

# MOVING TO HIGHER GROUND: PROTECTING AND RELOCATING COMMUNITIES IN RESPONSE TO CLIMATE CHANGE

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## INTRODUCTION

Amidst the intense political controversies facing the United States today, it is easy to forget that the risks posed by global climate change continue to mount. In the summer and fall of 2016, several major flooding events reminded us of the potentially devastating consequences of global climate change. In the span of eight days in August, an unnamed tropical storm that stalled over Southeastern Louisiana dumped an estimated 7.1 trillion gallons of water on the state—three times as much rain as Louisiana received during Hurricane Katrina.<sup>1</sup> According to the Governor of Louisiana, the flooding caused by this unnamed storm damaged at least 6,000 businesses and 55,000 homes, a number that some suggest could easily double as applications for rebuilding assistance and inspections continue.<sup>2</sup> In late September 2016, the Cedar River in Iowa crested many

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1. Jason Samenow, *No-Name Storm Dumped Three Times as Much Rain in Louisiana as Hurricane Katrina*, WASH. POST (Aug. 19, 2016), [https://www.washingtonpost.com/news/capital-weather-gang/wp/2016/08/19/no-name-storm-dumped-three-times-as-much-rain-in-louisiana-as-hurricane-katrina/?utm\\_term=.8df30834b5b0](https://www.washingtonpost.com/news/capital-weather-gang/wp/2016/08/19/no-name-storm-dumped-three-times-as-much-rain-in-louisiana-as-hurricane-katrina/?utm_term=.8df30834b5b0). In many parishes, the rainfall totals fell in the 20–30 inch range, more rain than the City of Los Angeles has received in the last several years. *Id.*

2. Emily W. Pettus & Melinda Deslatte, *Louisiana Flood Damage at Least \$8.7 Billion, Governor Says*, ASSOCIATED PRESS (Sept. 3, 2016), <http://bigstory.ap.org/article/4ebe5296e9994d8fbd51a0de579d4ab6/louisiana-flood-damage-least-87-billion-governor-says>. Subsequent estimates by the Governor were even higher—60,646 homes damaged and 30,000 people rescued. Independent analysis of the number of homes likely “affected” and actually “damaged” have varied widely. *See* Drew Broach, *How Many Houses, People Flooded in Louisiana?*, TIMES-PICAYUNE (Sept. 15, 2016),

feet above its normal flood stage, forcing citizens of Cedar Rapids to construct a makeshift levee over the course of just a few days to avoid catastrophic flooding in their city.<sup>3</sup> Finally, in early October 2016, Hurricane Matthew, which caused massive damage and loss of life in Haiti and then grazed the coast of Florida, Georgia, and South Carolina, produced extensive flooding in North Carolina. This led to an estimated \$1.5 billion in damages to over 100,000 homes, businesses, and government buildings in that state alone, not to mention significant loss of life.<sup>4</sup>

My aim today is not to try to prove a specific causal connection between any of these tragic events and global climate change. I leave that task to the climate scientists. My focus is on what many scholars and public policy advocates now realize is an inevitable response: retreat. By retreat, however, I am not referring to elevating houses and other structures, although that is a valuable climate-change-adaption strategy in many cases. Instead, I mean moving households and entire communities to higher ground.

This subject fascinated the U.S. Media during the past year. In May 2016, *The New York Times* profiled the challenges facing a small tribe of Native Americans who currently live on a disappearing island off the coast of Louisiana. The tribe received a large federal grant from the Department of Housing and Urban Affairs (HUD) to help relocate the entire community to higher ground.<sup>5</sup> A few months later, the same newspaper described another community in the tidelands of Virginia, many of whose members are *resisting* calls to relocate. Instead, they demand that the federal

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[http://www.nola.com/weather/index.ssf/2016/08/how\\_many\\_people\\_houses\\_were\\_fl.html](http://www.nola.com/weather/index.ssf/2016/08/how_many_people_houses_were_fl.html) (noting that 109,398 people or households applied for assistance after the Louisiana Flood of 2016, according to FEMA reports).

3. Kyle Munson, *Cedar Rapids Flood is a Flop, and Thank God For That*, DES MOINES REGISTER (Sept. 28, 2016), <http://www.desmoinesregister.com/story/news/local/columnists/kyle-munson/2016/09/27/cedar-rapids-sequel-flood-flop-and-thank-god/91107802/>.

4. *North Carolina Estimates \$1.5 Billion in Hurricane Damage to Buildings*, REUTERS (Oct. 16, 2016), <http://www.reuters.com/article/us-storm-matthew/north-carolina-estimates-1-5-billion-in-hurricane-damage-to-buildings-idUSKBN12G10E>. For more detail about the loss of life and extent of damage in North Carolina attributable to Matthew, see Pam Wright, *Flooding in North Carolina from Hurricane Matthew Incurs \$1.5 Billion in Damage, Authorities Say*, WEATHER CHANNEL (Oct. 16, 2016 1:15 PM), <https://weather.com/news/news/hurricane-matthew-north-carolina-update> (discussing damage in North Carolina due to Hurricane Matthew).

5. See, e.g., Coral Davenport & Campbell Robertson, *Resettling the First American "Climate Refugees"*, N.Y. TIMES (May 3, 2016), <http://www.nytimes.com/2016/05/03/us/resettling-the-first-american-climate-refugees.html> (detailing the complex issues in relocating communities). For more details about the planning process and objectives associated with the proposed relocation of this community, see LA. DISASTER RECOVERY UNIT, RESETTLEMENT AS A RESILIENCE STRATEGY AND THE CASE OF ISLE DE JEAN CHARLES 11–12 (2015), [http://www.coastalresettlement.org/uploads/7/2/9/7/72979713/ldjc\\_prospectus\\_final\\_27oct15\\_updated\\_logos-2.pdf](http://www.coastalresettlement.org/uploads/7/2/9/7/72979713/ldjc_prospectus_final_27oct15_updated_logos-2.pdf) (stating details about the planning process and objectives associated with this proposed relocation).

government build a massive seawall to protect the community from rising sea levels.<sup>6</sup> Several scholars have already begun to analyze the complex social dynamics, human rights issues, and regulatory challenges involved in relocating communities—particularly indigenous communities, in places such as Alaska—in the face of climate change.<sup>7</sup>

My particular goal in this paper is to offer some preliminary thoughts on four interrelated questions that all concern the challenge of protecting or relocating communities threatened by sea-level rise and climate change in the specific context of takings claims and government land-acquisition programs. I visualize these questions as forming a chronological decision tree that government officials, legislators, and courts will face. First, I address a question that may not be asked frequently today, but is nevertheless relevant to understanding the predicament that communities, like Isle de Jean Charles, are facing. The question is this: can property owners assert a valid takings claim based on a governmental decision *not* to build hard infrastructure that would protect land from sea-level rise and flooding? (My short answer is no. Takings liability does not exist in this situation.) The second question that follows from the first is: would governmental actors—federal, state, or local—use eminent domain to relocate property owners and entire communities to higher ground? (Again, my short answer is no. The political unpopularity of eminent domain will usually take this option off the table.)

The third question I will address is perhaps the most difficult to answer: if governments will not use eminent domain to relocate communities to higher ground, what other strategies are likely to achieve the same end? Put differently, if the government wants to use public resources to create *voluntary* property-acquisition programs designed to facilitate the movement of households and communities to higher ground,

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6. Jon Gertner, *Should the United States Save Tangier Island From Oblivion?*, N.Y. TIMES MAG. (July 6, 2016), <https://www.nytimes.com/2016/07/10/magazine/should-the-united-states-save-tangier-island-from-oblivion.html>.

