Stronger than the Storm?
Promoting the Post-Sandy Resilience of Historic Resources in New Jersey’s Coastal Communities

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Abstract

This thesis seeks to contribute to the resilience of historic resources on the Jersey Shore by analyzing ways in which the New Jersey preservation community’s response to Superstorm Sandy can inform future plans for hazard mitigation and adaptation to climate change. In order to accomplish this, this work attempts to identify the pre-existing conditions that influenced the ways in which preservationists responded to Superstorm Sandy, the strengths and weaknesses of preservation agencies’ responses, and how these can inform the ways in which heritage practitioners promote the resilience of historic resources in the face of climate change. By compiling oral histories of preservationists working in the aftermath of Sandy, this thesis provides a comprehensive narrative for a previously untold story. Additionally, this research aims to contribute to the growing body knowledge surrounding the incorporation of historic preservation into planning for both natural disasters and sea level rise. Taking the issues identified on the Jersey Shore and recognizing the opportunities for change, this thesis fills a gap in academic literature by discussing how preservationists can practically apply adaptation and mitigation measures.
Chapter 1: Introduction

The 130 miles of New Jersey’s Atlantic coast feature a diverse array of communities that range from the dense urban setting of Atlantic City to the undisturbed natural landscape of Island Beach State Park. These year-round and seasonal communities are often recognized for their economic and social importance as both the source of many tourist dollars and the site of happy memories for generations of families. Significantly, these beach towns also boast a plethora of historic resources that continue to actively contribute to the unique character of the New Jersey shore. Including both the gaudy neon of mid-century modern motels and the modest simplicity of late nineteenth century camp meeting cottages, this heritage survives to tell the story of the region’s development. However, the seaside setting that remains crucial to understanding the context of these resources now poses the greatest threat to their very survival. The unprecedented destruction wrought by Superstorm Sandy in 2012 shed light on the vulnerability of these coastal places. Dramatic shifts in public policy that followed, such as reforms to the National Flood Insurance Program and the revision of Base Flood Elevation maps, have posed additional threats and obstacles to the region’s historic resources. Historic preservationists must now address short-term issues surrounding the implications of post-Sandy policy decisions while simultaneously coping with the realities of increasingly frequent superstorms and rising sea levels that accompany climate change.
This thesis aims to assess the challenges posed to the heritage of the Jersey Shore and consequently identify the opportunities available to preservationists as they work to promote the resilience of the region’s historic resources. Superstorm Sandy initially opened up larger discussions surrounding the heightened vulnerability of New Jersey’s coastal ecosystems, but the conversation was soon replaced by the narrative of the Shore’s reconstruction to be something “stronger than the storm.” Influenced by the political and economic imperative to rebuild, the state’s preservation agencies have largely missed an opportunity to take the lessons learned from Sandy and inform a strategy of mitigation and adaptation for historic resources in New Jersey. Therefore, this thesis will address the issues that emerged in the response to Sandy and use these to inform recommendations for hazard mitigation and climate change adaptation. Using Superstorm Sandy and the Jersey Shore as a frame for analysis, this work represents attempt to bridge the gap between disaster recovery and planning for resilience in historic preservation.

These goals prompted a key set of questions that have guided the development of this thesis:

- Which pre-existing conditions influenced the ways in which preservationists responded to Superstorm Sandy?
- What were the strengths and weaknesses of preservation agencies’ responses to Superstorm Sandy?
- How can this response to Superstorm Sandy inform the ways in which heritage practitioners promote the resilience of historic resources in the face of climate change?
The scope of this work will thus center on providing answers to these questions, using these findings to fulfill the aforementioned aims of addressing the issues associated with historic preservation in post-Sandy New Jersey.

This thesis will fulfill the goals and answer the questions posed above with a multi-step methodology. Chapter 2 examines existing literature to provide a foundational understanding of the challenges and strategies associated with the preservation of historic resources in coastal environments, identifying the gaps in literature and the niche that this thesis will fill. Chapter 3 establishes the character and significance of the Jersey Shore, examining the ecological, historical, social, political, and economic conditions that have defined this cultural landscape Chapter 4 defines the issues created by Superstorm Sandy and analyzes the response of New Jersey’s preservation community, relying on communication with key actors as the primary source of information. Chapter 5 synthesizes the perspectives of preservation agencies are identifies the key challenges in terms of preparedness and recovery on the Jersey Shore. Chapter 6 uses the lessons learned from Sandy to recognize the opportunities for change and consequently make specific recommendations about how to capitalize on those opportunities. Finally, Chapter 7 concludes by integrating the specific context of Superstorm Sandy in New Jersey with the larger set of policy issues surrounding sustainability, adaptation, and resilience in preservation and planning.

This thesis is influenced by the perspective of a researcher raised in New Jersey, whose familiarity with the assets of and threats to the Jersey Shore informed his analysis of the information presented. To expand beyond the inherent assumptions of a New Jersey native, interviews were conducted with individuals associated with the Federal Emergency Management
Agency [FEMA], U.S. National Park Service [NPS], American Institute of Architects [AIA], New Jersey Historic Preservation Office [HPO], New Jersey Historic Trust [NJHT], Preservation New Jersey [PNJ], Beach Haven Historic Preservation Advisory committee, Ocean City Historic Preservation Commission, and Cape May Historic Preservation Commission. However, this reliance on interviews has limited this analysis to the perspectives of those who responded. For instance, while four historic preservation commissions on the shore are recognized as Certified Local Governments [CLGs], only three were accessible for questions. Additionally, this thesis primarily focuses on the work of preservation agencies rather than all preservationists. This served to exclude the perspectives of the other stakeholders and preservationists, such as the hundreds of property owners, architects, planners, and curators that each made very deliberate decisions on how to treat their historic resources in the aftermath of the storm. Nevertheless, this thesis assumed that the information gathered would serve an important role in providing a context for making future decisions regarding the response, recovery, mitigation, and adaptation surrounding climate change.

“Adaptation”, “mitigation”, “recovery”, “resilience”, “response”, and “vulnerability” are often used within the context of planning for hazards, both single disaster events and long-term threats like climate change. While the definitions of these terms vary with each user, this thesis will define these key terms for the sake of clarity and continuity. **Vulnerability** is “a set of conditions and processes resulting from physical, social, economic and environmental factors, which increase the susceptibility of a community to the impact of hazards.” **Resilience**, on the other hand, “is the capacity of a system, community or society potentially exposed to hazards to
adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure.” **Responses** “address the short-term, direct effects of an incident.” Following response comes **recovery**, which encompasses the “decisions and actions taken after a disaster with a view to restoring or improving the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk.” **Mitigation** is characterized as “the social attempt to reduce the occurrence of a disaster, to reduce the vulnerability of certain populations, and to more equitably distribute the costs within the society.”¹ **Adaptation** “involves efforts to limit vulnerability...through various measures, while not necessarily dealing with the underlying cause of those impacts.”² The case of Superstorm Sandy on the Jersey Shore serves to illustrate all aspects of this process, from the historical, social, and political conditions that contributed to the shore’s vulnerability to planning for a Jersey Shore where rising seas will likely inundate entire communities.


Chapter 2: Literature Review

**Resilience & Historic Resources**

While the demographic and geographic landscape of the Jersey Shore represents a very different setting from that of the Gulf Coast, preservationists and the mainstream media alike have drawn parallels between Hurricane Katrina and Superstorm Sandy even before the floodwaters had receded from Battery Park. M.B. Hackler’s 2010 book, *Culture after the Hurricanes: Rhetoric and Reinvention on the Gulf Coast*, represents a comprehensive analysis of the cultural politics of recovery in the wake of Hurricanes Katrina and Rita. In the book’s introduction, titled “‘Louisiana’s New Oil’: Planning for Culture on the New Gulf Coast.” M.B. Hackler tackles the discourse surrounding the role that cultural identity would play in the region’s recovery following the storms. According to Hackler, the Gulf Coast’s re-emerging culture and the experiences associated with it are the construct of cultural policies that are themselves the product of historic, social and political forces. In New Orleans, as elsewhere, advocates had been slowly shifting their emphasis away from the “intangible benefits” of heritage by turning towards economic justifications for the institutional support of culture. When Katrina hit, the Gulf Coast already had an established “cultural economy” with “creative industries” sustaining it. Once the process of rebuilding began, policymakers pledged that New Orleans’s cultural economy would drive the city’s rebirth and make it a top tourist destination again. However, by placing culture solely within the marketplace, decisionmakers had neglected the dynamic communities, institutions, and places that fostered the vibrant exchanges and traditions that constituted the culture - from cuisine to
architecture - that made New Orleans distinct.\textsuperscript{3} In a similar manner, historic preservation on the Jersey Shore has largely been valued for its potential to attract tourists, rather than its ability to sustain a community’s cultural identity.

Jay D. Edwards’ chapter of this book, “New Orleans Shotgun: A Historic Cultural Geography,” is an analysis of the cultural, economic, and racial implications associated with the history and preservation of shotgun houses in New Orleans. The author starts by laying out the socioeconomic landscape of New Orleans, highlighting how the city’s working class African-American communities became associated with low-lying, cheaper areas in the city and were thus more severely impacted by the flooding of Hurricane Katrina. During the 2006 mayoral election, the low voter turnout in black neighborhoods away from the high ground of the old levees demonstrated how African-Americans were disproportionately displaced by both the storm itself and the financial mechanisms of recovery. According to Edwards, interest and documentation of the city’s architectural heritage also follows similar geographic patterns of inequality with “the house types of the Island and the Garden District receiving by far the bulk of the interest and publication space, while less glamorous historic houses of equal age situated in the lower-lying areas of the back of town...receive cursory mention at best.”\textsuperscript{4} The shotgun house is the predominant typology of these back of town neighborhoods, forming a “shotgun crescent” that encircles New Orleans’ colonial core.

\textsuperscript{4} Ibid., 50.
Edwards argues that the popular history of the shotgun house largely dismisses the typology, framing it as a mere offspring of the “Creole Cottage” style found in the French Quarter. However, this neglects the narrative of the shotgun as a product of Haitian immigrants in the early nineteenth century. By bringing their building traditions to the growing African-American districts of New Orleans, these immigrants blended their practices with the architectural language of the city to produce a truly unique vernacular. Acknowledging this bias, the author raises the question: “Is there a strong possibility of a direct correlation between the lack of socially and culturally based
architectural histories of the shotgun crescent and the lack of social and political will to rebuild those neighborhoods?"\(^5\) The deteriorating neighborhoods surrounding the vibrant tourist district, which itself directly profits from the cultural products of the shotgun crescent, seems to provide answer enough for Edwards. Accepting the author’s assertions, it becomes evident that preservationists’ understanding of significance can have direct implications for the social and economic recovery of communities following a disaster.

Much attention has been given to promoting the resilience of historic properties in the face of natural disasters. The FEMA’s 2005 *Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning: State and Local Mitigation Planning How-to Guide* provides an in-depth, step-by-step instructions for mitigating losses to historic properties in all forms of disasters. Acknowledging that “it is more cost effective to assess potential effects from a disaster and to implement preventative measures than to wait for a disaster to strike and then assess actual impacts,” the authors lay out a four phase approach.\(^6\) The first step, “Organize Resources,” involves assembling the necessary information, staff, support, and funding to effectively consider historic resources in hazard mitigation planning. The publication then delineates how practitioners can interpret the value of historic properties and thereafter establish preservation priorities during the “Assess Risks” phase. In the “Develop a Mitigation Plan” step, FEMA recommends identifying, evaluating, and prioritizing a number of potential action categories, including prevention, resource protection, and structural diversions. The final phase

\(^{5}\) Ibid., 60.

calls for planners and preservationists to “Implement the Plan and Monitor Progress,” emphasizing the importance of coordination among stakeholders and agencies. In the case of Superstorm Sandy, the degree to which preservationists in New Jersey had adhered to this framework varied greatly, resulting in inconsistent consideration of historic resources in recovery plans.

In 2008, FEMA’s National Flood Insurance Program [NFIP] produced a “Floodplain Management Bulletin for Historic Structures.” Floodplains, or “Special Flood Hazard Areas,” are defined by FEMA as the ‘land area covered by the floodwaters of the base flood...where the National Flood Insurance Program's floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies.” A “Floodway,” on the other hand, is “the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.”

Through NFIP, FEMA provides vulnerable communities with flood insurance coverage if they enact ordinances that require new, substantially improved, and substantially damaged residential buildings to be elevated above the Base Flood Elevation determined for the site. FEMA also provides Flood Insurance Rate Maps (FIRMs) that identify flood zones and thus dictate the cost of coverage for structures within hazard areas. Before new legislation was adopted in 2012, buildings built before the implementation of FIRMs were

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7 Ibid., 1.1-4.11
grandfathered in as “pre-FIRM” structures, receiving subsidized insurance rates that didn’t reflect actual risk.⁹

While other pre-FIRM buildings would lose their subsidized insurance premiums if they are not elevated following substantial damages or improvements, the NFIP historically gave special consideration to historic resources that are listed or eligible to be listed on the National Register of Historic Places, as well as those on state or local registries. The NFIP allows municipal floodplain management ordinances to include two provisions that serve to incentivize owners to maintain the historic character of their properties:

1. “Any alteration of a ‘historic structure,’ provided that the alteration will not preclude the structure’s continued designation as an “historic structure,” does not constitute a substantial improvement necessitating elevation.”

2. “Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure’s continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.”¹⁰

The Floodplain Management Bulletin identifies stricter standards for improvements to historic structures in designated “floodways,” which could potentially raise water surface elevation during a flood.

Within historic districts, non-contributing structures and undeveloped lots are subject to all requirements, for exempting them “would create a significant flood risk to structures and to the health and safety of the population.” FEMA maintains that “there are ways to elevate or floodproof

⁹ The Biggert-Waters Act of 2012 and the Flood Insurance Affordability Act of 2014 limited pre-FIRM status to only primary residences, not second homes or businesses. Historic buildings were no longer given any special status that reduces premiums under these Acts.

new structures and substantially improve non-contributing structures so that they comply with the NFIP regulations, but that are still in harmony with the historic nature of the district,” However, owners of non-contributing properties may be eligible for exemption if they undertake substantial improvements, including “the removal of modern additions to the building, replacement of modern siding or roofing materials with historic materials, and other actions to restore the historic nature of the structure,” so that their building qualifies as “contributing to the historical significance of a registered historic district.” 11 Significantly, NFIP acknowledges that despite these exemptions “flood mitigation measures should be a consideration to minimize flood damages when rehabilitating a historic structure or repairing a damaged historic structure.” 12 Additionally, these strategies will be most effective when historic resources are identified and incorporated into a community’s hazard mitigation plan. The protection and mitigation strategies developed in response to flooding and hurricanes prove particularly relevant for adaptation to the challenges of climate change and sea level rise. Even so, FEMA has not effectively addressed climate change within the recommendations and analyses found in the two aforementioned documents. In addition to this, FEMA has not adequately updated this literature to reflect the changes mandated by recent flood insurance reform, only providing a two page document on “Historic Structures and the Biggert-Waters Flood Insurance Reform Act of 2012.” 13

Two master’s theses have attempted to highlight this gap between disaster mitigation and climate change adaptation by providing solutions for threatened historic communities on the

11 Ibid., 7-8.
12 Ibid., 10.
United States’ Eastern seaboard. Ann Horowitz’ 2013 master’s thesis, “The Effects of Sea Level Rise on Historic Districts and the Need for Adaptation,” uses three cities on the Atlantic coast (Saint Augustine, Florida; Elizabeth City, North Carolina; and Alexandria, Virginia) as case studies to synthesize the threats that sea level rise poses to historic districts. Horowitz powerfully overlays maps of National Register-listed historic districts with projected inundation levels for the years 2050 and 2100. After identifying the specific challenges in each community, she provides an analysis of the data as a whole. Horowitz found that, “[g]enerally, the adaptation solutions have been initiated at the local levels with funding secured from all tiers of government” and “the communities’ adaptation efforts mitigate current chronic flood conditions and exclude long-term solutions to sea level rise impacts.”

While historic development patterns shared by all of the communities precluded certain strategies, like vegetative buffer zones, the local adaptation approaches varied with the economic valuation of properties, the density of the communities’ urban form, and the availability of open space. Regardless of the specific community context, funding from the state and federal governments was necessary to carry out larger, more comprehensive adaptation projects. Horowitz asserts that while adaptation measures could affect the integrity of each community’s historic resources, preservationists must understand that they may be necessary to prevent the resources’ loss to the projected sea level rise.

Horowitz then puts forward a set of findings and assertions based on this data, maintaining that successful adaptation planning requires an understanding of a community’s sea level rise.

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projections and the ways in which these will specifically impact historic resources. These recommendations include:

- Planning adaptations in anticipation of sea level rise
- Designing adaptation strategies at the local level
- Adding social and environmental benefits to cost-benefit analyses
- Educating local stakeholders on sea level rise,
- Expanding the participation of local governments within adaptation planning groups
- Conducting further research

Decisions regarding historic properties will ultimately come down to whether a “property conveys more meaning to the community as a gradual ruin or as a fully functioning but compromised property.”\(^{15}\) While the determination of value and the proposal of solutions should come from the community itself, local practitioners must remain familiar with the growing body of scientific data on sea level rise that will largely come from sources at the state or federal level, such as the Environmental Protection Agency and the National Oceanic and Atmospheric Administration.

Horowitz concludes her analysis of these three historic coastal communities with a warning: even as “sea level rise threatens the country’s connections to its shoreline heritage,” communities facing financial challenges and more imminent issues will have difficulties in shifting their priorities towards long-term adaptation planning.\(^{16}\)

Horowitz’s work lays the foundation for Rachel Isacoff’s 2014 master’s thesis, titled “Raised or Razed: The Challenge of Climate Adaptation and Social Equity in Historic Coastal Communities.” Focusing on historic resources in the Mid-Atlantic region, Horowitz attempts to

\(^{15}\text{Ibid., 207.}\)
\(^{16}\text{Ibid., 222.}\)
address the social equity issues embedded within the process of choosing strategies and allocating limited resources to protect heritage. According to her, coastal communities have a long history of responding to environmental threats. As heritage practitioners increasingly recognize the growing severity of the threats posed by climate change, these local traditions of adaptation can actually be used to strengthen the distinct tangible and intangible values of a specific place. If cultural and historic values are to be incorporated into a community’s long-term adaptation plan, Isacoff asserts that preservationists must engage in a collaborative effort that reconciles multiple goals through a variety of strategies. Nevertheless, the author acknowledges that historic preservation in an era of climate change seems to present “a heartwrenching dilemma: preservation professionals must choose which precious resource not to harm – the natural environment, the built environment, or the cultures of longstanding communities.”

Isacoff thus looks at three forms of response to sea level rise: protection (flood barriers), accommodation (elevation), and retreat (relocation), and discusses the options, precedents, constraints, and considerations associated with each.

Isacoff applies the applies barriers adaptation to the context of historic coastal communities

*Image Source: Adapting to Climate Change: Thresholds, Values, Governance*

Given the sensitive economies and cultural identities of coastal towns, these communities are often restricted in their ability to build protective infrastructure. Even though many examples of levee and dike construction serve as successful historic precedents, they may ultimately prove insufficient if design standards are not reassessed to respond to intensified flooding threats. Despite this vulnerability, the significance of many historic buildings in these communities rests in their relationship to the coastal environment, warranting preservation in situ. This can be achieved through accommodative strategies like elevation and flood-proofing, which should be
undertaken with sensitivity to the surrounding cultural landscape that contributes to the building’s significance. While poorly done elevation has the potential to diminish the historic integrity of both individual structures and historic districts, preservationists must reassess their traditional notions of significance so as to remain relevant to the threats and interests of the community. Isacoff’s third adaptation measure, retreat, acknowledges the very real chance that if “Greenland is deglaciated, societies would not be able to adapt through coastal protection...abandonment of coastal areas would be necessary.”18 In the long-run, allowing nature to take its course would protect public and private funds from the costs of responding to intensifying climate change impacts. Restrictions on reconstruction have promoted relocation on an individual, ad hoc basis, but historic communities should consider relocating as a whole in order to retain the context so important to cultural significance. Ultimately, both of these theses are certainly valuable in solidifying an understanding of the implications of sea level rise for coastal heritage in the United States. In their works, Isacoff and Horowitz clearly delineate the threats posed to historic resources, the responses available to preservationists, and the implications of these responses. However, comparatively little attention is given to the ways in which preservationists within this context will practically utilize these findings and recommendations.

**Superstorm Sandy & Historic Resources**

Before the unprecedented destruction wrought by Hurricane Sandy in October of 2012, there was little literature on disaster recovery and cultural resource management specifically

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18 Ibid., 65.
geared towards the context of coastal New Jersey. After the storm, the New Jersey HPO quickly provided a “Hurricane Sandy Cultural Resources Recovery” webpage with links to relevant information for owners and managers of cultural resources. However, few of these materials were produced by the HPO for this particular scenario. For issues related to Hurricane Sandy, users were directed to the websites of the state’s Office of Emergency Management and Department of Environmental Protection. FEMA publications provided information regarding recovery and reimbursement for nonprofits, museums, and cultural institutions. Under the “Elevation of Historic Properties” section, the New Jersey HPO provided a link to the Mississippi Development Authority’s “elevation guidelines for homes in the unique context of the Gulf Coast Region.”

Regarding the National Flood Insurance Program, the only material listed was FEMA’s “Floodplain Management Bulletin: Historic Structures” document, which dated to 2008 and did not reflect the recent policy shifts embodied in the Biggert–Waters Flood Insurance Reform Act of 2012. Links to information supplied by the National Trust for Historic Preservation, the Maryland Historic Trust, and the North Carolina State Historic Preservation Office, among others, were “provided for your use in planning and undertaking your response for cultural resources impacted by the disaster.” The website also listed previous cultural resource documentation for Hudson County, Monmouth County, and Ocean County, but the most recent survey dated back to 2007. Significantly, with the goal of determining where additional recovery assistance was

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needed, the HPO provided an email address for users to submit updated data regarding damage to historic properties. Although this web page represented a useful assemblage of resources in the aftermath of Hurricane Sandy, it nonetheless illustrated how ill-prepared New Jersey’s preservation community was for a disaster of this scale.

One of the first official publications put forward by New Jersey’s preservation community was an article, titled “Sustained Survival: Challenges and Tools for New Jersey's Historic Resources During Hurricane Sandy Recovery,” that was featured in the March 2013 issue of Garden State Legacy. PNJ’s Senior Programs Director at the time, Stephanie Cherry-Farmer, MSHP, acknowledged the particular vulnerability of communities defined by their relationship to places of rapid and dramatic change, contending that “Hurricane Sandy is exactly the type of environmental change that holds the future of places hostage” and it is therefore “the type of threat that we historic preservationists fear the most, as we can do very little in the short-term to safeguard the heritage we work so hard to protect.”

Providing a snapshot of the statewide priorities of preservationists in the months following the storm, Cherry-Farmer announced that the annual New Jersey History and Historic Preservation Conference would host several sessions based on lessons learned from Sandy with the goal of preparing heritage practitioners for challenges ranging “[f]rom federal funding that may or may not require preservation-conscious review, to local code officials that may be working with the needs of historic resources for the first time ever, to an unprecedented need for recovery funding and technical assistance.” However, she reminds preservationists that

countless undocumented historic properties were also lost in the storm, so “we will never be able to accurately quantify just how detrimental Hurricane Sandy was to New Jersey’s built heritage.”

Cherry-Farmer leaves readers with the command to “stay tuned” as the HPO staff begins their survey work, Section 106 reviews requiring community participation start to filter in, and the state receives its share of the $50 million allocated to historic resources by the Disaster Relief Act of 2013.

In May of 2013, the “Historic Resources and Communities Damaged By Superstorm Sandy” were placed on Preservation New Jersey’s annual 10 Most Endangered Historic Places list. This entry provides a succinct analysis of the issues developing as the process of rebuilding began. Sandy’s long-term impact on the built environment of New Jersey remained uncertain, and the process of recovery did not provide the time needed for a holistic and thoughtful approach to historic preservation. Preservation New Jersey anticipated that revisions to the Federal Emergency Management Agency’s Flood Insurance Rate Maps would put historic resources in jeopardy. Additionally, while historic property repairs would be required to meet the Secretary of the Interior’s standards, many property owners remained uneducated as to what constituted an “appropriate” repair during disaster recovery. Acknowledging these challenges, the article asked many of the key questions that prompted this thesis:

- “What is the best approach for preserving existing historic integrity when that integrity does not accommodate new environmental realities such as sea level rise?”
- “What does the future look like in storm-ravaged communities like Mantoloking, where, of the 512 buildings that comprised the borough before the storm, 135 were destroyed, an estimated 56 are partially underwater in the bay, and around 100 are entirely or partially off their foundation?”

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21 Ibid., 2-4.
“How can preservationists most effectively institute a holistic approach that prioritizes preservation of the historic character that makes these communities special, while respecting that recovery and future planning must accommodate unprecedented development realities?”

Superstorm Sandy brought renewed attention to the vulnerability of historic properties in coastal communities, and placed climate change and sea level rise into mainstream conversation. However, the early attention given to these heightened threats has largely failed to manifest itself in the reconstruction and adaptation strategies implemented. Therefore, the questions posed by Preservation New Jersey remain largely unanswered.

Preservation New Jersey included images such as this to demonstrate the damage inflicted by Sandy.

Image Source: Preservation New Jersey

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http://www.preservationnj.org/site/ExpEng/index.php/?ten_most_13/index_detail/Historic_Resources_and_Communities_Damaged_By_Superstorm_Sandy.
In November of 2013, around a year after the storm made landfall, the Federal Emergency Management Agency released its “Hurricane Sandy in New Jersey and New York Mitigation Team Report.” The “Historic Properties” chapter identified historic buildings as the core of a community’s identity and used eight sites “that represented the typical damage observed after Hurricane Sandy” as case studies.23 These examples ranged from the Erie-Lackawanna Terminal, a Beaux-Arts transit hub located directly on the waterfront of Hoboken, to the streetscape of early nineteenth century mercantile architecture found in Manhattan’s South Street Seaport Historic District. Of particular interest for to this thesis was the section covering the All Saints Episcopal Church in Bay Head, New Jersey. Even after Sandy, this cedar-clad Shingle style church complex remained a key contributing property within the Bay Head Historic District. Rather than elevating the structure after rising bay water destroyed the bulkhead and flooded the property, the congregation chose to sensitively restore the building in situ by removing the relatively new, “non-historic” siding to allow the original interior woodwork to dry with natural ventilation.

