

# NOTES

## THE UNCERTAIN FUTURE OF TOURISM ON MIGRATING BARRIER ISLANDS: HOW AND WHY THE OUTER BANKS OF NORTH CAROLINA SHOULD ADJUST TO GROWING THREATS

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## INTRODUCTION

In September 2022, local officials told visitors of the town of Rodanthe in the Outer Banks of North Carolina to avoid the beach due to debris and overwash from Hurricane Earl—a storm whose eye did not even come close to the area.<sup>1</sup> Later that same month, the National Park Service warned that several Rodanthe homes were vulnerable to collapse from the storm surge of Hurricane Fiona, another storm which stayed far from the shores of North Carolina.<sup>2</sup> These warnings did not come without precedent since earlier in the year, strong tides swept three Rodanthe homes into the ocean between February and May 2022.<sup>3</sup> In early October 2022, the remnants of Hurricane Ian saw overwash force the closure of North Carolina Highway 12 (NC 12), the only highway connecting some parts of the Outer Banks.<sup>4</sup> Waves from Hurricane Ian's remnants also crashed against the stilts of many homes.<sup>5</sup> Each house collapse evaporates investments and mandates costly and environmentally

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1. Joy Crist, *Coastal Flood Advisory Remains in Effect; Minor Ocean Overwash Reported in Rodanthe on Friday Morning*, ISLAND FREE PRESS (Sept. 9, 2022), <https://islandfreepress.org/outer-banks-news/coastal-flood-advisory-remains-in-effect-minor-ocean-overwash-reported-in-rodanthe-on-friday-morning/> [<https://perma.cc/X6MA-QY4C>]; Mark Price, *Hurricane Earl, Full Moon, Lunar 'King Tide' Align to Create Threat on NC Outer Banks*, NEWS & OBSERVER (Sept. 9, 2022, 2:41 PM), <https://www.newsobserver.com/news/state/north-carolina/article265477586.html> [<https://perma.cc/WR34-FU2U>].

2. Angelo Vargas, *Rodanthe Houses Vulnerable to Rough Surf, High Winds as Fiona Passes Off Coast*, 13 NEWS NOW (Sept. 23, 2022, 9:23 AM), <https://www.13newsnow.com/article/weather/rodanthe-houses-vulnerable-rough-surf-high-winds-fiona/291-9d51d6db-36e1-4b0a-950a-3def2d16533a> [<https://perma.cc/6CFU-ZCFJ>]; Steven Yablonski, *Deadly Hurricane Fiona Producing Large Waves, Dangerous Rip Currents Along the East Coast*, FOX WEATHER (Sept. 22, 2022, 3:59 PM), <https://www.foxweather.com/weather-news/deadly-hurricane-fiona-producing-large-waves-dangerous-rip-currents-along-the-east-coast> [<https://perma.cc/93WZ-QGEE>].

3. Joy Crist, *Updates on the At-Risk Oceanfront Homes in Rodanthe Are the Focus of Public Meeting*, ISLAND FREE PRESS (Aug. 26, 2022), <https://islandfreepress.org/outer-banks-news/updates-on-the-at-risk-oceanfront-homes-in-rodanthe-are-the-focus-of-public-meeting/> [<https://perma.cc/8NL7-M3WD>].

4. Rodney Overton, *NC 12 Closed at Outer Banks Amid Flooding Just Days After Hurricane Ian*, CBS17 (Oct. 3, 2022, 6:54 PM), <https://www.cbs17.com/news/north-carolina-news/nc-12-closed-at-outer-banks-amid-flooding-just-days-after-hurricane-ian/> [<https://perma.cc/6UHW-3BFU>].

5. See *id.* (showing water reaching homes and flooding the roadway in slideshow images).

dangerous cleanup.<sup>6</sup> Every closure of NC 12 dampens tourism dollars at least partially and temporarily.<sup>7</sup>

Erosion, storms, and the migration of the barrier islands that comprise the Outer Banks themselves are not new. The rising seas that have resulted from climate change have merely exacerbated what has always occurred.<sup>8</sup> What is new, however, is the economic havoc that natural processes and disasters alike can wreak on the islands.<sup>9</sup> Today, because climate change has accelerated natural island migration, individuals, local governments, and the federal government alike have a lot to lose in the fight against the tides.<sup>10</sup> The damage that Hurricane Ian wreaked on Southwest Florida's barrier islands should serve as a grim warning to those in the Outer Banks.<sup>11</sup> Insurance payments and coastal management programs

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6. See Catherine Kozak, *Imperiled Beach Houses a Problem Fraught with Legal Perils*, ISLAND FREE PRESS (Sept. 14, 2022), <https://islandfreepress.org/outer-banks-news/imperiled-beach-houses-a-problem-fraught-with-legal-perils/> [<https://perma.cc/4RXJ-R7Z9>] (discussing the substantial and ongoing costs of cleanup after the Rodanthe houses collapsed); Stacia Strong, *Outer Banks Homes Keep Falling into the Ocean, and Septic Tanks Causing Issues*, WRALNEWS (Nov. 13, 2022, 7:41 AM), <https://www.wral.com/outer-banks-homes-keep-falling-into-the-ocean-and-septic-tanks-causing-issues/20573410/> [<https://perma.cc/A3SH-6QHG>]; Richard Fausset, *Beach Houses on the Outer Banks Are Being Swallowed by the Sea*, N.Y. TIMES (May 16, 2022), <https://www.nytimes.com/2022/05/14/us/outer-banks-beach-houses-collapse.html> [<https://perma.cc/238R-TJH6>] (highlighting the costs to the homeowners whose homes were swept away).

7. Lee Ringer, *Stronger Storms Mean Tough Decisions for N.C. Highway 12*, SPECTRUM NEWS (Aug. 17, 2021, 8:30 AM), <https://spectrumlocalnews.com/nc/charlotte/weather/2021/08/14/stronger-storms-mean-tough-decisions-are-ahead-for-n-c-highway-12> [<https://perma.cc/N6UH-6VLP>] (“If we don’t have [Highway 12], we can’t get the hundreds of people, thousands of people coming and going.”).

8. See Laura J. Moore, Jeffrey H. List, S. Jeffress Williams & David Stolper, *Complexities in Barrier Island Response to Sea Level Rise: Insights from Numerical Model Experiments, North Carolina Outer Banks*, J. GEOPHYSICAL RSCH., Sept. 2010, at 1, 15.

9. See generally Gilbert M. Gaul, *Shifting Sands: Carolina’s Outer Banks Face a Precarious Future*, YALE ENV’T 360 (July 14, 2022), <https://e360.yale.edu/features/outer-banks-climate-change-flooding> [<https://perma.cc/PD34-SBAW>].

10. See JEFFREY POMPE, ALTERED ENVIRONMENTS: THE OUTER BANKS OF NORTH CAROLINA 50-52, 67 (2010).

11. See Bedel Saget, Marco Hernandez, Malika Khurana, Zach Levitt, Eleanor Lutz & Albert Sun, *What Hurricane Ian Destroyed in a Florida Beach Town*, N.Y. TIMES (Oct. 4, 2022), <https://www.nytimes.com/interactive/2022/10/01/us/hurricane-ian-fort-myers-beach-damage.html> [<https://perma.cc/6LVV-MNKT>]; Ben Finley & Steve Helber, *Ian Shows the Risks and Costs of Living on Barrier Islands*, AP NEWS (Oct. 1, 2022, 11:56 AM), <https://apnews.com/article/hurricanes-florida-storms-climate-and-environment-hurricane-ian-9e6d1d3fee5e7334e14cc3da6c113e53> [<https://perma.cc/PB43-NBUL>]; *Lee County Has Updated the Hurricane Ian Damage Assessment Map*, WVCU (Oct. 8, 2022, 7:52 PM),

are expensive now and will likely become even more costly in the future.<sup>12</sup> Even though the problems confronting the Outer Banks may seem obvious, because of government and popular skepticism for takings and reticence toward retreat from the coasts, there is not a clear legal path for addressing the issues; there is no one superior or “silver bullet” solution.<sup>13</sup>

This Note will evaluate a variety of potential solutions to the problems that pose nearly existential threats to development on the Outer Banks of North Carolina, with a specific focus on Dare County. Dare County is an important case study in the management of migrating barrier islands on the Outer Banks and elsewhere across the region because it is a site of many competing interests.<sup>14</sup> Dare contains popular and relatively new tourist towns, neighborhoods for permanent residents, unique parklands, and historical landmarks alike.<sup>15</sup> Part I will discuss the history of the islands—both in the long term as migrating barrier islands, and in the nearer term, tracing patterns of development. Part II will discuss current laws and policies, from national programs to county ordinances and their current flaws. Part II will also examine the costs of these policies amid the threats of erosion and climate change. Topics of discussion will include the National Flood Insurance Program (NFIP) as authorized by the Federal Emergency Management Agency (FEMA), North Carolina’s Coastal Area Management Act (CAMA), and a selection of noteworthy Dare County Ordinances. There are six municipalities with their own municipal codes within Dare County.<sup>16</sup> This Note, however, largely will not discuss those municipal regulations because the areas that face the most imminent threats remain unincorporated.<sup>17</sup> Part III will discuss a variety

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wgcu.org/2022-10-08/lee-county-has-updated-the-hurricane-ian-damage-assessment-map [https://perma.cc/EZT9-AGWH] (showing that damage in Lee County, which includes the barrier island Sanibel, had a preliminary damage estimate of over five billion dollars).

