entertainment hub of northeastern New Jersey. A concept, designed by New York Architect Stan Eckstut, included a pedestrian mall with

²³ Doug Most, “Nets Firm up Newark Move, Close Door on Meadowlands, Whitman Says Devils Must Share New Site,” *Hackensack (NJ) Record*, May 13, 1999, LexisNexis Academic; Herb Jackson, “New Arena for Newark; Continental Site May Become Center for Entertainment,” *Hackensack (NJ) Record*, June 7, 2001, LexisNexis Academic.

²⁴ Ronald Smothers, “Plan Calls for Meadowlands to Become Family Complex,” *New York Times*, June 22, 2001, ProQuest Historical Newspapers (91894194).

²⁵ Hugh R. Morley, “Newark Arena Plan Meets Another Roadblock; Inaction of Key Panel Could Leave Decision to McGreevey,” *Hackensack (NJ) Record*, November 20, 2001, LexisNexis Academic.

restaurants, stores, and an indoor family entertainment center. Rail transportation would connect the village to Newark, New York City, and beyond and walking and biking paths would connect the village to the Hackensack River.²⁶

Rather than ignoring its environmental setting, Eckstut's design embraced the Meadowlands' natural resources. This conception was more reminiscent of Chet Mattson's vision for the Meadowlands in the early 1970s than of anything that had been constructed there since. For this reason, Hackensack Riverkeeper Bill Sheehan praised the plan as a significant departure from other developments such as the Meadowlands Sports Complex, which showed little concern for the Meadowlands' landscape. He told reporters, "it sounds to me as though the people who are in the decision-making process are now ready to acknowledge that the Meadowlands is a special place."²⁷

In the Continental Arena redevelopment plans, environmentalists, and perhaps the Acting Governor himself, also saw a solution to the Meadowlands Mills problem. From the moment DiFrancesco proposed his Newark arena and Meadowlands redevelopment plans, state officials and environmentalists encouraged Mills Corporation to shift its development from the ecologically valuable Empire Tract to the upland Continental Arena site.²⁸ Bill Sheehan wrote in an editorial to *The Record*, "the arena site holds the key to preserving not only the wetlands that Mills covets, but all of the remaining 7,000 open space acres of the Meadowlands as well."²⁹

²⁶ Hugh R. Morley, "Meadows Plan Calls for Family Attractions, Disney-Style Village Would Be Centerpiece," *Hackensack (NJ) Record*, June 14, 2001, LexisNexis Academic.

²⁷ Ibid.

²⁸ Hugh R. Morley, "Towns Fear Murky Plans for Old Arena," *Hackensack (NJ) Record*, June 8, 2001, LexisNexis Academic.

²⁹ Bill Sheehan, "The State of the Wetlands," *Hackensack (NJ) Record*, November 22, 2001, LexisNexis Academic.

By 2002, Mills Corporation's plans had been so stalled in the quagmire that was the Empire Tract that it wasted no time in planning for a move to the Continental Arena Site. Weeks before the New Jersey Sports and Exposition Authority submitted a call for proposals for the Continental Arena site redevelopment, the company ran a public relations campaign in an effort to show Bergen County residents what Mills could uniquely bring to the site. To counter public perception that the Mills plan was simply another shopping mall, newspaper advertisements highlighted the company's desire to build recreational amenities like an indoor ski jump. One advertisement showed a man skiing indoors with the headline, "Ahh. Summer in the Meadowlands."³⁰

Mills still had to enter the Sports Authority's competitive bid process and on September 17, 2002, it and five other major developers unveiled their individual plans for the 106-acre Continental Arena site. With names like "Liberty Speedway and Family Theme Park," "MeadowFest America," and "Sports City America" the proposals all fit with the administration's re-envisioning of the Meadowlands as an entertainment complex. Into this mix, Mills and its partner Mack-Cali Realty Corporation of Cranford, New Jersey proposed "Meadowlands Xanadu," a name that drew on Samuel Coleridge's poetic description of a "stately pleasure-dome" on a "sacred river."³¹ A \$1.2 billion development, the plans for Xanadu included indoor skiing, surfing and bass fishing, a minor league baseball stadium, a luxury spa, a child-scale city, retail, and restaurants.³²

³⁰ Hugh R. Morley, "Developer Pitches Meadowlands Vision to Public; Mills uses More-Than-Mall Idea in Ads," *Hackensack (NJ) Record*, June 11, 2002, LexisNexis Academic.

³¹ Samuel Taylor Coleridge, "Kubla Kahn," accessed February 13, 2017, <https://www.poetryfoundation.org/poems-and-poets/poems/detail/43991>.