In contrast, the Ocean Grove Auditorium, a large Ruskinian Gothic structure located three blocks away from the ocean in the historic camp meeting community of Ocean Grove, received no flood damage but saw a portion of its recently installed (also “non-historic”) roof uplifted by strong wind gusts, exposing the interior and damaging windows. In fact, storm damage from wind appeared to be the biggest threat to Ocean Grove, as the only flooding in this town community

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occurred along the street adjacent to the beach. Repairs to the roof were underway at the time of publication, but there was no mention of any steps taken to address the increased likelihood of flooding coming from sea level rise and more powerful storms. Focusing on repair and recovery rather than long-term resilience, the Mitigation Team Report failed to provide any examples of building elevation or relocation, the strategies promoted by FEMA as most effective at preventing flood damage. This proves particularly problematic for historic resources, as context-specific case studies would benefit property owners attempting to reduce flood vulnerability while simultaneously maintaining historic integrity.

**Conclusion**

The New Jersey preservation community’s response to Superstorm Sandy will frame a critical analysis of the recommendations, assertions, and findings of this literature. This work assumes that, like New Orleans, the resilience of New Jersey’s heritage has hinged on its ability to integrate itself within the economic imperative of recovery promulgated by state institutions in their “Restore the Shore” campaign. However, heritage also has the ability to positively contribute to the recovery of communities. Therefore, preservationists’ understanding of significance can directly impact a community’s cultural resilience. These principles serve as the fundamental assumptions that will guide this thesis’ interpretation of the response to Superstorm Sandy in New Jersey.

The guidelines for historic structures provided in the aforementioned FEMA publications, while practical and widely applicable, utterly neglected the new realities posed by climate change
and the recent shifts in policy, such as reforms to flood insurance. Conversely, the recommendations for adapting to sea level rise provided by Horowitz and Isacoff have not been examined against the realities facing preservationists in the field. Building off of this previous work, the lessons learned on the Jersey Shore will contribute to an enhanced understanding of the practical consequences of response, recovery, mitigation and adaptation strategies for historic resources in coastal communities. These will then inform long-term action plans for climate change that are specifically geared to the context of the shore. The means of addressing the challenges of this particular case can then be extrapolated to make more widely applicable recommendations.

The lack of literature that specifically responds to the challenges faced by historic resources in post-Sandy New Jersey warrants a thesis in and of itself. Consequently, the information gathered to form more general assertions regarding the vulnerability of historic resources will also provide some clarity for the issues raised by preservationists on the Jersey Shore. This thesis will help to synthesize the debates occurring along the coast, from Bay Head to Cape May, surrounding the appropriate balance between preserving historic integrity and adapting to sea level rise. Additionally, this work will aim to critically examine the varied ways in which communities have responded to a large-scale loss of historic fabric. Beyond the information provided within these pages, this thesis will also shed light on the gaps where additional work is most needed in order to adequately protect resources at the shore. Hopefully, the findings presented here will provide the tools necessary to answer the aforementioned question posed by Preservation New Jersey in 2013: “How can preservationists most effectively institute a holistic approach that prioritizes
preservation of the historic character that makes these communities special, while respecting that recovery and future planning must accommodate unprecedented development realities?
Chapter 3: Character & Significance of the Jersey Shore

Diane Bates, Ph.D., a Sociology Professor at The College of New Jersey, provides a comprehensive analysis of the social, ecological, historical, political, and economic circumstances that contributed to the particular vulnerability of the Jersey Shore. In her work, *Superstorm Sandy: The Inevitable Destruction and Reconstruction of the Jersey Shore*, Dr. Bates argues that “unlike other living things, people don’t just occupy habitats, they inhabit places rich with social, cultural, and personal meanings.” Accordingly, the Jersey Shore is both a physical and cultural landscape, and the upheaval caused by Hurricane Sandy forced its stakeholders to grapple with both the loss of familiar places and the need to move forward and rebuild within a new environmental reality. However, in order to better understand the values that visitors and residents ascribe to the shore, one must first look at its continued use as a place of recreation. The shore has evolved from being a destination of longer stays at resort hotels in amusement centers like Atlantic City and Asbury Park to a place of second homes and day trips conveniently linked to metropolitan centers by highways. As the middle class of nearby metropolitan areas became increasingly affluent, they abandoned the hotels and boarding houses of historic resort cities to purchase a vacation houses in less developed communities on the coast, so that by 2010 there were 109,075 seasonal vacant housing units in the four counties of the Jersey Shore. For the working and middle class in the immediate postwar period, shore homes were an asset to be passed down through generations. Therefore, while the national imagination characterizes the Jersey Shore as a place

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of white working class complacency and stagnation, shore homes have traditionally served as desirable symbols for New Jersey’s upwardly mobile middle class. As the state’s economic interests and cultural identity depend on the shore, residents can consequently dismiss those who question post-Sandy reconstruction as outsiders who lack the moral imperative to rebuild because they simply do not understand the shore’s importance. “How people imagine the Shore, or as sociologists might say, how they “construct” the Shore, is as important as the physical reality, because the way that people think and feel affects their decisions regarding their use of the physical space.”  

Region

The New Jersey Shore is not easily ascribed a singular identity. “Down the shore” encapsulates a diverse social and environmental landscape that includes both the beachfront enclaves of the mega-rich and the rural inland communities that remain tied to the shore’s economy. Dr. Bates identifies “five overlapping human ecological sub-regions with somewhat unique current and historic relationships between people and the physical landscape.” These are:

- The **Raritan Bay shore**, lying adjacent to New York Bay, is a region of estuaries with a tradition in the fishing industry. Superstorm Sandy pushed unprecedented volumes of water into the bay, subjecting this portion of the shore to some of worst storm surge and devastating the communities of modest year-round homes that lined the coast.

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25 Ibid., 22-42.
26 Ibid., 26.
• The **Monmouth headlands**, the only spot on the Jersey Shore where the mainland directly fronts the ocean, are characterized by bluffs leading down to narrow beaches. During Superstorm Sandy, powerful ocean waves eroded the beaches, destroyed the boardwalks, and overtopped the inland lakes of the Monmouth headland towns.

• The **barrier islands** “are permanent but somewhat ephemeral landforms that separate bays from the open ocean.” Superstorm Sandy subjected the barrier islands to both direct onslaught from the ocean and overflow from the bay, which proved devastating to some communities in Ocean County.

• The **bay communities** landward from the barrier islands feature a drastically altered landscape where bulkheads and artificial waterways have largely replaced the historical ecosystem of wetlands and tidal creeks. Superstorm Sandy’s high winds and storm surge backed up the flow of tidal rivers into their floodplains, which were unable to adequately absorb excess water due to intensive development along the bay.

• The **inland communities** may not front the ocean or bays, but lie within the same watershed and remain culturally connected to the coast. Although the winds of Superstorm Sandy knocked down trees and disrupted power lines, this area served as the primary place of refuge for those fleeing more vulnerable waterfront communities.\(^{27}\)

\(^{27}\) Ibid., 27-30.
In addition to Dr. Bates’ sub-regions, the Jersey Shore is politically divided into four counties with distinct development patterns and socioeconomic profiles. From north to south, Monmouth, Ocean, Atlantic, and Cape May Counties each have unique histories that warrant further explanation.

**Monmouth County**

Monmouth County stretches from the Raritan Bay to the Manasquan River, encompassing both the working class bay shore and the affluent towns of the Monmouth headlands. Although they appear as one continuous string of development, the character of Monmouth County’s coastal communities varies sharply, with a simple municipal boundary seemingly dictating the style, reputation, and income of visitors. For instance, Ocean Grove, a religious camp-meeting town where tents on permanent foundations still pop up every summer and driving on Sundays was prohibited until 1974, sits across Wesley Lake from Asbury Park. Memorialized by Bruce Springsteen, Asbury Park was once “too burdened with its current plight - low tax revenues, and intense pressure for service delivery - [to] devote attention or resources to local protections for historic resources.” Within the past ten years, this town has recently seen a rebirth through gentrification, capitalizing on both underutilized historic resources and new construction. On the other hand, some towns in Monmouth County, developed in the nineteenth century as exclusive vacation communities with easy access to Manhattan, rank among the oldest and wealthiest seaside

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resorts in the country. Perhaps due to this accessibility, these mainland towns have always had a larger year-round population than the resorts located on barrier islands further south. Linked to jobs in New York City by commuter rail and ferry service, Monmouth County’s year round population is also distinctly more “white collar” than the rest of the shore, ranking as the 38th highest-income county in the United States in 2011.\textsuperscript{30}

Ocean County contains some of the fastest growing suburban communities in the state. In fact, Ocean County may be better typified as an exurb of New York City than as a seasonal resort. Remaining sparsely populated into the late twentieth century, the county still retains large swaths of undeveloped inland forests. The coast of Ocean County can be divided into two geographic regions, the Barnegat Peninsula and Long Beach Island. Among the last stretches of the shore to be developed, most of the Barnegat Peninsula are populated with towns that developed and expanded in the immediate postwar era, like Ocean Beach and Seaside Heights. These communities are characterized by small houses on streets that “could be the closest together anywhere in the state” with “so many of them that the developers would seem likely to run out of names.” The wide beaches and varied communities of the Barnegat Peninsula, from the nightclubs and amusement piers of Seaside Heights to the multimillion dollar mansions and inaccessible beaches of Bay Head, were among the hit hardest by Hurricane Sandy. With overflow from the bay and waves pounding the beach, the ocean broke through and created a new channel across the peninsula in Mantoloking. South of the Barnegat Peninsula is Long Beach Island. Stretching nineteen miles and sitting four miles out at sea, Long Beach Island is a thin strip of land containing countless tiny communities with quirky names like Ship Bottom, Loveladies, and Harvey Cedars. Once home to just a series of hotels only accessible to the mainland by steamships plying the wide Barnegat Bay, most of Long Beach Island developed much later than the rest of the shore, maintaining a quieter and more residential identity. While some iconic landmarks, like

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the Barnegat Lighthouse and Beach Haven’s Victorian cottages, have stood the tests of time, most of the Long Beach Island’s housing was constructed after the Ash Wednesday Storm of 1962, which completely inundated the island with storm waters and catalyzed the adoption of local elevation requirements.
Atlantic County

The northern stretch of Atlantic County’s coast, where the Mullica River empties into the pristine wetlands just north of Brigantine Island, remains protected as the Edwin B. Forsyth National Wildlife Reserve. Looming in the background are the hotel towers of Atlantic City, the largest municipality on densely-populated Absecon Island. Atlantic City gained fame as one of America’s most popular resorts in the early twentieth century before white flight and economic collapse made the city a shadow of its former self in the 1960s. While the legalization of gambling in 1976 may not have alleviated the poverty and isolation of residents, it did place Atlantic City

Map of Atlantic County municipalities.

Image Source: New Jersey Department of Transportation

33 Bates. Superstorm Sandy. 25.
back on the map and solidified the city’s role as an employment center for a small metropolitan region of inland towns and shore communities with sizeable year round populations. Consequently, the towns of Ventnor, Margate, and Longport, located further south on Absecon Island, maintain a higher socioeconomic status and a demonstrably more suburban character than their neighbor the north.

**Cape May**

Cape May County includes a mixture of densely developed barrier islands separated from mainland residential communities by large salt marshes, as well as agricultural areas further inland. The most tourist-dependent of the shore counties, the population of Cape May County balloons in the summer months when an influx of visitors from the Philadelphia metropolitan area flock to second homes and vacation rentals. Located on a series of barrier islands linked together by bridges, the character of these seasonal resorts runs the gamut from neon-covered motels and crowded boardwalk in Wildwood to landscaped medians and McMansions in Avalon. In the late nineteenth century, prominent individuals purchased large tracts of land at cheap prices, clearing away the unique natural landscape of the barrier islands (hence the name, Wildwood) and parcelling out lots for residential development. Although they were once easily accessible to the urban masses by railway, Cape May County’s beach towns weathered the postwar decline relatively intact and now cater to the more affluent and suburbanized descendants of Philadelphia and Camden’s working class.

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History

In his 1830 novel, *The Water-Witch*, James Fennimore Cooper paints a picture of the sixteenth century Jersey Shore as a landscape of “low and narrow bank[s] of sand” with “smooth and regular beach[es],” featuring inlets “indented in a manner to form several convenient anchoring-grounds for ships that seek shelter from easterly gales.”36 For most of its history, the Jersey Shore remained just that: an undisturbed natural landscape, populated by a few hardy

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individuals and occasionally visited by passing ships. In fact, navigators actually viewed the New Jersey coast as a place to be avoided. The shallow waters and shifting sand bars that now make for excellent bathing beaches made the shore an especially treacherous location for ships. For instance, in 1846 a particularly powerful winter storm wrecked nine vessels off the New Jersey coast in a single day.  

Recognizing these human and economic costs, the U.S. Life-Saving Service was created by an act of Congress. Between 1848 and 1898, the Jersey Shore saw the construction of 41 Life-Saving stations, each equipped with rescue boats and lookout towers. Many of the later ones, constructed in the Duluth style, survive along the coast from Manasquan to Stone Harbor, despite outliving their original use. In the 1850s the federal government appropriated additional funds for the construction of four lighthouses along the coast between Sandy Hook and Cape May. The 169-foot-tall Barnegat Lighthouse, built by Lieutenant George Meade in 1857 at the northern end of Long Beach Island, still stands as one of the Jersey Shore’s iconic landmarks. This investment in life-saving stations and lighthouses in the mid-nineteenth century marks the beginning of a history of large-scale investment in infrastructure on Jersey Shore that continues to this day.

37 National Register of Historic Places, Squan Beach Life-Saving Station #9, Manasquan, Monmouth County, New Jersey, National Register #08000135.
38 National Register of Historic Places, U.S. Life-Saving Station No. 35, Stone Harbor, Cape May County, New Jersey, National Register #08000970.
39 National Register of Historic Places, Barnegat Lighthouse, Barnegat Light, Ocean County, New Jersey, National Register #71000512.
While most of the shoreline remained an inaccessible and inhospitable place, the first resorts on the Jersey Shore developed at the points most easily accessible by water from larger cities. The development of steamship technology meant that by the 1820s, there were dependably scheduled sailings along the Delaware and Raritan Bays from Philadelphia to Cape May and New York to Long Branch, at the foot of Sandy Hook. Settlement was largely confined to these northern and southern extremes until this period of isolation was abruptly ended with the coming of the railroad. Industrialization, which spurred the rapid expansion of New York, Philadelphia, Newark, Camden, and other urban centers, was accompanied by the growth of a massive railway network. Now only a day trip away from the oppressive conditions of these burgeoning cities, the swaths of
undeveloped land and pleasant natural setting of the Jersey Shore suddenly presented an opportunity. In 1854, Jonathan Pitney and a bold group of investors had completed the construction of a railway heading straight from Camden through the Pine Barrens to the marshes and forests of Absegami Island, the site of a proposed “Atlantic City.” The Camden & Atlantic Railroad soon proved to be the fastest route to the ocean, and Atlantic City quickly surpassed Cape May and Long Branch as the state’s preeminent seaside resort.

![Atlantic City Boardwalk, 1870s.](image-source: Margaret Thomas Buchholz)

However, the shore remained largely undeveloped into the 1870s until increased rail connections initiated a boom period. Real estate interests capitalized on the Shore’s coastal location while also promoting public investment in the development of infrastructure, offsetting

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the risk of their ventures. Dunes were flattened, marshes were filled in, canals were dredged, and vegetation was removed to reshape this temporal coastal ecosystem into a commodifiable landscape. In Allenhurst, “30 cottages were constructed, along with sidewalks, sewers, electric lights, and an artesian well system...with a year of the first residential lot purchases” in 1895. Appealing to a new middle class which suddenly had leisure time, real estate speculators aggressively marketed their shore resorts through advertisements and attention-grabbing gimmicks. Lucy the Elephant, a six-story-tall structure built of wood and tin to resemble a large elephant topped by a howdah, was constructed in 1881 to attract potential buyers to undeveloped land south of Atlantic City. These efforts were largely successful, and “by the end of the 1880's the shorefront had become nearly a continuous line of resort communities” along parts of the coast.

The late nineteenth and early twentieth centuries are often characterized as the peak of the first period development for many communities along the Jersey Shore. Genteel Cape May remains nationally recognized for its Victorian architecture dating from this era when, after a fire in 1878, it intentionally rebuilt in a unified style to set itself apart from more raucous resorts. Atlantic City saw its golden age in the first decades of the twentieth century, when millions of

\[42\] National Register of Historic Places, Allenhurst Residential Historic District, Allenhurst, Monmouth County, New Jersey, National Register #10000353.  
\[43\] National Register of Historic Places, Lucy, the Margate Elephant, Margate City, Atlantic County, New Jersey, National Register #71000493.  
\[44\] Gail Hunton. *Monmouth County Historic Sites Inventory*, compiled for the New Jersey Office of Cultural and Environmental Services, Historic Preservation Section, Monmouth County Park System/Monmouth County Historical Association, 1980.  
vacationers thronged the boardwalk each year in search of both wholesome and illicit forms of entertainment. While clusters of seaside resorts grew into mature communities that took on a truly urban appearance, other stretches of the shore saw only light development and retained an idyllic atmosphere, such as the Barnegat Peninsula. The hotel and amusement centers, including Long Branch, Asbury Park, Atlantic City, and Wildwood, reigned supreme until the onset of a rapid decline in the postwar era as the expansion of highways opened up quieter towns for new development. In his analysis of twentieth century Atlantic City, Bryant Simon succinctly describes the varied factors that attributed to the downfall of these older resorts:

To be sure, backyard swimming pools, televisions, air conditioners, jet travel, and a growing thirst for the rugged outdoors took bites out of Atlantic City's tourism business. Yet neither separately nor together can these factors explain where the crowds went. Not everyone was staying at home. While demolition companies began to implode Atlantic City's massive Boardwalk hotels in the late 1960s, the crowds swelled at other Jersey and Delaware shore towns. From this time on, real estate prices and summer rental rates soared at beach towns north and south of Atlantic City, places like Long Beach Island, Avalon, and Bethany Beach, the quiet, middle-class resort where the Frosts relocated. Each of these spots had a quaint town center, sandy side streets, and places to park bikes with baskets without fear of them being stolen. Clearly then, the people who used to go to Atlantic City and their children were not fleeing the shore entirely, nor did airplane trips and package tours rule out a weekend at the beach or diminish the desire for a beach house. The flight from Atlantic City was, more accurately, part of another flight pattern, the one that swept the white middle class from the cities to the suburbs, from the downtown movie palaces to the drive-ins, and from urban amusement parks to the tightly controlled worlds of Disneyland and its imitators.46

These changing consumer preferences left many of the older seaside resorts in decay, spurring a period of redevelopment that resulted in the displacement of vulnerable populations from more desirable locations.

Dr. Bates identifies the three important redevelopment strategies implemented along the shore as public-private partnerships, gentrification, and second-home ownership.\textsuperscript{47} In Long Branch, the success of the Pier Village public-private redevelopment project prompted the city to use eminent domain to aid a developer in its plans to create a new luxury development on the site of thirty-six bungalows in the Beachfront North neighborhood. While the project was ultimately unsuccessful, many residents were still displaced, opening up land for the construction of large vacation homes and destroying the physical and social integrity of a community. In some older shore communities, gentrification has preserved a community’s built fabric while displacing the low-income residents that occupied it. For instance, the demographic profiles of oceanfront neighborhoods in historic communities like Asbury Park and Ocean Grove have been transformed by an influx of new year-round and seasonal residents. In many cases, historic preservation was key to this process, Ocean Grove, with over 65% of its housing built before 1940, marketed this historic integrity to professionals seeking year round and vacation homes. Nevertheless, as demonstrated by Hurricane Sandy, the benefits of revitalization have been spread unevenly. In the aftermath of the storm, well-resourced local governments and established economic interests could pool their resources to facilitate the recovery of better-off towns while less affluent resorts with vulnerable populations continued to languish in worsening conditions.

\textsuperscript{47} Bates. Superstorm Sandy. 63.
Ecology

While the primary draw of the Jersey Shore may be its natural amenities of sandy beaches and mild sea breezes, it is not a natural landscape. Even the limited stretches of preserved natural coast reflect a history of human intervention and the rearrangement of landscapes to meet various needs. Yet the temporality of this coastal environment seems to fly in the face of attempts at permanent development. Besides the stretch of headlands along the northern coast, where the ocean erodes away at the mainland to create high bluffs and narrow beaches, barrier islands are the predominant landform along the Jersey Shore. Varying in width from four miles to one hundred yards, the natural profile of barrier islands begins on the ocean side with quartz sand
beaches and high dunes formed by wind action. The broad beaches take the brunt of the energy from incoming waves, but the high dunes prevent particularly strong storm surges from washing over the island. These dunes flatten out into a ridge of dense vegetation that stabilizes the island and serves as a habitat for diverse wildlife. The barrier flats level down to a fringe of salt marshes leading into the bay. The wetlands, which line both the mainland and island sides of a bay, serve as natural sponges that absorb excess water, reducing flooding and erosion. Over time, the consistent force of ocean waves gradually pushes barrier beaches landward, simultaneously eating away at beaches while forming new ones from sand bars. The ocean also has a strong influence on the microclimate of the Jersey Shore, keeping it generally milder than cities further inland. Heating up and cooling down more slowly than adjacent landmasses, the ocean decreases the range of average temperatures at the shore and keeps the coast relatively cooler in the summer and warmer in the winter.48

While it may appear that the Jersey Shore’s economy depends on the exploitation of its beaches, the coastal ecosystem has traditionally provided other means of sustenance for local residents. Although the destruction of many of the salt marshes and wetlands has deprived fishermen of a diverse ecosystem, major commercial fishing ports remain operational in Port Norris, Cape May, Atlantic City, Barnegat Light, Point Pleasant, and Belford. In 2003, New Jersey’s boats yielded over 170 million pounds of fish with over $120 million in value.49 However, unlike the commercial trawlers sailing out daily, recreational fishing from the shoreline proves less

fruitful. As far back as 1953, a state survey showed that fishers at the oceanfront averaged a catch of only 0.37 fish per hour while those along the bay fared slightly better at 0.69 fish an hour.\textsuperscript{50} Even so, recreational fishing and its associated services, such as party boats and supply shops, provided 10,000 jobs and generated in $1.7 billion in sales in 2011.\textsuperscript{51}

\textsuperscript{50} Cunningham, \textit{The New Jersey Shore}, 230.
Nevertheless, the Jersey Shore’s sandy ocean beaches are clearly its most valuable natural resource. Given this importance, local governments spend massive amounts of funds fighting to stabilize their beaches against the natural process of erosion and replenishment. Alongshore currents, flowing underneath the waves at the surface, carry sand either north or south along the coast. Currents are also influenced by tides, with the twice daily ebb and flow of water through the inlets between the ocean and bays. Manmade groins and jetties attempt to stabilize beaches by blocking the flow of currents along the shore, yet they result in an unequal distribution of sand on either side of these rock barriers. Beach replenishment projects introduce additional sand, typically from dredging projects in nearby inlets and bays, but these foreign sands are often incompatible, disrupting ecosystems and washing away quickly in storms. Consequently, efforts to stabilize these dynamic landforms for permanent development are associated with impermanent solutions that require large expenditures and constant maintenance.52

**Demographics**

In her summary of the region, Dr. Bates asserts that "while the Jersey Shore is not as affluent as the state as a whole, it is also not as poor."53 However, a demographic analysis of Atlantic, Cape May, Ocean, and Monmouth Counties’ combined population of 1,578,861 residents paints a more complex picture of the region. The shore is noticeably more white than the rest of

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53 Ibid., 77.
the state, with 83.1% of its population identifying as white in the 2010 Census, compared to 68.7% of the state as a whole. A similar trend appears regarding the native born population, which makes up 82.5% of the shore but only 79.7% of the state. While distinct social characteristics may distinguish the shore from the rest of the state, variations appear within the region as well. Regarding occupations, a demonstrably higher percentage of Atlantic County’s population is employed in the “Arts, Entertainment, and Recreation, and Accommodation and Food Services” and “Retail Trade” industries than that of the other four counties (39.5% compared to 28.6% in Cape May, 22% in Ocean, and 19.4% in Monmouth). This is likely due to the employment opportunities provided by the twelve casino hotels that were operating in Atlantic City in 2010. However, this has definitely changed in the last couple of years, with the closure of 4 large casinos that put thousands out of work. The legalization of gambling in other parts of New Jersey will likely exacerbate these conditions. On the other hand, given its accessibility to Northern New Jersey and New York City, 23.4% of Monmouth County’s working population is employed in the “Finance and Insurance, and Real Estate and Rental and Leasing” and “Professional, Scientific, and Management, and Administrative and Waste Management Services” industries. This is measurably higher than in Ocean (16.2%), Cape May (14.7%), and Atlantic (12.1%) Counties.

However, an analysis of the distribution of socioeconomic status along the Jersey Shore requires a more nuanced look at census tracts. Dr. Bates’ used data from the 2000 Census to determine the twenty highest- and lowest-income census tracts along the Jersey Shore. While

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Superstorm Sandy likely resulted in a shift in demographics, this analysis nevertheless proves useful in demonstrating patterns of economic and social inequity along the shore. The median household income of the wealthiest census tracts averages at $139,998 a year, with 87.3% of residents over age 25 boasting a college education. Eighteen of these high-income tracts were located in Monmouth County, reinforcing the previous observation of its higher concentration of white collar employment. On the opposite end of the spectrum, the population of the twenty poorest census tracts features a college educate rate of only 18.9% of the population and an average median household income of just $26,717. While all four shore counties are represented on the list of the twenty lowest-income tracts, nine of them are found within the boundaries of Atlantic City.