12. POMPE, *supra* note 10, at 50-52, 67.

13. See Kozak, *supra* note 6.

14. See *About Dare County*, DARE CNTY., <https://www.darenc.gov/about> [https://perma.cc/Z39K-AAVP].

15. *Id.*

16. *Towns, Villages & Areas*, DARE CNTY., <https://www.darenc.gov/about/towns-villages-areas> [https://perma.cc/AEV9-9YDP] (listing the municipalities and unincorporated areas).

17. Compare *id.*, with *Dare County Flood Zones* (June 19, 2020), <https://gis.darecountync.gov/floodzones/> [https://perma.cc/CF9F-Y5MY] (displaying a map of approximate, though

of potential solutions, and how no one solution could adequately address the multi-faceted problems that Dare County faces. Proposed solutions range from the enactment of rolling easements, to changes to local land use and development regulations, and to the institution of a mechanism that would force lenders to bear the brunt of the costs of flood insurance. Part IV will address counter-arguments to the notion that sweeping changes are needed in Dare County.

## I. THE GEOLOGICAL AND HUMAN HISTORY OF THE OUTER BANKS OF NORTH CAROLINA

### A. *The Outer Banks as Migrating Barrier Islands*

The Outer Banks of North Carolina, an area with many popular vacation spots, are in a precarious position for development even without the rising tides of anthropogenic climate change. The Outer Banks are a series of migrating barrier islands which have naturally drifted throughout history.<sup>18</sup> Barrier islands protect the mainland from sea level changes and the worst of storms, and they naturally evolve by moving upward and inward, and in some areas, by growing trees.<sup>19</sup> The Outer Banks themselves have migrated over time and adapted in various ways to nearly all environmental changes, while still continuing to provide a barrier for the mainland.<sup>20</sup>

Areas of the Outer Banks have conspicuously migrated over time. A Civil War fort that was built on one of the islands became partially submerged shortly after its construction more than a

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imperfect, flooding risks).

18. Moore et al., *supra* note 8, at 4 (“[Scientists] suggest the Outer Banks began migrating landward between 9000 and 4000 years ago.”).

19. See Julie C. Zinnert, Sheri A. Shiflett, Stephen Via, Spencer Bissett, Benjamin Dows, Paul Manley & Donald R. Young, *Spatial-Temporal Dynamics in Barrier Island Upland Vegetation: The Overlooked Coastal Landscape*, 19 *ECOSYSTEMS* 685, 690-91 (2016) (discussing how when certain Virginia barrier islands faced periods of severe erosion, the island vegetation shifted from grassy to woody cover, stabilizing the islands to provide protection for mainland coastal communities).

20. See *id.* at 685-86; see also Moore et al., *supra* note 8, at 1.

century ago.<sup>21</sup> The fort is now underwater, far from shore, as the island and inlet nearby have migrated significantly.<sup>22</sup> Additionally, in 1999, the National Park Service famously relocated the Cape Hatteras Lighthouse because natural erosion threatened its original location.<sup>23</sup>

Environmental scientists' estimates vary as to the rates at which the islands move each year in the past and present, and to complicate matters, different areas of the Outer Banks migrate at different rates.<sup>24</sup> The consensus, however, is that the islands do drift at least several feet each year.<sup>25</sup> Importantly, many estimates of current patterns and models for future migration usually do not accurately represent the impact of severe weather events.<sup>26</sup> Storms drastically and somewhat unpredictably increase the rates of erosion and migration.<sup>27</sup> The long-term future of the islands of the Outer Banks is unknown, but scientists predict that the Outer Banks may shrink in width but attempt to maintain a constant volume, migrate inland at increasing rates until equilibrium is reached, and then migrate steadily.<sup>28</sup> Alternatively, rather than reaching an equilibrium migration rate, the islands may sink or disintegrate and become part of the ocean floor.<sup>29</sup> Mitigation measures to replenish sand on beaches ("beach nourishment projects") and to otherwise prevent island drift are unlikely to change the long-term future of the Outer Banks;

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21. Douglas L. Inman & Robert Dolan, *The Outer Banks of North Carolina: Budget of Sediment and Inlet Dynamics Along a Migrating Barrier System*, 5 J. COASTAL RSCH. 193, 211-12 (1989).

22. *Id.* at 215 (showing the location of Fort Oregon in 1975 in a bathymetric chart).

23. *Moving the Cape Hatteras Lighthouse*, NAT'L PARK SERV. (Apr. 2, 2022), <https://www.nps.gov/caha/learn/historyculture/movingthelighthouse.htm> [<https://perma.cc/B7YJ-3MYV>].

24. *See, e.g.*, Moore et al., *supra* note 8, at 4-5, 13, 15 (estimating historic rates and describing an equation to predict future changes based on simulations); Inman & Dolan, *supra* note 21, at 203; Stephen A. White & Yong Wang, *Utilizing DEMs Derived from LIDAR Data to Analyze Morphologic Change in the North Carolina Coastline*, 85 REMOTE SENSING ENV'T 39, 39 (2003).

25. *See* Moore et al., *supra* note 8, at 4-5, 13, 15; Inman & Dolan, *supra* note 21, at 203; White & Wang, *supra* note 24, at 39.

26. *See, e.g.*, Moore et al., *supra* note 8, at 22.

27. *See id.*

28. *Id.* at 15, 25.

29. *Id.* at 1.

some measures, like dune stabilization and jetty construction, actually increase the rates of erosion.<sup>30</sup>

*B. The History of Tourism and Development on the Outer Banks*

Widespread development on the Outer Banks is notably a product of only approximately the last fifty to seventy years when investors ceased to fear the natural threats to the islands.<sup>31</sup> Although nine beach cottages still present on the Outer Banks today have been standing since the 1860s, the population at the time of their construction was sparse and the structures were mobile.<sup>32</sup> Dare County did not build the first bridge connecting Nags Head in the Outer Banks to the mainland until 1927,<sup>33</sup> and NC 12 did not connect the series of islands until the 1950s.<sup>34</sup> For years, businessmen struggled to draw tourists to the area; the tourism industry that Dare County and the Outer Banks in general are known for today was not possible until all levels of government came alongside businessmen to establish parks, connect the islands, and stabilize the dunes (attempting to slow the migration of the islands).<sup>35</sup> Even after these infrastructure changes, tourism did not take off until the economic circumstances made development ripe.<sup>36</sup>

When interest in the Outer Banks, and Dare County in particular, greatly increased in the 1970s, the islands still had the feel of

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30. See Inman & Dolan, *supra* note 21, at 197 (“Dune stabilization has severely limited the natural barrier migration by limiting landward extension, and thus causing the barriers to narrow.”); Stanley R. Riggs, Dorothea V. Ames, Stephen J. Culver, David J. Mallinson, D. Reide Corbett & John P. Walsh, *Eye of a Human Hurricane: Pea Island, Oregon Inlet, and Bodie Island, Northern Outer Banks, North Carolina*, in 460 AM.’S MOST VULNERABLE COASTAL COMTYS. 43, 43, 67 (Joseph T. Kelley, Orrin H. Pilkey & J. Andrew G. Cooper eds., 2009) (demonstrating effects of dune construction and how jetty construction can also increase erosion rates). *But see* White & Wang, *supra* note 24, at 43 (demonstrating how beach nourishment projects limited erosion from storms in a different North Carolina coastal area).