7. See, e.g., Robin Bronen, *Climate-Induced Community Relocations: Creating an Adaptive Governance Framework Based in Human Rights Doctrine*, 35 N.Y.U. REV. L. & SOC. CHANGE 357, 393 (2011) (discussing how the humanitarian crisis surrounding the relocation of indigenous Alaskan communities demonstrates the need for a relocation policy framework founded on human rights principles and that accounts for the socioeconomic needs of the community); Robin Bronen & F. Stuart Chaplin III, *Adaptive Governance and Institutional Strategies for Climate-Induced Community Relocations in Alaska*, 110 PROC. NAT'L ACAD. SCI. 9320, 9320 (2013) (discussing the impact of climate change on Alaskan communities and proposing policy changes moving forward); Ashley Rawlings, *Erosion-Induced Community Displacement in Newtok, Alaska and the Need to Modify FEMA and NEPA to Establish a Relocation Framework for a Warming World*, 5 SEATTLE J. ENVTL. L. 199, 219 (2015) (arguing that current federal and state agency programs do not provide sufficient relocation aid, and that therefore Congress should amend NEPA and FEMA to provide adequate "relocation remedies").

what strategies have proved to be most successful? To answer this question, I will briefly review a handful of recent experiments and offer a few suggestions about the lessons this limited experience has taught us.

In the last section of the paper, I tackle a residual question that follows from the previous three questions, especially the third. If a government-sponsored buyout program succeeds in inspiring a large percentage of property owners in a community to sell their property and move to higher ground, or if large numbers of property owners leave on their own volition for other reasons, what obligations, if any, does the community still owe to those who remain behind, especially when it comes to maintaining infrastructure and government services? Would a county, a state, the federal government, or even a public utility be able to withdraw infrastructure support and services and leave the remainder of the community to fend for itself in the face of ever-rising waters and more ferocious storms? To answer this question, I draw on a few recent cases and insights from recent scholarly literature addressing the question of whether takings liability should exist for government *inaction*, as well as governmental action. That is to say, should there be liability for so-called “passive takings”?<sup>8</sup>

#### I. IS THERE A TAKING WHEN GOVERNMENT CHOOSES NOT TO BUILD HARD INFRASTRUCTURE TO PROTECT PROPERTY?

The first question that I address is a relatively simple one, but answering it will lead to other important questions. Does a property owner have a valid takings claim if the government decides not to build some kind of hard infrastructure that would protect the land from flooding, sea-level rise, or any other natural hazard? In other words, is a landowner entitled to just compensation under the Takings Clause by demonstrating that a government decision *not* to build protective infrastructure has rendered the land valueless for development, or has at least significantly diminished the land’s economic value?

In *Allain-Lebreton Co. v. Department of Army*, the United States Fifth Circuit Court of Appeals answered this question firmly in the negative.<sup>9</sup> In *Allain-Lebreton*, the plaintiff corporation owned land near a proposed hurricane-protection levee and offered a gratuitous easement over its land to

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8. See generally Christopher Serkin, *Passive Takings: The State’s Affirmative Duty to Protect Property*, 113 MICH. L. REV. 345, 346 (2014) (arguing that government inaction could violate the Takings Clause); David Dana, *Incentivizing Municipalities to Adapt to Climate Change: Takings Liability and FEMA Reform as Possible Solutions*, 43 B.C. ENVTL. AFF. L. REV. 281, 296 (2016) (positing that the threat of liability from theoretical and uncertain passive takings in the future may not incentivize governments to act, and offering alternative solutions).

9. *Allain-Lebreton Co. v. Dep’t of Army*, 670 F.2d 43, 44 (5th Cir. 1982).

the local levee district to facilitate construction if the levee was constructed over a designated portion of its land.<sup>10</sup> The U.S. Army Corps of Engineers (the Corps) rejected the offer, choosing instead to construct the levee elsewhere, in part, because the plaintiff's suggested location would enclose a substantial tract of wetlands.<sup>11</sup> The plaintiff contended that, but for the Corps' veto of the plaintiff's proposal, the levee district would have accepted its proposed levee location, and the plaintiff could have drained and developed its wetlands.<sup>12</sup> The plaintiff complained that the Corps' decision to construct the levee elsewhere effectively meant that the Corps' plan sacrificed the development potential of its land.<sup>13</sup> By this course of action, the Corps had allegedly "taken" the plaintiff's land without paying just compensation.<sup>14</sup>

The federal district court dismissed the plaintiff's claim, and the Fifth Circuit affirmed, holding that the Corps and the levee district actually "decided *not* to take the offered property of the company" and decided not "to interfere with it in any way."<sup>15</sup> This refusal to act, the court held, "merely denied to the company certain business opportunities which it could have enjoyed if the levee had been located where the company desired."<sup>16</sup> In other words, the Corps' refusal "to conduct its affairs so as to help the company develop its land"—its decision to leave property alone—"is not a taking."<sup>17</sup> In conclusion, the Fifth Circuit observed that "[t]he sovereign must only pay for what it takes, not an opportunity the owner loses."<sup>18</sup>

At almost the same time, a federal district court rejected a property owner's claims in another dispute involving levee alignment in South Louisiana. This case was framed as a suit for injunctive relief rather than as a takings claim.<sup>19</sup> In *Bayou Des Familles Development Corporation v. United States Corps of Engineers*, the owner of a 2000-acre, undeveloped tract of land on the west bank of the Mississippi River had plans for a major residential development.<sup>20</sup> To this end, it began constructing its own private

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10. *Id.*

11. *Id.*

12. *Id.*

13. *Id.*

14. *Id.*

15. *Id.* at 44–45.

16. *Id.* at 45.

17. *Id.*

18. *Id.*

19. *Bayou Des Familles Dev. Corp. v. U.S. Corps of Eng'rs*, 541 F. Supp. 1025, 1042 (E.D. La. 1982).

20. *Id.* at 1029.

levee to make the land developable.<sup>21</sup> The Corps stopped the levee construction because the levee project was destroying valuable wetlands.<sup>22</sup> Eventually, the property owner sought to induce the local levee district, parish officials, and the Corps to incorporate its partially constructed private levee into the much larger, federally supported levee system that was being designed to protect the entire west bank of New Orleans from hurricane flooding. When the Corps and the local officials eventually chose *not* to build the new levee along the alignment that the property owner wanted, the property owner filed a lawsuit to enjoin the Corps, the levee district, and the parish government from proceeding with the levee project at the alternative location.<sup>23</sup>

The federal district court, however, dismissed the lawsuit, citing *Allain-Lebreton*, and holding that the decision *not* to place the flood control levee where the plaintiff desired did “*not* create a justiciable case or controversy ripe for review.”<sup>24</sup> In addition, the court held that it lacked “the authority to order the Corps to build a hurricane levee along the alignment of plaintiff’s incomplete levee, as plaintiff has asked the court to do.”<sup>25</sup> Although the court did not address takings liability, it is clear that the court did not believe a property owner could compel the government to use its resources to build infrastructure to maximize the property’s development potential.<sup>26</sup> Government inaction—at least at this stage in the planning and construction of a major infrastructure project designed to respond to ecological threats—could *not* lead to governmental liability.<sup>27</sup>

These two decisions support an initial conclusion relevant to our decision tree regarding how governments can and/or should respond to the threat of climate change. A property owner is *not* entitled to just compensation under the Fifth Amendment when the government decides not to build hard infrastructure that would protect that property from ecological threats—at least at the outset of government engagement with the local area.<sup>28</sup> Put differently, a landowner does not have a takings claim when the government elects *not* to protect land from the threat of natural

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21. *Id.*

22. *Id.* at 1038.

23. *Id.* at 1031–32.

24. *Id.* at 1041–42 (emphasis added) (citing *Allain-Lebreton Co. v. Dep’t of Army*, 670 F.2d 43 (5th Cir. 1982)).

25. *Id.* at 1042.