The *de facto* segregation of the Jersey shore becomes apparent when comparing Rumson & Asbury Park.

*Image Source: NJ.com*
Unsurprisingly, the socioeconomic inequity of these tracts reflects the *de facto* racial segregation that predominates within the region. The percent of the population identifying as white on the 2000 Census in the twenty highest-income tracts ranges from 96% (Rumson) to 80% (Holmdel). Interestingly, the white population constitutes anywhere from 97% (Berkeley) to 2% (Asbury Park) of the lowest-income tracts. These observations demonstrate that the shore’s white population represents a range of socioeconomic classes occupying communities of varying character, but the region’s minority population remains concentrated in poorer locales with lower rates of educational attainment. Understanding the nuanced demographic profile of this region, one sees how the social consequences of Hurricane Sandy varied by community. Although Sandy unleashed its fury on both the mansions of Mantoloking and the Cape Cod houses of Ortley Beach, the Jersey Shore’s social stratification led to inequitable processes of recovery and unbalanced patterns of displacement.

**Municipal Politics in New Jersey**

The race and class dynamics of the Jersey shore are closely tied to larger demographic shifts in the metropolitan regions of New Jersey. The middle class exodus from urban centers in the postwar era meant that by 2010, New Jersey’s cities had higher levels of unemployment, poverty, and welfare recipients than the rest of the state. Newark, for instance, lost more than 55,000 residents, more than half of its manufacturing jobs, and became a predominantly African-American city between 1950 and 1970. As of 2014, African-Americans remained a majority

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55 Bates, Superstorm Sandy, 81..
(52.4%) of Newark’s population, while 29.9% of the city’s residents still had an income below the poverty level. The population of the counties of New Jersey’s urban core grew by nearly a third between 1940 and 2010, even as vacancy rates in the state’s inner cities remained six to ten times higher than the rest of the state. Therefore, even without this seaside location, shore counties would have likely become increasingly suburban and affluent as the white middle class left the urban centers and the state became home to a diverse set of cultural, economic, and social groups. Metropolitan regions across the country have evolved to be largely segregated, with an urban core of impoverished minority groups isolated from middle-class suburbs and wealthy exurban communities, a trend which, as noted by Dr. Bates, continues unquestioned because of the American emphasis on self-determination that accepts inequality as the product of differential levels of work ethic in society.

In New Jersey, this segregation is reinforced by the 565 municipalities within the state. New Jersey has a higher density of local governments, defined as county governments, municipalities, and school districts, than any other state, averaging 20.4 local governments per square mile in 1992 (compared to 2.4 per square mile for the United States as whole). Each of these municipalities enact their own zoning laws that can effectively exclude certain segments of the population by regulating land use and lot size, thus creating a demographically and politically

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57 Bates, Superstorm Sandy, 81-94.
58 Ibid., 95.
balkanized environment in which regional cooperation is limited. New Jersey’s coastal counties contain 125 municipalities, including 24 with less than a square mile in area, as well as distinct “Census-Designated Places” that remain within the jurisdiction of a larger municipality. This proliferation of small local governments leaves many communities with part-time municipal administrations managed by residents who may lack the specialized knowledge needed for the dynamics of coastal communities. The fragmented nature of local government down at the shore has proven particularly problematic when coping with environmental issues. For instance, before Hurricane Sandy, Mantoloking maintained a beach replenishment program, but neighboring Bay Head had constructed a sea wall. While Bay Head remained relatively unscathed by the storm, a devastated Mantoloking claimed that its neighbor’s sea wall had exacerbated damage within their community and argued that any expansion would increase flooding in the future. As flooding does not follow municipal boundaries, truly effective adaptation strategies can only be accomplished with interventions at the regional level, which has proven particularly difficult in a political climate favoring home rule.

**Economy**

In 2015 tourism was a $41.2 billion industry in New Jersey. The four counties of the Jersey Shore account for 48% of the tourism direct sales in the state.\(^{60}\) Given the importance of tourism to the Shore’s economy, regional business interests have effectively allied with local governments to funnel resources into the infrastructure necessary to support this industry. The

beach badges charged by municipalities along the shore do not come close to covering the massive subsidies that go towards beach and soil stabilization and the construction of long bridges to the mainland. Dependent upon this coastal setting for tourist and real estate revenues, civic and economic interests accept storm damage as an inherent and expected cost and actively oppose land preservation as a threat to continued growth. The concentration of employment in the tourist industry at the shore, particularly so in Atlantic and Cape May Counties, drove rapid reconstruction efforts to accommodate the expected thirty million visitors in the summer following Sandy. In fact, tourism direct sales in the four shore counties dropped by only 1% between 2012 and 2013.\textsuperscript{61} Thus, while homes remained uninhabitable, this economic imperative ensured that the most of the boardwalks and amusement piers of the Jersey Shore were open for business by the summer of 2013.\textsuperscript{62}

**Historic Preservation**

Located within the state's Department of Environmental Protection, the Historic Preservation Office oversees preservation activity within New Jersey. With a staff of around twenty, the HPO reviews the effect of federal actions on historic resources, nominates properties to the National Register of Historic Places, administers tax incentives for historic preservation, undertakes cultural resources surveys, and provides information for practicing preservationists throughout the state. At the local level, preservation is carried out by 161 municipal historic

\textsuperscript{61} New Jersey. Division of Travel and Tourism. *The Economic Impact of Tourism in New Jersey*, 53.
\textsuperscript{62} Bates. *Superstorm Sandy*. 45-47.
preservation commissions. 45 of these preservation commissions take part in the Certified Local Government program, administered by the National Park Service and state historic preservation offices, recognize municipalities with historic preservation ordinances that meet national preservation standards and opens up additional resources and grants. At the Jersey Shore, 6 municipalities have historic preservation commissions but only 4 are designated CLGs: Beach Haven Borough, Cape May City, Middletown Township, and Ocean City.

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Certified Local Governments of New Jersey with those along the Shore outline in red.

*Image Source: New Jersey Historic Preservation Office*
Serving as a liaison between the public and private sectors, the New Jersey Historic Trust is closely affiliated with the state’s Department of Community Affairs and serves as the primary grant maker for historic preservation in the state. Since 1990, NJHT has awarded $137 million through its eight distinct grant programs. On the other hand, Preservation New Jersey serves as the only statewide nonprofit organization devoted to advocating for historic preservation. While serving as the voice for heritage at the state level, PNJ also provides resources for preservation groups working at the local level. Preservation organizations at the Jersey Shore vary in their mission, resources, and membership. This stakeholder group includes both well-established organizations like Cape May’s Mid-Atlantic Center for the Arts and Humanities, which restored the Frank Furness-designed 1879 Emlen Physick Estate and produces educational programming for local students, as well a single-purpose groups like the Inlet Public/Private Associate in Atlantic City, which operates the Absecon Lighthouse as a museum and promotes the redevelopment of the surrounding neighborhood. Additionally, New Jersey’s preservation community extends beyond these agencies to include the individual property owners, architects, engineers, consultants, historians, planners, and developers who actively rally around preservation issues and provide input into the continuous discourse surrounding the state’s heritage. Typically, the actors that make up this wide array of preservationists each fill their own particular niches in the field and only coordinate to achieve specific goals. However, the sheer magnitude of the challenges posed by Superstorm Sandy forced preservationists to cooperate in unprecedented ways.
Conclusion

The varied group of preservationists working within this specific context reflects the diverse set of character-defining features that constitute the the unique identity of the Jersey Shore. While the shore can be broken down into distinct ecological and political subregions, the communities of this landscape all share certain ecological, historical, demographic, and economic commonalities. Barrier islands are the predominant landform along the Jersey Shore.

This temporal ecosystem of constantly shifting ocean beaches remained largely undeveloped until the late nineteenth century, when real estate interests capitalized on the Shore’s natural amenities and proximity to urban centers. Tourism and real estate thus dominate the Shore’s economy, with the four counties of the Jersey Shore account for almost half of the direct tourist sales in the state. Business and civic interests accept storm damage as an inevitable cost while actively promoting reconstruction and opposing land-use controls. Therefore, governments have expended massive amounts of funds to stabilize the beaches against the natural processes of erosion and replenishment that shape this landscape. Despite these similarities, the socioeconomic profiles of shore communities vary widely and reflect the dominance of home-rule governance in New Jersey that prevents regional cooperation and promotes segregation. These physical and social characteristics help to both define the Jersey Shore and inform an understanding of why the response to Superstorm Sandy took the form that it did.
Chapter 4: Superstorm Sandy & the Preservation Community’s Response

Superstorm Sandy

Although residents across the state had been preparing for the late season landfall of Hurricane Sandy on October 29, 2012, the storm’s impact resulted in widespread damage to businesses, infrastructure, and homes across the state, appearing to affect both rich and poor alike in a democratic manner. Inland communities faced fallen trees, power outages, and gas shortages, but over 80% of the state’s damaged homes were found within the four counties along the shore. 44,000 displaced households received rental assistance following Hurricane Sandy, and 63% of the displaced people surveyed reported at least mild distress. While residents statewide mourned the loss of homes and local landmarks along the Jersey Shore, 81.6% of the deaths attributed to Hurricane Sandy actually occurred outside the four coastal counties. Even as social media outlets became memorials to the destroyed cultural landscape, the storm proved to be less of an apocalypse and more of a harbinger of the increasingly evident vulnerability of the Jersey Shore.64

While survivors may have been shocked by the dramatic fracturing of social networks, changes in their lifestyle, and alterations to their physical environment, Hurricane Sandy actually strengthened the processes already in place that have been transforming the shore into an increasingly affluent place. Structures built before the National Flood Insurance Program was enacted in 1968 were originally grandfathered into the program and thus not subjected to elevation requirements. In an attempt to make this federal program financial self-sufficient, the Biggert-

64 Bates, Superstorm Sandy, 7-134.
Waters Act, enacted in July of 2012, raised the cost of subsidized flood insurance premiums on all previously grandfathered buildings. While the National Flood Insurance Homeowner Affordability Act of 2014 reintroduced subsidies for primary homes, the effects of these reduced subsidies were compounded by the Federal Emergency Management Agency’s introduction of new Advisory Base Flood Elevation maps two months after Sandy, prompting elevations and demolitions. Middle-class homeowners who could not afford to repair, let alone elevate, their shore houses were compelled to sell to their property to wealthier buyers, eroding away the Jersey Shore’s traditional landscape of small, older homes for the middle class.

Superstorm Sandy’s Destruction in the Ortley Beach section of Toms River: October 31, 2012.

*Image Sources: New York Daily News*

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65 Ibid., 111-135.
Response

Individuals were frequently overwhelmed by the task of recovery, as seen in Toms River, where around half of the 956 homes with demolition permits still remained standing a year after the storm. Yet survivors reported a stronger sense of community and togetherness as residents united in solidarity to help one another. The United States Federal Emergency Management Agency, State of New Jersey’s Department of Community Affairs and Department of Environmental Protection all played a role in recovery efforts, but the State Office of Emergency Management’s Recovery Bureau was particularly important in providing affected communities with everything from direct public assistance to preparedness and mitigation plans. According to a *Monmouth University/Asbury Park Press* poll conducted in the months following the storm, 69% of those affected by Sandy felt that the response of their local government was “excellent” or “good.” The approval of the state government’s response was only slightly less at 66%, while feelings regarding the federal government were noticeably lower at 51%. Of the 816 interviewees, only a minority believed that the municipal (6%), state (5%), or federal (5%) government had done a poor job.  

While Sandy may have left shore residents with a strengthened faith in their community and home rule governance, this contrasted sharply with a growing antipathy towards what was perceived as insufficient and unreliable financial support from government agencies. Although the emergency response to Sandy was performed with more organization and success than Hurricane Katrina, residents of affected areas quickly grew dissatisfied with the federal

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government once aid was blocked by the United States Congress in January of 2013. Additionally, as late as 2015, FEMA had denied payment to such a large number of flood insurance claims that it reopened the cases of 141,800 Sandy victims amid charges of fraud. Governor Chris Christie enjoyed remarkably strong support following the storm, even after the state adopted FEMA’s controversial preliminary Flood Insurance Rate Maps that identified most of the shore as a high risk flood zone. This support eroded away after the uproar surrounding Christie’s distribution of $159.8 million in federal housing funds earmarked for Sandy victims. 16.1% of these funds were allocated to Essex County, where Christie received endorsements from two communities after they received funding for affordable housing complexes ostensibly built for victims displaced by Sandy. While Essex County saw damage from the storm, hard hit Ocean County, where 1,620 structures saw major damage or were destroyed, only received 7.7% of this aid. Ultimately, their belief that the inherent vulnerability of the Jersey Shore could be solved with technical solutions and infrastructural improvements meant that New Jersey residents saw the government’s ineffective handling of Superstorm Sandy as a violation of its responsibility. However, by taking perspective this perspective residents’ ignored their own culpability that comes with inhabiting and investing in flood-prone areas.

70 Diane Bates, Superstorm Sandy, 101-120.
Dr. Bates correctly asserts that “knowledge of historic storms along the Jersey shore is widespread and easily accessible to anyone interested; at the same time, residents can deny these threats in their everyday interactions with the coastal environment because these disruptions do not jibe with the dominant construction of the Shore, which is rooted in the security of family.”\textsuperscript{71}

As a place for celebrations and vacations, the Jersey Shore represents a cultural continuity that spans generations. Regardless of the inevitability of future storms, the cultural value that New Jersey residents ascribe to the shore is justification enough for reconstruction. Through this lense, questioning development on the coast is equivalent to denying these emotional connections.

In a stable modern society, the perceived responsibility of government shifts from providing basic needs towards protecting citizens from potential threats to the routine of their daily lives. Therefore, New Jersey residents expect their government to implement engineering solutions to strengthen the shore despite the strong chance that future storms will be even costlier and more powerful than Superstorm Sandy. The U.S. Army Corps of Engineers adopted a strategy to construct higher dunes and build wider beaches along the portion of the coast most severely affected by Sandy. However, even the U.S. Army Corps of Engineers recognizes that beach replenishment projects are not a permanent fix to the problems posed down the Jersey Shore, demonstrating that the acceptance of the status quo is not based purely on economics but rather on the feelings of security that come from habitual behaviors and responses.

\textsuperscript{71} Ibid., 15.
Historic Resources

Despite the different focuses of the stakeholders that make up New Jersey’s preservation community, Superstorm Sandy’s 2012 landfall brought with it a set of challenges that drew the attention of preservationists statewide. Of the 90,027 documented historic properties identified by the New Jersey Bureau of GIS, 12,357 (13.7%) were located within the storm surge zone. Breaking this down further, one finds a differential distribution of impacted resources by county. Only 12.5% of Monmouth County’s historic resources were in the storm surge zone, but Atlantic and Cape May Counties respectively saw 27.8% and 45.6% of their historic resources inundated during Sandy. Ocean County stands out as the most significantly affected county in New Jersey, with 59.3% of its historic properties impacted by the storm. This analysis corresponds with the path of Sandy which brought the “right wall” of the storm, typically the strongest part of the hurricane, directly in line with the Ocean County coast.\(^{72}\) At the municipal level, a band of affected municipalities stretched around the borders of New Jersey, corresponding to the municipalities that front the Atlantic Ocean, bays, and major rivers. Comparing these two units of analyses shows that even the counties with less than 25% of their historic resources affected still had municipalities where over 75% of the historic properties were in the storm surge zone. As lost heritage is often most keenly felt at the local level, a more detailed analysis of historic resources in Ocean County would provide a more enriched understanding of Sandy’s differential impact on communities.

Ocean County features 5,041 documented historic properties within its 33 municipalities. 59.4% (2,993) of these historic resources were within Superstorm Sandy’s storm surge, and 8 municipalities saw over 75% of their historic properties affected by the storm. Even within Ocean County, one can see 9 municipalities where no historic properties were within the storm surge. While most of these communities were located further west on the mainland, some coastal towns saw none of their few documented resources impacted by the storm surge either. At this detailed level of analysis, looking at quantitative values reveals more than simply looking at normalized data. 100% of South Toms River’s resources were within Sandy’s storm surge, but there was only 1 identified historic property. On the other hand, 76% (or 1,266) of Toms River’s 1,656 historic properties were located within the inundation zone. Despite the sharp contrast in the sheer numbers of affected properties, the destruction of a community’s single documented resource may have the same cultural impact as damage to a number of properties in a town with an extensive built heritage.
Superstorm Sandy's Storm Surge in New Jersey

Legend
- Storm Surge
- Counties

Superstorm Sandy’s Impact on Historic Properties in New Jersey Municipalities

Percent of Historic Properties within Storm Surge

- None
- 1%-25%
- 26%-50%
- 51%-75%
- 76%-100%

While this serves as a general analysis that overlays the storm surge zone onto mapped historic resources, the HPO and EFMA provided a more in depth analysis how “cultural resources” were affected by the storm. Although the HPO never explicitly identified what constitutes a “cultural resource,” the National Park Service identifies them as “physical evidence or place of past human activity: site, object, landscape, structure; or a site, structure, landscape, object or natural feature of significance to a group of people traditionally associated with it”73 A total of 8,421 cultural resources suffered damage during the storm. Of these, 660 were identified with major damage or classified as destroyed. Ultimately, Sandy damaged 13% of the state’s historic resources while inflicting severe damage or destruction on 1%. GIS also shed light on the geographic distribution of affected properties, illustrating that 45% of the total number of cultural resources impacted by Hurricane Sandy were located in Ocean County. Cultural resources in Hudson County, located further north on New York Bay, constituted 28% of those damaged. Along the shore, Cape May, Monmouth, and Atlantic Counties made up 16%, 5%, and 2% of the totals, respectively.74

According to FEMA, 82,565 structures in New Jersey were damaged to some degree by Superstorm Sandy, including 5,582 that saw major damage or were destroyed. The HPO found that cultural resources represented around 10% of the total number of structures that were evaluated at an “affected,” “minor,” or “major” level of damage. On the other hand, cultural resources constituted 33% of the total number of destroyed resources identified by FEMA. In

conclusion, while Superstorm Sandy’s storm surge significantly damaged properties across the state, historic resources were disproportionately impacted. The majority of this destruction occurred in a select group of coastal counties, but even within these divisions it affected properties are concentrated in the communities directly lining the ocean and bay shores.\(^75\)

**New Jersey Historic Preservation Office**

Located within the state’s Department of Environmental Protection, the New Jersey Historic Preservation Office [HPO] is tasked with a mission to “assist the residents of New Jersey in identifying, preserving, protecting and sustaining our historic and archaeological resources...through our annual conference, consultation with professionals, training workshops, co-sponsorship of history and historic preservation related activities, the Historic Preservation Bulletin and other free publications.”\(^76\) Given New Jersey’s coastal setting, the HPO has had a long history dealing with storms and their effects on historic resources. However, Hurricane Sandy was by far the largest and most destructive storm to hit New Jersey since the creation of the office in 1966. In December of 2013, the HPO published its “Action Plan Narrative for the Preservation, Stabilization, Rehabilitation, and Repair of Historic Properties” to qualify the agency for the federal Hurricane Sandy Disaster Relief Assistance Grant for Historic Properties. This document provided a thorough analysis of the office’s response to the disaster and its subsequent recovery strategies. The narrative laid out in the action plan was complemented by the testimony of three members of the HPO staff: Daniel Saunders, the Administrator and Deputy State Historic

\(^75\) Ibid., 37.

Preservation Officer; Jonathan Kinney, in charge of the Certified Local Government program; and Andrea Tingey, in charge of cultural resource surveys, outreach activities, and Certificates of Eligibility for the National Register of Historic Places.

When Hurricane Sandy made landfall near the barrier island community of Brigantine, New Jersey, it was classified as a Category 2 Post-Tropical Cyclone with Hurricane Force. Dan Saunders described the situation at the office Trenton:

So Hurricane Sandy hits and we’re all without lights and power at home for ten days. We’re basically just out of it. Then things sort of come back to life. We come back to work and it’s really quiet. There’s stuff going on at the shore, but you can’t get there. The police have got it all blocked off. After awhile of it being quiet, we sort of go, ‘Well let’s talk to FEMA, They’re at the shore….’

While the first survey didn’t begin until November 29th, the process of gathering information regarding Hurricane Sandy’s impact on historic properties began immediately after the storm made landfall. The HPO solicited anecdotal accounts of damage to cultural resources through the online portal provided on their website. The reported effects of floodwater inundation “spanned the spectrum from immediately and obviously catastrophic to substantial interior damage which will result in gutting or demolition,” while the storm surge’s movement of large quantities of sand left archaeological sites associated with Native American settlements exposed to the threats of erosion.

These reports provided an important initial grasp of the destruction at hand, but a more systematic assessment was needed to provide an aggregated understanding of the disaster. As

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77 Daniel Saunders. Interview by Chuck Hovanic, Trenton, January 15, 2016.
data and imagery became available through the Federal Emergency Management Agency [FEMA], the HPO’s GIS point person, Kinney Clark, used information from its Cultural Resources Geographic Information System [CRGIS] to produce a more thorough assessment of impacts. Clark’s analyses provided a rough estimate for the number of cultural resources impacted by the storm surge determined how these were geographically distributed across the state. As more data came in, HPO staff was able to classify the degree of damage to each cultural resources as either “affected,” “minor,” “major,” or “destroyed.” The HPO then compared this CRGIS data to the damage statistics produced by FEMA in order to place historic properties within the broader understanding of the impact of Sandy on New Jersey’s built environment.

The data gathered through Clark’s CRGIS work helped inform windshield surveys that were conducted from the end of November through December of 2012. Survey teams consisted of HPO employees partnered with staff from FEMA’s Office of Environmental Planning and Historic Preservation, many of whom had previous experience surveying in New Orleans after Hurricane Katrina. Ultimately, surveyors, compiled over 4,500 images to assess the damage and historic significance of properties within a 93 square mile area. According to HPO staff,

This random ‘let’s drive around and figure out what damage we can see’ evolved into a clear survey. We did green and pink because we had green markers and pink markers on the day we started. Green means there’s nothing there. Pink means it’s interesting. [At] most preservation offices...you go out looking for historic types. This is the exact opposite...if you can exclude large areas with the survey, you won’t get crushed with reviews. I mean that really was a danger for us...At that point we didn’t know if we’d get more staff.79

79 Daniel Saunders.
Surveying attempted to apply the National Register criteria in a “very rough and quick way,” excluding “neighborhoods that didn’t have integrity or areas with a lot of new buildings,” of which there are many at the Jersey Shore, by literally marking them as green on a survey map. Andrea Tingey elaborated, “Pink and green is kind of a unique New Jersey response of looking at just clear-cut areas. Most of the other states were either sitting in their offices reviewing things as they came in or looking for positive historic resources in a more traditional way. We were the ones looking for: ‘No that’s crap go do whatever you want. Don’t bring that to me again.’ We did have this huge expanse of territory and we were scared.” The pink and green survey ultimately informed a programmatic agreement that streamlined the Section 106 review process for projects in green zones.

Surveyors were also tasked with identifying when a property “wasn’t a building anymore.” After two field visits to Mantoloking, the site of the infamous ocean breech across the peninsula, the HPO-FEMA team reached an agreement as to what “wasn’t a building anymore.” According to HPO staff, affected properties were no longer considered buildings if they were so damaged that they could no longer be evaluated against the National Register criteria as a “resource.” According to the National Park Service’s *National Register Bulletin*, a historic resource is a “building, site, district, object, or structure evaluated as historically significant.” While this standard for assessing damage against integrity may have been clear for surveyors in the field, evidently the exact criteria for determining a total loss of integrity remains unclear. After the survey, the HPO

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80 Ibid.
81 Andrea Tingey. Interview by Chuck Hovanic, Trenton, January 15, 2016.
returned to particular areas identified as pink, meeting with local stakeholders to inform their understanding of the storm’s impact on the community’s historic properties. The drive to streamline the regulatory review process was largely driven by political pressure to keep things moving: “Nobody wants to be the reason why somebody is not back in their house.” Even so, regulatory reviews at the HPO more than doubled from the year before to a total of around six thousand projects.

The dramatic increase in the HPO’s workload prompted it to shift priority away from projects not involved in Hurricane Sandy recovery. While the agency continued to carry out National Register nominations and Certified Local Government subgrants, the programs “shifted the focus of their work efforts from program development to providing technical assistance and outreach to those communities who were hardest hit by the storm.” Regarding the Hurricane Sandy Disaster Relief Assistance Grant for Historic Properties, the HPO instituted a three-pronged approach to ensure the most effective use of funds. Partnering with the New Jersey Historic Trust [NJHT], the office established a Cultural Resource Recovery Assistance grant program. Having already communicated with affected communities and local preservation organizations, the joint HPO-NJHT developed a scoring criteria based on:

- Historic Significance
- Ability to Complete the Project Promptly and Successfully
- Ability to Correct Storm Damage
- Degree and Nature of Damage
- Completeness and Accuracy of the Application

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83 Daniel Saunders
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The HPO did not extend funding to private property owners, despite acknowledging that they demonstrated the greatest need, as “this potential applicant group is unfamiliar to the office” and would therefore “require revising existing grant agreement templates.” However, social and political issues factored into this decision too. Jonathan Kinney noted, “It’s just an interesting piece of the story. As opposed to where disasters happen elsewhere in the country, this for the most part, was extremely wealthy, secondary homes being destroyed and damaged. But then you’ve got other areas at the shore where it’s absolutely primary homeowners and they are not wealthy. It’s an interesting spectrum.”

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As private secondary homes, many shore houses were both disqualified from the grant program and ineligible for flood insurance subsidies. While there are certainly ethical issues associated with directing disaster relief towards repairing vacation homes, many historic resources were nonetheless lost due to these policy decisions. “The best house in Mantoloking,” for example, had an owner that “had been in [the house], taken all the wainscotting off, dried it, taken doors down, and was being very loving and appropriate, but at high tide the dining room was underwater still.” Unable to distribute a grant, the HPO’s only course of action was determining that it was individually-eligible for the National Register of Historic Places. Facing stiff fines from the borough and increased flood insurance premiums, the owner ultimately demolished the house.