³² Hugh R. Morley, "State Outlines Six Plans for Arena; Confident Proposals 'Will Bring Growth,'" *Hackensack (NJ) Record*, September 20, 2002, LexisNexis Academic.

In the following weeks, Bergen County residents and officials voiced general apprehension in response to all of the proposals. At the top of the list of concerns were those proposals that included construction of a NASCAR speedway that would bring untold traffic, noise, and pollution to the region. Otherwise, traffic congestion, the amount of retail space, and its impact on nearby downtown business districts topped the list.³³

Environmental impacts were another underlying concern. On environmental issues, the Mills Corporation held an advantage among its competitors, thanks to the leverage that the Empire Tract provided. In September 2002, Mills sent a letter to Representative Steve Rothman articulating the company's intention to deed the Empire Tract to the Meadowlands Conservation Trust, a non-profit land conservancy that the state legislature had created in 1999, in return for the sole rights to develop the arena site.³⁴ Though Mills' move was clearly not one of corporate altruism, Bill Sheehan said, "I know a good deal when I see one."³⁵ Sheehan and other local environmentalists found Mills' proposal attractive because of its concomitant commitment to the preservation of the Empire Tract.

The Sports Authority's chairman, Carl Goldberg, agreed. After selecting Mills' Xanadu proposal on February 12, 2003, he told reporters, "the environmental benefits were nothing short of compelling." While Xanadu held a series of advantages over its

³³ Shannon D. Harrington, John Brennan, and Hugh R. Morley, "Bergen's Anger Fades on Meadowlands Plans," *Hackensack (NJ) Record*, September 23, 2002, LexisNexis Academic.

³⁴ Hugh R. Morley, "Mack-Cali Joins Mills in Arena Site Proposal," *Hackensack (NJ) Record*, September 13, 2002, LexisNexis Academic.

³⁵ Bill Sheehan, "Save the Empire Tract the Right Way," *Hackensack (NJ) Record*, December 10, 2002, LexisNexis Academic.

competitors including unique attractions, up-front lease payments, pledges for infrastructure improvements, tax revenue, and job creation, it was the link between Meadowlands District redevelopment and preservation of the Empire Tract that sealed the deal for Mills.³⁶

Members of the environmental community rejoiced. The largest contiguous piece of wetlands would no longer be the home of a massive shopping mall. Instead, its transfer to the Meadowlands Conservation Trust would protect it in perpetuity and to enhance the deal, Mills promised twenty-five million dollars for the tract's restoration. A *Record* editorial proclaimed that the "long and nasty battle over the future of this environmentally significant tract will be over," and that Representative Steve Rothman's plans for an 8,400-acre wildlife refuge "will be a big step closer to reality."³⁷ Andy Willner characterized the preservation of the "heart of the Meadowlands" as "the largest environmental victory in this area."³⁸ The headline of the Hackensack Riverkeeper's winter 2003 newsletter victoriously proclaimed, "The Empire Tract is Saved!"³⁹ According to Willner and Sheehan, the deal had only winners – Mills got to build, wildlife got a home, and wetlands were preserved. They declared, "today, we should all celebrate the people's victory in the marsh."⁴⁰

³⁶ Ronald Smothers, "Giant Playground is Chosen for Site of Meadowlands Arena," *New York Times*, February 13, 2003, ProQuest Historical Newspapers (92641061).

³⁷ "Meadowlands Decision," *Hackensack (NJ) Record*, February 13, 2003, LexisNexis Academic.

³⁸ Alex Nussbaum, "Winning Pick Also a Victory for Wildlife; Mills to Turn Over 600 Acres Embroiled in Seven-Year Fight," *Hackensack (NJ) Record*, February 13, 2003, LexisNexis Academic.

³⁹ Bill Sheehan, "The Empire Tract is Saved!," *Hackensack Tidelines* (Winter 2003): 1.

⁴⁰ Andy Willner and Bill Sheehan, "Celebrating an Environmental Victory," *Hackensack (NJ) Record*, March 23, 2003, LexisNexis Academic.

A Master Plan for the Twenty-First Century

The writing had been on the wall for the Mills Corporation for over a year by the time the company had officially pulled out of the Empire Tract. On January 22, 2002, the New Jersey Meadowlands Commission (NJMC) voted to abandon its contentious Special Area Management Plan, which had allowed for the Empire Tract development, and it began the master planning process anew.⁴¹ The impact of the grassroots protests of the past decade was evident in NJMC chairwoman Susan Bass Levin's promise that the new plan "will make it very clear that wetlands will not be used for development."⁴²

Within two years, the NJMC made good on those promises. The Commission adopted its new Master Plan in January 2004; its key proposal was the protection of the remaining 8,400 acres of wetlands and open space. Like every plan before it, the new Master Plan called for a balance between economic development and environmental preservation. Except this time, the plan achieved its growth objectives by confining development to already-filled land. Though it called for large developments – twenty-four million square feet of commercial space and 3,750 residential units– to meet the region's economic needs, it prioritized redevelopment of vacant or abandoned lots, landfills, and brownfields. Instead of mini-cities on wetlands, the new plan called for "brownfield to greenfield" projects like the Meadowlands Golf Course Redevelopment Plan, which proposed to transform abandoned landfills into golf courses.⁴³

⁴¹ Alex Nussbaum, "Environmentalists Claim a Meadowlands Victory; Agency Abandons Controversial Master Plan," *Hackensack (NJ) Record*, January 24, 2002, LexisNexis Academic.