26. *Id.*

27. *Id.*

28. See *Allain-Lebreton Co.*, 670 F.2d at 44 (holding that the failure of the government to build a levee did not constitute a taking); see also *Bayou Des Familles Dev. Co.*, 541 F. Supp. at 1042 (dismissing a request for injunctive relief to re-permit the construction of a levee).

hazards, or elects not to build infrastructure that would make the land developable.<sup>29</sup>

It is worth keeping this initial insight in mind as we reflect on communities like Isle de Jean Charles. Although our current interest in that community tends to be drawn toward its innovative effort to relocate to higher ground, at one time, leaders of Isle de Jean Charles resisted relocation and lobbied instead for their community to be protected by levees within the almost-billion dollar “Morganza to the Gulf” hurricane-protection levee project.<sup>30</sup> Such a realignment would have substantially increased the cost of the project.<sup>31</sup> Isle de Jean Charles is not the only community that has been left outside the proposed “Morganza to the Gulf” hurricane-levee alignment. Four other communities now lie outside the current proposed alignment.<sup>32</sup> In Louisiana and elsewhere, hard infrastructure, like levees and seawalls, do not protect many communities.<sup>33</sup>

## II. WILL GOVERNMENTAL ACTORS BE WILLING TO USE EMINENT DOMAIN TO MOVE PEOPLE OUT OF HARM’S WAY?

The next question that deserves brief attention is whether federal or state governments will use eminent domain to acquire homes, businesses, and farms located in coastal communities that the effects of climate change are likely to overwhelm. As a legal matter, there is little doubt that governments could use eminent domain and take private property for the purpose of protecting communities from climate change if they were willing to pay property owners just compensation.<sup>34</sup> Governmental actors could easily satisfy the Fifth Amendment’s “public use” requirement, as well as similar requirements of state constitutions, by acquiring private

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29. *Bayou Des Familles Development Co.*, 541 F. Supp at 1042.

30. Dan Barry, *In Louisiana, a Sinking Island Wars with Water and the Government*, N.Y. TIMES (June 19, 2006), <http://www.nytimes.com/2006/06/19/us/19road.html?mcubz=1>.

31. *Id.*; see also U.S. ARMY CORPS OF ENG’RS, MORGANZA TO THE GULF 1–2 (2015) (reasoning that costs under the Morganza project would increase even more if leaders were successful in lobbying for protection for the levees).

32. U.S. ARMY CORPS OF ENG’RS, FINAL POST AUTHORIZATION CHANGE REPORT MORGANZA TO THE GULF OF MEXICO, LOUISIANA 30 (2013), <http://www.mvn.usace.army.mil/Portals/56/docs/PD/P rojects/MTG/M2GPACReportMay2013.pdf>.

33. Robert Twilley, Professor, La. State Univ., Presentation on the Integrated Approaches to Creating Coastal Resilience Designs 14–16 (Feb. 1, 2017), <http://coastalresiliencecenter.unc.edu/wp-content/uploads/2017/02/TWILLEY-LSU-2017-Annual-Meeting-Presentation-web.pdf>.

34. See *infra* note 36 (listing cases in which eminent domain was used and narrowed in scope).

property and holding title in their public capacity.<sup>35</sup> For instance, they could hold the acquired land as wildlife refuges, national or state parks, national or state seashores, or as publicly owned floodplains or greenways.<sup>36</sup>

The real problem with eminent domain is whether governments would muster the political will to use it for such purposes, and whether Congress or state legislatures would be willing to pay for involuntary acquisitions with public funds. The answer to these questions is obvious.

Consider just one example. Recently, the Corps proposed the use of involuntary acquisition in certain areas as one feature of its “Southwest Coastal Louisiana Study.” It is a landmark, federally authorized feasibility and environmental impact study of how to accomplish both: (1) hurricane- and storm-damage risk reduction through the National Economic Development Plan (NED); and (2) coastal ecosystem restoration through the National Ecosystem Restoration Plan (NER) for the Southwest Coastal Plain of Louisiana—an area prone to flooding and other hurricane damage as evidenced by Hurricane Rita eleven years ago.<sup>37</sup> The initial study recommended the acquisition and removal of “Severe Repetitive Loss Structures” located within the regulatory floodplain and elevation of other structures.<sup>38</sup> It proposed that—in the event voluntary acquisitions and voluntary elevations proved insufficient to justify the cost of the program—the federal government and its local sponsors would reserve the right to acquire structures involuntarily.<sup>39</sup>

The response of the local community at public meetings and in the notice and comment period that followed release of the initial study was telling. In the Corps’ words:

The single-most important area of controversy is based upon over 2,540 oral and written comments and signatures on a petition to

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35. Robert Meltz, *Takings Law Today: A Primer for the Perplexed*, 34 *ECOLOGY L.Q.* 307, 326 (2007).

36. Although Louisiana narrowed its definition of a legitimate public purpose to justify expropriation under LA. CONST. art. I, § 4(B) in 2006 in response to the controversial decision in *Kelo v. City of New London*, eventually the pressures of redevelopment in the wake of Hurricane Katrina led to some relaxation of the scope of permissible purposes for expropriation and to creative judicial decisions to evade the remaining restrictions. *Kelo v. City of New London*, 545 U.S. 469, 484, 489 (2005); see also John A. Lovett, “Somewhat at Sea”: *Public Use and Third-Party Transfer Limits in Two U.S. States*, in *RETHINKING EXPROPRIATION LAW I: PUBLIC INTEREST IN EXPROPRIATION*, 93, 115 n.102 (B. Hoops et al, eds., 2015) (discussing how courts can interpret public purpose broadly).

37. *Executive Summary to U.S. ARMY CORPS OF ENG’RS, SOUTHWEST COASTAL LOUISIANA INTEGRATED FINAL FEASIBILITY REPORT AND ENVIRONMENTAL IMPACT STATEMENT*, at i (2006), <http://www.mvn.usace.army.mil/Portals/56/docs/PD/Projects/SWCoastal/2016/SWC%20Main%20Report.pdf>.

38. *Id.* at 35.

39. *Id.* at 18.



“PLEASE TAKE IT OUT!”; and to completely remove any and all reference or language related to “eminent domain” and “involuntary participation” from the study. The property owner’s choice to remain at their “own risk” or possibly without future assistance is considered the only appropriate course of action. Furthermore, the statement has been made that the goal of the plan is to restore and protect the coast and marshes, assist in preserving the unique culture, not remove people from their homes and family lands.<sup>40</sup>

Apparently, the Corps got the message from the local community loud and clear. In its recent response to the public comments, the Corps announced:

**Resolution:** The involuntary aspect of the NED TSP to remove structures that are located in the regulatory floodway, designated as “Severe Repetitive Loss Structures” as defined by FEMA, or that present a life safety risk, has been removed from the RP [Recommended Plan]. The NED RP is now 100% voluntary and there is no longer a need for the use of eminent domain to acquire structures that met these criteria in the 2015 Revised Draft Report.<sup>41</sup>

This kind of government reaction to public disapproval of eminent domain is not unusual. Indeed, in Isle de Jean Charles,<sup>42</sup> just as in many of the case studies presented in the following section, when local communities reject the proposed use of eminent domain, government officials invariably comply with their demand.

### III. WHAT KINDS OF GOVERNMENT-SPONSORED BUYOUT PROGRAMS ARE MOST SUCCESSFUL?

The third question on our decision tree concerns neither takings nor eminent domain, but rather public policy. If governments want to encourage property owners to sell their property—whether it consists of homes, farms, or businesses—and move to higher ground, what kinds of incentives and voluntary buyout programs have proven to be most successful?

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40. *Id.* at 35.

41. *Id.* (emphasis added).

42. *See* Davenport, *supra* note 5 (observing that islanders on Isle de Jean Charles demanded that the relocation buyouts there be voluntary as a condition for their support, and officials complied).