As attention shifted away from recovery to rebuilding, the HPO’s second program attempted to address the problems posed by changes to the National Flood Insurance Program, providing technical assistance aimed at helping property owners understand the impact of elevation and other site planning considerations on the historic integrity of both individual buildings and entire districts. HPO staff acknowledged the seemingly contradictory stance of the National Flood Insurance Program, which exempted historic properties from elevation requirements but nevertheless subjected them to increasing insurance rates if they were not raised. Even with the streamlined review processes set forth in the aforementioned Programmatic Agreement, the HPO estimated a 130% increase in the office’s workload, prompting them to

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86 Andrea Tingey.
request funding for five additional full time employees, including two architectural historians and a GIS specialist, in their action plan.87

Staff at the HPO that noted the character of the shore itself posed problems for developing comprehensive preservation strategies. The Jersey Shore is not one place, but a string of distinct communities that seem to only share a coastal setting and robust real estate markets. Any state-level strategy for promoting the resilience of historic resources thus had to take these diverse identities into account. In addition, the HPO staff felt that the preponderance of seasonally vacant homes in shore towns played a large part in shaping the actions and response of local governments. Often, the implementation of immediate repairs, such as drying out interiors before mold sets in, was delayed by municipalities that were slow to inform secondary homeowners of damage. In addition, the chaos of recovery left some local governments largely unaware of the applications and plans of individual homeowners, hindering their ability to shape the reconstruction. When asked about what they felt were the strengths and places for improvement in the response of New Jersey’s preservation community to Hurricane Sandy, HPO staff offered good insight. As Andrea Tingey saw it, “The weakness was what we didn’t know: the amount of information, the format of the information, and the difficulty in sharing what information we did have.” Regarding previous surveys, most of them were around thirty years old and thus woefully out of date in the dynamic real estate market of the Jersey Shore. “We didn’t have the reports scanned. We scanned all the reports from Monmouth and Ocean Counties so that we could put them up on our website to have

them available to communities and FEMA, but all of that scanning happened after the storm.”

Regarding the positives, Jonathan Kinney acknowledged “our ability to adapt and create these systems and procedures from scratch. I think we did a lot of good outreach to states and other areas that had previously gone through this. We weren’t trying to reinvent the wheel, but no two areas are the same so there was lot of adaptation that had to happen.” The HPO also had the advantage of being within the New Jersey Department of Environmental Protection. By sharing an office, the HPO was “kept at the table” and thus remained in the consciousness of the state and federal agencies that were central to recovery efforts. In fact, the HPO’s previous work in Section 106 reviews had fostered strong working relationships with FEMA and the Department of Transportation, allowing staff at the HPO to serve as informal liaisons between other state departments and federal agencies in the aftermath of the storm.

The Historic Preservation Office’s response and recovery plan for Hurricane Sandy clearly developed in an ad hoc and reactive manner. Even so, the staff at the HPO demonstrated a remarkable adaptability to the difficult circumstances presented to them. The actions taken to defend historic resources in the immediate aftermath of Sandy seem to be slowly developing into codified strategies to prepare for future storms. The rapid “pink and green” surveys, while less than ideal, laid the foundation for more in-depth surveying that will hopefully lead to more a meaningful understanding of both the extent and vulnerability of historic resources along the coast.

If budgets allow, the difficult tasks of assessing the integrity of hundreds of damaged

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88 Andrea Tingey.
89 Jonathan Kinney.
resources and certifying appropriateness for thousands of Section 106 reviews will lead to established guidelines that inform the future treatment of properties damaged by storms and flooding. Nevertheless, even the ingenuity of the HPO staff cannot provide a satisfying solution that prepares historic properties for the projected inundation of barrier island communities as sea levels rise.

**New Jersey Historic Trust**

According to its website, the New Jersey Historic Trust [NJHT] was founded by state law in 1967 with a mission “to advance historic preservation in New Jersey for the benefit of future generations through education, stewardship and financial investment programs that save our heritage and strengthen our communities.” To address the challenges to this mission, NJHT established the following goals for itself:

- “Establish stable sources of funding to support activities that contribute directly to the preservation and use of New Jersey’s heritage resources.”
- “Increase visibility for heritage preservation and its ability to contribute to the vitality of New Jersey’s economy and communities.”
- “Support effective collaboration among all state-level preservation related endeavors to maximize the public benefits from these efforts.”

In this capacity, the Trust has become a large source of funding for a variety of historic preservation projects throughout the state. The Trust’s Executive Director, Dorothy Guzzo, and Jennifer Stark, Program Manager for Sandy Disaster Relief Grants, provided their perspectives on Hurricane

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Sandy’s effect on historic resources. When asked about the role of NJHT in the recovery effort immediately following Sandy, Guzzo responded that:

We had none here, none whatsoever. We were sitting here at the Historic Trust, offering help like crazy, saying, ‘We can do things. We can survey.’ And absolutely no role here. This administration took a very different view in how they were going to address Sandy. The Historic Preservation Office was front and center with all of that. They worked hand-in-glove with the Federal Emergency Management Agency. They were out in the fields doing the survey work with them, the spot work. After a time, when the federal money came in through the National Park Service [NPS], it came in through the Department of Interior. It was part of the big omnibus package of funding that came down for Sandy. That money that was to go back out for a grant program was funneled to us through the Historic Preservation Office because we already knew about how to make grants, so then we hired Jennifer. We had a larger staff at one point, but now we’re down to Jennifer, who is also a historic architect, to administer the Sandy grant program.91

Built in 1832, the Old First Church in Middletown received a Sandy Disaster Relief Grant.

Image Source: Author

91 Dorothy Guzzo. Interview by Chuck Hovanic, Trenton, January 8, 2016.
Of the twelve states that received disaster relief funding for historic properties, only New York and New Jersey denied subgrants to repairs on historic houses. It is probably no coincidence that these were the two states that also saw the most destruction during Hurricane Sandy. New Jersey’s Sandy Disaster Relief Grants for Historic Properties program, which accepted Expression of Interest forms until July 30, 2014, provided awards of up to $500,000 for properties listed or eligible for listing on the National Register of Historic Places. Eligible applicants were limited to non-profit organizations, places of public accommodation, religious organizations, and municipal and county governments that intended to carry out non-construction and construction activities, including, but not limited to, survey assessments, engineering drawings, landscape studies, archaeological stabilization, stabilization of documented historic landscapes, and the “elevation or moving of structures per FEMA regulations, in limited circumstances.”92

The New Jersey Department of Environmental Protection [DEP], which received the federal funding package, stipulated that the grant program would not accept applications from private homeowners. Although Guzzo contests that the NJHT had the staff and resources ready to vet the potentially large quantity of applications, she surmised that the DEP’s decision was based on the assumption that funding from the federal Department of Housing and Urban Development [HUD], channeled through New Jersey’s Department of Community Affairs, would sufficiently address the needs of residential properties. However, the aforementioned Action Plan Narrative for the Preservation, Stabilization, Rehabilitation, and Repair of Historic Properties

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produced by the HPO justifies the exclusion of private properties on the grounds that the “HPO has not provided funding to private property owners since the 1980s, and the NJHT has never funded private individuals or business owners, so funding construction projects will require revising existing grant agreement templates. We anticipate substantially more guidance will be needed for many private property owners unfamiliar with grant application processes, the Secretary of the Interior’s Standards, significant capital improvement projects, and preservation easement restrictions.”

“Once you took residences out and you’re left with churches and public buildings and some businesses, there wasn’t a huge demand for the money,” Dorothy Guzzo observed, “so in some instances the criteria was: ‘Do you have damage?’” The New Jersey Historic Trust did not fund any elevation projects following Sandy. However, as grant program manager Jennifer Stark observed, “Utilities are being elevated. We’ve got floodgates going in. We’ve got flood vents going in.” These represent a mix of dry and wet floodproofing techniques that have less of an impact on the historic character of a building, yet they are not taken into account as mitigation strategies under the NFIP. Flood gates, for instance, can be erected rapidly when flooding is imminent, providing more protection than sandbags in less time. Flood vents installed in walls, on the other hand, allow water to flow under a building without obstruction, preventing the buildup of water pressure. Guzzo added that “part of that is just relative to where you fall in the flood zones. So although some of these properties are, ours are not in the prime tier where

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94 Dorothy Guzzo.
95 Jennifer Stark. Interview by Chuck Hovanic, Trenton, January 8, 2016.
they have to be elevated.” While the use of NJHT grant money to fund flood-proofing measures indicates a step towards promoting resilience, it nonetheless falls short of actually developing the necessary long-term adaptation plans for historic structures that will become increasingly vulnerable as the climate changes. Ultimately, despite the program’s limited scope and application, NJHT successfully funded a variety of resources that served important roles within their communities, from Elberon’s Church of the Presidents to a former United States Life Saving Station in Seaside Park.

Jennifer Wellock, an employee at the NPS, provided an astute comparison of the treatment of private properties following Hurricanes Katrina and Sandy. While the NPS typically did not grant money to homeowners for disaster recovery, congressional legislation specifically mandated that funding help get people back into their homes after Katrina. Following Sandy, HPOs generally seemed more interested in activities like surveying rather than on the ground restoration work. The distribution of homeowner’s insurance may have contributed to this divergence. Property owners that received insurance payouts for storm damages were unable to apply additional federal disaster relief money to those repairs that were covered by insurance. Whereas homeowners insurance was widespread by mandate in most of the northeastern United States, many of the properties affected by Katrina were handed down through generations and thus never required insurance. Regardless of the reasons behind it, the exclusion of private homes from the NJHT grant had profound implications for a region where residential properties, from camp meeting cottages to Gilded Age mansions, make up a large part of the historic fabric.

96 Dorothy Guzzo.
When asked about NJHT’s continued role in promoting the long-term resilience of New Jersey’s historic resources, Dorothy Guzzo noted that they had updated their “historic structures reports and preservation plan guide to include some disaster management stuff in there, so that when an architect was looking at a property they would be incorporating this idea of disaster as part of their planning documents.” While nothing had been officially implemented, Guzzo presumed that future grant programs would ask applicants to address resilience in some sort of way, be it elevating utilities to reduce flood damage or trimming trees to prevent downed power lines. If a disaster similar to Hurricane Sandy were to hit again, she believes that NJHT would be better prepared than before. Guzzo also hypothesized about what might have been if New Jersey had not taken such a pro-reconstruction stance by devoting large sums of money to strengthening the shore. Rather than taking Sandy as a “unique opportunity to refocus its development priorities and re-examine whether allowing construction in the most flood-prone areas is a good idea,” Governor Christie asserted that “there is no choice but to rebuild, especially at the Jersey Shore, not only because it’s a part of the cultural heartbeat of our state, but also because it’s a huge part of the economic engine of our state.” Had more questions been asked, heritage practitioners may have been forced to evaluate and prioritize threatened resources, thus articulating a stronger argument for historic preservation. As Guzzo explains,

Preservationists might have come out better because there may have been more of an effort to say, ‘These are the places that matter’...You could’ve been asked to make those decisions. They would have been hard decisions, but I would have rather looked at that value question...Now everything is treated the same. It might

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97 Dorothy Guzzo.
have actually worked out better because if you were stepping back to look at a policy decision...you would’ve incorporated or could’ve incorporated historic preservation into the overall policy. So preservation may have come out further ahead.99

The role of the New Jersey Historic Trust following Hurricane Sandy is emblematic of the limited ability of organizations to operate outside of the role set by established frameworks of recovery and reconstruction. For instance, NJHT’s history as a grant provider precluded its inclusion in the joint FEMA-HPO damage assessment surveys, despite its willingness to provide money and manpower. A similar disconnect surfaced regarding private homes’ ineligibility in

99 Dorothy Guzzo.
the Sandy Disaster Relief Grants program. While Dorothy Guzzo felt that the NJHT was prepared for a deluge, the HPO’s “Action Plan Narrative for the Preservation, Stabilization, Rehabilitation, and Repair of Historic Properties” stated that the “HPO has not provided funding to private property owners since the 1980s, and the NJHT has never funded private individuals or business owners, so funding construction projects will require revising existing grant agreement templates.” When it comes time to determine the role of historic resources in planning for climate change, the fragmented nature of New Jersey’s preservation community will surely present similar challenges in forming an integrated approach for resilience.

**Preservation New Jersey**

According to their website, Preservation New Jersey, Inc. [PNJ] was founded in 1978 to advocate for and promote “historic preservation as a sustainable strategy to protect and enhance the vitality and heritage of New Jersey’s richly diverse communities. PNJ is the only statewide private membership-supported historic preservation organization in New Jersey.” Among its many activities, PNJ publishes the aforementioned annual list of the 10 Most Endangered Historic Places in New Jersey, advocates for sound public policy at all levels of government, provides instructional toolkits on issues ranging from affordable housing to preservation planning, and runs workshops to educate the public on preservation and sustainability issues.  

As mentioned earlier, in 2013 PNJ placed “Historic Resources and Communities Damaged by

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Superstorm Sandy” on its annual most endangered. This article raised a clarion call for preservationists statewide and clearly set forward the priorities of the organization:

The preservation community is only now beginning to get a clear handle on the tools available for Superstorm Sandy recovery...From federal funding that may or may not require preservation-conscious review, to local code officials that may be working with the needs of historic resources for the first time, to an unprecedented need for recovery funding and technical assistance, it will continue to be up to those of us who care about heritage and historic places to help ensure that the preservation of New Jersey’s historic resources is an ongoing priority.101

Despite the strong rhetoric, the role of PNJ was limited to serving as a conduit for information that would enable other preservationists to carry out recovery work.

Deborah Kelly, a former PNJ board member and executive, felt that the organization had an evolving role in preservation in New Jersey:

PNJ has been through many phases in its life. They went from, years ago, when it was first formed with part-time staff to actually three or four full-time staff for a while. Then when the recession happened and a lot of organizations lost funding, they went down again to no staff. So they’re rebuilding right now. They used to be able to be more effective at being advocates and a resource for these townships and homeowners than they might be able to right this minute. But they’re building a new website. Their website might be the first place a lot of people go to try to get information, but they’re advocates. Their primary mission is to advocate for New Jersey’s historic resources and to offer resources and education to homeowners, municipalities, and just the public who is interested in promoting historic preservation. As I said, they are not as active right now as they have been at different points in the past, but I think they’re still a good resource.102

This state of transition within the organization influenced the ways in which PNJ carried out its mission following Hurricane Sandy. Originally, PNJ received a grant from the National Trust

101 "Historic Resources and Communities Damaged By Superstorm Sandy." Preservation New Jersey.
102 Deborah Kelly. Interview by Chuck Hovanic, New Brunswick, April 1, 2016.
for Historic Preservation for a year-long project of interacting with communities with damaged historic resources, making sure that they were aware of grant programs and were focusing on historic resources, while also providing comments for Section 106 reviews on Federal Emergency Management Agency actions. This grant was soon supplanted by funding from the New Jersey Historic Trust, which saw PNJ as a tool to get preservationists down in the trenches at the shore. Ultimately, these two sources of funding, along with consultation from the New Jersey Historic Preservation Office, enabled the organization to undertake three projects: facilitating public awareness, providing assistance, and interacting with affected communities; holding two workshops that focused on practical issues at the shore and in urban environments, respectively; and creating a resource guide to be posted on their website.

While the direct assistance, toolkit, and workshops certainly proved valuable to interested parties, PNJ’s success as an advocate was more questionable. The attendees at the two workshops held in Bay Head and Newark were “generally historical societies, historic preservation commissions, or somebody who already had an interest.” The owner of an old house in a random community without a strong preservation identity was not likely to show up. Rather than serving as the voice for historic preservation when it was intentionally or inadvertently left out of the discussion, PNJ primarily built upon the work already being done by preservationists in the field. Instead, Preservation New Jersey’s advocacy efforts focused on pushing for the creation of statewide elevation design standards. They took no stance on the new Base Flood Elevation maps that posed dramatic implications for historic resources in high risk flood zones, only encouraging FEMA to complete the new advisory maps so that homeowners
could finally begin to make repairs and adapt their houses to the new standards. Regarding the future, Kelly noted that “there has been flooding down there in [other] hurricanes, [and] probably everyone feels that they are not going to go away. Probably, these extreme weather conditions will just keep happening too.”

If another storm similar to Sandy were to strike the shore again, PNJ would likely respond in the same manner, attempting to facilitate the flow of money and information to the communities and resources most at danger.

**Preservation New Jersey’s**
**2015 Resiliency Workshop Series**

**GOING UP? - COASTAL FLOOD MITIGATION**
Thursday, March 12, 2015 - 2 pm to 5:30 pm
Ballroom, Bay Head Yacht Club, Bay Head, NJ 08742

One of the great challenges of communities living on the New Jersey coast or along its some 18,126 miles of rivers and streams is how to prepare for inevitable flooding.

The National Flood Insurance Program (NFIP) requires that buildings be elevated, moved out of a floodplain, or acquired and demolished to comply with the new flood maps. The hope is that elevating will keep buildings out of the water, but what do wholesale elevations do to a community?

**How do you elevate buildings without adversely affecting historic character?**

**What do elevations do to a streetscape? What are the best design options?**

**What happens to the residents who can’t afford to elevate or rebuild?**

**SPEAKERS:**

* Justin A. Mihalk, AIA NCARB, NJ-AIA, AIA Regional Recovery Working Group (AIARRWG)
* Timothy G. Hart, Division Director Ocean County Cultural and Heritage Commission
* Linda B. Weber, AICP, PP, Resiliency Director, Sustainability Institute, The College of New Jersey
* Susan Bristol, Architect, LEED AP, NJ Planning Professional, Adjunct Instructor, NJIT

Online information advertising Preservation New Jersey’s 2015 Resiliency Workshop Series.

*Image Source: Preservation New Jersey*
In its response to Hurricane Sandy, PNJ stayed true to its mission of providing resources and serving as a voice for New Jersey’s heritage. That being said, the response of the only statewide preservation organization still left something to be desired. A not-for-profit advocacy group typically has the ability to take the issues identified by preservationists and clearly articulate them in the forums where they can have the most impact. While overwhelmed preservationists at the shore often lamented that heritage was rarely prioritized in the recovery and reconstruction plans at the municipal and state levels, PNJ only issued two public statements regarding the issue. After Hurricane Sandy, Preservation New Jersey mainly “preached to the choir” of heritage advocates rather than attempting to insert preservation into larger discussions of resiliency. While it seems easy to blame the organization, PNJ’s focus on campaigning for more technical resources, like design guidelines or disaster-recovery toolkits, is more a reflection of the current state of affairs in New Jersey rather than a deficiency in the organization.

Preservationists and residents alike have overlooked the inherent challenges associated with vulnerable coastal environments to maintain a more politically and economically beneficial “business as usual” approach. Strikingly, maintaining the status quo is done in the face of the widespread belief among New Jersey residents that the storms of 2011 and 2012 (Hurricanes Irene and Sandy, as well as the 2011 Halloween blizzard), were partially attributable to climate change. Rather than capitalizing on this new awareness of vulnerability and addressing the

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fundamental issues of rebuilding down at the shore, PNJ’s focus on technical fixes echoed the call to “Restore the Shore” that was heard throughout the state.

**Beach Haven Historic Preservation Advisory Committee**

Eighteen miles long and only a few blocks wide, Long Beach Island sits six miles out from the mainland in Ocean County. Located towards the southern end of this barrier island, the Borough of Beach Haven has a year round population of 1,170 and an historic district with “architecturally-distinctive houses spanning seven decades of seaside resort construction” that demonstrates the town’s “role as a preferred summer resort community for Philadelphia businessmen.”105 The sparsely populated island saw its start as a resort community with the coming of the Pennsylvania Railroad in 1872 and the incorporation of the Tuckerton and Long Beach Building, Land, and Improvement Association in 1873. Platted out along a narrow part of the island, where “a rifle-ball might be shot across the island from one to the other,” the newly founded community of Beach Haven provided access to both bathing in the ocean and aquatic sports in the bay. As the town grew in popularity, members of Philadelphia’s business elite built elegant summer houses that often remained within the family for generations. Although by the 1910s, the town had begun to market itself to a larger audience by citing its proximity to major urban centers and describing its alluring social life and amusements. At this point, development in Beach Haven was concentrated within twelve square blocks at the center of the island.106

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106 National Register of Historic Places, Beach Haven Historic District, Beach Haven, Ocean County, New Jersey, National Register #83001608.
Location of Beach Haven within Ocean County.

As automobile ownership increased, a regional road network was established and subsequently improved upon to promote easy access to the shore. Increased automobility spurred the construction of new tracts of cottages that pushed development up to the ocean and bay. By 1925, the borough had a year round population of 625 with an average of 4,000 visitors during the summer. Responding to this increasing demand, a local construction industry developed with a small community of builders and suppliers producing many of the later Cape Cod and ranch houses. Yet as bungalows proliferated in Long Beach Island’s other communities during the 1930s, Beach Haven remained distinctly dominated by large, three-story houses. Although the end of rail service in 1936 and the destruction of its boardwalk during the 1944 Great Atlantic Hurricane posed challenges to the borough, the community demonstrated its commitment to continued growth in 1948 by extending its water and sewer network to accommodate planned development even closer to the bay. However, the Ash Wednesday Storm of 1962 brought devastation that “resulted in new local building codes and construction techniques that significantly changed the character of shore architecture beginning in the 1970s, with the living spaces of residences raised to the second floor on pilings.” Remarkably, the sturdy homes of Beach Haven’s golden age rode out the storm and the subsequent boom in construction to serve as examples of the early development of this Jersey shore community.

When Superstorm Sandy made landfall on October 29, 2012, storm surge from the bay left the “Queen City” of Long Beach Island inundated in six feet of water. Jeanette Lloyd, a member of the Beach Haven Historic Preservation Advisory Committee [HPAC], provided an account of

\[107\] Ibid.
the storm and the ongoing recovery process. A total of 106 out of 384 houses in the historic district were flooded, but most of the damage was seen in bungalows with first floors only one to three steps above ground level. The New Jersey HPO reached out to the HPAC shortly after the storm. According to Lloyd:

  The state said, ‘You can’t demolish.’ We said, ‘Come down here.’ So...about six of them came down here, and they spent the day with us. We took them in about six houses. I said, ‘Do you see what’s happening? His foundation is not only gone, but the whole thing has been tweaked…You can’t save a shack bungalow.’ And so they said, ‘Jeanette do what you have to do’

Whereas the HPO was perceived as an uninvolved and uninformed outsider, HPAC members were aware of the challenges posed to owners of damaged historic properties and thus seemed more sympathetic to demolition. Ultimately, the HPAC only permitted the demolition of six homes within the historic district. However, this fierce autonomy dominated discussions of outside involvement in Sandy recovery:

  The federal government wouldn’t budge, so most of us now don't have flood insurance. We dropped it because we saw what a disaster the federal government is, and it’s not all the federal government. Christie was given a lot of money and he held it. So all of the sudden we’re here, and people need the money. And we are finding out that Keansburg or someplace up near Perth Amboy...he spent a lot of the money up there.

Even if some commissioners opted out of the National Flood Insurance Program, the HPAC was compelled to address FEMA’s placement of the entire historic district within an AE flood zone. Any new construction or substantial work done on existing properties would require a base flood

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109 Ibid.
elevation of eight feet, which was pushed up to nine feet after Governor Chris Christie’s statewide mandate for an additional foot of elevation above federal requirements.

As requests for elevations came in, HPAC commissioners began by asking questions: “What are you putting the house on? How are you raising it?” Eventually they developed a highly contextual standard for what they felt maintained historic integrity within the district, recommending that the foundations of both elevated homes and new construction be covered in half-brick or lattice-work. The historic idiosyncrasies of Beach Haven’s development pattern further complicated the process. Lots only twenty-five feet wide, the result of large family properties being subdivided by later generations, housed small bungalows that were particularly devastated by the flooding. The committee thus had to determine how rehabilitation and new construction could meet both historic district guidelines and elevation requirements within the spatial constraints of a small lot. As Lloyd described the process, “we’re lucky because all of our blocks are eclectic, so if a new construction is going in or a new addition is coming in we can say, ‘Well here are two or three different ideas that you can have.’ So we don’t have cookie cutter houses on any of our blocks.” The HPAC also anticipated other threats posed by elevation requirements. “If you've been down to Ocean City, you see how close the houses are. They are all cookie-cutter, the same. It’s a mess, and that’s what we didn't want to happen here. But we knew if you're going to stop people from building a McMansion, and that is a two car garage underneath, then you better find yourself a damn alternative. Because a lot of these people around here are very wealthy.”

110 Ibid.
With parking at a premium in older, more densely developed communities along the shore, the promise of a garage could incentivize owners to demolish only slightly damaged properties and rebuild at new heights. Therefore, after three meetings the HPAC was able to persuade the borough’s land use board to exclude detached garages from coverage restrictions. This allowed owners to fit a small structure at the back of the typically larger lots of old houses. As a concession to property owners that were undertaking the expense to elevate their bungalows, height restrictions in the historic district were also raised by three feet. As Jeanette Lloyd saw it, “whenever you take away something, if you’re going to be really successful, you have to give it back.”

However, this close collaboration with stakeholders and sensitivity to community preferences grew out of a rather tense start when the HPAC was first formed in 2003. Facing allegations that the historic district was simply another set of regulations, from the start the HPAC actively strived towards a consistent application of design standards to demonstrate to residents the value of living in a neighborhood where things don’t change as rapidly as the rest of the Jersey Shore. This attitude shaped the ways in which the committee interacted with homeowners following Hurricane Sandy. Jeanette Lloyd explained how the HPAC held 98 technical review meetings after the storm:

We don’t want you spending any money on an architect or a lawyer or a builder or anything. If you selected your builder, then come to us. There’s only three of us, so it’s a meeting without a quorum. We meet with you, and it’s usually here downstairs [the Beach Haven Public Library]. We will tell you, “You are going down the wrong path.” We suggest to you what path to go down...“And I think giving that technical review committee has really helped us because by the time

111 Ibid.
they come with these projects to the regular publicly scheduled meeting, they're on target. We’ve gone through the things that are allowed and are not allowed, and that is what the community really likes.\textsuperscript{112}

Given its comparatively large budget and strong working relationships with other borough departments, the committee now appears ready to devote the extra funding and time to ensuring a satisfactory outcome for a large redevelopment project located in the heart of the historic district.