31. See POMPE, *supra* note 10, at 35 (discussing how much of the development seen today did not begin to take root until the latter part of the twentieth century).

32. *Id.* at 28-29.

33. *Id.* at 31.

34. *Id.* at 34.

35. See *generally id.* at 31-35 (describing the various projects undertaken to help the Outer Banks’s economy).

36. See Clark Twiddy, *How Did the Outer Banks Get So Famous, Anyway?*, VRM INTEL (Jan. 3, 2019), <https://vrmintel.com/outer-banks-development-history/> [<https://perma.cc/EQ5S-UDYD>].



remote, primitive beaches.<sup>37</sup> For much of Dare County today, however, primitive beach is more myth than reality.<sup>38</sup> State officials took advantage of the islands' appeal and encouraged development to boost tourism dollars.<sup>39</sup> Investment homes, communities for full-time residents, and businesses both large and small now cover most of the land within the county, with additional investments made each year.<sup>40</sup> By 2022, many of the beaches of tourist-heavy individual townships were the products of beach nourishment projects.<sup>41</sup>

Tourism became the top source of revenue for Dare County years ago and now dwarfs fishing, boat building, and other local industries.<sup>42</sup> Likewise, the number of temporary inhabitants (vacationers) outnumbered full-time residents of Dare County in 2021 at a ratio of up to eighty to one.<sup>43</sup> Overall, less than one-third of residential properties and even fewer oceanfront homes are owned by full-time

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37. See Lane DeGregory, *A Decade of Growth on the Outer Banks: A Decade of Growth and Change 10 Years Ago, the Barrier Islands Offered Solitude with Their Beaches. Today, Vacationers—and the Growing Number of Residents—Are Grappling with the Area's Growth*, VIRGINIAN-PILOT, July 6, 1996, <https://scholar.lib.vt.edu/VA-news/VA-Pilot/issues/1996/vp960706/07060371.htm> [<https://perma.cc/Y9AH-ZS4W>].

38. See Gaul, *supra* note 9; see also *Projected 2022-2023 Beach Nourishment Schedules*, DARE CNTY., <https://www.darenc.com/government/beach-nourishment/upcoming-projects> [<https://perma.cc/U46K-WH66>].

39. Twiddy, *supra* note 36.

40. See Gaul, *supra* note 9 (“[D]evelopers continue to add billions of dollars of real estate.”).

41. *Id.*

42. See N.C. State Univ. Off. of Outreach & Engagement, *2020 Economic Development & Diversification Strategic Plan*, DARE CNTY. 11-12 (Dec. 19, 2016), <https://www.darenc.com/home/showpublisheddocument/1233/636179214120300000> [<https://perma.cc/W86H-SHBF>] (showing how in 2014 tourism employed many more Dare County residents and impliedly drew more revenue than marine trades and commercial fishing); *2021 County Level Visitor Expenditures*, VISIT N.C., <https://partners.visitnc.com/contents/sdownload/72835/file/2021-County-Level-Visitor-Expenditures.pdf> [<https://perma.cc/76UX-4FQK>] (showing that Dare County received over \$1,800,000,000 from tourism in 2021).

43. *Visitation Figures at Key Sites 2018-2022*, OUTER BANKS, [https://assets.simpleviewinc.com/simpleview/image/upload/v1/clients/outerbanks/2022\\_Attractions\\_437a13b2-d214-4f43-a89c-fc3cb2c7d3b4.pdf](https://assets.simpleviewinc.com/simpleview/image/upload/v1/clients/outerbanks/2022_Attractions_437a13b2-d214-4f43-a89c-fc3cb2c7d3b4.pdf) [<https://perma.cc/962K-J6FW>] (showing that in 2021 over three million people visited Cape Hatteras National Seashore, and almost two million visited Jockey's Ridge State Park—key landmarks frequented by tourists adjacent to Dare County); *Quick Facts, Dare County, North Carolina*, US CENSUS BUREAU (July 1, 2022), <https://www.census.gov/quickfacts/darecountynorthcarolina> [<https://perma.cc/6DHM-NDXH>] (showing that Dare County had an estimated year-round population of almost 38,000 people in 2022).

residents.<sup>44</sup> This indicates that most of the “residential” properties in Dare County are second homes or commercial investment properties built and maintained as rental units to house tourists.<sup>45</sup> Climate change and the natural migration of the islands put Dare County in a difficult spot because the investment home tax revenue and tourism giving the county the most revenue are also the most at risk and require the most outlays.<sup>46</sup> Given the uptick in recent flooding and increasing costs of climate disasters, the Outer Banks may very well be at a tipping point where further development does not make sense.<sup>47</sup>

## II. NOTABLE CURRENT COASTAL POLICIES AND THEIR COSTS

The current relevant policies of the federal government, North Carolina, and Dare County are inadequate to meet the current challenges of island migration and future climate-related disasters because they are short-sighted scientifically. State and local laws stress the benefits of tourism and recreation, even in the texts of the laws themselves.<sup>48</sup> A focus on promoting tourism above all else, however, can increase the costs of the fallout and cleanup from a future environmental disaster.

### A. *Nationally—the National Flood Insurance Program*

The most relevant national regulation in the context of the Outer Banks, island migration, and sea level rise is the National Flood Insurance Program (NFIP). The NFIP provides subsidized flood insurance primarily for one- to four-family residential properties and

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44. Austin Thompson, *Rising Seas; Falling Funds: An Analysis of Beach Nourishment Finance in Dare County, NC* 36, 44-45 (Apr. 27, 2018) (Masters Project, Duke University) (on file with Duke University).

45. *See id.* at 45.

46. *See* Sarah Peach, *Rising Seas: Will the Outer Banks Survive?*, NAT'L GEOGRAPHIC (July 24, 2014), <https://www.nationalgeographic.com/science/article/140725-outer-banks-north-carolina-sea-level-rise-climate> [<https://perma.cc/8U9Y-QB92>] (quoting the Nags Head mayor at the time: “Our only industry is the tourist industry, and without a beach there is no tourist industry.”).

47. *See* Peter Rowe, *Development on the Outer Banks: A Case of Public Perception*, 7 INQUIRIES J. 1, 12 (2015).

48. *E.g.*, DARE COUNTY, N.C., ORDINANCES art. XXV (effective May 30, 1991).

some commercial properties that can serve as small businesses.<sup>49</sup> Lenders often require buyers to purchase flood insurance through the NFIP for properties in particularly high-risk flood zones.<sup>50</sup> The NFIP, in many instances, will cover up to \$250,000 for individual dwelling units and \$500,000 for nonresidential properties.<sup>51</sup> Problematically, the NFIP rates and premiums are often priced far below cost and significantly underestimate actual flood risk.<sup>52</sup> The NFIP does not distinguish between investment properties (second homes and residential properties owned corporately) and actual residential properties that house full-time residents.<sup>53</sup> Further, systemic failures inherent in the NFIP incentivize development in flood-prone areas.<sup>54</sup> Climate change-fueled sea level rise in the Outer Banks may thus prove exorbitantly expensive for the federal government in the long run. In fact, Dare County is already expensive.<sup>55</sup> North Carolina was number twelve in the country for sheer total of NFIP claims, and NFIP coverage in Dare County reaches into the billions.<sup>56</sup> Should the flood insurance program run out of money, Dare County may be out of luck in the event of a flood disaster. If the NFIP can pay out claims, because investment properties tend to sit in riskier areas, federal funds will likely flow to investment properties more often than to homes of full-time residents.<sup>57</sup>

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49. 16 MICHAEL ALLAN WOLF, POWELL ON REAL PROPERTY § 92A.05(6)(c)(i).

50. *Id.* § 92A.05(7)(a), (c).

51. *Id.* § 92A.05(6)(c)(ii).

52. Edward P. Richards, *Applying Life Insurance Principles to Coastal Property Insurance to Incentivize Adaptation to Climate Change*, 43 B.C. ENV'T AFFS. L. REV. 427, 446-48 (2016).