Before answering this question, it is worth pausing to reflect that the underlying problem is one of collective action. How can governments motivate enough property owners to relocate from one dangerous, exposed place to a safer place? After all, if enough property owners accept buyout offers, even if the buyouts are funded by the public treasury, the expenditure may be efficient in the long run if governments can avoid costs associated with emergency services. These costs may include assisting with rebuilding homes, assisting local governments with rebuilding public infrastructure after every new disaster, as well as maintaining infrastructure and public services in vulnerable areas.<sup>43</sup> But, if too small a percentage of property owners in a given community accept buyout offers, these disaster-response, infrastructure-maintenance, and public-service costs will remain quite high.<sup>44</sup> The costs incurred in creating, promoting, and funding buyouts would likely prove to be a waste of government resources.<sup>45</sup>

Over the last decade or so, governments have initiated numerous community-wide buyout programs. Consequently, we now have learned at least a few lessons about what kinds of design features lead to success or failure. These programs date back to those designed to respond to Hurricanes Katrina and Rita on the Gulf Coast of Louisiana and Mississippi. The programs also include responses to the severe flooding in Cedar Rapids, Iowa in 2008, and responses to the flood damage resulting from Superstorm Sandy in New York and New Jersey in 2012.<sup>46</sup>

A brief summary of some of these programs and a distillation of several important lessons follows:

**The Baker Bill:** U.S. Congressman Richard Baker of Baton Rouge proposed the first large-scale plan for responding to the massive damage caused by Hurricanes Katrina and Rita in Southeast Louisiana through a bill he introduced in the U.S. House of Representatives in the fall of 2005.<sup>47</sup> The plan hinged on the creation of a new federal agency, the Louisiana Recovery Corporation (LRC), modeled on the Resolution Trust Corporation

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43. ROBERT FREUDENBERG ET AL., LINCOLN INST. OF LAND POL'Y, BUY-IN FOR BUYOUTS: THE CASE FOR MANAGED RETREAT FROM FLOOD ZONES 38–39 (2016).

44. See FEMA, PROPERTY ACQUISITION HANDBOOK FOR LOCAL COMMUNITIES I-5–I-6 (1998), <https://www.fema.gov/pdf/government/grant/resources/hbfullpak.pdf> (discussing the importance of voluntary participation in such programs).

45. See *id.* (detailing the cost-benefit analysis of buyouts).

46. See Christopher Maag, *In Eastern Iowa, the City That “Would Never Flood” Goes 12 Feet Under*, N.Y. TIMES (June 13, 2008), <http://www.nytimes.com/2008/06/13/us/13flood.html?mcubz=1> (discussing the worst flooding in Cedar Rapids’s history); Sarah Ladislaw, *Hurricane Sandy: Evaluating the Response One Year Later*, CTR. FOR STRATEGIC & INT’L STUDIES (Nov. 4, 2013), <https://www.csis.org/analysis/hurricane-sandy-evaluating-response-one-year-later> (discussing impacts of Hurricane Sandy in New Jersey, New York, and Connecticut).

47. H.R. 4100, 109th Cong. (2005).

of the 1980s.<sup>48</sup> The plan would have funded the LRC through the sale of bonds and authorized it to buy up homes, commercial properties, and mortgages all across New Orleans and Southeast Louisiana, and assemble the parcels into larger tracts attractive to developers.<sup>49</sup> The LRC would then sell those parcels to master developers who would presumably have constructed new homes on higher and safer ground using modern elevation and construction techniques.<sup>50</sup> The sale of the land to the developers would pay off the bonds.<sup>51</sup> The LRC would have guaranteed homeowners to receive at least 60% of their pre-storm equity, and mortgage holders up to 60% of their pre-storm loan value.<sup>52</sup> The LRC would not be allowed to use eminent domain.<sup>53</sup> Property owners who sold their land to the LRC would, however, have been entitled to exercise a right of first refusal or option to buy property in the redeveloped communities.<sup>54</sup> Although some analysts predicted the Baker Bill plan could lead to the acquisition of as many as 100,000 parcels, and although it gained support of local political leadership in Louisiana, President George W. Bush ultimately refused to support the proposal, and the plan died in Congress.<sup>55</sup> Although the Baker Bill buyout plan never materialized, and the contemporaneous and even more ominous redevelopment plan suggested by the Bring New Orleans Back Commission also fizzled, one obvious lesson is that large-scale plans proposing massive buyouts across an entire city or region naturally attract significant opposition and are difficult to realize in democratic societies.

**Mississippi Coastal Improvements Program:** The primary focus of Mississippi's redevelopment efforts after Hurricane Katrina was on encouraging and providing financial assistance to homeowners to rebuild

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48. *Id.* § 2(a); John A. Lovett, *Housing Recovery Efforts in the Wake of Katrina and Rita*, 20 PROB. & PROP. 49, 50 (2006) [hereinafter *Housing Recovery Efforts*].

49. *Housing Recovery Efforts*, *supra* note 48, at 50; John A. Lovett, *Property and Radically Changed Circumstances*, 74 TENN. L. REV. 463, 541 (2007) [hereinafter *Property*].

50. *Housing Recovery Efforts*, *supra* note 48, at 50; *Property*, *supra* note 49, at 541.

51. *Housing Recovery Efforts*, *supra* note 48, at 50.

52. *Id.*

53. *Id.*

54. *Id.*

55. *See Property*, *supra* note 49, at 546 (discussing the Baker Bill in detail on pages 541–47). For discussion of the similarly misguided plan of the “Bring New Orleans Back Commission,” which published an infamous map of the City of New Orleans with large green dots indicating areas for potential green space and suggestions of “shrink[ing] the city’s footprint” and the spontaneous and almost universal public condemnation of the plan, see KRISTINA FORD, *THE TROUBLE WITH CITY PLANNING* 30–33 (Yale Univ. Press 2010) (discussing the “Bring New Orleans Back Commission” and the map of the City of New Orleans, which sparked public condemnation); RICHARD CAMPANELLA, *BIENVILLE’S DILEMMA* 344–50 (2008) (describing “The Great Footprint Debate”).

their homes on the same ground.<sup>56</sup> In September 2007, however, the Corps and other federal and state agencies announced the Mississippi Coastal Improvements Program (MsCIP), which included several different plans for the Mississippi Gulf Coast and its barrier islands.<sup>57</sup> The goal of the program was to strengthen Mississippi's Gulf Coast, to prevent damage from future hurricanes,<sup>58</sup> and to transform much of the coast into public wetlands and recreation space.<sup>59</sup> More specifically, the plan aimed to acquire 17,000 residential properties along the Gulf Coast, 10,000 of which were located in Hancock County.<sup>60</sup> Sixty percent of the targeted land was located within the corporate limits of the City of Bay St. Louis.<sup>61</sup> In addition, 2,000 of the parcels were within the highest hazard area.<sup>62</sup> The proposed budget for the entire project was set at \$10 billion.<sup>63</sup> At one point, the plan was described as "the nation's most significant attempt to radically reconfigure coastal communities . . . ."<sup>64</sup>

Potentially affected property owners, particularly in Hancock County, however, were not pleased with buyout elements of the MsCIP.<sup>65</sup> They complained that the timing of the plan's announcement came far too late—two whole years after Katrina—by which time most property owners had cleared debris, started rebuilding homes, or had even completed rebuilding.<sup>66</sup> The Corps told homeowners who had already rebuilt that they

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56. See *Property*, *supra* note 49, at 488, 534–35, 540 (outlining details of the Mississippi redevelopment plan). The primary Mississippi redevelopment plan had two distinct phases. Phase I focused on homeowners who had standard property insurance, but not flood insurance because they lived outside the official National Flood Insurance Program (NFIP) floodplain. Phase II targeted homeowners who were completely uninsured or underinsured (i.e., they lacked a standard homeowners policy, or had such a policy but did not have flood insurance, even though they lived in the NFIP floodplain). In either case, the benefit provided homeowners with a grant to rebuild on site. The only mitigation requirement was that homeowners who received a grant had to sign a covenant agreeing that they would obtain flood insurance in the future, would elevate or rebuild their homes above the advisory base-flood-elevation level, and would comply with building codes. *Id.*

57. *Mississippi Coastal Improvements Program*, U.S. ARMY CORPS OF ENG'RS PROGRAM & PROJECT MGMT., <http://www.sam.usace.army.mil/Missions/Program-and-Project-Management/Civil-Projects/MsCIP/> (last visited Nov. 28, 2017).

58. *Mississippi Coastal Improvements Program (MsCIP)*, USGS [hereinafter *Mississippi, USGS*], <https://gom.usgs.gov/web/Projects/View/4> (last updated Nov. 2, 2017).