**Ocean City Historic Preservation Commission**

Ocean City, a dry town with a crowded boardwalk and two amusement piers, brands itself as “America’s Greatest Family Resort.” While this city’s origins as a religious retreat remain widely acknowledged by its 11,701 year-round residents, the physical reminders of this past appear swallowed up by the proliferative development of duplex vacation housing in recent years.

The Ocean City Residential Historic District, encompassing roughly seventeen square blocks just north of downtown, stands as a bulwark against constant development pressure in the city. This collection of 157 buildings is significant “as the well-preserved initial settlement of Ocean City, New Jersey, founded as one of several religious resorts along the New Jersey coast in the late 19th century.”

\textsuperscript{112} Ibid.
However, for the first two centuries of European settlement in New Jersey, Peck’s Beach, the future site of Ocean City, remained largely unchanged from its description in 1633 as “a slight sand beach full of low sand hills.” Ocean City was originally conceived as a religious resort along the lines of Ocean Grove, yet unlike the rural cottage mode of its older northern neighbor, the city’s architecture strongly reflected the contemporary styles popular throughout New Jersey. Although a house had been built at the corner of 7th Street & Asbury Avenue by the 1850s, true settlement of the community commenced in earnest in 1879. The Ocean City Association, the religious camp meeting group backing the community, platted, cleared, and graded a four block

\[\text{\textsuperscript{113}} \text{ L. T. Stevens, } History\ of\ Cape\ May\ County,\ Cape\ May,\ NJ,\ 1897,\ 21.\]
long area stretching from the bay to the ocean, so that within a year, thirty-five dwellings, ten private stables, two public bath houses, and a hotel had been built.\textsuperscript{114}

The focal point of this settlement, however, was the large wood frame Ocean City Tabernacle, which catered to the spiritual needs of the city’s population: a mix between the original Methodist settlers, Philadelphia residents, and mainland locals. Like the rest of the barrier islands in Cape May County, Ocean City remained inaccessible and grew slowly until the introduction of modern utilities induced a “concentrated development that was almost urban in character.” With the completion of a road to the mainland, numerous hotels were erected to accommodate summer vacationers.

Despite this rapid growth in its early history, Ocean City maintained a reputation as a clean and wholesome resort into the early twentieth century. The 1920s brought increased population and land speculation, as well as charges against the Mayor for harboring gambling and liquor interests in town. However, the greatest changes to the social and physical character of Ocean City have occurred after the 1960s, as laws restricting activity on Sundays were loosened and high property values drove redevelopment. Still, the historic district survives as a well-preserved turn of the century residential neighborhood. While nearby shore communities, like Sea Isle City, developed within the same period, Ocean City is the only one with its original core settlement intact, largely unaltered save for the proliferation of synthetic siding on houses.

\textsuperscript{114} National Register of Historic Places, Ocean City Residential Historic District, Ocean City, Cape May County, New Jersey, National Register #03000129.
Alterations to properties in the district are subject to review by the Ocean City Historic Preservation Commission [HPC]. This nine member commission is charged with “identifying, recording and maintaining a system to survey and inventory all building sites, places, landmarks and structures of historical or architectural significance, based on the ‘Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation,’ and aiding the public in understanding their worth, methods of preservation, techniques of gathering documentation and related matters.”

Formed in 1980s with the goal of establishing a large historic district at the heart of the island community, in 1993 the HPC was finally granted jurisdiction over an area roughly 15% of that which it originally proposed. Even this scaled down version of the district has faced strong opposition from the community, with a city council subcommittee exploring the option of shrinking the district in 2014.

South of the eye of hurricane, Ocean City was at the fringe of the area affected by Sandy in 2012. While large portions of the city were subjected to flooding, the original settlement around the tabernacle was built on some of the highest ground on the island, meaning that the historic district was largely spared from severe damage. Additionally, to avoid mosquitos many homes in the historic district were originally constructed without accommodation on the ground floors. It was only with the demand for additional accommodations that these “basements” were infilled with living units. The grade-level apartments thus sustained a majority of the flood damage in the

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district that occurred during Sandy, while the main living areas of these houses often sat comfortably at around sixteen feet above base flood levels.

Eight members of the Historic Preservation Commission provided their perspective on the implications of Hurricane Sandy for Ocean City. There was a general disdain directed at the response of outside government agencies. When asked about what the state could have done better, one commissioner asserted, “A lot of us looked to the state: ‘What do we do?’ They never got back to us...The state did nothing. There’s nothing to do differently.”117 Regarding the New Jersey Historic Preservation Office, one of the commissioners explained that

    When the state came down, we were concerned about houses being raised and others not. They basically said...what they are trying to do is make the streetscape stay essentially the same. They didn't really explain how they would accomplish that. So logically it makes sense. Every house needs to be consistently raised above flood levels...It never happened because you would have to get everyone to buy into it, so don’t think that any solid framework came out of it. I think they just came up with ways to fund people to fix their problem. There is no way to make a historic district comply with flood requirements without changing character.118

For those in Ocean City, elevation to avoid rising flood insurance rates proved to be the primary issue raised by Hurricane Sandy. In May of 2013, Ocean City Council enacted an ordinance that allowed property owners to elevate their properties, as long as they did not enlarge the building footprint, without submitting an application to the Zoning Board of Adjustment. With parking at a premium on the densely built island, this change in zoning encouraged homeowners to raise their cottages and construct a garage at grade level.119 While elevations may occur as of right in the rest of the city, any alterations in the historic district are held to a higher standard of contextual

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117 Ken Cooper. Interview by Chuck Hovanic, Ocean City, February 2, 2016.
118 Jeffrey Sutherland. Interview by Chuck Hovanic, Ocean City, February 2, 2016.
119 City of Ocean City, New Jersey, Ordinance § 13-12, 2013.
sensitivity. The HPO went by the city’s floodplain ordinance, which required two feet of freeboard above FEMA’s new Base Flood Elevation. Commissioners themselves had raised their homes in the district, but the elevation of a small bungalow at the corner of 6th Street and Central Avenue proved particularly controversial. With a squat upper porch on the “first floor” raised above a live-in basement by brick piers, the building was dramatically elevated, so that in the words of one commissioner, “it doesn’t look historic anymore.”

Although the HPC has the power to review all projects within the historic district, the city’s preservation ordinance included a provision that if a property owner could prove “financial liability,” the commission would have to grant permission to tear it down. While the HPC did not provide clear definition of what constituted a financial liability, the National Trust for Historic Preservation acknowledges that “many preservation ordinances provide for variances from the

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120 Ken Cooper.
121 Loeper, John. Interview by Chuck Hovanic, Ocean City, February 2, 2016.
strict application of its rules in cases of economic hardship.” The criteria used for determining economic hardship typically includes the property’s current rate of return, efforts to sell the property in its current condition, the economic feasibility of alternative uses for the property, and the property owner’s knowledge of the likelihood of designation at the time of purchase. In Ocean City, commissioners noted that the wood frame, turn of the century houses that proliferated within the district were largely constructed by local builders without blueprints, which made them particularly difficult to elevate without compromising their structural integrity. Commissioners acknowledged that a lawyer could make a strong argument for demolition given the expense of elevating historic properties and the cost of insurance premiums for maintaining homes at grade level. One commission shared, “that was my biggest fear after Sandy, but no one has come forward after that even thought it would be very easy to do.” Another added, “Who’s to say it won’t happen? They’ve fixed their properties the best they can, but now that insurance rates are starting to rise…”

The infill apartments of historically elevated houses proved particularly problematic in the recovery period. Rather than subject themselves heightened insurance rates for the habitable space at ground level, many homeowners chose not to repair their basements and thus abandon upwards of 3,000 square feet of floor area, denying themselves the potential of earning rental income on their properties. Even if a building was properly elevated, members of the HPC cited the

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123 John Loeper.
124 Ken Cooper.
inadequacy of flood insurance coverage, with one commissioner stating that his house, valued at $850,000, would only be insured at the program’s maximum limit of $250,000.\textsuperscript{125} While this may have been the case in this particular scenario, the commissioner did not acknowledge the availability of supplemental insurance through a private carrier.

Regardless of the emphasis on property elevation, the Historic Preservation Commission remained aware of the potential of alternative measures to protect historic properties. In the commissioners’ experiences, floodgates on individual properties proved all but ineffective in low lying areas. Shore municipalities’ reliance on individual owners to maintain and upgrade bulkheads on the bay meant that flooding would remain problematic as well. As one commissioner opined, “I think that until the cities do something like a cohesive bulkhead system across the bay, there is nothing they are going to do to stop this flooding. It always comes in from the bay. There was one breach during Sandy in the Gardens [a neighborhood at the northern end of the island]. They leave the bulkhead systems up to the individual homeowner to maintain or not, and that floods the entire island.”\textsuperscript{126} Another commissioner criticized the United States Environmental Protection Agency’s prohibition on the use of dredged sand for defensive beach dunes, stating that “it’s like they fight themselves in spite of themselves.”\textsuperscript{127}

Despite climate change’s promises of increasing superstorms and inundation by sea level rise, preservationists in Ocean City cited real estate development as the greatest threat to the survival of the historic district. As one commissioner stated, “It’s purely economics. That’s the

\begin{footnotes}
\item[125] Ibid.
\item[126] Jack Ball. Interview by Chuck Hovanic, Ocean City, February 2, 2016.
\item[127] John Loeper.
\end{footnotes}
biggest threat. As they run out of places to tear down, if a storm hits and a homeowner is faced with rebuilding or demolition, a developer comes in and they take the money. Those are year-round people who can’t afford to buy another place. The year-round population is dropping. People buying second homes don’t want historic homes because they are too expensive to maintain. What’s driving it [demolition] is the need for inventory to build new stuff.” Hurricane Sandy and the threat of future flooding only serve to exacerbate the displacement. In a city where the land is more valuable than the house on it, “the older people’s homes got flooded, but they couldn't repair because it would cost too much. It’s not cost effective. In a historic district it multiplies because you couldn't sell it [as is] or demolish it, so it’s an excuse to move out.” Another commissioner added, “I do think that the storm has played an important part. People who have lived here awhile have seen the tides rise. As it does, people are going to get tired. That might be a reason to get rid of the historic district. We let her raise that house (at 600 Central Avenue) because we don’t have a right to keep it at a level where she continues to get flooded.” Ultimately, even HPC members saw historic district regulation as adding to the hardships of owners of flood-prone properties.

**Conclusion**

While New Jersey may benefit from a well-resourced and fairly robust preservation community, Superstorm Sandy’s landfall dramatically exposed the vulnerability of the state’s

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128 Jeffrey Frost. Interview by Chuck Hovanic, Ocean City, February 2, 2016.
129 Jeffrey Sutherland.
130 Ken Cooper.
coastal heritage. The unprecedented destruction forced the state’s preservation agencies to work together, often in an ad hoc manner, to confront the threats posed to historic properties down at the Shore. Cooperating with federal agencies like the NPS and FEMA, the HPO took on a leadership role as it coordinated resources to assess damage, respond to threats, and promote recovery. With a more narrow scope, PNJ and the NJHT filled specific roles to convey information and resources to those on the ground. Preservationists working in impacted communities, including preservation commissions, architects, and property owners, were the ones making the decisions that ultimately determined the fate of threatened resources. By providing a cohesive narrative of the preservation community’s response to Superstorm Sandy, this thesis can synthesize the perspectives of different actors to determining the challenges and opportunities for heritage at the Jersey Shore.
Chapter 5: Key Challenges in Preparedness & Recovery

Thus far, this thesis has knit together the varied testimonies of preservationists to create a compelling narrative of a community galvanized to protect its threatened heritage in the face of unprecedented challenges. While this story deserves to be told in its own right, its true strength comes from its ability to convey the challenges and opportunities associated with responding to vulnerability in coastal communities. From the experience of Superstorm Sandy, three key findings emerged regarding the weaknesses of historic preservation community’s response at the Jersey Shore. These issues center on surveys and planning, flood insurance, and the interpretation of significance and appropriateness. Acknowledging that the obstacles extend far beyond those identified below, this section attempts to examine the aforementioned challenges in greater detail. This enhanced understanding of the problems associated with the response to Superstorm Sandy will ultimately be used as a framework to analyze the feasibility of long-term hazard mitigation and climate change adaptation strategies.

Surveys & Planning

The typical New Jersey resident does not imagine the shore as a historic landscape. Visitors look past the intact illustrations of nineteenth century urban form in Atlantic City and the remarkable collection of postwar “Doo Wop” motels in Wildwood, to the beaches, boardwalks, and barbecues that seem to define life “down the shore.” Besides the four Certified Local Governments, the state’s preservation agencies have largely regarded the shore in a manner similar to that of its residents. As Dorothy Guzzo, the director of the New Jersey Historic Trust, saw it:
I think the Jersey Shore, because it’s a transient population and because people only go there for vacation and aren’t year-round residents, does not have a well-developed network of preservation. So there aren’t a lot of historic preservation commissions at the shore. There hadn’t been a lot of survey work done at the shore, so that was a very weak part of the state. When Sandy hit, preservation wasn’t there because the people in the local areas weren’t there...You do see spots like at Beach Haven, but that’s because the population is there and they were fully capitalizing on their historic resources for tourism purposes...If Sandy had come in at Cape May, I think we’d be having a different conversation right now...but it’s because of where it hit, in the central part of Jersey, that I think it’s very different. There would have been more emphasis on “historic,” for one thing. Cape May is a National Historic Landmark, so you probably would’ve had Washington, DC and all the National Parks Service people up in arms over this and maybe sending help right away...I know one of the biggest questions that was asked right after the storm was about Lucy [the Margate Elephant]. Everybody wanted to know about Lucy. Lucy didn’t move. Lucy wasn’t hurt at all, but it is kind of funny. It’s what people know. Cape May would’ve been that icon...Preservation is a bit lower unless someone makes it their forefront.\footnote{Dorothy Guzzo.}

Instead of nationally recognized Cape May, most of the communities that bore the brunt of Sandy’s impact were beyond what most preservationists regarded as historically significant, places like Skippers Cove and Cedar Bonnet. These developments of mid-twentieth century tract housing were built for middle-class vacationers, giving every resident waterfront access along a series of manmade lagoons feeding into the Barnegat Bay. The storm surge of Sandy flooded Barnegat Bay, wiping out these modest homes and displacing the middle-class community with the new construction that followed. However, these arguably “vernacular” landscapes remained outside the scope of preservationists until they were threatened with extinction.\footnote{Timothy G. Hart "Ocean County Recovery & Resiliency." Lecture, Bay Head Yacht Club, Bay Head, NJ, March 12, 2015.}
The lack of funding for surveying certainly exacerbated these issues. While a FEMA employee argued that survey work burdens already overstressed HPO staffs and diverts limited funds away from actually “protecting” heritage, historic resource surveys play a crucial role in the context of post-disaster recovery. Section 106 of the National Historic Preservation Act of 1966, which “requires Federal agencies to take into account the effects of their undertakings on historic properties,” is only triggered when it is determined that an agency’s actions will affect resources that are listed on the National Register of Historic Places or meet the criteria for the National Register.\textsuperscript{133} Surveys provide a way for preservationists to quickly assess the impacts of various projects carried out in the aftermath of a disaster. In the case of Hurricane Sandy, Section 106 reviews were largely the result of the Federal Emergency Management Agency’s response and recovery work. However, since the Shore occupied a peripheral place in the minds of preservationists, its heritage was less documented than other parts of the state. Jennifer Wellock, a technical reviewer and historian with the National Parks Service, felt that:

In many cases the survey was incredibly outdated. They had done a big push at the bicentennial and that was probably the last time they looked at shoreline resources unless there were economic issues. The data wasn’t able to be shared with our colleagues at emergency management because it wasn’t digital. That’s why [the HPO staff] had to go out in the car. They had to see the current condition because they didn’t have that on hand. That’s a time suck. If you have a programmatic agreement, it’s typically a three-day turn-around because there’s life safety issues. If you don’t have baseline data, you are at a disadvantage.\textsuperscript{134}


\textsuperscript{134} Jennifer Wellock. Telephone interview with Chuck Hovanic, April 5, 2016.
While the “pink & green” survey that facilitated the Programmatic Agreement between the HPO and FEMA was innovative, there were many shortcomings that could have been avoided with a more formal survey of historic resources conducted before the storm. A HPO employee involved in the survey admitted, “Well in some places we were being asked to look at places that were previously identified as eligible but had experienced a lot of damage. Some of the FEMA employees wanted to push us towards, ‘Okay, now reevaluate: Is this still eligible?’ Sometimes in the morning, if you had some familiarity with why a property was significant, and the damage was obvious, there was some room for discussion. But at four in the afternoon [when] you didn’t know why we said the property was eligible to begin with, and it was in a large district...” the assessment may have been less thorough.\textsuperscript{135}

Without a firm grasp of these coastal historic assets, it should come as no surprise that there were no comprehensive emergency preparation plans for historic preservation in place before Hurricane Sandy hit. The diverse character of the federal, state, and local actors involved in preservation brought a distinct set of strengths, weaknesses, priorities, and strategies to the table. However, the cooperation between these parties developed in an ad hoc manner as each organization found their unique role. FEMA’s most important contribution to preservation in New Jersey was the aforementioned historic resource survey of 93 square miles area affected by the storm. Done primarily to streamline the Section 106 process, these surveys were fairly simple and were by no means comprehensive. However as a FEMA surveyor noted, “Because there never had been a comprehensive survey, you needed to start with something not comprehensive. If you

\textsuperscript{135} Andrea Tingey.
do it in an extremely detailed manner and you wait ten years to do something about it, then a lot of those details are gone…Would there have been one otherwise? No. Would it have been worth the money? No...It was good for the HPO because we gave them a survey for free.”

While the HPO had neglected to update their surveys of the shore for decades, the “pink and green” provided a foundation upon which to inform future decision-making for coastal resources.

Learning from the experience following Superstorm Sandy, the Historic Preservation Office proactively surveyed vulnerable coastal areas with little previous documentation. Cumberland County, a largely rural county along the often-forgotten shore of the Delaware Bay, was the focus of efforts that, according to Andrea Tingey, were “one hundred percent based on vulnerability, lack of knowledge, and the realization that had the storm taken a slightly different course we didn’t feel like we could have done pink and green because we didn’t feel like we knew well enough how to see that place.” Tingey describes the development of the survey process in greater detail:

Clearly, the shore was the most impacted, but there was a huge surge zone along the bay shore as well. As paltry as our knowledge was about the Atlantic shoreline, our knowledge about the bayshore was much, much less. A couple of us had been down there, just out of curiosity, and saw enough to know that it’s a very vernacular landscape. It’s difficult for us to make sense of what we’re seeing because it’s also a very retardataire landscape. So you look at something and you think ‘Oh, that’s first quarter of the 19th Century,‘ and it’s really like 1925. The way that the disaster response came, all the attention was to the shore. Cumberland County didn’t get any of the Housing and Urban Development money for the recovery because they had poverty, but they lacked sufficient concentrations of population and didn’t qualify in the way that the matrix was designed...So one of the things that we decided to do was take some of the mitigation money from the disaster recovery to go out and adapt the pink and green methodology to do field survey work. We took the surge zone in Cumberland County, buffered it…and created a study area that

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136 Oscar Beisert. Telephone interview with Chuck Hovanic, February 18, 2016.
was roughly the southern half of the county. Then we decided to exclude certain areas of population, like Millville, Bridgeton, Greenwich, areas where there had been some previous survey work or areas that could really suck a whole survey effort in and of themselves. Then we’ve been going out in a car, putting a GoPro on the driver’s side, with a driver, navigator, and two photographers. We tiled the whole survey area to create map pages and we loaded into the GIS everything that had been previously surveyed, everything that was on the Cumberland County, New Jersey, and National Registers, and everything on the online historical marker database. Our GIS guru then went into the tax assessors’ data and pulled everything that had a construction date before 1970 and treated a layer of target properties. We’ve been grinding through, driving every single mile of public right of way, and evaluating targets and looking to see what targets didn’t pop up because of inaccuracies in the tax data.137

By adopting a methodological and informed approach to surveying, HPO staff were able to address the shortcomings identified the HPO-FEMA assessment survey, such as the exclusion of vernacular landscapes and the effects of fatigue surveyors’ assessments, that could have been avoided with a more formal inventory of historic resources.

A majority of the funding for post-Sandy preservation came from the $47.5 million appropriated from the Historic Preservation Fund by the federal Disaster Relief Appropriations Act of 2013. This money was allocated to the National Park Service by way of the U.S. Department of the Interior, which then funneled around $40 million to four the most severely affected states.138 The NJ HPO received around $13 million of this money, using around 16% for its own purposes and distributing over $11 million directly to property owners through subgrants

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137 Andrea Tingey.
while only using around 16% of the money for its own purposes. The Deputy State Historic Preservation Officer described the coordination that followed:

There was some interaction. Preservation New Jersey was kind of at its nadir at the point, so they were not a player in that real sense. There were a couple of people, like Debbie Kelly, doing some stuff so that worked. The New Jersey Historic Trust has money, so they were doing their own thing. They really stepped up when it came time to give out grant money because they had the experience to do that. So that was perfect. They just slotted in with what they know how to do. They did some other stuff too. They did historic structure reports and updated guidance with some disaster-preparedness, sustainable stuff built in.

While the coordination might have seemed effective in retrospect, the initial process of identifying roles wasted crucial time. As previously noted, the HPO’s recovery work did not begin until late November, almost a month since the storm made landfall and long after FEMA had been deployed in the field. Additionally, a surveyor contracted by FEMA noted, “in spite of the fact that the New Jersey Historic Trust had a Sandy point person and was the only statewide that had interest in historic buildings (which FEMA is supposed to notify for Section 106), FEMA never notified the Historic Trust. FEMA sometimes omitted contacting municipalities, but always neglected to contact the Trust.” Until they began implementing the HPO’s subgrant program, ineffective communication left the Trust’s financial resources and extra manpower sitting in its office in Trenton as surveyors were down at the shore.

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140 Daniel Saunders.
141 Mary Delaney Krugman, Telephone interview with Chuck Hovanic, February 2, 2016.
As heritage practitioners at the state level were grappling with damage from Cape May Point to Middletown, local preservationists, particularly those in communities with Certified Local Governments, served as the eyes and ears at ground zero. Before they could send staff out in the field, “the HPO solicited and collected anecdotal information about damage to historic properties owned by individuals, nonprofits, and local governments throughout the state through our website and other electronic media.”

While surveyors were able to make general characterizations regarding a structure’s damage, local preservationists’ constant presence in the community and strong rapport with property owners produced a more thorough understanding of the challenges facing a historic site. Seeing houses still on their foundations with little visible damage, FEMA and state surveyors marked most homes in the borough of Beach Haven as “no damage.” According to committee member Jeanette Lloyd, the borough’s Historic Preservation Advisory Committee called on the HPO to “come down here and tell us how we can save this thing. You tell me how to tell my people how to save this thing.”

However, upon touring six houses, the HPO staff soon discovered more insidious “slow-burning damage” in the form of mold and interior water damage and approved the demolition of some structures.

While this strategy worked in towns with proactive and vocal preservationists, like Beach Haven, it proved ineffective in places without a significant year-round population vested in retaining community character. Wellock, the NPS service technical reviewer, saw the exclusion of preservation from statewide disaster mitigation plans and municipal master plans as a national issue:

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143 Jeanette Lloyd.

144 Andrea Tingey.
Planning isn’t very sexy these days. It’s ignorance. It’s not willful. They don’t understand that if you’re not in the mitigation plans for your Office of Emergency Management, then you are not considered when the money comes in. So you need to get in the plan for the next one. We discovered this in Alabama when they had a tornado, and we said, “How about we do GIS for all the counties?” At FEMA’s mitigation office they said, ‘Well it’s not in the plan. If you had identified this before the event…’ They go through the approved hazard mitigation plan and see what was listed as a priority project, they might be “sewers, floodwall, or upgrades to broadband.” ‘Cultural resources’ is a boilerplate plan that links us with fish and biology: ‘Historic properties are in the area and this would be managed in the event of a disaster within the SHPO.’ It doesn’t articulate a real desire to keep them, so when the money comes in, that’s where it goes. Nobody is going to care.\textsuperscript{145}

This is a double-sided issue, in which preservationists fail to adopt hazard mitigation into their master plans and communities exclude preservation from their hazard mitigation plans. Wellock continues:

The main thing is integrating preservation policy into these places. HUD has the same kind of planning document that they go to after a disaster, of course, no one in the preservation community has tapped into that plan to say that historic resources are important…I looked up the City of Newport, Rhode Island. We know there’s big money in preservation. Everyone goes to visit the mansions. Their city plan in 2008…talks about how preservation is part of the economy and gives a map of the districts. It doesn’t necessarily say that they want anything. It doesn’t suggest that giving up to date documentation would be good, it doesn’t say that they are on a shoreline and that potential inundation is an issue. They updated that in 2014, so they are trying…The City of Annapolis is good. The National Trust has put a lot of money into it. I think it’s important. It’s unfortunate that Annapolis’ is economically a little bit different than the rest of the country. The New Jersey Shore vs. Annapolis: They might have more resources.\textsuperscript{146}

In fact, the New Jersey Office of Emergency Management’s [OEM] 2014 State Hazard Mitigation Plan addresses historic preservation once, simply stating that it “coordinates with state and federal

\textsuperscript{145} Jennifer Wellock.
\textsuperscript{146} Ibid.