53. See WOLF, *supra* note 49, § 92A.05(6)(c)(i) (demonstrating that there is no distinction between types of homes).

54. Richards, *supra* note 52, at 446-48.

55. *Flood Insurance Data and Analytics*, FEMA, <https://nfipservices.floodsmart.gov/reports-flood-insurance-data> [<https://perma.cc/H4L8-SVHA>] (listing documents entitled "Claims Information by State" and "Policy Information by State").

56. *Id.*

57. See *infra* notes 84-88 and accompanying text (discussing the relationship between flood zones and flood insurance coverage); *Dare County Flood Zones*, *supra* note 17 (showing how investment properties, which are usually closer to the water, are in the riskiest flood zones).

*B. State-Wide Coastal Regulation Through the Coastal Area Management Act*

Most reforms must occur at the local level because the North Carolina Constitution prohibits state enactments of local laws.<sup>58</sup> That said, in *Adams v. North Carolina Department of Natural and Economic Resources*, North Carolina carved out an exception by which laws governing coastal areas can be considered “general law[s].”<sup>59</sup> *Adams* also upheld the Coastal Area Management Act (CAMA) and its implementing Coastal Resources Commission (CRC), the main segment of North Carolina law designed to address coastal policy.<sup>60</sup> The CAMA and CRC have done good work in averting worst-case scenarios by enacting and enforcing coastal setback lines.<sup>61</sup> These oceanfront construction setback lines limit how close new structures can be to water, and thus prevent new developments from facing acute flood dangers.<sup>62</sup> Despite this, the setback lines fail to adapt to current challenges and embrace timelines that would, according to scientists, protect coastal communities effectively.<sup>63</sup>

Litigation of the CAMA can lead to limited civil damages or injunctions, but most published cases center on permits and whether it was “arbitrary and capricious” for the government to issue particular permits.<sup>64</sup> The minutes and meeting agenda of the

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58. N.C. CONST. art. II § 24 (West, Westlaw through July 1971 amendments); *id.* art. XIV § 3.

59. 249 S.E.2d 402, 410 (N.C. 1978).

60. *Id.* at 411-13.

61. See 15A N.C. ADMIN. CODE 07H .0306(a) (effective Sept. 9, 1977); *Oceanfront Construction Setback & Erosion Rates*, N.C. DEP'T ENV'T QUALITY, <https://deq.nc.gov/about/divisions/coastal-management/coastal-management-oceanfront-shorelines/oceanfront-construction-setback-erosion-rate> [<https://perma.cc/6AF9-HPBG>]; *Lawsuit Filed Against North Carolina After Ocean Takes Beach Property*, S. ENV'T L. CTR. (Nov. 15, 2021), <https://www.southernenvironment.org/news/lawsuit-filed-against-north-carolina-after-ocean-takes-beach-property/> [<https://perma.cc/SKP5-GDFH>].

62. *Oceanfront Construction Setback & Erosion Rates*, *supra* note 61.

63. See Jennifer Allen, *NC's First Sea Level Rise Report, 10 Years On*, COASTAL REV. (June 24, 2020), <https://coastalreview.org/2020/06/ncs-first-sea-level-rise-report-10-years-on/> [<https://perma.cc/6CWV-RP6R>] (showing how the sea level rise estimates of scientists have not been adopted by North Carolina); Jason S. Allen, Stefano B. Longo & Thomas E. Shriver, *Politics, the State, and Sea Level Rise: The Treadmill of Production and Structural Selectivity in North Carolina's Coastal Resource Commission*, 59 SOCIO. Q. 320, 327-32 (2018).

64. *E.g.*, *Friends of Hatteras Island Nat'l Historic Mar. Forest Land Tr., for Pres., Inc. v. Coastal Res. Comm'n*, 452 S.E.2d 337, 344-45, 351 (N.C. Ct. App. 1995).

CRC confirm the trend that most litigation involving the CAMA involves the issuance of permits rather than more substantive enforcement measures.<sup>65</sup> Such a focus can take the teeth out of enforcement regimes.

### *C. Selected Dare County Laws that Pertain to the Coast*

Dare County's promotion of a tourism economy reaches even its most minute laws. For example, among other tight ordinances and policies, the county has strict limitations on the size of signs.<sup>66</sup> Sign regulations are aesthetic restrictions and effectively place limits on many national chains, instead promoting small businesses run by full-time residents.<sup>67</sup> Aesthetic restrictions are not the only mechanism by which Dare County favors small businesses, but in conjunction with other policies, Dare County has proven itself to be a prime small business locality.<sup>68</sup> Although this has many financial and cultural benefits, the concentration of small businesses in the county exposes small-scale investors and entrepreneurs, who may not be able to weather a financial storm, to the worst economic effects of climate change in the case of a climate disaster.<sup>69</sup>

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65. *E.g.*, Memorandum from Mary L. Lucasse, Esq. to the N.C. Coastal Res. Comm'n (Aug. 31, 2022) (on file with the N.C. Dep't of Env't Quality) (linked in the Sept. 2022 Coastal Res. Comm'n Agenda).

66. DARE COUNTY, N.C., CODE OF ORDINANCES ch. 158 (2022). Individual townships within Dare County can have their own even stricter and more detailed ordinances with easily visible effects. *E.g.*, KILL DEVIL HILLS, N.C., CODE OF ORDINANCES § 153.077 (2022); Akila Sankar McConnell, Note, *Making Wal-Mart Pretty: Trademarks and Aesthetic Restrictions on Big-Box Retailers*, 53 DUKE L.J. 1537, 1537 (2004) (showing the degree to which aesthetic restrictions affected a Home Depot in Kitty Hawk and likely deterred other larger chains from moving into the town).

67. DARE COUNTY, N.C., CODE OF ORDINANCES § 158.01(C). *See generally* Charles R. Taylor, Matthew E. Sarkees & Hae-Kyong Bang, *Understanding the Value of On-Premise Signs as Marketing Devices for Legal and Public Policy Purposes*, 31 J. PUB. POL'Y & MKTG. 185, 185-86 (2012) (discussing the value of signage to large and small businesses).

68. *See New Study Shows That Dare County's Small Business Presence Is Among the Highest in N.C.*, OBX TODAY (Aug. 14, 2023), <https://www.obxtoday.com/new-study-shows-that-dare-countys-small-business-presence-is-among-the-highest-in-n-c/> [<https://perma.cc/8NG5-BFV9>]; *Business and Economy*, U.S. CENSUS BUREAU, [https://data.census.gov/profile/Dare\\_County,\\_North\\_Carolina?g=050XX00US37055#business-and-economy](https://data.census.gov/profile/Dare_County,_North_Carolina?g=050XX00US37055#business-and-economy) [<https://perma.cc/2K29-VZN9>] (showing that in 2017 Dare County had nearly 2,000 small businesses, and that the majority of establishments had less than five employees).

69. *See Benjamin Collier & Marc Ragin, As Climate Risk Grows, So Will Costs for Small Businesses*, HARV. BUS. REV. (Aug. 16, 2022), <https://hbr.org/2022/08/as-climate-risk-grows-so>.

As part of the county's compliance with the CAMA and the natural functions of local government, Dare County and the towns and villages within are responsible for land use plans.<sup>70</sup> The county made notes on projected development and land use sophistication in each town and village in 2009.<sup>71</sup> These notes remained unchanged after the 2018 town halls, and county officials have not updated them or adopted a new land use plan since 2010.<sup>72</sup>

According to the notes in the current land use plan, Rodanthe Village, where homes were recently swept away, remains mostly unregulated due to "residents' continued resistance to land use controls."<sup>73</sup> The towns of Avon, Frisco, and Hatteras are also particularly vulnerable to island migration and erosion, but the county notes expect further development, especially along the NC 12 Highway.<sup>74</sup> Further, Frisco largely lacks use-specific zoning, so development there could occur on even broader lines than in other towns.<sup>75</sup> Most unincorporated areas are zoned "S-1," under which all uses are permitted, with few substantive restrictions.<sup>76</sup> When addressing the flooding danger of these communities, Dare County falls back on the setback lines created by the CAMA and does not bolster protections for low-lying areas.<sup>77</sup> It is both ironic and troubling that some of the areas most affected and scientifically risky are the same areas that resist planning designed to ameliorate

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will-costs-for-small-businesses [https://perma.cc/BV9M-UQCT].