⁴² Alex Nussbaum, "New Meadowlands Master Plan Would Preserve Unused Acreage; Growth Gives way to Reuse of Sites," *Hackensack (NJ) Record*, December 30, 2002, LexisNexis Academic.

⁴³ New Jersey Meadowlands Commission, *NJMC Master Plan* (Lyndhurst, NJ: New Jersey Meadowlands Commission, 2004), Chapters 1, 3.

This newest plan reflected a shift in the ideas of planning professionals in the 1990s. It embraced the themes of “smart growth” and “sustainable development.” In 1987, the United Nations’ World Commission on Environment and Development issued a report called “Our Common Future.” The key concept in that report is that our “economic future is linked to the integrity of natural systems.”⁴⁴ Once again the Meadowlands Commission saw the environment as an asset.

By integrating this planning concept into the 2004 Master Plan, the NJMC acknowledged that environmental protection was paramount to all other decisions in the Meadowlands; that to attend to the human needs in the marsh, one must first attend to the natural needs. In the Meadowlands, that meant attending to the wetlands. The plan recognized that the wetlands had value and that they provided important services like recreational opportunities, water purification, flood control, and habitat. Wetlands preservation and enhancement were the “key tools” for creating an ecological balance between open space and development and improving the region’s water quality.⁴⁵ As of January 2004, the NJMC controlled nearly 4,000 of the 8,400 wetlands acres and NJMC Executive Director Robert Ceberio indicated to reporters that the Commission and the Meadowlands Conservation Trust planned to acquire the rest through purchase.⁴⁶

Perhaps tellingly in its listing of the NJMC’s tripartite mandate, the Master Plan placed “preservation of the delicate balance of nature” first, before development and solid

⁴⁴ Ibid., 1-5 – 1-7.

⁴⁵ Ibid., 5-21.

⁴⁶ Lisa Goodnight, “Meadowlands Reborn: Plan Unveiled for Progress, Preservation,” *Hackensack (NJ) Record*, January 9, 2004, LexisNexis Academic.

waste.⁴⁷ “To preserve and enhance wetlands and other valuable natural resources, open space, energy resources, and the historical heritage of the Meadowlands District” topped the list of the Master Plan’s goals. This marked a very different conception of the role that wetlands played in the District and the NJMC’s understanding of its mandate.⁴⁸

The approval of the 2004 Master Plan was yet another victory for those who had been fighting to preserve wetlands in the Meadowlands. Captain Bill called it a “milestone,” that signified a remarkable shift in the ways that citizens and government officials thought about the Meadowlands.⁴⁹ Even long-time Meadowlands developers had shifted their thinking. Walter Smith, an Executive Vice President of Hartz Mountain Industries said, “I’ve got to think that being next to a nature preserve, being next to environmentally sound wetlands is a good thing, not a bad thing, when it comes to attracting business.”⁵⁰ It was a sentiment reminiscent of ways Chet Mattson thought about the marsh.

It was also a remarkable citizen victory. Local citizens mobilized against government and large developers and forced a “180-degree change” in the Meadowlands Commission’s policy. Edward Lloyd of Columbia University’s Environmental Law Clinic applauded the outcome as a victory for the people, “the citizens just said no, and made most of the agencies come to share that view. It’s the way politics are supposed to

⁴⁷ New Jersey Meadowlands Commission, *NJMC Master Plan*, 1-1.

⁴⁸ *Ibid.*, 1-7.

⁴⁹ Hackensack Riverkeeper and NY/NJ Baykeeper, “Action Taken by Meadowlands Commission Kills SAMP: Conservationists Celebrate Victory in the Hackensack Meadowlands,” news release, January 23, 2002, http://www.hackensackriverkeeper.org/pr_archive/SAMP_RELEASE.html.

⁵⁰ Alex Nussbaum, “New Meadowlands Master Plan Would Preserve Unused Acreage; Growth Gives way to Reuse of Sites,” *Hackensack (NJ) Record*, December 30, 2002, LexisNexis Academic.

work.”⁵¹ Hackensack’s *Record* called it a “new day” for the Meadowlands.⁵² The wetlands belonged to citizens, not to developers.