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programs affecting natural hazard mitigation including open space conservation, historic preservation, water resources management, dam safety and shore protection.” The 2013-2019 New Jersey Comprehensive Statewide Historic Preservation plan proves no more helpful. Under “Goal 1: Use historic preservation as a tool to strengthen and revitalize New Jersey’s state and local economies in a sustainable manner,” the plan simply lists the aim to “assist individuals and organizations in disaster preparedness including the effects of sea level rise.” Without any clearly articulated strategy for promoting resilience or responding to disasters, it is unsurprising that preservationists’ responses were largely reactive.

Of the 47 New Jersey municipalities that border the Atlantic Ocean, only 22 (47%) had their master plans easily accessible online. Of these 22, 15 (68%) mentioned historic preservation in some form as a goal within their plan. However, none of them addressed historic resources in the context of recovery, adaptation, or resilience. Even towns that included a historic preservation component in their master plan, like Brick Township, Cape May, Ocean City, and Point Pleasant Beach, failed to address heritage within their separate Floodplain Management Plans. This is as much the fault of unconcerned preservationists as it is seemingly apathetic planners. In the “Log of Stakeholder Interactions” appendix of Point Pleasant Beach’s 2015 Floodplain Management Plan, the borough’s Historic Preservation Commission was contacted with no response.

The only instance where a planning document effectively linked a municipality’s historic resources with resiliency was the “Development of Climate Change Adaptation Elements for Municipal Land Use Plans” report produced for Ventnor City. The report maps out historic resources identified by the HPO and overlays them with both the potential storm surge for a Category 1 Hurricane and projections for sea level rise. Referencing the work done in Annapolis, Maryland, the report suggests that “One way the City can collect data on historic properties and their vulnerability to climate change impacts is to create a Historic Preservation Plan taking sea level rise projections and storm surge inundation into account. The plan should list the characteristics of each building, and then address architectural and structural measures to make them more resilient to climate change.”

Additionally, New Jersey’s Department of Community Affairs sponsored a Post Sandy Planning Assistance Grant Program “to support long range planning for community redevelopment in the municipalities and counties sustaining damage from Superstorm Sandy.” Of the 7 municipalities on the coast with published Strategic Recovery Planning Reports, 5 mentioned historic preservation. However, most of the documents only paid lip service to a community’s heritage. For instance both Berkeley Township, a large rural township with only a thin strip of coast on the Barnegat Peninsula, and Point Pleasant Beach, a densely developed borough with amusement attractions and a boardwalk, used identical wording for their goal to: “Encourage the

retention of established residential neighborhoods and the rehabilitation of the county’s older housing stock [and] facilitate participation in home rehabilitation and historical preservation grant programs, where applicable.\textsuperscript{152} Home rehabilitation may help to improve the structural integrity of existing housing stock. This, in turn, provides extra security and protection during extreme weather events, such as hurricanes and storms."\textsuperscript{153}

At the county level, only Atlantic and Monmouth Counties include preservation goals within their Natural Hazard Mitigation Plans.\textsuperscript{154} They both list all of the historic and cultural resources identified on the State and National Registers of Historic Places, with the acknowledgment that “inclusion in this data set does not preclude the existence of other historic properties or sites not within this category or as yet unidentified.”\textsuperscript{155} However, as noted previously, these listings were produced by surveys that were outdated and limited in scope. Monmouth County’s plan, produced in 2009, takes this inventory a step further by illustrating the exposure of historic resources to the hazards of flooding, wave action, storm surge, coastal erosion, dam failure, landslide, and wildlife, using GIS data provided by the HPO. Although the plan fails to take this information a step further by prioritizing resources and outlining mitigation strategies, it nonetheless provides a succinct depiction of which hazards threatened which resources in the county. While the inclusion of historic preservation within a local government’s strategic plan

indicates an awareness of the importance of heritage, these token statements and generalities prove ineffective when resources truly come under threat.

Inserting heritage into broader discussions of community planning and disaster recovery requires active voices that assert the importance of preservation. Once again, the Beach Haven Historic Preservation Advisory Committee [HPAC] serves as an excellent example. Seeing the construction of pumping and drainage infrastructure as important to the long-term health of the borough’s historic district, Jeanette Lloyd explained, “we know that if we wanted this change we had to be part of the master plan system. Our master plan is your road map for your town or city, and it has to be done every ten years. It’s mandated by law. So we made sure that two of us were on the master plan committee, and part of the master plan committee is infrastructure.”

The steps taken by individual actors are encouraging signs. However, the processes of identifying vulnerable historic resources and solidifying preservation’s role in strategic planning requires large shifts in policy and thinking on the part of both preservationists and the community at large. This corresponds to the assertions of Appler & Rumbauch’s “Building Community Resilience Through Historic Preservation.” Examining the relationship between historic preservation and disaster planning, Appler & Rumbauch attempt to answer the question: “To what degree do state historic preservation plans and state hazard mitigation plans reflect an effort to connect planning processes or goals?” Seeing the role of historic resources in contributing to a community’s social stability and economic recovery following a disaster, the authors argue that the emerging discourse on resilience presents an opportunity to integrate preservation into
hazard mitigation. While there are many instances of historic resources being effectively incorporated into disaster preparedness, there is no clear understanding regarding the degree to which practitioners in these two fields coordinate to set policy priorities. According to their findings, 50% of all state historic preservation plans “make explicit mention of disaster or emergency planning,” but 60% of state hazard mitigation plans fail to “include a representative from historic preservation on the core planning team.” According to their metrics, there is a weak connection between hazard mitigation and historic preservation in New Jersey’s state plans.157

Flood Insurance

Despite the destructive storm surge of Hurricane Sandy and the increasing likelihood of long-term inundation by rising seas, heritage practitioners along the Jersey Shore remain preoccupied with the threats posed by changes to the National Flood Insurance Program [NFIP] and its treatment of historic resources. As noted previously, the NFIP originally provided subsidized insurance rates for structures built before Flood Insurance Rate Maps [FIRMs] were issued for that particular locale. So long as there was no substantial damage or alteration (totaling more than 50% of the building’s market value), these pre-FIRM buildings were grandfathered into the program. Structures listed on an inventory of historic places, or deemed eligible for listing, are further protected through a provision that allows municipalities to either “exempt historic structures from the substantial improvement and substantial damage requirements of the NFIP” or

“place conditions to make the building more flood resistant and minimize flood damages, but such conditions should not affect the historic character and design of the building.”

Exemption from substantial improvement requirements operates with the assumption that owners of historic properties, wishing to avoid the higher insurance rates that come with a loss of historic status, will be encouraged to maintain historic integrity when altering their building. However, this strategy of providing relief for historic properties in flood zones neglects the fact that these buildings are still vulnerable to the very dangers that the NFIP was designed to mitigate against. In line with its three accepted strategies for flood hazard mitigation (elevation, relocation, or demolition), NFIP policy treats flood-proofing historic properties as an all-or-nothing scenario. A building can either meet the requirements of the NFIP through elevation or retain its historic integrity.

These criticisms almost became irrelevant with the passage of the United States Congress’ passage of the Biggert-Waters Flood Insurance Reform Act of 2012. After Hurricanes Katrina, Rita, Wilma, and Ike pummeled the southeast between 2005 and 2008, the NFIP incurred a debt of over $18 billion. The particularly destructive nature of these storms was exacerbated by the fact that around 20% of all policyholders pay discounted insurance rates. In an attempt address the unsustainability of the NFIP, the Biggert-Waters Act “required the NFIP to raise rates to reflect true flood risk, made the program more financially stable, and changed how Flood Insurance Rate Map updates impact policyholders.” The law made “no special provisions or exceptions for

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historic buildings. For rating purposes, historic buildings are to be treated the same as any other
Pre-FIRM properties.” Pre-FIRM primary residences located in special flood hazard areas would
see a 16-17% increase in their insurance premiums. Non-primary residences, businesses, and
severe repetitive loss properties (where claims payments exceed the fair market value), would see
a rate increase of 25% a year until reaching full actuarial rates. Biggert-Waters did not explicitly
modify any of the provisions for historic structures in the NFIP, but the wording of the legislation
did not grant FEMA any discretion in implementing the rate increases. Therefore, “while historic
structures can still be exempt for floodplain management purposes, under BW 12 there is no flood
insurance exemption, and they will be rated accordingly.” This created a paradoxical policy in
which owners of historic properties were not required to elevate their homes while simultaneously
being punished for not doing so.

Hurricane Sandy hit within months of the passage of the Biggert-Waters Act. New Jersey
had $54.5 billion of NFIP coverage in force in 2012 and the proposed insurance rate increases had
not taken effect yet. The uncertainties surrounding the new flood insurance policies meant that
recovery and reconstruction would be a long and complicated process for affected property
owners. It is therefore no surprise that Senator Robert Menendez of New Jersey spearheaded the
Homeowner Flood Insurance Affordability Act of 2014 to “delay the implementation of certain
provisions of the Biggert-Waters Flood Insurance Reform Act.”159 The provisions of the bill
included the repeal of certain rate increases, the restoration of grandfathered rates for primary

\[159\text{An Act To delay the implementation of certain provisions of the Biggert-Waters Flood Insurance Reform Act of 2012, and for other purposes, Public Law 113-89, 2014.}\]
residences, and the mandate that premium estimates take into account “the flood mitigation activities that an owner or lessee has undertaken on a property, including differences in the risk involved due to land use measures, flood-proofing, flood forecasting, and similar measures.” However, second homes and businesses, even those that were exempt from elevation as historic structures, would still face the 25% increase in insurance rates. Now $24 billion in debt, the NFIP comes up for reauthorization in 2017 and the provisions of the Flood Insurance Affordability Act will likely come under scrutiny.

However, the consideration of other flood mitigation measures, in addition to elevation, when determining insurance rates has the potential to promote the integrity of historic properties while reducing the burden placed on taxpayers by way of the National Flood Insurance Program. While NFIP’s accepted strategies of elevation, relocation, or demolition effectively ensure that a building is out of the reach of floodwaters and thus subject to reduced insurance premiums, there are many negatives associated with limiting itself to three strategies:

- They are the most expensive.
- Relocation is not always feasible.
- Not all structures are worth the cost to move or elevation.
- These strategies alter the historic appearance of buildings and neighborhoods.
- Demographics change as elderly and low income housing is replaced by more expensive and compliant homes.
- Historic communities are displaced.\(^{160}\)

The inflexibility of FEMA’s approach is partially to blame for the large number of grandfathered properties with subsidized rates. Rather than providing thousands of pre-FIRM

\(^{160}\) Mary Delaney Krugman. 2015. "Retrofitting For Resilience: Case Study: Floodproofing A Camp Meeting Cottage (Ca. 1885), Ocean City, NJ". Presentation, LIVING ON THE EDGE Conference, Galveston, TX.
properties with artificially low rates, FEMA could introduce a graduated assessment system that took into account certain floodproofing activities. This would address the social consequences associated with the broad-brush increase in insurance rates and the accompanying mandate for costly elevations. Homeowners would be able prioritize flood-proofing techniques based on individual circumstance. Historic properties in particular would benefit from this more nuanced understanding of flood hazard mitigation.

Mary Delaney Krugman, a practicing preservation consultant, laid out the availability of various floodproofing options and providing guidance for determining their appropriateness when retrofitting historic buildings. According to FEMA, floodproofing should only occur in the nonresidential portions of a building. The techniques used can be broken down into two broad categories: dry floodproofing with watertight barriers and wet floodproofing that uses flood-resistant materials. Dry floodproofing can be achieved with a range of systems that are deployed when the threat of flooding is imminent. While these barriers attempt to hold back the floodwaters, wet floodproofing “includes permanent or contingent measures applied to a structure or its contents that prevent or provide resistance to damage from flooding while allowing floodwaters to enter the structure or area.” Krugman asserts that this technique “is appropriate for older and historic buildings in “A” flood zones or low risk areas that should not be elevated because of potentially adverse effects to historic character, physical constraints, or a functional relationship to the water. Before selecting a treatment for their building, a property owner should ask two key questions:

- “Would not elevating expose a historic building to a substantial risk of loss or damage that would affect its long-term preservation?”

\[161\] Ibid,
“Would elevation adversely affect historic character?”

Upon choosing the method of flood-proofing, the owner must identify the building’s historic significance and establish the character-defining features that must be retained in order to convey this significance.

Krugman’s vacation home located just outside of the boundaries of Ocean City’s historic district, serves as an excellent case study for appropriately flood-proofing a historic home. Built in 1885, the house is a surviving example of Ocean City’s origins as a religious camp meeting community. With their origins in open-air revivals in the early nineteenth century, American camp meetings gradually evolved from communities of canvas tents to ornamented wooden cottages. Even as the houses grew in size, they continued to be built close to the ground, thus resembling tents. One of the camp meeting cottage typology’s main character-defining features is its proximity to the landscape, which obviously came into direct conflict with elevation requirements for buildings in flood zones.

In 2010, an elevated addition was added to the rear, but the building’s historic front was allowed to remain at grade thanks to the historic structure variance in Ocean City’s floodplain ordinance. Therefore, the cottage was subjected to eighteen inches of floodwater when Hurricane Sandy struck, ruining the carpets and insulation installed by the previous owner. The flooding was exacerbated by inappropriate construction methods employed over many years, the use of materials that promote mold, and highly absorbent fiberglass insulation. The significant damage
prompted Krugman to utilize an array of wet flood-proofing measures that would promote the resiliency of the cottage without destroying its character-defining relationship to the landscape.

First, the foundation was strengthened by tying in the original un-grouted concrete blocks to a concrete slab, adding stability to the historic foundation while allowing flood waters to flow through. Krugman then flood-proofed the cottage’s walls, using only flood-resistant building materials, such as a concrete wallboard and a pressure treated wood sill, below the base flood elevation [BFE]. To facilitate drying after a flood and consequently prevent the spread of mold, venting slots were introduced into the baseboard and crown molding while latticework opened up the “understair” to promote air circulation.\textsuperscript{162} The electrical panel and connections to the floor heating system were relocated above the BFE. In the historic section of the house, Ground Fault Interrupter receptacles were installed, which immediately shut down in the presence of water. Instead of carpeting, movable area rugs were laid out on a moisture resistant hardwood floor that could be easily cleaned after a flood. Pulleys were installed to lift new lightweight furniture above water levels. While the finished product resulted in the loss of some historic fabric during retrofitting and will require remediation and some repairs following the next flood, wet floodproofing was “less expensive than elevation; less destructive, wasteful, and disorienting than demolition; and helped preserve community identity.”\textsuperscript{163}

Despite the care and expense taken to minimize damages in future storms, the reformed NFIP would charge the same flood insurance premiums as they would for an unaltered structure.

\textsuperscript{162} Ibid.
\textsuperscript{163} Ibid.
sitting at grade-level and exposed to all the risks of flooding. According to Krugman, this is because the NFIP will charge rates that reflect the “actual risk” of flooding, rather than the “actual risk” of loss. While elevation, relocation, and demolition will forever remain the only ways to positively prevent damage in a floodplain, there are many alternative forms of mitigation that prevent loss (and the associated insurance claims) without compromising a building’s historic integrity.

**Interpreting Significance & Appropriateness**

Changes to flood insurance policy requires massive shifts in the ideologies of private and public sector players. Preservationists have a role in advocating for policy changes that better meet the goals of preservation, but they can make a bigger impact in the short-term by better articulating design standards that meet the NFIP’s elevation requirements while also maintaining historic integrity. In fact, the cycle of destructive storms and the adaptation that follows is woven into the history of the shore. In 1962, a particularly powerful nor’easter, known as the Ash Wednesday Storm, changed the landscape of the Jersey Shore forever. On Long Beach Island, twenty-five foot waves washed over the island, leaving it completely underwater for several days, carving three new channels between the ocean and Barnegat Bay and damaging or destroying over 80% of its structures. Ultimately, 21,533 structures in New Jersey experienced significant flooding. The widespread destruction catalyzed a series of proactive measures at the local, state, and federal level, including “the engineering of shore protection structures, beach replenishment projects, dune

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164 Ibid.
construction, improved siting and building codes, and the establishment of sound floodplain management through the National Flood Insurance Program [which] all contributed to reducing the vulnerability of New Jersey’s coastal communities.”

For the first time, elevation requirements were introduced in localities along the shore, ensuring that some rebuilt towns would bear little resemblance to their pre-1962 character.

Unsurprisingly, the Ash Wednesday Storm of 1962 served as a rupture point in the history of the shore that is reflected in the interpretation of historic resources. For example, the National Register of Historic Places nomination for the Beach Haven Historic District concludes that “As the result of a fierce nor’easter in 1962, over 270 houses were destroyed island wide. In Beach Haven, most beachside cottages were destroyed. These cottages were not rebuilt but were replaced by concrete block motels. The storm’s devastation resulted in new local building codes and construction techniques that significantly changed the character of shore architecture beginning in the 1970s, with the living spaces of residences raised to the second floor on pilings.”

Rarely interpreted, however, is the storm’s catalyzing effect on the preservation movement in Cape May, now a National Historic Landmark District. “Before the storm, Cape May had survived half of the 20th century through “benign neglect” with little new development but with loyal summer residents who returned year after year, many to the cottages built by their ancestors. By the early 1960s, a once fashionable Cape May was not only dated and old-fashioned but severely damaged by the storm. This destruction forced residents to consider state and federal

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166 National Register of Historic Places, Beach Haven Historic District.
funding in the reconstruction of their town. The budding preservation community was able to successfully advocate for the use of federal money in restoration projects, and increased recognition of the importance of these resources is reflected in the city’s 1963 master plan which “mandated a complete assessment of the town’s historic resources.”

A more in-depth interpretation of the history of storms in shaping the built form of the Jersey Shore, both through destruction and preservation, would allow heritage practitioners to define the integrity and significance of coastal historic resources in more flexible ways.

Recognizing adaptation as part of a structure’s historic significance may be easy. Determining how this significance can be appropriately reflected in the building’s character defining features proves more problematic. It seems that almost every shore town with a historic preservation commission has a poster child for inappropriate elevation. In Cape May, most of the applications that went through the city’s Historic Preservation Commission review process following Hurricane Sandy were requests to replace windows, siding, and roofs. Last updated in March of 2013, the City of Cape May’s ordinance regarding Flood Damage Prevention includes the provision that “Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure’s continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.”

Despite this legal exemption for historic properties, the elevation of a single cottage at 329 Congress Street sparked a debate within the

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168 City of Cape May, New Jersey, Ordinance § 265 (2013).
Superstorm Sandy resulted in substantial damage (exceeding 50% of the building’s market value) to the house, requiring the property owners to bring the building into compliance with the flood-damage-resistant provisions identified in the aforementioned city ordinance. The property was raised from an existing first floor elevation of 6.26 feet to meet the required height of 12 feet, with a front porch and a new set of stairs added on. The zoning board issued a variance for the property, reducing the minimum setback requirements needed to build the porch and thus allowing the owners to slightly move the building for aesthetic effect.

Before elevation could occur, the work also needed to be approved the HPC. At the January 28, 2013 meeting, “Members discussed at length the misfortune of losing the English Cottage [architecture style], indicating that elevating the property and introducing other exterior changes will give the structure another look. Concerns of the streetscape being affected were discussed at length.” Nevertheless, the conceptual approval of the project passed unanimously “with the

\[^{169}\text{November 23, 2015 Meeting Minutes, City of Cape May Historic Preservation Commission.}\]
request that the house be set back on the property to reflect the streetscapes in the neighborhood, that the porch roof be lowered in its elevation and given treatment of either simulated flat metal, acromax, or cedar shakes in appropriate color to match the country look of the house, the lattice be done in a privacy lattice, the entrance to the rear area be done in lattice to lower the elevation bringing it back to the cottage look, and that the return peak centers over the front door be treated with cedar shake.”

Despite this careful consideration of the proposed alterations, in November of 2015 the owners of 329 Congress Street applied for the removal of their property from the historic district’s list of contributing properties because of the previous changes to the structure that were necessary to meet FEMA requirements. At the November 23, 2013 meeting of the HPC, the applicants testified that:

On October 20, 2012, Sandy hit and because we sustained damage we had to raise our house 12 feet. Along with this was the requirement of moving the house back because of the sidewalk setbacks. This caused the destruction of all the flower beds, bulbs, trees, bushes, and perennials. Also, the three doors into the house needed stairs to allow entry. We are now higher than sea level. We no longer can hear the people enjoying the look of the house. This is a house on stilts; the area under the house is four feet of dead space. A fine house, but not a cozy cottage. The charm is gone.

According to the meeting minutes, “the members debated the issue at length and were recommended that the application be tabled because a few members felt it retained its historic significance.”

This stalemate caught the attention of a local newspaper, the *Cape May Star and Wave*, which referenced the statements of Commissioner Corbin Cogswell and Chairman Warren Coupland. Cogswell asserted that “the HPC worked with the owner of the home to ensure the changes were keeping with the design of the house [and] the basic shape of the house remains despite the fact that it is now elevated.” Even so, Coupland felt that “so many changes were made to 329 Congress St. that it would be hard to argue the home continued to be a contributing structure.” Cogswell said the changes were dictated by floodplain changes and that the question of changing the home’s rating could recur all over Cape May.” Homeowners throughout the city, allowed to “sensitively” elevate their properties under the HPC review, could then use the alterations to justify downgrading their properties to non-contributing status. This reduced rating would arguably loosen the infamously strict standards upheld by the Cape May HPC for key properties in the historic district.172

Before the building’s historic status came under official scrutiny, the elevation of 329 Congress Street already had consequences for other properties in the district. On August 23, 2013, a little over a month after the HPC gave final approval for the elevation of 329 Congress, the owners of a similar house next door at 325 Congress Street applied to elevate their house. Similar to its northern neighbor, “the structure [was] a 1925 Sears House that must be raised to meet FEMA requirements. The house was built at ground level and incurred flooding...that collapsed a section of the main floor” The owners introduced plans that included “a 9 ft increase in height (total 13ft

above sea level to meet FEMA), with replacement of all windows, new windows on lower level (wood), new siding will match cedar shake (same for same) and introduction of a staircase to the archway that exists (side entrance), along with a lower level floor.”173

Once again, “members were understanding of the applicant’s position but shared their concerns at length regarding the cottage style structure that will be altered because of the elevation,” but ultimately gave unanimous conceptual approval with the requirement that the elevation be reduced by one foot to match the height of 329 Congress Street.174 Of the three English Cottage style homes that stand at the corner of Congress Street and Claghorne Place, only one remains at its original height, negatively affecting the historic integrity of the streetscape. Cape May’s well-established preservation community, as well as the relatively low number of damaged properties in the historic district, fostered an intense discussion regarding the effect of elevation on the historic integrity of properties. While the community seemed to accept the inevitably of raising properties as a response to FEMA’s requirements, preservationists failed to frame elevation as tool within the context of adapting to the long-term threats of climate change and sea level rise.

The HPO identified elevation as a common, but problematic response for property owners all along the Jersey Shore. In Ocean Beach, a uniform neighborhood of small one-story houses, seemingly random elevations, many of them much higher than what was required by the flood insurance maps, destroyed the character-defining consistency of the community. In fact, Sandy

174 Ibid.
recovery and reconstruction served as a crash course in flood-proofing and substitute materials for HPO staff.

These still-developing standards for appropriate adaptation were most notably put to the test during the regulatory review for the elevation of the Bay Head Yacht Club. Platt Byard Dovell White Architects were hired to elevate and restore the 1920s clubhouse that was constructed above the Barnegat Bay. Hurricane Sandy struck in the middle of the project, forcing the architects to revise their approach and settle on a design that “honors the Colonial Revival idiom of the original architecture, restores the role of clubhouse in its historic context, and celebrates the relationship of building to water.”

This entailed raising the building by over ten feet, constructing a new two-story wing, and entirely restoring the historic facade, so that the building barely resembled its pre-Sandy condition. Serving as the home of an exclusive organization with a long history in the community, the Bay Head Yacht Club’s historic and architectural significance made it a contributing property in the Bay Head Historic District.

Despite the drastic alterations, the HPO determined the intervention produced no adverse effect. According to staff, the elevation and expansion of the historic property were viewed with a focus of their impact to the historic district, namely how the yacht club’s size and location related to other properties, rather than how they affected the individual building. In fact, the HPO saw the additional width on the structure as balance to the effects of the elevation. As Andrea Tingey stated, “If you didn’t know what it looked like before, it’s not jarring...I was not in disagreement

with the office, but I was surprised by how positively we all viewed the project.” Jonathan Kinney asserted that “we have to balance how much impact there is to the building” with the acceptance that alterations are necessary if owners plan on “keeping the building there in that location and avoiding a future complete loss...We’re dealing with the threat of climate change, and it’s kind of a net benefit weighing.”

176 Andrea Tingey
329 Congress Street: Before & After.

Image Sources: City of Cape May Historic Preservation Commission
Evidently, guidelines for appropriate elevation would provide clarity for heritage practitioners dealing with flood-proofing issues for the first time. This is not to say that relevant materials are not already available for public use. The National Flood Insurance Program’s *Floodplain Management Bulletin for Historic Structures* provides accounts of good examples of elevation, flood-proofing, and relocation, but lacks any detailed guidelines for implementing these measures. On the other hand, two publications produced in the aftermath of Hurricane Katrina provide comprehensive yet highly contextual interpretations and recommendations for elevation. Establishing a continuity between the historic development of the city’s iconic building typologies and the reconstruction following Katrina, FEMA’s *History of Building Elevation in New Orleans* asserts “that the appearance of these houses and the methods of elevating them have changed, but the reasons that prompted their raising have remained the same.” This history plots out the circumstances that spurred elevation, identifies historically prominent house moving firms, illustrates the raised house types of the New Orleans area, and defines building elevation designs and technologies, all while providing examples of buildings being appropriately restored and elevated after Hurricane Katrina.