70. N.C. GEN. STAT. ANN. §§ 113A-101, 110 (West 1981).

71. DARE CNTY., 2009 DARE COUNTY LAND USE PLAN UPDATE 1 (2010), <https://files.nc.gov/ncdeq/Coastal%20Management/documents/PDF/Land%20Use%20Plans/Dareplan.pdf> [https://perma.cc/639P-J479].

72. *Land Use Plan*, DARE CNTY., <https://www.darenc.gov/departments/planning/zoning-regulations-maps/land-use-plan> [https://perma.cc/TAK2-LMV5]. Dare County proposed a new land use plan in 2022, but has not yet adopted it. The proposed plan is more sensitive to the flooding risks of the county than the plan currently in force, but it still predicts and allows for widespread development along the same patterns and in the same areas as the current plan. *See generally* PROPOSED 2022 DARE COUNTY LAND USE PLAN, 66, 221-30 (2022), <https://www.darenc.gov/home/showpublisheddocument/12828/638340190938370000> [https://perma.cc/2X XK-MT7E].

73. DARE CNTY., *supra* note 71, at 77; *see supra* note 6.

74. *See* DARE CNTY., *supra* note 71, at 79-81.

75. *See id.* at 80.

76. DARE COUNTY, N.C., CODE OF ORDINANCES § 22-27.1 (2021).

77. *See* DARE CNTY., *supra* note 71, at 79-81.

risks. Instead, these communities have the clearest avenues for development.<sup>78</sup>

As for the county's plans to address climate risks, although there are strict standards for newer constructions, older structures do not need to conform to these rules, and thus remain vulnerable unless they are "partially located in a special flood hazard area."<sup>79</sup> In flood zone X, which encompasses much of the county, many standards are relaxed in that the usual definitions of substantial improvements (renovations or large additions) and substantial damage do not apply.<sup>80</sup> More stringent standards are not required unless the structure has been "entirely demolished."<sup>81</sup> Finally, in flood zone VE, where flood risk is significantly greater than in zone X, the setback line behind which each new construction must be located is "mean high tide" and the structure must be elevated above "regulatory flood protection elevation requirements."<sup>82</sup> Given the pessimism expressed toward the science panel at the state level, it is unlikely that these standards for zone VE accurately reflect sea levels and the risks of storm-induced climate disasters.<sup>83</sup>

Despite some of these deficiencies, Dare County's ordinances designed to minimize flood damages seem robust. The most worrying issue, therefore, is their reliance on flood zones to delineate standards. Although flood zones intuitively allocate risk, FEMA's 2020 update to the flood zone maps in Dare County drastically decreased the number of properties that are considered in high-risk flood zones.<sup>84</sup> Flood zone X only represents moderate risk, while flood zones AE and VE designate areas at high flood risk.<sup>85</sup> The maps, following outdated computer models that did not account for recent storm surges, shifted thousands of properties from high-risk

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78. See *supra* notes 73-75 and accompanying text.

79. See DARE COUNTY, N.C., CODE OF ORDINANCES § 151.50(N) (2020).

80. § 151.51(E)(2)(a); § 151.05. See generally *Dare County Flood Zones*, *supra* note 17.

81. § 151.51(E)(2)(d).

82. *Id.* § 151.55(A)-(B).

83. See *supra* note 63.

84. Michelle Wagner, *Dare Officials Concerned About FEMA Flood Maps*, OUTER BANKS VOICE (Jan. 7, 2020), <https://www.outerbanksvoice.com/2020/01/07/dare-officials-concerned-about-fema-flood-maps/> [<https://perma.cc/FJU4-98AK>].

85. *What Does My Flood Zone Mean?*, FEMA, <https://www.floodsmart.gov/understanding-my-flood-zone> [<https://perma.cc/R2GN-4ST5>].

flood zones to flood zone X, which has more flexible building codes.<sup>86</sup> Further, unlike AE and VE, flood zone X does not require owners to purchase flood insurance.<sup>87</sup> Dare County amended some of the ordinances to stave off some of the negative consequences of the rezoning, but the discrepancy in standards between the flood zones remain, and property owners are still misled as to their real risk of flooding.<sup>88</sup>

*D. Miscellaneous Policies that “Adapt” to Erosion and Island Migration*

Beyond the state and local land use regulations, Dare County uses a few mitigation measures to maintain its policy of promoting development and tourism. There is a sense in which Dare County can mislead itself about the risks its islands face because of its tourism revenue. Just 2 percent of the Occupancy Tax, a tax levied almost solely on tourists, was enough to pay for beach nourishment projects in 2022.<sup>89</sup> The costs of beach nourishment will only increase, but county officials say that their models account for this, and that beach nourishment is sustainable because Occupancy Tax revenues are also predicted to increase in kind.<sup>90</sup> For the most part, however, beach nourishment is the only real mitigation measure employed and funded in full by Dare County.<sup>91</sup>

There have been two main pushes toward a policy of managed retreat, but these are the exception and not the rule. First, at the request of homeowners, Dare County officials closed a street in Rodanthe to allow homeowners to move their homes back from the

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86. See Wagner, *supra* note 84; *supra* note 80 and accompanying text.

87. Wagner, *supra* note 84.

88. *Id.*

89. See *Frequently Asked Questions*, DARE CNTY., <https://www.darenc.gov/government/beach-nourishment/frequently-asked-questions> [<https://perma.cc/4ESH-4N4A>]; Dare County, *Occupancy Tax Dare County*, YOUTUBE (Nov. 30, 2016), <https://www.youtube.com/watch?v=ZHmrwQmqtDs> [<https://perma.cc/45KK-4ZY8>].

90. Celeste Gracia, *Beach Nourishment Along Outer Banks Will Be Sustainable for Foreseeable Future*, WUNC (May 9, 2022, 7:04 AM), <https://www.wunc.org/news/2022-05-09/beach-nourishment-outer-banks-sustainable-foreseeable-future> [<https://perma.cc/7V32-SEVY>].

91. See *Frequently Asked Questions*, *supra* note 89.



shore—at the expense of the homeowners themselves.<sup>92</sup> Second, at first glance, the new NC 12 bridge (funded by the State of North Carolina) looks like an instance of managed retreat.<sup>93</sup> The bridge curves around some of the fastest eroding areas near Rodanthe and Pea Island and effectively abandons the old embattled stretch of highway.<sup>94</sup> However, after examining the immediate costs and opposition by locals of embracing managed retreat in the area, officials notably decided not to build a bridge that would bypass all of the areas frequently affected by overwash.<sup>95</sup> NC 12 thus still stubbornly cuts through and increases access to endangered areas.<sup>96</sup>

Mitigation in place and disaster response efforts are more common ways to confront the problem of flooding risk. For the most part, state officials look only thirty to fifty years out (down from ninety years) for planning purposes.<sup>97</sup> This window still misses long-term costs and even the ways that shorter time horizons have rapidly ballooned costs with the increasing severity of erosion from storms. Because of the limited span of the new bridge, many sections of NC 12 in Dare County still experience overwash and closures from storms and require significant funding and manpower to reopen.<sup>98</sup> Although the nearly sixty-two million dollars that North Carolina spent on NC 12 in Dare County may seem small compared to tourism tax revenue, road-closing storms seem to be increasing in frequency, driving up costs.<sup>99</sup>

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92. Dan Kennedy, *Shifting Sands and Houses: Rodanthe Residents Prepare to Move Homes Away from Rising Ocean*, 13NEWSNOW (Nov. 7, 2022, 6:51 PM), <https://www.13newsnow.com/article/news/local/north-carolina/outer-banks/rodanthe-house-moving-beach-erosion-outer-banks-ocean/291-49c496dd-6d2c-4f5f-8517-775a33d3f13e> [<https://perma.cc/GEJ6-XPYF>].

93. See Gareth McGrath, *Is New Rodanthe Bridge the Future of NC 12 on the Outer Banks?*, STARNEWS ONLINE (July 29, 2022, 12:32 PM), <https://www.starnewsonline.com/story/news/2022/07/29/new-outer-banks-bridge-carries-nc-12-around-erosion/10181279002/> [<https://perma.cc/6XKE-HAJM>].

94. *Id.*

95. *Id.*

96. *Id.*

97. See Allen et al., *supra* note 63, at 331; *Oceanfront Construction Setback & Erosion Rates*, *supra* note 61 (“[S]etback factors are calculated using the long-term (approximately 50 years) average annual shoreline change rates.”).