Conclusion

In a 2015 interview, Andy Willner asked me, “where else in the country, perhaps in the world, [were] literally thousands of acres of wetlands just taken back from the clutches of developers?” The answer seemingly is, nowhere. The Hackensack Meadowlands story is truly unique. How can we explain what is in Willner’s words, an “extraordinary urban environmental victory”?⁵³

If you ask Andy Willner and Don Smith, you get two different answers to this question. Willner gives most of the credit for this victory to the thousands of people that he and Bill Sheehan mobilized in a steadfast opposition to the Special Area Management Plan and Meadowlands Mills Mall. He credits their persistence and New Jersey attitude. When Mills executives reminded Willner of the company’s success in defending their developments in places like the Houston suburb of Katy, Texas against protests from environmental groups like the Sierra Club, Willner reminded them that, New Jersey “is a very different place than Texas . . . I mean these are environmentalists that are just used to the gritty.”⁵⁴ They also brought to the fight an unwavering belief that the Meadowlands were valuable as a natural resource and that they could, in fact, save it all.

⁵¹ Alex Nussbaum, “Environmentalists Claim a Meadowlands Victory; Agency Abandons Controversial Master Plan,” *Hackensack (NJ) Record*, January 24, 2002, LexisNexis Academic.

⁵² “New Day for Meadowlands; With Greater Concern for Wetlands,” *Hackensack (NJ) Record*, January 30, 2002, LexisNexis Academic.

⁵³ Andrew Willner, interview with author.

⁵⁴ *Ibid.*; See Bill Dawson and Terry Kliever, “‘Mega-Mall’ Firm Offers to Fund to Aid Waterfowl,” *The Houston Chronicle*, September 10, 1997 for Katy, TX mall proposal.

Don Smith explains this most extraordinary urban preservation effort differently; he finds the root of the victory long before Mills Corporation entered the picture. “The biggest single thing was the passing of the Meadowlands Commission Act,” he told me. “Without that,” he said, “you and I wouldn’t be sitting here, this would be all gone.” Though the state legislature created the Meadowlands Commission to oversee the orderly development of the Meadowlands District, it did so just as a national environmental movement ramped up. Early HMDC staff members took their mandate to protect the environment seriously, resulting in the containment of landfills and the preservation of large areas of wetlands like the Kingsland-Sawmill Creek marsh. And they did this before any federal laws protected wetlands. In its *Comprehensive Land Use Plan*, the HMDC imagined a new future for the Meadowlands, one in which humans could use the land without using it up.

The Clean Water Act and its Amendments showed a realization on the national level of the importance of wetlands – they were no longer wastelands, but something valuable. However, the act was not uniformly applied to urban wetlands like the Meadowlands, largely because agencies like the Army Corps and HMDC held fast to the idea that any environmental cleanup in an urban wetland required some wetlands to be sacrificed. For environmentalists who never bought into the HMDC’s idea that you could use wetlands without using them up, the Clean Water Act proved to be a powerful tool. When Mills Corporation applied for the single largest Section 404 fill permit since the Clean Water Act was passed, environmentalists mobilized in opposition. They articulated a view of the Meadowlands’ future that said that wetlands in urban places

were more valuable than a mall. In describing the Meadowlands as though it were a wilderness, they tapped into a strong and long held understanding of the role of nature in American culture. The Meadowlands, they said, were the national park in your own backyard and as such it deserved all the federal protection afforded to wetlands in Yellowstone. It was a compelling argument.

The Hackensack Meadowlands Development Commission, the Clean Water Act, a cadre of gritty grass roots environmentalists who could bridge Americans' longing for wilderness with a twentieth century environmental management bureaucracy. These are all necessary components to understand how 8,400 acres of wetlands remain in the Meadowlands. But, perhaps, the wetlands themselves deserve some credit, too. They, after all, had a habit of thwarting humans' attempts at transforming them. Muskrats broke through the Swartwouts' embankments, land subsided behind Spencer Driggs' iron dikes. A hurricane broke through an embankment at Kingsland-Sawmill Creek, flooding formerly drained land. The fact that nothing had been built in the heart of the Meadowlands by the time the HMDC was created in 1969 speaks more to the murky depths of its boggy soils than to any lack of human drive to transform them.

The late twentieth century history of the Hackensack Meadowlands is one of continuous attempts to balance human and natural needs in an urban wetland. Perhaps the outcome of this story, the preservation of 8,400 acres of wetlands and open space in the middle of the most densely population metropolitan area in the country, achieved by a combination of natural agency, state planning, federal law, and grassroots activism,

shows that at the beginning of the twenty-first century, Americans decided that those needs were one and the same.

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