In Mississippi, the Mississippi Development Authority published its *Elevation Design Guidelines for Historic Homes in the Mississippi Gulf Coast Region* to “provide recommended elevation design guidance for the rehabilitation of historic buildings funded through MDA programs. The goal of this effort is to reduce risk from future flood events through elevation, and to preserve the physical integrity and character of historic buildings. Specifically, one of the most important outcomes of this effort is to limit the total height of elevation for historic buildings so
they maintain their historic character in relation to other historic buildings within each local historic district, thus protecting the architectural qualities of each historic district as a whole.” The document uses historic precedent and local context to provide guidance on the site, architectural, and foundation designs of properties being elevated.

These codified elevation histories and standards are entirely absent down at the Jersey Shore. On the Hurricane Sandy Cultural Resources Recovery page of the New Jersey HPO website, the only information available on the elevation of historic properties is a link to the guidelines for the Mississippi Gulf Coast Region. Even in Cape May, the Historic Preservation Commission’s eighty-one page Design Standards book, which addresses everything from Gothic Revival finials to the installation of dumpsters, only references flood-proofing once when discussing the historic use of berms to both give a house grandeur and protect it from flooding. While most preservationists agree that guidelines are needed, the party responsible for creating them remains up for debate. Many feel that the Secretary of the Interior’s Standards for the Treatment of Historic Properties make it difficult to balance mitigation goals with those of maintaining historic integrity. With exemption from elevation requirements contingent on National Register-eligibility, which itself relies on the Secretary of the Interior’s standards, owners of historic properties who choose to elevate sensitively to reduce vulnerability run the risk of compromising the building’s historic integrity, which may ultimately require it to be elevated to the BFE for that flood zone. Given the influence of these standards, the dream scenario, as seen
by Jennifer Stark of NJHT, “would be that the Park Service actually updates the standards. Right now it seems like the states are trying to tackle that individually.”

While they had developed an understanding of what constituted an appropriate elevation following the storm, in early 2016 the HPO still remained in the contract negotiation process regarding the development of clearly-articulated elevation design guidelines. These would not be mandatory, but would nonetheless serve as a useful resource for owners of damaged historic homes that are required to elevate their property in the face of decreasing federal subsidies for flood insurance.

Even with funding available, defining a uniform set of standards for elevation along the Jersey shore would be a difficult task. Mary Krugman and Michael Calafati, AIA (an architect practicing out of Cape May) identified twenty major architectural styles found at the shore, ranging from the “cottage vernacular” to mid-20th century modern. Given this diversity, specific elevation standards catering to the unique needs and context of each community would be the most ideal scenario. While the Beach Haven already produced a design guideline book similar to Cape May’s, its HPAC received funding from the HPO to update it with new standards for elevation. Preservationists in Beach Haven referenced features on historically elevated houses to guide future construction and alterations. Each of the stairways of the “Seven Sisters,” a series of seven elevated houses built between 1926 and 1930, provided a set of templates for appropriate front steps in the historic district. Also included were recommendations for elevating bungalows so that they retained the distinct front roofline with its gable and dormer while simultaneously allowing

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177 Jennifer Stark.
additional height towards the rear. However, the implementation of design standards at the local level is limited to the interest of active governments that demonstrate a commitment to preservation.

At the end of the day, however, Deputy SHPO Daniel Saunders argues that while FEMA and the HPO are positioned to provide funding and aid, it is the homeowner that is deciding how to treat their property. Therefore “the planning really does make a difference. The idea that a community has, even if it’s not ‘planning’ but a shared vision for what they will do to make their community more resilient, is incredibly important. Because if you don’t have that you get hodgepodge. Except for some districts where hodgepodge is their current character, that’s bad for them.”

Even so, the HPO staff agreed that regulation did not necessarily mean preservation. According to them, locales with old money, like Bay Head, or towns that saw economic value in preserving and promoting their heritage, like Ocean Grove or the Wildwoods, were in fact often more preserved than communities with a Certified Local Government [CLG]. Jonathan Kinney, who leads the state’s CLG program, observed:

I think we’ve seen, at least with the CLG communities, that there is that first step, which is knowing what you have. The commissions that are really successful take that to another level and are able to get the word out to the community about what they have and why it’s important. [They show that the reason] why it’s important for the community as a whole, not just the six or seven people on this commission, to care about and try to preserve is because really everyone benefits. So there’s a constant outreach and education effort going on…Beach Haven, I think, does a very good job of that. I don’t think Cape May has to do much of that because it’s so well known. It’s so clear that people are going to Cape May, staying in Cape May, and spending money in Cape May because of the town. Middletown, I really don’t know much about their efforts… It’s not what you would consider a shore community. It’s more bay shore. They’ve got Sandy Hook right there, but that’s

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178 Daniel Saunders.
federal property...I think Ocean City is a fantastic example of a shore community where the district is under constant and very strong pressure from development...They’ve got a National Register district and a local district where the boundaries are slightly different...It’s a tiny district. It’s certainly changed a lot over the years. The commission is in a constant struggle to assert their presence, assert the importance of the district. How many realtors are on the town council? At least two or three. I mean that’s like the trenches of shore preservation right there, and you can see it.179

Acknowledging the varying rates of success for certified local governments, Andrea Tingey asserted that “CLG status is not the answer to the problems. In Beach Haven, it’s because they’re rock stars that they went after CLG and have been able to take advantage of the program to some extent. It’s their intrinsic knowledge base, work ethic, and passion that has made them successful. And I think we’ve benefitted more from Beach Haven’s CLG status in some ways than they’ve benefitted from it. I mean they’ve got some survey projects and some other planning tools, but they’d be rock stars without the program to be honest.”180

**Beyond the Key Challenges**

In the months following Hurricane Sandy, questions began to emerge regarding the efficacy of rebuilding on barrier islands threatened by rising sea levels and increasingly powerful storms. However, in New Jersey, these questions were quickly silenced by the state’s “Stronger than the Storm” marketing campaign that demonstrated an institutional commitment to “Restore the Shore.” An article in Grist, an online environmental magazine, highlights the New Jersey

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179 Jonathan Kinney.
180 Andrea Tingey.
Department of Environmental Protection [DEP] and its failure to even mention climate change or sea level rise in its 2013 “Rebuilding After Sandy” fact sheet:

Of course, it can convey the main information without addressing climate change. And Sandy, like any other storm, cannot be blamed specifically on climate change. But placing rebuilding in the context of climate change — and its promise of higher sea levels and stronger, more frequent storms — would be helpful. For example, in answering the question “What’s the benefit of elevating now if I’m not required to?” the agency writes, “In addition to ensuring that your structure and all of its contents are better protected, many property owners will find that they will recoup the cost of elevating through lower insurance premiums over a matter of years.” Another reason to elevate your beachfront home is that in the years ahead, the polar ice caps will melt, the seas will rise, and your house will be underwater.181

Likely because of its location within the DEP, the state HPO has neglected to prioritize climate change in its hazard mitigation plans. Nevertheless, Deputy State Historic Preservation Officer Dan Saunders gave the ominous forecast that: “The whole state is in denial. I mean with the barrier islands we’re all just going, ‘Sure if you have the money and you can afford the insurance, go ahead and rebuild. Build higher.’ But we all know the barrier island is going to go west.” As he puts it,

It’s also a question of ‘How fast is change going to come?’ It’s a huge question. If the sea level is going to rise six inches in the next thirty years, the homeowner is like, ‘okay.’ But if it’s six feet, it’s a whole different world. That’s this huge unknown. If you’re more [of a] ‘free market lets things decide’ [person], you step back and say ‘We’re not going to do anything.’ But if you’re very proactive, [you think] government should be involved and plan and change...The wild end of that would be: ‘We’re going to move the houses on the barrier island west. Because if you look at Holgate, the barrier island where man hasn’t been holding it in place, it’s moving west. That’s where it’s going to go.’ And obviously you have huge amounts of property value. Any piece of infrastructure has big momentum, and the

shore is a big piece of infrastructure. It’s very hard to move that. That’s why the planning at the local and state level doesn’t seem to be going anywhere.\textsuperscript{182}

Dorothy Guzzo, Executive Director of the New Jersey Historic Trust had a similarly bleak outlook on the long-term challenges posed by sea level rise:

Somebody told me that it’s after your third storm that the conversation starts to happen. Because I saw that conversation nowhere. I saw some people writing things in blogs, questioning ‘What is the right thing to do here? We have the opportunity to re-plan for the future.’ The emphasis was on rebuilding. Everything’s supposed to be rebuilt. I don’t even think that conversation is happening that much. If it is, it’s in small corners, not necessarily by decision makers and policymakers. Somebody told me you had to wait until the third devastation. I don’t know if that’s true, but that’s what I was told. Isn’t that a scary thought: that you have to have another two storms like this for people to sit down saying, ‘What’s the right thing to do?’\textsuperscript{183}

According to staff at the HPO, historic preservation commissions in communities that dodged a bullet during Sandy seemed particularly unfazed by sea level rise and the increasing likelihood of storms in the future.\textsuperscript{184}

Commissioners in Ocean City recognized that the impact of Hurricane Sandy had largely fallen from the popular consciousness of Ocean City residents. However, a week before the interview with the HPC, a nor’easter flooded portions of Cape May County at levels that rivalled those of Sandy. One commissioner noted that, “the storm is going to start to bring some of this to the forefront again. The storm last week was severe enough to get people to start to think about it again. I think Sandy was starting to fade. It did not make it into the district, but if that second tide

\textsuperscript{182} Daniel Saunders. 
\textsuperscript{183} Daniel Saunders. 
\textsuperscript{184} Andrea Tingey. 

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had been a foot higher then we’d be in a completely different situation right now. It would've been Sandy all over again.” Unfortunately, the minutes for the two subsequent HPC meetings make no mention of the recent storm.

Even if the community were galvanized by the most recent storm, one commissioner ominously concluded that, “We were at the bottom fringe of Sandy impact. If you look at the 100 to 500 year storm water mark, you're going to be going into Milmay (around 20 miles inland) before you won’t get your ankles wet. We've just been lucky that it hasn't happened. There used to be a schooner on land in Cape May Court House. Those storms happen. When you take a virgin section of this island and dig a three foot hole, you are going to find three compressed black lines. That’s vegetation that was totally awash. It’s going to happen. It’s just a matter of time.”

Even in Beach Haven, which saw the full force of Sandy, sea level rise did not seem to threaten the stalwart preservation community six miles out to sea. While Jeanette Lloyd acknowledged that their storms were worse, she asserted that:

I’m a science teacher. I know for a fact that the whole universe is all cyclical. We live in a cyclical world. It’s all give and take. If you study the science behind the Earth warming and the Earth cooling, you'll realize that the Earth is going through a transition now and getting warmer. What they don’t want to tell you is how much ice and snow is now building in Antarctica. They don’t want to tell you the ozone layer above the Arctic is closed up, It’s no longer there. Now, what we do have is our glacial melting. Yes, it is definitely, but I think El Niño has more effect on weather system at the present time than global warming does.

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185 Jack Ball.
186 John Loeper.
187 Lloyd.
While this perspective is not unique to those living in coastal communities, it certainly proves more problematic in this setting, especially when decision-makers fail to prepare for the potential threat of climate change. In fact, the values ascribed to historic preservation in Beach Haven remained largely disjoined from the larger discourse surrounding sustainability. For instance, when a federal grant application posed the question: “Are you a sustainable energy community? “ Lloyd remarked that, “well this has nothing to do with historic preservation.”

Rather than recognizing the dense, walkable character of the community, or the energy savings associated with reusing existing buildings, the HPAC saw preservation and sustainability as unconnected goals. This perspective framed preservationists’ understanding of how promoting resilience and protecting heritage interacted. According to Lloyd, the stance of the HPAC was that “it’s not going to affect us that much, but it is going to affect us. I think that the lower houses, the bungalows that were severely damaged, we’ve taken care of by raising them.” Essentially, so long as threatened houses were elevated, the permanent inundation of half of the town was not a primary concern of preservationists. Although Beach Haven has been characterized as one of the most responsive and proactive certified local governments following Hurricane Sandy, preservationists here neglected to solidify a role for heritage in the community’s long-term resilience in the face of climate change.

A paradox emerges in which preservation professionals at the state and local level acknowledge the inevitability of future inundation but fail to incorporate these threats into policy decisions. Deborah Kelly, with Preservation New Jersey, identified it as a statewide “political

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188 Ibid.
issue. It shouldn’t really be. It was a political issue saying, ‘Everything is fine, the shore is open again, without really addressing some of the long-term and short-term problems.’ There are a lot of people still out of their houses, but the long-term problems with future flooding and trying to plan to protect some of the communities...are happening in a spotty way too.” However, Kelly and other preservationists in the state saw the proactive work of the National Parks Service as having the potential to shift policy discourse in the right direction:

I think that they are starting to look at these as major problems over the country. The entire east coast, and a lot of the southeast, have historic resources that are threatened by climate change. However they’re going to look at it, or what side they’re going to come out on as far as triage, I don’t know. At least they’re having discussions about it. Sometimes the top defines the issue. It might not be in the same format that makes it way down to the townships, but when they identify priority issues I think that then all of a sudden it gets more attention and more resources and it helps everybody focus on those issues.  

In fact, the National Parks Service [NPS] was carrying out these conversations right on the Jersey Shore, at the Sandy Hook Unit of its Gateway National Recreation Area. “At the Park Service level, they have a different problem. It’s not ‘Do we put money into stuff? Do we change things?’ It’s ‘How do we make decisions about our fundamental obligation, which is to preserve for future generations?’ And they’ve started to come up with a process for how they decide.”

Ever since Superstorm Sandy, the conversations surrounding preservation at the Jersey Shore have primarily focused on resource surveys, flood insurance, and appropriate elevations. However, Sandy’s floodwaters unearthed a vulnerability to climate change that requires interventions on a scale beyond the scope of the solutions provided above. On the surface, the

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189 Deborah Kelly.  
190 Daniel Saunders.
challenges of sea level rise and more severe storms appear to be outside the purview of the preservation. Others see responding to climate change as a task that is beyond the capacities of preservation agencies. Even if preservationists choose to leave resilience out of their vocabulary. Sandy demonstrated that floodwaters and storm surges do not respect the boundaries of historic districts. As the threats become imminent, preservationists will be eventually be forced to take action regarding the treatment of the resources that they have been entrusted to steward. If heritage practitioners neglect to insert themselves into larger discussions of climate change mitigation and adaptation now, historic properties will not be prioritized when the difficult choices need to be made. Assuming that heritage has the ability to positively contribute to the social and cultural recovery, communities will be less resilient if preservation is excluded from climate change plans.
Chapter 6: Opportunities for Change

Although the scenario described above is not unique to the Jersey Shore, the historic, ecological, demographic, political, and economic factors that contributed to the region’s vulnerability require highly contextual responses to achieve resilient and inclusive outcomes. Acknowledging the strengths and challenges associated with this particular case, the following chapter seeks to make specific recommendations that capitalize on identified opportunities for change. Previous work has provided valuable guidelines, recommendations, processes for decision-making and policy development in the context of climate change. Therefore, a pre-existing framework will be applied better understand the feasibility of implementing various strategies in the particular context of the shore.

In April of 2014, the National Parks Service held its Preserving Coastal Heritage planning session at Federal Hall in Lower Manhattan. Participants, drawn from fields including historic preservation, planning, and cultural resource management, used case studies to develop a decision-making framework that would ultimately inform the Cultural Resources Climate Change Response Strategy currently being developed by the NPS. At the conference, the Chief of Technical Preservation Services at the NPS presented a conceptual diagram illustrating the factors that shape the decisions made regarding the treatment of historic sites threatened by climate change. Before identifying an adaptation action, practitioners should: consider the historic significance, programmatic function, and importance of the resource; identify the different approaches to
climate change adaptation, along with their cost and feasibility; and weigh the impacts climate change against the effects of an action on a resource. Participants in the discussion identified five additional criteria that they felt should influence the decision-making process for treating vulnerable historic resources:

- Value of resources to public/community
- Public input throughout the process
- Focus on public awareness regarding climate change
- Potential for outside partners or funding
- Timeframe/urgency of threats.

However, these decisions needed to be made as part of a larger planning process, which was also represented as a conceptual diagram produced by the NPS.
Following the NPS’ six step process, heritage practitioners are first called to inventory resources and compile baseline data. After taking stock of existing historic properties, the next step calls for conducting a vulnerability assessment and establishing a time horizon. Understanding a resource’s susceptibility to hazards allows the preservationist to formulate and evaluate alternative treatments for the resource. Taking this a step further, the practitioner can then compare alternatives and weigh their effects on cultural resources. Once an appropriate course of action is selected, the implementation step can finally begin. However, the process is
not over, for preservationists must continue to monitor and reevaluate the effectiveness of the treatment, gathering information to inform future planning.

 Although this planning process is widely applicable and can be used to arrive at a variety of decisions, the NPS Climate Change Adaptation Coordinator for Cultural Resources presented seven options relating specifically to historic resources in the context of climate change adaptation:
- Do Nothing
- Offsite Action
- Improve Resiliency
- Relocate Or Allow Movement
- Data Recovery, Then Let Go
- Record, Then Let Go
- Interpret The Change

These options emerged out of the NPS’s plan for the treatment of their vulnerable resources, including structures located in Gateway National Recreation Area, located at the northern end of the Jersey Shore on Sandy Hook.

Sandy Hook, a unit of the NPS’s Gateway National Recreation Area includes both historic properties, like the Sandy Hook Lighthouse and the structures of Fort Hancock, and recreational resources. “The batteries and homes of Fort Hancock exhibit the greatest vulnerability to sea level rise, due to their location on the coast. [but] Extreme weather events also threaten Fort Hancock’s Officer’s Row; some of these buildings are already deteriorating due to the harsh, humid coastal climate and the effects of past storms.”¹⁹¹ Tim Hudson, the National Park Service’s Hurricane Sandy Recovery Manager, described the process of assessing all of the buildings in Fort Hancock. Park Service staff identified each structure’s actual use before the storm, intended use after the storm, year of construction, known deferred maintenance, status in the General Management Plan (whether it was to be rehabilitated, stabilized, or left as a ruin), FEMA flood zone plus a buffer of five feet, Asset Priority Index score (indicating its importance to the park), and a determination of

what percentage of required maintenance the Park could afford to put into the building. According to Hudson,

The data was then analyzed to prioritize work. All critical systems were to be above feet above the FEMA base flood elevations, while non-critical systems would be two feet above FEMA BFEs if possible. We tried to concentrate on buildings with first floors at one foot above the BFE or higher. Where we had that, we abandoned the basements, moved all boilers, and electrical panels out of the basement and found places with the least intrusion of historic fabric in the buildings (or on porches). We took out all mold growing material, like carpets and gypsum board, and replaced it with tile or heavily painted wood on the floors and cement board on the walls. We also made sure that we weren't trapping water in the building. We had issues with Americans with Disabilities Act compliance on some outlets, so those that we couldn't move we put on separate breakers that would trip while the main panel would be okay. Where we couldn't get to one foot above the base flood elevation and we had to keep the buildings, we made sure that the buildings would flow through whenever possible and used marine paint wherever possible.192

Controlled by a single agency with the resources to conduct thorough assessments and develop comprehensive strategies, Sandy Hook represents an ideal scenario to carry out the adaptation planning processes outlined above. While the model of Fort Hancock cannot be precisely replicated along the Jersey Shore, it nonetheless demonstrates that a practicable decision-making framework exists for the treatment of heritage in the face of climate.

Despite the work done on Sandy Hook, the experience of Superstorm Sandy demonstrates that New Jersey’s preservation agencies have arrived at different steps in the planning process. Depending on the circumstances surrounding a decision, heritage practitioners have differentially weighed the aforementioned criteria to select a treatment option. Regarding climate change,

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192 Tim Hudson. E-mail message to Chuck Hovanic, May 6, 2016.
preservationists on the Jersey Shore have more often than not pursued the “Do Nothing” option. Evidently, there is insufficient discussion regarding the practical application of these recommendations to the specific context of New Jersey. The National Park Service’s framework will serve as a structure for this analysis, in which will take a generic process and examine it against the particular strengths and weaknesses associated with its application on the Jersey Shore.

**Inventory Resources**

Immediately following Superstorm Sandy, Stephanie Cherry-Farmer bemoaned the loss of “the myriad of resources that may meet the age, integrity, and significance thresholds for official designation as ‘historic,’ but have simply never been officially identified, surveyed, or recorded.”193 This lack of knowledge or awareness regarding extant resources can largely be attributed to the lack of surveys discussed at length in the previous chapter. However, a closer look at the New Jersey’s Cultural Resources GIS reveals even existing data was collected fairly inconsistently. The state Historic Preservation Office relied on information gathered from registers of historic places, local preservation commissions, and previous surveys to populate the dataset. Therefore, historic properties in places with pre-existing historic preservation activity were more likely to be recognize, leaving out many resources in both vernacular rural landscapes and marginalized urban communities. In an attempt to address these inconsistencies, the HPO launched a GIS Pilot Project that conducted an architectural survey of Gloucester and Salem Counties. However, the comprehensive survey stopped after these two counties, further skewing

the data. For instance, Bergen County had a 2010 population of 905,116 but only featured 2,048 historic properties. In contrast, Salem County, with a 2010 population of 66,083, boasted a total of 10,436 resources. The need to broaden the scope of resource documentation became even more urgent after Sandy, which demonstrated how data informed preservationists responded to the disaster. The inequity embedded within the process of inventorying cultural resources ultimately reinforced the unequal recovery of heritage following Sandy.

As mentioned previously, most of the HPO’s cultural resource documentation for the Jersey Shore is out of date, and only a portion of these surveys have been digitized. Fortunately, the HPO’s work in Cumberland County serves as a precedent that can be easily adapted for use along the rest of the coast. Using GIS, the HPO can create buffer zone along the coastline with a width determined by the particular aims and scope of the survey: Sandy’s storm surge, NFIP flood zones, or sea level rise protection serve as good examples. Recently documented areas, such as CLG communities or designated historic districts, can be excluded from this initial broad-brush survey. Travelling by foot, car, or boat, surveyors can quickly assess and photograph a resource. This strategy benefits from the expediency and low cost of the “pink and green” surveys conducted after Sandy, but lacks the associated time constraints that prevented the development of a more thorough methodology needed for an adequate cultural resource assessment. These surveys would have the dual purposes of both increasing the accuracy and expediency of Section 106 reviews following future storms and serving as a foundation on which to build a long-term climate change mitigation plan.
Nevertheless, this represents a massive undertaking that will require a large investment of time and labor drawn from the HPO’s limited pool of resources. Short- and long-term goals for surveying should be based on the vulnerability of an area and the date of the last survey. A public outreach campaign jointly conducted by the HPO and Preservation New Jersey [PNJ], would encourage Jersey Shore stakeholders to participate in the program. Funded by the New Jersey Historic Trust [NJHT], PNJ could hold workshops that trained residents to assess properties using a digital platform. Adding much needed manpower to the survey effort, public participation will add another layer of understanding of the significance of particular resources. By documenting properties not typically seen as “cultural resources” in the eyes of professional preservationists, this survey effort has the potential to create a more inclusive understanding of heritage that may lead to more equitable processes of recovery. This valuation of resources can be further enriched through coordination with other preservation agencies, like the National Parks Service and Certified Local Governments, which would allow the HPO to better assess the significance or need of a site and establish priorities for documentation.

**Vulnerability Assessment**

Appler & Rumbauch attempted to establish a methodology for measuring the exposure of historic resources to flood hazards in their aforementioned article on building community resilience through preservation. By using publicly accessible GIS data on National Register-listed properties and FEMA’s 100- and 500-year floodplain maps, the authors intended to make their assessment replicable at any government agency with access to GIS software. With Kentucky, Colorado, and Florida serving as case studies, the authors were able to analyze vulnerability in a
number of ways. For instance, they identified the ways in which resources were differentially exposed to flood hazards based on the “area of significance” defined on their National Register nominations. Additionally, the authors determined the number of CLGs located within floodplains, as well as the number of flood-exposed resources in these communities. According to them, as CLG communities “have already made an investment in protecting their historic resources, developing a flood mitigation strategy for those resources should be recognized as a necessary extension of their effort in communities with a high number of vulnerable buildings or districts.”

Although New Jersey was not included as a case study within the Appler & Rumbauch article, the geographic units used by the SHPO to delineate survey areas in the aforementioned step (Sandy’s storm surge, flood insurance, and sea level rise maps) can also serve as a foundation for identifying vulnerable resources. These layers can inform the development of a “Vulnerability Index,” in which historic properties are assigned a rating based on the possibility of inundation by sea level rise. Learning from the objections to FEMA’s Flood Insurance Rate Maps, mapping would not be the only means of assessing a property’s susceptibility to flooding. A mechanism must be built into the rating process that allows property owners to request a more thorough assessment that takes specifics like site topography, adaptation and mitigation measures, and community infrastructure into account. Agencies like the HPO and NJHT could use these ratings as tool for prioritizing the allocation of funds for adaptation projects. Additionally, any Section

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106 reviews, National Register nominations, or grant recipients that involve properties flagged with a certain vulnerability rating would be required to include an adaptation plan.

Certified Local Governments can complement the work of the HPO by harnessing the pre-existing social and financial capital that is typically found in CLG communities and applying it to address issues of adaptation. Just as the New Jersey Department of Community Affairs awarded sponsored strategic recovery plans for communities through its Post Sandy Planning Assistance Grants program, the HPO or NJHT could provide funds for CLGs to conduct vulnerability assessments to be incorporated into a municipality’s hazard mitigation and historic preservation plans. Following the recommendations of the *Development of Climate Change Adaptation Elements for Municipal Land Use Plans* report produced for Ventnor City, these plans would list the threatened historic resources, identify their character-defining features, and provide recommendations for how to reduce the impact of climate change. Following this model, the City of Cape May, a National Historic Landmark District with 2,923 documented historic resources, would overlay a map of Superstorm Sandy’s storm surge and recognize that 45% of its resources were threatened by future storms. This baseline data could then be broken down to assess threatened resources into categories such as typology, materials, use, age. Understanding the character of the threatened resources, the Cape May Historic Preservation Commission could insert tailor-made recommendations into its comprehensive *Design Standards*. This vulnerability assessment would also help to quiet the debates surrounding appropriate alterations, like the aforementioned controversy regarding the elevation of the cottage at 329 Congress Street. Properties identified as very susceptible to flooding in sea level rise projections would be held to
a different standard of adaptation than a structure located away from the oceanfront on high
ground.