98. See Craig A. Midgett, *NC 12 Hot Spots*, N.C. DEP’T TRANSP., DIV. 1, 27 (June 2021), <https://www.darenc.gov/home/showpublisheddocument/9680/637600627083830000> [<https://perma.cc/EX4M-E4M8>].

99. *Id.* at 27; see @NCDOT\_NC12, TWITTER, [https://twitter.com/NCDOT\\_NC12](https://twitter.com/NCDOT_NC12) [<https://perma.cc/8E3Z-4236>] (recording many of the recent road closures due to heavy storms).

In 2021, Dare County spent over four million dollars from FEMA and the State of North Carolina to elevate thirty-one homes at risk of flooding.<sup>100</sup> Averaging well over one hundred thousand dollars per home, this funding is not sustainable.<sup>101</sup> Further, because most of the homes being elevated are mansions, second homes, or investment properties, this funding should not come from taxpayers.<sup>102</sup> Taxpayer dollars should not provide the safety net for investment properties in flood-prone areas.

### III. SOLUTIONS TO THE GAPS IN THE CURRENT LAWS AND POLICIES

The solutions to the problem of developing and migrating barrier islands addressed in this Note assume that the islands in Dare County should be treated as real property. Given that the Outer Banks are migrating barrier islands, however, some scholars have argued that they should only be seen as national community-based resources, like water, that merit protections and should not fall under real property laws at all.<sup>103</sup> In some sense, migrating barrier islands do not behave like “normal” land and thus cannot neatly fall under the “normal” real estate conventions like metes and bounds.<sup>104</sup> Were barrier islands not considered real property, the lands would be ineligible for future development and localities could introduce increasing restrictions on land use until the islands return to their primitive state.<sup>105</sup> Such an approach could be a blueprint for more sustainable coastal development going forward, but would be dangerous to adopt today. Enacting a community-based resource approach for developed barrier islands now could create additional harms because it would probably create chaos for permanent residents, shock the tourism industry, and unnecessarily complicate property taxes.

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100. *FEMA Grant to Elevate 31 Dare County Homes*, OUTER BANKS VOICE (Aug. 20, 2021), <https://www.outerbanksvoice.com/2021/08/20/fema-grant-to-elevate-31-dare-county-homes/> [<https://perma.cc/J92Y-5BZX>].

101. *See id.* (extrapolating the average cost per home).

102. *See supra* note 45 and accompanying text.

103. *See* Amy H. Moorman, *Let's Roll: Applying Land-Based Notions of Property to the Migrating Barrier Islands*, 31 WM. & MARY ENV'T L. & POL'Y REV. 459, 491-92, 494-95 (2007).

104. *Id.*

105. *See id.* at 491, 495-96.

Assuming traditional property laws apply to the islands in Dare County, the best policy solutions to the problem of Outer Banks migration involve managed retreat, curbs on further development, and changes to the NFIP. State and local officials should not necessarily abandon current beach nourishment projects but should instead supplement their current mitigation projects with new policies that will address the long-term effects of island migration and sea level rise.

### A. *Rolling Easements*

The CAMA's setback lines address some of the problems associated with erosion and new development, and ideally incorporate annual erosion rates, but they are not equipped to reflect true erosion.<sup>106</sup> First implemented in Texas, rolling easements may do a better job incorporating actual erosion, while also addressing the political problems that arise when water overtakes private property.<sup>107</sup> Under a rolling easement, when the sea level reaches a particular point, like the vegetation line on dunes, ownership of the land automatically transfers to the government, or another potential easement holder like a conservation group.<sup>108</sup> Private owners of the land and structures can then be forced to pay rent to the easement holder, and eventually compelled to remove their structures and abandon their property interests.<sup>109</sup>

State statutes or local regulations could create rolling easements in all coastal areas.<sup>110</sup> Rolling easements can also be used in conjunction with the existing setback lines.<sup>111</sup> When statutes require

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106. See *Oceanfront Construction Setback & Erosion Rates*, *supra* note 61 (“[S]horeline position change rate information is not intended to be predictive, nor does it reflect the short-term erosion that can occur during storms.... [T]he most current and effective oceanfront development setback factors are still those adopted in February 2013.”).

107. See James G. Titus, *Rising Seas, Coastal Erosion, and the Takings Clause: How to Save Wetlands and Beaches Without Hurting Property Owners*, 57 MD. L. REV. 1279, 1313, 1331 (1998).

108. See generally JAMES G. TITUS, EPA, ROLLING EASEMENTS 4-10 (2011), <https://www.epa.gov/sites/default/files/documents/rollingeasementsprimer.pdf> [<https://perma.cc/8CPG-ZXCL>].

109. See *id.*

110. Titus, *supra* note 107, at 1313.

111. *Id.* at 1318.

that the terms of deeds include rolling easements, owners taking title implicitly agree to eventual relinquishment of property rights and acknowledge that sea level rise may affect their property.<sup>112</sup> As long as property owners have notice of the rolling easements, the easements would affect investment-backed expectations, and help remove the potential for state takings liability.<sup>113</sup>

Even though rolling easements would likely be unpopular, some scholars note that they may be more politically palatable than the setback lines that are already in place.<sup>114</sup> After all, with setback lines, technically owners still own and need to pay property taxes on land that they cannot use as they desire, that may be trodden on by the public through public beach access, and that will no longer belong to the owners once it becomes submerged.<sup>115</sup> Whereas with a rolling easement, once the land has become part of the easement and is no longer privately owned, the taxpayer may receive a tax deduction.<sup>116</sup> Overall, especially when combined with the existing setback lines, rolling easements can pave the way for informed, gradual retreat in Dare County.<sup>117</sup> These easements would allow for tourism now, and in some cases even new development, but with a clear eye to an eventual end.<sup>118</sup>

### *B. Even Stricter Land Use and Development Policies*

Retreat and a complete moratorium on new development are likely the most effective means to minimize the impacts of island migration and storm-related flood events, but there is no political appetite for such sweeping restrictions.<sup>119</sup> Therefore, since further

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112. See *id.* at 1314-16.

113. See Margaret E. Peloso & Margaret R. Caldwell, *Dynamic Property Rights: The Public Trust Doctrine and Takings in a Changing Climate*, 30 STAN. ENV'T L.J. 51, 61 (2011).

114. See Titus, *supra* note 107, at 1331.

115. See Joseph J. Kalo, *North Carolina Oceanfront Property and Public Waters and Beaches: The Rights of Littoral Owners in the Twenty-First Century*, 83 N.C. L. REV. 1427, 1449-50 (“[P]laintiff’s lots had been taken by the sea and title thereto had vested in the State of North Carolina.”).

116. See TITUS, *supra* note 108, at 109-10; Titus, *supra* note 107, at 1387.

117. See Titus, *supra* note 107, at 1317-18.

118. See *id.*

119. Large-scale developments are already being planned or are underway in the county. See, e.g., Michelle Wagner, *Dare Board Advances Project to Create Up to 400 Housing Units*, OUTER BANKS VOICE (May 2, 2022), <https://www.outerbanksvoice.com/2022/05/02/dare-board->

development will inevitably go ahead, a variety of stricter restrictions and land use policies are justifiable.

### 1. *Increased Frequency of Permit Denials*

Although permit denials can potentially be grounds for takings compensation, Dare County should be more willing to deny building permits once properties have suffered total losses from flooding.<sup>120</sup> The county currently allows rebuilding pursuant to a permit if various building regulations are met.<sup>121</sup> Given the nature of the challenges that the Outer Banks face, however, even well-built structures will likely prove temporary. Assuming the risk that courts will consider permit denials a taking, compensation may prove less costly in the long run than insurance payouts and repetitive rebuilding because each rebuild may become more expensive to adapt to increasingly robust building codes.<sup>122</sup>

### 2. *Limits on the Square Footage of New Homes*

While moving endangered homes is still feasible, Dare County should limit the size of new homes and spaces.<sup>123</sup> The cost of moving

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advances-project-to-create-up-to-400-housing-units/#:~:text=In%20February%2C%20the%20county%20entered,state%20for%20such%20a%20purpose [https://perma.cc/6QQA-UNMT]; Joy Crist, *Tourism Officials Outline Plans for New Indoor Event Center at Rodanthe Meeting*, ISLAND FREE PRESS (Dec. 9, 2022), <https://islandfreepress.org/outer-banks-news/tourism-officials-outline-plans-for-new-indoor-event-center-at-rodanthe-meeting/> [https://perma.cc/H8RH-UJTS]; Michelle Wagner, *Planned Development Off Airport Rd. Raises Concerns*, OUTER BANKS VOICE (June 21, 2022), <https://www.outerbanksvoice.com/2022/06/21/planned-development-off-airport-rd-raises-concerns/> [https://perma.cc/8K7E-Z26U].