59. Jenny Jarvie, *Talk of Federal Buyout Roils Lives in Coastal Mississippi*, L.A. TIMES (Oct. 2, 2007), <http://articles.latimes.com/2007/oct/02/nation/na-coast2>.

60. Bruce Egglar, *Buyout or Sellout?*, TIMES-PICAYUNE (Sept. 27, 2007), [http://blog.nola.com/times-picayune/2007/09/buyout\\_or\\_sellout.html](http://blog.nola.com/times-picayune/2007/09/buyout_or_sellout.html).

61. *Id.*

62. *Mississippi, USGS*, *supra* note 58.

63. Jarvie, *supra* note 59.

64. *Id.*

65. *Id.*

66. *Id.*

would be offered the full value of their homes,<sup>67</sup> and told those who had not rebuilt they would be offered rebuilding costs, plus the *current* value of the land, less any insurance payments the owner received.<sup>68</sup> Nevertheless, residents of the Mississippi Gulf Coast generally remained dissatisfied.<sup>69</sup> Residents and political leaders in Bay St. Louis claimed that the late announcement was deterring those who had already commenced rebuilding from completing their efforts and discouraging others from starting to rebuild.<sup>70</sup> Those who had rebuilt expressed concern about what would happen if they were the only residents left, how the plan would affect their flood-insurance rates, and what effect the plan would have on the city's local property tax base.<sup>71</sup>

At one public meeting, several hundred people—reportedly the largest crowd ever to appear at a post-Katrina recovery meeting in Bay St. Louis<sup>72</sup>—demonstrated by a show of hands that the program was largely unpopular.<sup>73</sup> At least some residents, however, expressed concern about staying in the area when no one else was, and the risks posed by a future hurricane.<sup>74</sup>

By the end of October 2007, the federal government abandoned its buyout plan, and proposed in its place the same repetitive loss buyout plan under the NFIP that had already been available for many years.<sup>75</sup> In any event, Congressional funding for the plan never materialized.<sup>76</sup> The lessons here again concern both scale and timing. Large-scale buyout programs introduced wholesale to an entire community engender significant opposition, especially when individuals have already used their own resources and other government subsidies to rebuild in place.<sup>77</sup> Local officials will also oppose large-scale buyout plans that threaten to undermine the local tax base.<sup>78</sup>

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67. *Id.*

68. *Id.*

69. In particular, there was considerable dispute about how the “current value” of the targeted parcels would be determined. *Id.*

70. *Id.*; see also, Egger *supra* note 60 (describing community opinion regarding a potential buyout of private real estate).

71. Jarvie, *supra* note 59.

72. Egger, *supra* note 60.

73. *Id.*

74. Jarvie, *supra* note 59.

75. J.R. Welsh, *Deal May Halt Big Federal Buyout*, SUN HERALD (Oct. 31, 2007), <http://infoweb.newsbank.com/resources/doc/nb/news/11CB257D24E9F380?p=NewsBank>.

76. *Id.*

77. See *supra* notes 65–69 (discussing the unpopularity of MsCIP with residents who had already rebuilt their homes).

78. See *supra* notes 70–71 (highlighting the concerns of political leaders in Bay St. Louis that a reduction in the tax base could negatively impact the city's finances); see also *infra* notes 162–64

**The Franklin Creek Floodway Plan:** Despite the problems with the MsCIP plan described above, a more limited and targeted buyout project focused on the Franklin Creek Floodway in Mississippi has been relatively successful.<sup>79</sup> For this program, the sponsors specifically targeted approximately 24 traditional slab-on-grade or curtain-wall-foundation residences and approximately six mobile homes, which had been flooded by four and a half feet of water because of Katrina's storm surge.<sup>80</sup> The sponsors also anticipated the program would affect 150 people and therefore allocated \$6.3 million to cover costs.<sup>81</sup> The average value of the targeted structures was \$50,000.<sup>82</sup> Eventually, the sponsors succeeded in purchasing 200 acres of land—including 59 low-lying, flood-prone properties—and in relocating 29 families out of the flood zone.<sup>83</sup> By December 2010, property acquisition and relocation was 80% complete.<sup>84</sup> After acquiring the land, which cannot be used for commercial or residential purposes, sponsors developed plans to restore the natural hydrology of the area by removing obstacles preventing drainage into Grand Bay.<sup>85</sup>

**Louisiana Road Home Program:** Louisiana's Road Home Homeowner Assistance Program (Road Home)—the plan Louisiana eventually implemented with billions of dollars in Community Development Block Grant (CDBG) funds provided by the Department of Housing and Urban Affairs (HUD) after Hurricanes Katrina and Rita—was primarily designed to help homeowners rebuild on the sites of their original homes.<sup>86</sup> Option 1 under Road Home offered homeowners rebuilding grants of up to \$150,000.<sup>87</sup> Road Home capped grant awards at the lesser of a

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(noting city officials' concerns about decreased tax revenue as a result of New Jersey's Blue Acres Buyout Program).

79. See TOM SMITH, MISS. COASTAL IMPROVEMENTS PROGRAM, PLANNING AND IMPLEMENTING COASTAL RESILIENCY 22 (2010), <https://conference.ifas.ufl.edu/aces10/Presentations/Additional%20ppts%20to%20pdf/Monday-NEW/2%20-%20Tom%20Smith%20-Mon-C-pm.pdf>. (noting that as of 2010 the Franklin Creek Floodway Plan was 80% complete).

80. U.S. ARMY CORPS OF ENG'RS, MISS. COASTAL IMPROVEMENT PROGRAM (MSCIP) INTERIM REPORT 7 (2006) (on file with the Vermont Law Review).

81. *Id.* at 10; SMITH, *supra* note 79, at 22.

82. U.S. ARMY CORPS OF ENG'RS, *supra* note 80, at 10.

83. Harlan Kirgan, *Katrina's Wake, Corps of Engineers Projects Seek to Mend, Improve Coast's Resiliency*, GULFLIVE.COM (Aug. 28, 2011, 6:20 AM), [http://blog.gulflive.com/mississippi-press-news/2011/08/katrinawake\\_corps\\_of\\_engineer.html](http://blog.gulflive.com/mississippi-press-news/2011/08/katrinawake_corps_of_engineer.html); U.S. ARMY CORPS OF ENG'RS, *supra* note 80, at 7; SMITH, *supra* note 79, at 22.

84. SMITH, *supra* note 79, at 22.

85. U.S. ARMY CORPS OF ENG'RS, *supra* note 80, at 10.

86. *Property*, *supra* note 49, at 535.

87. *Id.* at 536.

home's pre-storm value or the cost to repair the home.<sup>88</sup> As in Mississippi, Louisiana's Road Home imposed a 30% moral-hazard penalty for homeowners who did not carry insurance.<sup>89</sup> Eventually, in response to criticism and litigation launched by advocates for low-income residents of New Orleans, Road Home provided Additional Compensation Grants (ACGs) to eligible homeowners who wanted to rebuild because (as the advocates pointed out) capping the grants at the pre-storm value tended to penalize homeowners from lower-income communities.<sup>90</sup>

Road Home did include two buyout options, and so it is worth considering their impact. Option 2 offered homeowners the opportunity to sell their homes to Road Home for an amount calculated on the same basis as the Option 1 grant awards, but required homeowners to commit to purchase a new home or build a new home in Louisiana.<sup>91</sup> Option 3 offered homeowners the opportunity to sell their homes to Road Home without making any commitment to purchase or build another home in Louisiana, but reduced the offer price by 40% unless the eligible homeowner was 65 years or older.<sup>92</sup>

Road Home was clearly designed to create strong incentives for Louisiana homeowners to rebuild in place or at least to accept a buyout and remain in Louisiana.<sup>93</sup> Those incentives achieved their objectives: as of August 2016, 130,047 eligible homeowners have closed on their Road Home grants.<sup>94</sup> Total disbursements of the initial Road Home grants totaled more than \$9 billion (\$9,013,322,940 to be precise).<sup>95</sup> Further, 46,144 Option 1 recipients have received ACGs totaling \$2,126,633,778.<sup>96</sup> Across the entire state, 119,227 homeowners received Option 1 grants and rebuilt (or at least made plans to rebuild) on site.<sup>97</sup> This accounted for more than

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88. *Id.*

89. *Id.* at 541.