While the “pink and green” surveys conducted by the HPO in the aftermath of Hurricane
Sandy were a response to an emergency, this vulnerability assessment moves preservationists away
from reactive strategies to proactive approaches that ensure that future threats are little surprise to
preservationists. However, these vulnerability reports are not intended to simply sit on the shelves
of the borough hall but rather serve as tools for the formulation, evaluation, and comparison of
potential adaptation strategies.

**Formulate, Evaluate, and Compare Alternatives**

The decision regarding which adaptation measure to undertake, as well as whether to even
acknowledge climate change, ultimately rests in the steward of the historic resource. However,
the preservation agencies discussed in this thesis have the resources to positively influence the way
historic properties are handled in the face of these threats. Ideally the discussion surrounding the
treatment of resources would be fostered by a variety of agencies, operating at the international,
federal, state, and local levels. Local actors could take the fundamental principles of this dialogue
and determine their applicability to the specific context of their communities. In order to ensure
that the adaptation process is inclusive, a variety of stakeholders must be engaged to understand
the range of values ascribed heritage.

In Annapolis, Maryland, the city’s “Weather It Together Survey” will inform its Cultural
Resources Hazard Mitigation Plan. Taking this to New Jersey, the Ocean City Historic
Preservation, which recently engaged in an advocacy campaign to defend the city’s small historic
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district, could build off of this foundation of community participation and adopt the questions of the Annapolis survey for its own purposes:

- Which of the following describes your relationship with the Ocean City Historic District?
- What visual elements define a visitor's experience in the historic district?
- Besides your own property, which are the five most important buildings or public spaces that need to be protected in preparation for a flooding or weather-related disaster?
- If you own a property, which of the following incentives would encourage you to spend money to retrofit your building to protect against disasters?

The survey results would help to craft an understanding of how stakeholders interact with the historic district, the elements of the community that they think should be preserved, and which strategies will most effectively encourage outside participation in the preservation process. With clearly articulated goals informed by community surveys, preservationists can also more effectively advocate for historic properties when governments begin to grapple with floodwater inundation.

Once the community’s input is gathered and assessed, it can be inserted among the other factors for decisionmaking identified at the NPS’s *Preserving Coastal Heritage* conference. However, adaptation is not a single decision made by a solitary actor. In many cases, multiple agents will be making a number of decisions regarding the treatment of an individual resource. The complexity of this process precludes the implementation of a simple analytical framework. Four properties listed on the National Register of Historic Places will serve as examples to demonstrate the varied ways in which preservationists can assess adaptation options and weigh them against
the aforementioned decision-making criteria. These hypothetical scenarios will be based on projections that sea levels on the Jersey Shore will rise three feet by 2100.

205 Second Street in Beach Haven, is listed as a contributing structure in the Beach Haven Historic District. “Built in 1880, this gabled-front, two-and-one-half story, vernacular Victorian dwelling has a full-width shed-roofed porch set on a concrete foundation with turned posts and turned spindles. A shed-roofed dormer projects from the west roof slope and a single-story, lean-
to addition adjoins the rear wall.” The Beach Haven Historic District is identified as “significant for its planned development as a major summer railroad resort, as a grouping of summer residences with overall architectural distinction, and as a cohesive entity that shows the evolution of barrier island architectural design and construction at the New Jersey shore from 1873 through 1940.”

Like all structures within the historic district, 205 Second Street is subject to the design review of the proactive Beach Haven Historic Preservation Advisory Committee [HPAC].

By 2100, water overflowing from the bay will have permanently inundated Beach Haven up to the western side of Beach Avenue, leaving one and a half blocks (and consequently half of the historic district) still on dry land. The narrow lot that 205 Second Street sits on will be underwater as well. “Do Nothing” is the cheapest option, but will ultimately result in the destruction of the resource, eliminating its functional and historic value and negatively affecting the integrity of the Beach Haven Historic District. “Taking Offsite Action” will reduce the likelihood of flooding, allowing the house to retain its historic integrity while continuing to be used. Even though they might save the neighborhood, these large scale infrastructure projects are costly to implement and will negatively impact the character of the historic district. “Improving Resilience” with tactics such as elevation and flood-proofing will reduce the impact of stronger storms exacerbated by rising seas in the near-future, but the structure will inevitably be uninhabitable when the entire block is overtaken by the bay.

“Relocation” off the island will preserve the house at a high cost, but rob it of the setting that contributes to its significance. If it becomes clear that some mitigation action must be taken,

195 National Register of Historic Places, Beach Haven Historic District.
the house should be “Documented” in its unaltered form before any alterations are made. Therefore, even if the owner decides to “Let Go” and abandon the property to the rising tide, a physical record of the structure will remain. The presence of the Beach Haven HPAC would prove to be an advantage to 205 Second Street and its neighbors. Besides the ability to review flood-proofing measures to ensure that they are appropriate, this established and comparatively well-resourced preservation group has the ability collectively advocate for historic resources in large-scale plans for infrastructure or relocation. With additional funding, the HPAC could record this history of adaptation and deterioration and add it to their already well-stocked records on all of the properties within the historic district.

**St. Nicholas of Tolentine Church**, at 1409 Pacific Avenue in Atlantic City, was built in 1905 with an addition in 1935. The National Register describes it as a Romanesque Revival style church erected in rough-cut, light-colored North Carolina granite on a granite foundation. The church is significant as “an intact example of ecclesiastical architecture executed in the Romanesque Revival style in 1905. It is the most majestic, almost cathedral-like, church in the city of Atlantic City and is the only extant Romanesque Revival church there.” The church retains a loyal congregation in a city whose dwindling number of practicing Catholics prompted two church closures in 2015. In 2100, St. Nicholas and most of downtown Atlantic City will remain dry, with flooding concentrated in the residential neighborhoods closer to the bay.

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196 National Register of Historic Places, St. Nicholas of Tolentine Church, Atlantic City, Atlantic County, New Jersey, National Register #01000039.

In this instance, abandonment or relocation are unnecessary, and doing nothing presents itself as a feasible option. However, other factors must be taken into consideration before arriving at this decision. While the sturdy stone edifice of St. Nicholas remained untouched by Sandy’s storm surge, a sea level rise of less than one foot will put the church well within the surge zone of

In 2100, St. Nicholas of Tolentine Church will remain dry with most of downtown Atlantic City.  
*Image Sources: Wikimedia Commons & Climate Central*
another powerful storm. Therefore, floodproofing measures will likely be necessary. Given the expense associated with elevating a masonry structure, wet floodproofing options might prove to be the most feasible option for a parish with financial difficulties. Inundation in residential neighborhoods will also likely result in displacement, diminishing the size of St. Nicholas’ already shrinking congregation. This would decrease the parish’s financial and social capital, ultimately hindering its ability to respond to additional threats posed by climate change. This situation could be alleviated with infrastructural interventions undertaken by the municipality or state to make Atlantic City more resilient, decreasing the likelihood that St. Nicholas will get flooded and encouraging the church’s parishioners to remain on Absecon Island.

**Battery 223** is located in Lower Township within the boundaries of Cape May Point State Park. “Constructed in the fall of 1942 and completed in June 1943 as part of the Harbor Defenses of the Delaware, Battery 223 is made of thick reinforced concrete with a substantial blast proof roof.” The battery is significant for its “association with the U.S. coastal defense system established during World War II.” While the battery has sat unused and abandoned since the 1950s, it remains in fairly good condition with minor deterioration. Given its historic use, Battery 223 is located right on the beach. Thanks to an Army Corps of Engineers beach replenishment project the battery now sits above the high tide mark, but another severe storm could potentially wash away this unstable sand and once again exposure the structure to erosion.

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198 National Register of Historic Places, Battery 223, Lower Township, Cape May County, New Jersey. National Register #08000555.
Even if the beach replenishment holds steady, a rise in sea level of just one foot (predicted to occur within 40 years) will leave it out at sea. Moving Battery 223 further inland on the beach will allow the concrete structure to retain its character-defining relationship to the coastline. However, this may prove prohibitively expensive for the New Jersey Division of Parks & Forestry.
which recently considered closing nine parks in the face of decreased funding.\textsuperscript{199} Constructing flood barriers or sea walls will disrupt the relatively undisturbed ecosystem protected within Cape May Point State Park, sacrificing the integrity of the natural landscape for that of the Battery 223. Other flood-proofing measures, such as elevation or wet flood-proofing are inappropriate or ineffective for an unused structure sitting on a sand beach. In this case, documentation and abandonment appear to be a logical course of action. Parks & Forestry, located within the Department of Environmental Protection, could call on colleagues at the HPO to conduct an extensive documentation of the site. Park staff could then monitor the condition of the structure overtime to better understand the effects sea level rise on historic concrete resources.

The \textbf{Brielle Road Bridge over the Glimmer Glass} in Manasquan “is a movable bridge where the bascule leaf opens by pivoting about a horizontal axis and the position of the leaf is controlled by counterweights set on a curved track...The bridge is technologically and historically significant as the only example of its type in New Jersey and exemplifies the need for movable bridge technology in the late 19th and early 20th centuries for the transportation of vehicles over navigable waterways...Although some of the modifications were made within the last fifty years, they were in response to the continued use and operation of the bridge within a marine environment and to accommodate increased automobile traffic in this location.”\textsuperscript{200} Owned by Monmouth County, the Brielle Road Bridge provides an important link between the beaches of Manasquan and the inland town of Brielle. The structure bridges the gap between a small island of undeveloped

\textsuperscript{200} National Register of Historic Places, Brielle Road Bridge over the Glimmer Glass, Manasquan, Monmouth County, New Jersey, National Register #08000336.
marshland and a peninsula of with both modern suburban development and the bulkheads and docks of a marina. One foot of sea level rise (projected in 40 years) will inundate the bridge’s western base on the marshy island, and an additional foot (projected in 70 years) will leave the eastern end underwater as well. The bridge’s location over the Glimmer Glass is another contributor to its vulnerability. This body of water overflowed during Superstorm Sandy and left boats scattered across the bridge’s span, indicating that the Brielle Road Bridge will likely be damaged by more intense storms in the future.

In this instance, the structure and technology of the bridge, as well as its setting over the Glimmer Glass, are the character-defining features of the historic resource. Therefore, any attempts at relocating or improving the resiliency of the bridge will almost certainly have a negative impact the structure’s historic integrity. Monmouth County cannot “document and let go” either, for the bridge requires constant upkeep to keep it functioning as a transportation link. However, another crossing less than a mile north sits in a less vulnerable location. When the time comes to evaluate the feasibility of maintaining bridges to a partially inundated Manasquan, Monmouth County could divest itself of the span, documenting it and letting it deteriorate while allocating funds to the remaining bridge on Main Street. Alternatively, Monmouth County could explore the options of relocating the structure to a new location now in need of a bridge thanks to the rising sea level. Ultimately, even if an investment in infrastructure was able to protect Manasquan from sea level rise or control the flow of the Glimmer Glass, this would not guarantee the continued use of the Brielle Road Bridge. After a heavy truck caused $1.6 million in damage and caused the bridge to be shut down, the Monmouth County Freeholder Board began exploring
the options. As far back as 2007, the county recognized the need for a bridge that could safely accommodate increased traffic loads and offered to give it away to anybody who would cover the cost of moving the structure.²⁰¹

Not meant to be exhaustive, these case studies simply served as a decision-making exercise. While the input of stakeholders and community groups may have resulted in a different interpretation of the proposals, the scenarios above demonstrated the feasibility a wide range of adaptation measures for four different types of resources. Even though elevation dominates the discourse surrounding adaptation to sea level rise, these samples demonstrate that this strategy is only a feasible option for a specific portion of the shore’s historic resources. Additionally, these examples indicated that the threats to historic properties are not evenly distributed along the Jersey Shore but in fact varied with their elevation and proximity to water. The current function of these building structures, ranging from a ruin to a busy transportation artery, illustrates how the use of a resource is critical in choosing the adaptation measure. Finally, the diverse areas of significance associated with each of these cases shows just how severe the impact that climate change will have on New Jersey’s heritage.

Implementation

This list of possible actions fails to address the criticism directed at other academic work on climate change and historic resources, namely their failure to consider how preservationists will practically implement their proposed recommendations. In order to understand how preservationists can carry out the aforementioned adaptation strategies along the Jersey Shore, the focus will shift away from the four case studies to examine how different agencies in the state can overcome the challenges associated with this particular context. Besides the vulnerabilities
inherent in its coastal landscape, the emphasis on home rule governance and limited funding pose the greatest challenges to achieving comprehensive goals for preservation along the shore.

The dispersal of political power among the 565 municipal governments in New Jersey is frequently cited as a hindrance to achieving goals at the regional level. While home rule governance provides greater autonomy for communities, the lack of large scale planning is particularly problematic in the context of climate change. In New Jersey, municipalities are essentially left to individually plan for a threat whose impacts will be felt at a global level. While there have been steps towards larger scale planning, such as county Floodplain Management Plans, political balkanization appears to be an intractable issue plaguing New Jersey. Fortunately, the centralized structure of the New Jersey preservation community provides an opportunity to work around the challenges associated with home rule governance. Preservation agencies like the HPO, NJHT, and PNJ can break down municipal barriers to take on the threats to resources in a regional way. The development of regional surveys, assessment methods, and decision-making tools will both reduce the burden placed on communities and encourage a consistent approach to climate change in the heritage field.

As an important source of funding for Certified Local Governments, statewide agencies have the ability to shape the way preservation is carried out at the local level as well. At the same time, the integration of CLGs into the New Jersey’s preservation hierarchy can also serve as a means to legitimize the voice of local heritage practitioners, providing Trenton insight into as to how policy goals can be achieved on the ground. The power of these kinds of interactions was demonstrated in Beach Haven, where the local HPAC, understanding the extent of Sandy’s impact
on the community, argued against the HPO in support the demolition of severely damaged bungalows. However, the HPAC later capitalized on outside funding to formulate design guidelines for elevating other vulnerable properties, including bungalows, in their community. Ultimately, while preservationists not be able to change the state’s municipal structure, the balance of power and distribution of resources within organizational structure of New Jersey’s preservation community affords agencies the chance to circumvent some of the more constraining aspects of home rule governance.

However, the capacity for these agencies to implement comprehensive strategies is inhibited by limited manpower and funding. The effect of this chronic lack of resources on preservation agencies’ work was highlighted during Superstorm Sandy. The constant fear of being overwhelmed by the magnitude of the task was the impetus behind two major policy decisions in the aftermath of the storm: the exclusion of private homes from the NJHT’s disaster relief grants for historic properties and the HPO’s somewhat perfunctory approach to surveying for Section 106 reviews. While the choices made are understandable given the difficult realities of preservation and disaster recovery, they nonetheless came with the cost of undervaluing and neglecting certain parts of the Jersey Shore’s heritage. Many practitioners see support for preservation as a cyclical process reflecting the changes in political, economic, and social conditions. As Dorothy Guzzo at the NJHT described it, “I don’t think it’s very good right now, and part of it is the administration that we’re in. It’s just that everything is sort of in a ‘hanging on’ policy right now. We’re waiting for better days.” Nevertheless, advocates like Preservation New Jersey can work to change this waiting game by actively campaigning for increased funding, the incorporation of preservation...
into disaster planning, or simply more awareness for the state’s heritage. This task does not rest on the shoulders of agencies alone, but requires the support of the preservation community at large that includes planners, architects, consultants, property owners, and concerned citizens. Acknowledging the variety of unnamed stakeholders that make up the preservation community, the following recommendations will be geared towards the preservation agencies already discussed at length in this resource.

**Recommendations for Agencies**

The New Jersey Historic Preservation Office, as the agency that regularly receives funding from the National Park Service and works directly with the Federal Emergency Management Agency after a disaster, has the ability to both contribute to the national discourse on climate change and incorporate these discussions into its own work. The recipient of most funds allocated to heritage in New Jersey, the HPO functions as a power broker that can potentially shift the focus of preservation activity towards an emphasis on adaptation and resilience. According to the testimony of most the preservationists interviewed, a set of elevation design guidelines will prove valuable for determining how retain historic significance while both making properties more resilient and responding to the new standards of flood insurance policy. Nevertheless, the HPO must acknowledge that elevation is a short-term solution for a long-term problem that requires a more complex set of responses. The HPO will therefore need to lead the charge in conducting the aforementioned inventory of resources and vulnerability assessments. This will create contribute to an understanding of a historic resources on the Jersey Shore that is much broader and more inclusive.
While the state’s “Vulnerability Index” for historic resources will be informative, in order to make it relevant to the work of preservationists the HPO also needs to create a clearly articulated “Sea Level Rise Decision-making Criteria.” Building off of the factors and processes identified in the NPS’ *Preserving Coastal Heritage* conference, this document would function like Secretary of the Interior’s Standards to serve as a framework for all actions regarding climate change mitigation. Informed by the site’s Vulnerability Index, the HPO staff could then apply the Sea Level Rise Criteria to Section 106 reviews, disaster relief grants, and historic preservation plans in the aftermath of the storm. These standards have the potential to streamline the recovery process, assuaging preservationists’ concerns of being overwhelmed and encouraging them to conduct “pink and green” surveys more thoroughly. Ultimately, the HPO’s role in adaptation planning will be providing the tools, including an inventory of coastal resources, the Vulnerability Index, and the Sea Level Rise Criteria, as well as financial assistance, that can then be used by the stewards of historic resources.

The New Jersey Historic Trust should apply these tools into their grant programs as well. Any site applying for funding will need to include a mitigation and adaptation component in their application, with the exact requirements depending on their Vulnerability Index rating. To encourage preservationists to better understand the vulnerability of historic resources, NJHT should provide grants for stewards of historic resources to carry out “Disaster Mitigation and Climate Change Adaptation Plans.” Within these plans, heritage practitioners would apply the Sea Level Rise criteria to inform the treatment of their resources, ensuring that the critical decisions are made before the floodwaters arrive. This standard decision-making framework would also
expedite the grantmaking process following another storm, possibly allowing private homes to be included in future disaster relief grants. In fact, if NJHT intends to truly influence the resilience of New Jersey’s coastal heritage, its funding must be extended to the private homes that make up a good portion of the historic fabric of the Jersey Shore.

Preservation New Jersey’s role as an advocate can serve to increase public awareness of the threats that climate change poses to historic resources, providing a counterbalance to the “Stronger than the Storm” mentality that pervades the state. Including sites threatened by sea level rise on its annual list of the “Ten Building Most Endangered Historic Places” would be an relatively easy way to generate publicity and start a discussion. Building off of this experience engaging with the public, PNJ would be able to effectively administer the aforementioned “Weather it Together’ surveys to include the public in the decision-making process regarding the prioritization of resources and the adaptation method to be used. The organization can serve as a conduit for information regarding new technologies and assessment techniques, channel updates from the HPO office in Trenton to affected communities down at the shore. This can be accomplished by continuing its Resiliency Workshop series, expanding it to educate preservationists on the ways that they can apply the Sea Level Rise criteria. In a state where a commitment to “business as usual” precludes most attempts to plan for inevitable changes, PNJ can potentially use threatened heritage to bring climate change back into the forefront.

Unlike other preservation players in the state, the Certified Local Governments and local preservation commissions at the Jersey Shore are managed by people who face the same threats as the historic properties they seek to protect. While they may have the most to lose, preservationists
at shore will provide the critical perspective necessary to put any of the previously discussed adaptation projects in motion. Preservation commissions have the knowledge and resources to conduct resource inventories and vulnerability assessments at levels of detail beyond the capacity of the HPO. PNJ may be able to facilitate the “Weather it Together” surveys, but CLGs can craft the questions to better reflect the particularities of their community. These would then contribute to their “Disaster Mitigation and Climate Change Adaptation Plans” which were funded by the NJHT. Essentially, statewide agencies will provide the tools needed to establish a framework that will then guide the local preservation commissions in their treatment of vulnerable resources.

During the Design Review process, commissioners could use their influence to compel property owners to incorporate appropriate adaptation measures into their alterations. The treatment of historic structures would be informed by updated design guidelines that incorporate specific recommendations based off of building typology and Vulnerability Index rating. These standards could either mirror documents produced at the state level or be developed in response to the specific context of the community. By quantifying the threats to heritage and developing clearly articulated strategies for mitigation, preservationist can more easily integrate heritage into a community’s plans for resilience.

Unfortunately, these actions require a municipality to have a proactive and well-resourced preservation commission. While there are only 4 Certified Local Governments along the Jersey Shore, there are many more with local preservation commissions operating outside of this NPS program. Encouraging these other historic preservation commissions would be a good first step towards empowering communities with the means to make their heritage more resilient. However,
statewide agencies will need to fill in the void and serve the populations most vulnerable. Larger organizations should acknowledge the likelihood that there may not be any local actors prepared to survey resources, assess vulnerability, or develop hazard mitigation plans for historic properties. In supporting the creation of a more inclusive, as well as more resilient, concept of heritage, the historic preservation community can begin to correct the processes that have contributed to the patterns of social inequity that pervade in New Jersey.
Chapter 7: Conclusion

The Jersey Shore is an iconic place imbued with a distinct set of values for residents and visitors alike. Many argue, with good reason, that the shore is a timeless and unique place. However, the storm surge of Superstorm Sandy dramatically undermined this idealization of the landscape to remind stakeholders of its inherent temporality and vulnerability. At first, Sandy seemed like a critical juncture that would shift conversations towards climate change adaptation. It soon became apparent that the calls to be “Jersey Strong” and “Restore the Shore” drowned out the chance to critically reflect on the processes that magnified the impact of Sandy. While Sandy certainly left a permanent scar on some communities and displaced segments of the population, in many ways the Jersey Shore is the same place that it was before October 29, 2012. The resilience and recovery of New Jersey’s heritage served to reinforce this notion of continuity and stability. Nevertheless, historic preservation has the ability to move the shore beyond the “Stronger than the Storm” mentality. By exposing the ways in which climate change will ultimately destroy the resources that contribute the shore’s identity, from Lucy the Elephant to the Barnegat Lighthouse, preservationists can start a conversation and begin the process of adaptation for the community at large.

While Superstorm Sandy forced New Jersey to critically reflect on its own vulnerability, it also integrated the Jersey Shore into the global discourse on climate change. Consequently, the lessons learned from the preservation community’s response to Sandy can be also of value to preservationists practicing outside of the Garden State. Sandy clearly demonstrated that hazard
mitigation is critically underrepresented in the practice historic preservation. Whether at the international or neighborhood level, making the hard decisions beforehand will result in a more desirable outcome in the long run. The exclusion of heritage from planning for hazards can partly be explained by another issue seen in New Jersey: the need for preservationists to move beyond the symptoms and address the root of the issues.

The interviews presented in this thesis indicate that design standards for elevation are the primary concern of most preservationists at the shore. Much energy has been devoted to combatting the effects of the National Flood Insurance Program, yet little attention has been given to the acknowledging the rationale behind elevation requirements. Sensitive elevations will certainly produce more appropriate adaptations, but this will matter little if the historic district is submerged in rising seas. Climate change threatens to wipe out entire communities, countering decades of concerted preservation efforts. Unfortunately, it appears that most heritage practitioners find it easier to neglect the issue altogether rather than attempt to address the magnitude of the challenge at hand. However, if they hope to preserve at least some coastal heritage for the next century, preservationists based in vulnerable communities must proactively identify important values and use these prioritize adaptation actions with the limited capital and time available.

In many cases, preservationists did not identify these values until it was too late. The loss of previously overlooked middle-class communities on the Jersey Shore, however, can serve as a warning to heritage practitioners working in locales far beyond the shores of the Barnegat Bay. The existing inventory of historic resources reflects the narratives of history and perceptions of culture embodied within the dominant group. If only this heritage is integrated into adaptation
plans, climate change will simply reinforce existing social inequity, as seen in the displacement of middle-class homeowners from the Jersey Shore. While historic preservation alone cannot correct inequitable processes, if heritage contributes to a community’s post-disaster recovery, acknowledging alternative values in preservation will serve to promote the resilience of marginalized groups.

Even though Superstorm Sandy caught the preservation community by surprise, its response the storm and the threats it posed to heritage illustrated the dynamism and adeptness of preservationists in New Jersey. The Historic Preservation Office’s “pink and green” surveys were innovative way to identify historic resources, assess damage, and streamline interagency coordination while working within the constraints of limited time, finances, and staff. The Beach Haven Historic Preservation Advisory Commission’s constant engagement with their constituents in the recovery process, responding to the particular threats to their community and developing highly contextual standards of appropriateness, provides a model that can be replicated in a variety of scenarios. The work undertaken by New Jersey’s preservationists, consultants, and architects to identify methods of retaining historic integrity for structures undergoing elevation and flood-proofing demonstrates that historic preservation has the ability to evolve with the changes necessitated by the new realities of climate change. Ultimately, the shortcomings of the preservation community’s response to Sandy was not for lack of hard work, but rather a reflection of larger forces at play that shaped the preservation landscape on the Jersey Shore.

Climate change does not lend itself a simple solution. In many ways, the case study of Superstorm Sandy and the Jersey Shore has done little but reinforce pre-existing uncertainties
regarding the status of heritage in a future of rising seas and stronger storms. Despite this, the information provided in the preceding chapters answered the questions that this thesis initially set out to ask. The insufficient disaster planning, understanding of extant resources, and financial resources shaped the preservation community’s response to an already difficult set of circumstances facing the Jersey Shore. Despite these conditions, preservationists effectively responded to a scenario by providing solutions that reflected the specific needs of the heritage in their stewardship. However, the preservation community has not entirely bridged the gap between mitigating disasters and adapting to climate change. Even so, Superstorm Sandy demonstrated that preservationists can contribute to resilience by identifying valued resources, managing the changes to these resources, and advocating for policies that better protect them for the future. Regardless of the vulnerability of these physical resources, Sandy demonstrated the resilience of the preservation community itself and proved that it truly is stronger than the storm.
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