120. See *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1019 (1992) (showing the Supreme Court standard for when an owner becomes entitled to takings compensation).

121. DARE COUNTY, N.C., CODE OF ORDINANCES §§ 151.35, 51 (2020). See generally *supra* Part II(a).

122. See Pat Howard, *Replacement Cost v. Market Value*, POLICYGENIUS (July 15, 2022), <https://www.policygenius.com/homeowners-insurance/replacement-cost-vs-market-value/> [https://perma.cc/NGA5-BNCM] (“[R]econstruction costs can actually be higher than what a home is actually worth.”).

123. See Kennedy, *supra* note 92 (discussing how property lines limit how much ocean-front homes can be moved).

and elevating homes depends upon their square footage—contractors give quotes based on the cost per square foot.<sup>124</sup> Since tax dollars cover the elevation costs of some structures, state and local governments could minimize these expenses, and, indirectly, the potential losses from a flood event, by limiting the footprints of new constructions.<sup>125</sup>

### *3. More Restrictive Zoning and Building Codes*

Third, Dare County could change zoning ordinances and building restrictions. Density restrictions on various zones could limit the number of new homes and commercial buildings. The county could also create more detailed zoning restrictions for unincorporated areas like Rodanthe, further update building codes for all flood zones, and stop allowing nonconforming structures. Some of these changes might prove expensive, but if the goal of officials is to prolong tourism as long as possible and avoid retreat, the marginal value to be gained from updating nonconforming structures may outweigh the costs needed for compliance with building codes. If the costs of conforming are too high, then managed retreat may begin anyway.

### *4. An Extended Bridge Instead of Patchwork Repairs*

Finally, the county should extend the new NC 12 bridge to bypass troubled areas. Although access to some towns may become more limited with this change, exclusivity of access may increase the prices tourists are willing to pay to reach certain towns.<sup>126</sup> Because even minor storms can affect inlets in narrower parts of the islands, a piecemeal approach of many short bridges will be inefficient and

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124. See Les Masterson, *How Much Does It Cost to Move a House? Here's How Home Raising and Relocating Work*, REALTOR.COM (Mar. 7, 2023), <https://www.realtor.com/advice/buy/how-much-does-it-cost-to-move-a-house/> [https://perma.cc/6HTY-2W46]; Scott Dylan Westerlund, *How Much Does It Cost to Raise My House?*, ANGI (May 31, 2022), <https://www.angi.com/articles/how-much-does-it-cost-raise-house.htm> [https://perma.cc/8ZMT-Y5SW].

125. *FEMA Grant to Elevate 31 Dare County Homes*, *supra* note 100.

126. See *supra* notes 93-95 and accompanying text.

still require repairs, not unlike the current system of clearing NC 12.<sup>127</sup>

In sum, rolling easements could be immediately beneficial for properties that are currently adjacent to water. If rolling easements are implemented alone, however, much of the rest of Dare County would not realize any changes for some time. A variety of policies could thus help build resilience in properties that do not immediately abut water and could ameliorate some future risk by strategically limiting developments.

### *C. Changing Incentives for Lenders under the NFIP*

As for a federal solution to the local problems in the Outer Banks, many changes are needed to the NFIP. First, federal officials should consider excluding second homes and corporately-owned residential properties from NFIP coverage. Especially given the risk that the NFIP eventually may not have the funds to pay out all claims, federal tax dollars should prioritize full-time residences and local businesses rather than emblems of wealth and wealth-generating properties.<sup>128</sup> Second, NFIP pricing should reflect flood risk more accurately.<sup>129</sup> Finally, given that the NFIP essentially subsidizes and incentivizes risky development (in part through its pricing) after a storm or island-migration related flooding,<sup>130</sup> foreclosures on affected residential properties in flood zone X and higher risk flood zones should be prohibited. By statute, lenders must already keep insurance for properties in high-risk flood zones through the time of foreclosure sales, even when borrowers fail to obtain flood insurance themselves.<sup>131</sup> By selling troubled properties in foreclosure sales, however, lenders can offload some of their risks and avoid shouldering the full costs of floods. Exacerbating the problems, the U.S.

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127. See McGrath, *supra* note 93.

128. Aside from traditional (low-rate paying) savings accounts, most speculative investments are not eligible for federal insurance, so why should investment properties in risky areas be eligible for loss protection? See *Speculative Risk Insurance*, HIGGINBOTHAM (Apr. 27, 2021), <https://www.higginbotham.com/blog/speculative-risk-insurance/#:~:text=Speculative%20risk%20is%20not%20insurable%20primarily,the%20potential%20for%20moral%20hazard> [https://perma.cc/C4AH-KY8Z].

129. *E.g.*, Richards, *supra* note 52, at 428.

130. *Id.* at 446-48.

131. 12 C.F.R. § 339.7 (2023).

Department of Housing and Urban Development (HUD) is a common purchaser of foreclosures.<sup>132</sup> There is a long history of inequity and information gaps when HUD acquires and then sells flood-prone properties.<sup>133</sup> Were lenders forced to face the full risks and costs of flooding, they may think twice before lending in hazardous areas. Should credit then become relatively inaccessible in places like the Outer Banks, individuals would likely become less enticed to build and buy in areas with flood risk, sparking an indirect retreat.

#### IV. ADDRESSING COUNTERARGUMENTS

Policies of managed retreat and limited development are deeply unpopular.<sup>134</sup> Common arguments against limiting development often center on issues of environmental justice and notions that the current policies are sufficient. Given the nature of the population of Dare County and the grim warnings of scientists, these arguments should be given limited weight.

##### A. *Why Environmental Justice and Fairness Are of Little Concern Here*

Exact figures on the ratios of second homes and rental properties to that of permanent residents are hard to come by outside of incorporated towns. That said, the consensus is that the “majority of properties on the Outer Banks,” especially in areas closest to the water, are investment properties.<sup>135</sup> Second homes and commercially

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132. Huo Jingnan, Rebecca Hersher, Tegan Wendland, Steve Newborn & Daniel Rivero, *The Federal Government Sells Flood-Prone Homes to Often Unsuspecting Buyers*, NPR Finds, NPR (Sept. 13, 2021, 5:00 AM), <https://www.npr.org/2021/09/13/1033993846/the-federal-government-sells-flood-prone-homes-to-often-unsuspecting-buyers-npr-> [https://perma.cc/ZJG6-8KHF].

133. *See id.*

134. *See* Gracia, *supra* note 90; *see also* Julia Jacobo, *Hurricane Ian 1 Month Later: Images Show Destruction Left in Hardest-Hit Regions*, ABC NEWS (Oct. 28, 2022, 5:02 AM), <https://abcnews.go.com/US/hurricane-ian-month-images-show-destruction-left-hardest/story?id=92203002> [https://perma.cc/WE6J-9DU3] (showing that even after total losses, the leaders of areas hardest hit by Hurricane Ian vow to rebuild).

135. *Outer Banks Real Estate—2023 Guide*, OUTERBANKS.COM, <https://web.archive.org/web/20221201170624/https://www.outerbanks.com/real-estate-listings.html> [https://perma.cc/7WBD-9UVW].



owned residential properties, especially in beach towns, are largely reserved for the wealthy, and thus, these developments do not concern the types of populations that are at risk or in need of protection.<sup>136</sup> Therefore, the prevalence of non-locally owned properties should lessen the gravity of potential displacement should policies and island migration force owners to abandon homes.

Environmental justice research tends to focus on how climate change affects minorities and economically disadvantaged groups.<sup>137</sup> Full-time residents and some who have retired to Dare County could more plausibly claim that they faced environmental injustices or that reforms would be unfair surprises, especially if flood insurance programs become privatized or otherwise more robust and costly.<sup>138</sup> These limited environmental justice risks, however, could be addressed by grandfathering the limited and insufficient policies of year-round residents into the better policies, with protections that end upon the sale of the property. In other words, permanent residents should be exempt from shouldering surprise increased costs and should have their insurance policies subsidized. Upon the sale of properties, however, buyers would face the increased costs.