90. For an account of the criticism of the use of pre-storm value to determine Road Home grants and the Road Home program's eventual response, see Davida Finger, *Stranded and Squandered: Lost on the Road Home*, 7 SEATTLE J. SOC. JUST. 59, 66–67 (2008) (describing the criticism of the use of the pre-storm value to determine Road Home grants); see also David Hammer, *Road Home Changes Address Gap Between Home Values and Rebuilding Costs*, TIMES-PICAYUNE (Nov. 3, 2009), [http://www.nola.com/hurricane/index.ssf/2009/11/road\\_home\\_changes\\_target\\_gap\\_b.html](http://www.nola.com/hurricane/index.ssf/2009/11/road_home_changes_target_gap_b.html) (discussing Road Home's eventual response).

91. *Property*, *supra* note 49, at 543.

92. *Id.* at 536.

93. STATE OF LA. OFFICE OF CMTY. DEV., No. 457, HOMEOWNER ASSISTANCE PROGRAM SITUATION & PIPELINE REPORT 2 tbl.1 (2016), <https://www.road2la.org/hap/Docs/Situation%20and%20Pipeline%20Reports/Week457%2009-08-2016.pdf>.

94. *Id.*

95. *Id.*

96. *Id.*

97. *Id.*

\$8 billion (\$8,089,367,512 to be precise) in initial Road Home grants (not counting ACGs).<sup>98</sup>

In contrast, only 8,435 homeowners took Option 2 buyouts worth collectively \$743,080,557, and only 2,385 homeowners took Option 3 buyouts worth \$180,874,871.<sup>99</sup> In other words, only 10,820 out of 130,047 participating Louisiana homeowners, or 8.32% state-wide, took some form of a buyout.<sup>100</sup>

Of course, 10,820 buyouts is not an insignificant number. In which parts of the state were buyouts most popular? In Southeastern Louisiana, where the vast bulk of the Road Home grants were disbursed, most of the homeowners who participated in Road Home lived in one of five parishes: Jefferson, Orleans, Plaquemines, St. Bernard, and St. Tammany. Here is a more granular breakdown of the outcomes for these five parishes:

Table 1: Southeast Louisiana Road Home Program  
Number of Grants and Funds Disbursed Per Parish<sup>101</sup>

Parish	Option 1	Option 2	Option 3	Total
<b>Jefferson</b>	25,129 \$1,380,704,358	141 \$14,528,403	30 \$2,672,680	25,300 \$1,397,905,441
<b>Orleans</b>	41,680 \$3,837,756,502	3,670 \$354,474,330	1,567 \$122,677,094	46,917 \$4,314,907,926
<b>Plaquemines</b>	2,895 \$182,247,088	249 \$16,848,361	24 \$1,296,008	3,168 \$200,391,456
<b>St. Bernard</b>	7,870 \$692,485,405	3,780 \$311,341,635	714 \$50,972,914	12,364 \$1,054,799,954
<b>St. Tammany</b>	10,943 \$713,885,482	152 \$14,310,523	32 \$2,372,015	11,127 \$730,568,020

As the figures in Table 1 demonstrate, St. Bernard Parish was the only parish where a large percentage of property owners (36%) chose to pursue buyouts.<sup>102</sup> Not incidentally, many observers have noted that fairly large numbers of St. Bernard property owners chose to relocate in St. Tammany

98. *Id.*

99. *Id.*

100. *See id.* (calculating the combination of Options 2 and 3 along with participating homeowners from prior stated values).

101. *Id.* at 12–13 app. A, tbl.13.

102. *Id.*



Parish, on the north shore of Lake Pontchartrain.<sup>103</sup> In effect, many residents of St. Bernard intentionally, and largely through their own organic efforts, re-created communities in another parish that was perceived to offer greater security from future storms.<sup>104</sup>

In Southwestern Louisiana, the area hit hardest by Hurricane Rita, most of the Road Home participants also took Option 1 rebuilding grants, despite the continuing threat from future hurricanes and sea-level rise.<sup>105</sup> Here are the outcomes for five parishes (Calcasieu, Cameron, Iberia, Terrebonne, and Vermilion) with the largest number of Road Home participants.<sup>106</sup>

Table 2: Southwest Louisiana Road Home Program  
Number of Grants and Funds Disbursed<sup>107</sup>

Parish	Option 1	Option 2	Option 3	Total
<b>Calcasieu</b>	12,716	109	6	12,831
	\$466,294,738	\$7,793,628	\$281,655	\$474,370,021
<b>Cameron</b>	1,547	130	2	1,679
	\$102,509,462	\$10,078,085	\$143,850	\$112,731,397
<b>Iberia</b>	1,025	17	1	1,043
	\$51,579,076	\$938,366	\$61,086	\$52,578,528
<b>Terrebonne</b>	2,474	50	1	2,525
	\$132,768,775	\$3,494,712	\$41,071	\$136,304,559
<b>Vermilion</b>	1,615	51	3	1,669
	\$97,365,511	\$3,462,405	\$134,133	\$100,962,049

It is striking how few property owners chose to take advantage of two of the three buyout options. Even in the most heavily impacted and vulnerable parish right on the Gulf Coast—Cameron Parish—only 7.9% of Road Home participants chose either the Option 2 or Option 3 buyout.<sup>108</sup>

103. LA. DISASTER RECOVERY UNIT, *supra* note 5, at 11; Carrie E. Lasley, *Catastrophes and the Role of Social Networks in Recovery: A Case Study of St. Bernard Parish, LA, Residents After Hurricane Katrina 4* (Aug. 2, 2012) (unpublished Ph.D. dissertation, University of New Orleans) (on file with University of New Orleans).

104. LA. DISASTER RECOVERY UNIT, *supra* note 5, at 11.

105. STATE OF LA. OFFICE OF CMTY. DEV., *supra* note 93, at 12–13 app. A, tbl.13.

106. Terrebonne Parish is actually in South Central Louisiana, and so homeowners there were likely exposed to damage from both Hurricanes Katrina and Rita. *See id.* at 19 app. C (highlighting two other South Central Louisiana parishes likely exposed to both Hurricanes Katrina and Rita, both under 1,000 participants and not included in the provided outcomes).

107. *Id.* at 12–13, app. A, tbl. 13.

108. *See id.* (calculating the combined 132 residents choosing Options 2 or 3).

**Cedar Rapids Voluntary Property Acquisition:** The Midwest floods of 2008 hit the city of Cedar Rapids, Iowa exceptionally hard.<sup>109</sup> The Cedar River, which bisects the city, crested well above the previous record and the 500-year floodplain boundary.<sup>110</sup> In fact, the floodwaters engulfed roughly 15% of the city—an area of over ten square miles.<sup>111</sup> As the floodwaters began to recede, the city quickly started to map out a long-term recovery strategy.<sup>112</sup> City leaders sought input from local, regional, and national experts and entities, as well as citizens, by holding a series of open houses.<sup>113</sup> As a result of this collaboration, the city adopted its first flood recovery plan: the River Corridor Redevelopment Plan.<sup>114</sup>

The city's long-term recovery approach involved a comprehensive plan to provide social and economic recovery, as well as structural and nonstructural adaptations, to implement its large-scale flood mitigation system.<sup>115</sup> The city's ability to implement many of these goals hinged, however, on the success of the city's Voluntary Acquisition Plan.<sup>116</sup> The city council adopted this acquisition and buyout program in December of 2008 as "the first step towards broad sustainable neighborhood reinvestment."<sup>117</sup>

Based on the anticipated future land use, the buyout plan divided the floodplain into three distinct management zones: (1) Greenway; (2) Construction/Study Area; and (3) Neighborhood Reinvestment Area.<sup>118</sup> The Greenway represented unprotected areas entirely within the 100-year floodplain between the Cedar River and the proposed structural flood adaptations.<sup>119</sup> Properties in this zone were deed restricted upon acquisition against future redevelopment, except for recreational or public use.<sup>120</sup> The Construction/Study Area represented properties within the 100-year floodplain and covered parcels located immediately inland of the

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109. Eric Tate et al., *Flood Recovery and Property Acquisition in Cedar Rapids, Iowa*, 80 NAT. HAZARDS 2055, 2056 (2016).