Additionally, while there are legitimate fairness concerns for those who bought property in the area, their choice to do so and to stay given the unique environmental factors at play in the Outer Banks represents at least some degree of personal risk assumption. Even though there is some concern that some people who buy property may underestimate their levels of risk because of the new flood maps, flood risk overall is undeniable in the area.<sup>139</sup> Because

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136. See Alexander B. Lemann, *Assumption of Flood Risk*, 51 ARIZ. ST. L.J. 163, 215-17 (2019). See generally *Dare County, NC*, DATA USA, <https://datausa.io/profile/geo/dare-county-nc> [<https://perma.cc/V786-HG5Z>] (demonstrating the median household income and median property value in Dare County, N.C.).

137. See generally Jodi Helmer, *Climate Change Floods North Carolina's Housing Market*, NAT'L RES. DEF. COUNCIL (Oct. 6, 2020), <https://www.nrdc.org/stories/climate-change-floods-north-carolinas-housing-market> [<https://perma.cc/LB3E-LRT6>] (discussing flooding and flood insurance through an environmental justice lens and demonstrating some of the typical focal points for environmental justice advocates).

138. See Sarah Fox, *This Is Adaptation: The Elimination of Subsidies Under the National Flood Insurance Program*, 39 COLUM. J. ENV'T. L. 205, 227-32 (2014) (showing how homeowner concerns about equity and increasing costs led to the amendment and repeals of reforms made to the NFIP).

139. Wagner, *supra* note 84; Lemann, *supra* note 136, at 211 ("Nobody buying waterfront property ... in the Outer Banks of North Carolina ... could credibly express shock if a damag-

the vast majority of development has occurred in the last fifty to sixty years, most property owners in the county made conscious choices to build or buy in vulnerable areas, and have lessened abilities to plead ignorance or poverty in the event of total losses.<sup>140</sup> Further, although some longtime residents may have careers tied to the area, given that demand and real estate prices for properties in the Outer Banks are still high (and could theoretically go higher if land becomes closed for development), staying is itself a choice and assumption of risk because moving is both possible and likely affordable.<sup>141</sup>

Concerns for fairness can spill into the ranks of tourists as well, since managed retreat could theoretically limit the numbers of vacationers to the area. Repeat vacationers to the area often have a unique allegiance to the Outer Banks, evidenced in their repeat visitation and proud displays of “OBX” bumper stickers.<sup>142</sup> Further, both by price and proximity, the region has helped to increase access to coastal vacations.<sup>143</sup> After all, the CAMA and Dare County policies alike emphasize the importance of tourists’ access to recreation and coastal areas.<sup>144</sup> That said, policies of limiting development and managed retreat may only have small effects on tourist access and sentiment.<sup>145</sup> An intriguing 2015 study showed that year-round residents viewed development on the Outer Banks more favorably than did the tourists.<sup>146</sup> Beaches in Dare County have become packed in recent years—to the point that some officials have said

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ing storm comes along.”).

140. See Lemann, *supra* note 136, at 215-17 (discussing choice and hinting at equity in the flood insurance context); Twiddy, *supra* note 36 (describing the history of development in the Outer Banks); see also Kennedy, *supra* note 92.

141. Stephen Smith, *Island Real Estate: Hatteras Island Home Sales and Trends for October 2022*, ISLAND FREE PRESS (Oct. 25, 2022), <https://islandfreepress.org/real-estate/island-real-estate-hatteras-island-home-sales-and-trends-for-october-2022/> [<https://perma.cc/8U87-S7YZ>] (showing that prices are still climbing on Hatteras Island—the island in Dare County where erosion threats are the most imminent).

142. See Andrew Moore, *Changing Tides: Reimagining Tourism in the Outer Banks*, N.C. STATE U. COLL. NAT. RES. NEWS (Oct. 27, 2021), <https://cnr.ncsu.edu/news/2021/10/changing-tides-reimagining-tourism-in-the-outer-banks/> [<https://perma.cc/UA37-9PQF>] (“Outer Banks tourism has historically been driven by repeat visitation from large family groups, with multiple generations returning to the same rental home year after year.”).

143. See Twiddy, *supra* note 36.

144. *E.g.*, N.C. GEN. STAT. ANN. § 113A-134.1 (2023).

145. See Rowe, *supra* note 47.

146. *Id.*

that the current levels of tourism are unsustainable.<sup>147</sup> Perhaps tourists would prefer and be willing to pay for a less-developed Outer Banks with more privacy.<sup>148</sup> If the beaches remain public, and the park lands remain open or even expand, tourists may not be severely impacted by policy changes anyway.

### *B. Why the Status Quo Is Not Sufficient*

Dare County government sites and officials often stress that mitigation polices like beach nourishment are the only realistic paths forward.<sup>149</sup> Such a narrow view is supported by the reality that “beach nourishment is a practical solution for the Outer Banks for the near term,” and that tourism dollars currently surpass the costs associated with island migration.<sup>150</sup> Further, through the NFIP, FEMA casts a wide safety net for flood-related property damage—the damage most commonly affecting properties in the Outer Banks.<sup>151</sup> However, just because the balance sheet works now does not mean that it always will, or that this can be an excuse to avoid planning for the long term.<sup>152</sup> In fact, rates of flooding in Dare County have already begun to increase, and scientists say that some of the more catastrophic effects of climate change are already

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147. Mark Jurkowitz, *The Impacts of Tourism Are Both Positive and Negative*, OUTER BANKS VOICE (May 18, 2022), <https://www.outerbanksvoice.com/2022/05/18/the-impacts-of-tourism-are-both-positive-and-negative/> [https://perma.cc/57C7-UUP3].

148. See Allison Pohle, *National Parks Are Overcrowded and Closing Their Gates*, WALL ST. J. (June 13, 2021, 7:00 AM), <https://www.wsj.com/articles/national-parks-are-overcrowded-and-closing-their-gates-11623582002> [https://perma.cc/77SP-X2D3] (demonstrating how tourists in other contexts may prefer less crowds and how demand can remain high even when there are temporary closures and reservation systems in place).

149. Gracia, *supra* note 90 (“[B]each nourishment [i]s the only option for coastal communities.”).

150. *Id.* (since the 1930s, beach nourishment projects on North Carolina’s coast have cost over \$700 million); *The Tourists Are Back: NC Sees Spending Reach 99% of Pre-Pandemic Level*, OBX TODAY (May 4, 2022), <https://www.obxtoday.com/the-tourists-are-back-nc-sees-spending-reach-99-of-pre-pandemic-level/> [https://perma.cc/5JYE-LCXN] (“Visitor spending helped state and local governments collect tax revenues of \$2.3 billion.”).

151. See *supra* Part II.A.

152. See Kari Pugh, *An Outer Banks Town Is Falling Into the Ocean. Can Rodanthe Be Saved?*, VIRGINIAN-PILOT (Aug. 6, 2023, 3:01 PM), <https://www.pilotonline.com/2023/08/06/an-outer-banks-town-is-falling-into-the-ocean-can-rodanthe-be-saved/> [https://perma.cc/CU53-J2BC] (discussing how buyouts may be less costly than beach nourishment in Rodanthe, indicating that in areas of severe erosion, the default mitigation measure of beach nourishment is already falling short).

occurring in the Outer Banks.<sup>153</sup> The books may not balance for too much longer, so a change in policy is necessary to avoid financial fallout.

#### CONCLUSION

Policy changes in the Outer Banks will likely have high initial price tags and will be hard to swallow for many stakeholders, but changes are necessary to avert higher costs and greater shocks later. The Outer Banks, and the Rodanthe community especially, are already seeing the effects of increased sea level rise. Scientists suggest that the migration and erosion of the islands will continue, with potentially catastrophic consequences. Unfortunately, given the complexities of the problems and the scale of the risks, no one policy change will be sufficient—all or some combination of the potential solutions detailed in this Note should be used together. In the meantime, until policy change is wrought, it is important for tourists and property owners alike to understand the realities of island migration. Perhaps when there is a greater knowledge of the science behind the shifting sands, interested parties will be more willing to find nuanced alternatives to pushing for development and doggedly promoting tourism.

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153. *See supra* Parts I, II.

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