110. *Id.*

111. U.S. CENSUS BUREAU, U.S. DEP'T OF COMMERCE, QUICK FACTS: CEDAR RAPIDS, IOWA (2016), <https://www.census.gov/quickfacts/fact/table/cedarrapidscityiowa/PST045216> (stating Cedar Rapids was 70.80 square miles in 2010).

112. Tate, *supra* note 109, at 2056.

113. *Id.*

114. *Id.*

115. *Id.*

116. *Id.* at 2059.

117. CITY OF CEDAR RAPIDS, OTHER SOCIAL EFFECTS REPORT CITY OF CEDAR RAPIDS, IOWA—FLOOD OF 2008, at 23 (2010), <http://www.cedar-rapids.org/Public%20Works/Flood%20Control%20System/Other%20Social%20Effects%20Report%2011.15.10.pdf>.

118. *Id.*

119. *Id.* at 14, 23.

120. Tate, *supra* note 109, at 2059–60.

Greenway.<sup>121</sup> For this area, the city sought to acquire properties that the erection of the proposed flood-management system would likely impact.<sup>122</sup> Structural adaptations planned for this area include roughly three miles of floodwalls and earthen levees as well as the relocation of certain roads and underlying utilities.<sup>123</sup> Nonstructural adaptations planned for this area mirror those in the Greenway, i.e., open, public, recreational spaces.<sup>124</sup> Finally, the Neighborhood Revitalization Area represented certain properties just beyond the Construction/Study Area located near the boundaries of the 500-year floodplain.<sup>125</sup> Eligible properties included those deemed “beyond reasonable repair.”<sup>126</sup> Unlike those in the previous two zones, the city sought to acquire the properties in areas for the purpose of community development, i.e., rebuilding in a more resilient manner.<sup>127</sup>

As the following table demonstrates, the Cedar Rapids buyout program achieved impressive results:

Table 3: Cedar Rapids Voluntary Property Acquisition Program  
Outcomes<sup>128</sup>

	Source of Funds	Buyouts	Opt-Outs
Greenway	HMGP (FEMA)	97	18
Construction/Study Area	CDBG (HUD)	1259	230
Neighborhood Revitalization Area			
<b>Total</b>		1356	248

121. CITY OF CEDAR RAPIDS, *supra* note 117, at 23.

122. Tate, *supra* note 109, at 2060.

123. *Executive Summary* to U.S. ARMY CORPS OF ENG’RS, CEDAR RIVER CEDAR RAPIDS, IOWA, FLOOD RISK MANAGEMENT PROJECT: FEASIBILITY STUDY WITH INTEGRATED ENVIRONMENTAL ASSESSMENT, CEDAR RIVER, CEDAR RAPIDS, at IV (2011) [hereinafter CORPS], <http://www.mvr.usace.army.mil/Portals/48/docs/FRM/CedarRapids/CRMMainReport-Jan11.pdf>.

124. Tate, *supra* note 109, at 2059.

125. *Id.* at 2060.

126. Qualifying structures were those that were “substantially damaged,” i.e., beyond 50%, or those that posed a threat to the health or safety of the community. *Id.* at 2059–60.

127. *Id.* at 2060.

128. Interview with Rita Rasmussen, Real Estate Servs. Manager, City of Cedar Rapids, Iowa (Oct. 2016) (on file with author); *see also* Tate, *supra* note 109, at 2060 (highlighting the chart on the Voluntary Property Acquisition Program and the potential outcomes).

City Real Estate Manager, Rita Rasmussen, attributes much of the success of Cedar Rapids' acquisition and buyout program to the city's deliberate, collaborative design approach to the entire recovery efforts.<sup>129</sup>

The Cedar Rapids program did not completely escape criticism, though. Some residents expressed frustration with the city's communication as well as the slow pace of the buyout program and the recovery process.<sup>130</sup> Additionally, some residents rejected buyout offers because they were unsatisfied with the city's appraisals, especially when FEMA payments and other federal assistance were deducted from the appraised value.<sup>131</sup> Finally, the uncertainty of federal funding for the remainder of the city's master plan—for the planned structural and nonstructural adaptations—has drawn many critics, including the city itself.<sup>132</sup> The possibility that the city may never receive adequate funds to complete the plan would drastically limit the benefit of the buyout program, which was primarily designed to make room for the other adaptations.<sup>133</sup>

Another source of criticism stems from the perceived inequity of the proposed management plan in light of the social and economic landscape of the city.<sup>134</sup> As mentioned above, the Cedar River physically divides the city into eastern and western sides.<sup>135</sup> The river also illustrates the socio-economic division in the city.<sup>136</sup> The east side of the river includes the majority of the commercial and industrial structures in the downtown area.<sup>137</sup> However, the overwhelming majority of the flood-affected buildings were residences located on the west side of the river.<sup>138</sup> Further, many of the homes that incurred substantial damage were located in low-

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129. As Rasmussen explained: "We engaged many different entities throughout this process." Interview with Rita Rasmussen, *supra* note 128. The city's objective was "to design a program to meet the needs of the community." *Id.* Further, she noted the city's flexibility and determination, observing that "[w]hen we came across barriers where the program didn't fit in certain circumstances, we truly tried to work through those issues." *Id.*

130. REBUILD IOWA OFFICE, SPEAK UP IOWA! PUBLIC INPUT FINAL REPORT TO THE REBUILD IOWA ADVISORY COMMISSION 10–11 (2008), [https://rio.urban.uiowa.edu/sites/rio/files/sui\\_report\\_08-2008.pdf](https://rio.urban.uiowa.edu/sites/rio/files/sui_report_08-2008.pdf).

131. Interview with Rita Rasmussen, *supra* note 128.

132. CITY OF CEDAR RAPIDS, *supra* note 117, at 57.

133. *Id.* at 60.

134. *Id.* at 57; *see also* Tate, *supra* note 109, at 2066 (discussing the flaw in the management plan that led to social vulnerability and inequality).

135. CARMEN GONZALEZ ET AL., CTR. FOR PROGRESSIVE REFORM, CLIMATE CHANGE, RESILIENCE, AND FAIRNESS: HOW NONSTRUCTURAL ADAPTATION CAN PROTECT AND EMPOWER SOCIALLY VULNERABLE COMMUNITIES ON THE GULF COAST 25 (2016).

136. *Id.*

137. *Id.*

138. *Id.*

lying areas along the river in working-class neighborhoods with a higher percentage of elderly, poor, and disabled residents.<sup>139</sup>

The management plan proposed to eliminate the city's "both sides of the river" approach and provided structural adaptation only on the eastern side of the city.<sup>140</sup> Along with other critics, the city pushed back by arguing that any federal cost-benefit analysis should look beyond simple property values and also take into account the social and economic vulnerabilities of the affected communities.<sup>141</sup> Despite these concerns, the final plan recommended the construction of earthen levees, flood walls, and other closures on the east side of the Cedar River.<sup>142</sup>

As a result of this plan and subsequent criticism, the city sought creative methods to supplement the eventual federal funding.<sup>143</sup> After a couple of failed local sales option tax measures, the city successfully lobbied the Iowa legislature.<sup>144</sup> That led to the creation of the Iowa Flood Mitigation Board, "which made its first award to Cedar Rapids in the form of a 20-year, \$264 million commitment to flood protection."<sup>145</sup> That initiative could return up to \$15 million in state sales tax revenue per year to the city to slowly complete the improvements.<sup>146</sup>

**New Jersey's Blue Acres Program:** New Jersey implemented a voluntary buyout program as a principal component of its recovery efforts in the wake of Superstorm Sandy.<sup>147</sup> On May 16, 2013, Governor Christie announced the Superstorm Sandy Blue Acres Buyout Program, a statewide plan to purchase approximately 1,300 flood-damaged homes.<sup>148</sup> The New Jersey Department of Environmental Protection (NJDEP) implements this

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139. *Id.*

140. CORPS, *supra* note 123, at 259.

141. CITY OF CEDAR RAPIDS, *supra* note 117, at 56–57.

142. CORPS, *supra* note 123, at 283.

143. *Id.* at 205.

144. *Id.*

145. CITY OF CEDAR RAPIDS, CEDAR RIVER FLOOD CONTROL SYSTEM (FCS) MASTER PLAN, at 3 (2015), [http://www.cedar-rapids.org/Master%20Combined%20Document\\_Revision1\\_10.20.15.pdf](http://www.cedar-rapids.org/Master%20Combined%20Document_Revision1_10.20.15.pdf).

146. IOWA HOMELAND SEC. & EMERGENCY MGMT., CITY OF CEDAR RAPIDS' FLOOD MITIGATION PROGRAM APPLICATION EXECUTIVE SUMMARY 1 (2013), [http://homelandsecurity.iowa.gov/documents/misc/FLOOD\\_CedarRapids\\_ExecSummary.pdf](http://homelandsecurity.iowa.gov/documents/misc/FLOOD_CedarRapids_ExecSummary.pdf).

147. *See* Press Release, Dep't of Env'tl. Prot., Christie Administration's Blue Acres Buyout Program Surpasses 500 Property Acquisitions in Flood-Prone Areas Across New Jersey, State of N.J. (Aug. 4, 2016) [hereinafter DEP Press Release], [http://www.state.nj.us/dep/newsrel/2016/16\\_0073.htm](http://www.state.nj.us/dep/newsrel/2016/16_0073.htm) (describing that four agencies are responsible for funding the buyouts for the Blue Acres Program that Governor Christie designated as the state's post-Sandy initiative).

148. Press Release, State of N.J., Office of the Governor, Governor Christie Announces \$300 Million Buyout Plan to Give Homeowners the Option to Sell Sandy-Damaged (May 16, 2013), <http://www.nj.gov/governor/news/news/552013/approved/20130516a.html>. Of the estimated 1,300 properties, roughly 1,000 homes were located in tidal areas and damaged by Hurricane Sandy. *Id.* The remaining 300 homes were repeatedly flooded properties located in the Passaic River Basin. *Id.*

buyout program, which essentially represents a \$300 million expansion of the state's existing Green Acres Program that acquires flood-prone properties.<sup>149</sup> The Blue Acres program remains active; as of this writing, we are approaching the fifth anniversary of Hurricane Sandy.<sup>150</sup> As explained below, the program appears to be making progress in reaching Governor Christie's original goal. It has extended over 800 offers, representing over \$100 million in total acquisitions.<sup>151</sup>

New Jersey's Blue Acres program is a pure buyout program, unlike the Neighborhood Revitalization Zone in the Cedar Rapids plan, which was designed to foster disaster recovery by redeveloping purchased properties.<sup>152</sup> In other words, New Jersey designed the Blue Acres program with a single focus: hazard mitigation.<sup>153</sup> Thus, pursuant to the Green Acres statutes, the program demolishes existing structures upon acquisition and permanently deed restricts the properties as open space for public recreational or conservational purposes.<sup>154</sup> Accordingly, from its inception the program has targeted clusters of homes or whole neighborhoods for procurement.<sup>155</sup>

From a flood management standpoint, the Blue Acres plan provides great value, as it would maximize the overall benefit of nonstructural adaptation.<sup>156</sup> Any potential benefit, though, appears to be hampered by the

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149. See N.J. DEP'T OF ENVTL. PROT., GREEN ACRES PROGRAM, FREQUENTLY ASKED QUESTIONS: SUPERSTORM SANDY BLUE ACRES BUYOUT PROGRAM 1 (2015) [hereinafter BLUE ACRES FAQ], <http://www.nj.gov/dep/greenacres/pdf/faqs-blueacres.pdf> (describing that the New Jersey Department of Environmental Protection implemented the buyout program through the Green Acres Program, which was previously established to purchase flood-prone properties).

150. DEP Press Release, *supra* note 147.

151. N.J. DEP'T OF ENVTL. PROT., GREEN ACRES PROGRAM, THE SUPERSTORM SANDY BLUE ACRES BUYOUT PROGRAM: A NATIONALLY RECOGNIZED MODEL (2017) [hereinafter BUYOUT PROGRAM MODEL] (on file with Blue Acres).

152. Compare BLUE ACRES FAQ, *supra* note 149, at 4 (explaining that New Jersey's pure buyout process consists of notification of eligibility and, if the homeowner chooses to participate, the Program makes an offer for the property), with Tate, *supra* note 109, at 2059–60 (describing that the Cedar Rapids plan included a disaster-recovery plan for eligible properties in the Neighborhood Revitalization Zone, which designated properties for community redevelopment).

153. See BLUE ACRES FAQ, *supra* note 149, at 1–2 (explaining that “[t]he goal of the Blue Acres [Buyout] Program is to dramatically reduce the risk of future catastrophic flood damage, and to help families to move out of harm's way” and that the program is funded through FEMA's Hazard Mitigation Program).

154. See *id.* at 1 (describing the use of acquired property through the Blue Acres Buyout Program, which is an extension of the Green Acres Program).

155. *Id.* at 1–2.

156. See DEP Press Release, *supra* note 147 (describing that the program demolishes homes in flood-prone areas after acquisition and converts the properties into valuable open space).

“strictly voluntary” nature of the program.<sup>157</sup> In other words, success of a cluster-type approach requires the collective participation of willing sellers of contiguous properties.<sup>158</sup>

This limitation is illustrated by comments of several critics of the program, such as Jeff Tittel, director of the New Jersey Sierra Club.<sup>159</sup> He claims that the Blue Acres Program is failing to provide adequate assistance to coastal areas, such as the Jersey Shore.<sup>160</sup> In response to these allegations, Bob Considine, Press Director of the NJDEP, pointed out that the success of Blue Acres hinges on neighborhood interest in the buyout program.<sup>161</sup>

Other municipal leaders have complained about the program’s effects on the municipal tax base. Robert Campbell, mayor of Downe Township, has referred to the buyout program as a “nail in [the] coffin” for his township and the surrounding Bayshore area, suggesting that the township stands to lose 6%, or \$9 million, in ratables—after having already lost 10% of the ratable base after Sandy.<sup>162</sup> Mayor John Krenzel of nearby South River also questioned the purported voluntary nature of the buyout program,<sup>163</sup> suggesting that federal agencies are warning holdouts of the limited availability of future assistance and that the state Department of

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157. *Contra* BLUE ACRES FAQ, *supra* note 149, at 2–3 (stating that the program is voluntary, but once it identifies a cluster, neighbors that wish to participate in the program may, even if some neighbors chose not to participate).

158. See Amanda Oglesby, *Shore Still Left out of Flooding Buyout?*, ASBURY PARK PRESS (Aug. 10, 2016), <http://www.app.com/story/news/local/land-environment/2016/08/10/shore-still-left-out-flooding-buyout/88529652/> (explaining that one home in a cluster that refuses to sell might prevent other homeowners from receiving buyout benefits).

159. *Id.*

160. *Id.*

161. See Bob Considine, *LETTER: DEP Can’t Force Towns to Seek Blue Acres Buyouts*, ASBURY PARK PRESS (Aug. 12, 2016 5:00 PM), <http://www.app.com/story/opinion/readers/2016/08/12/letter-dep-force-towns-seek-blue-acres-buyouts/88636460/> (stating that the Blue Acres Buyout Program is a willing-seller program that cannot force participation and the Shore has expressed too little interest to meet the required clusters of properties).

162. Don E. Woods, *First Sandy, Now Blue Acres Buyout Could Be ‘Nail in Coffin’ for N.J. Shore Town*, NJ.COM (Feb. 3, 2016 5:07 PM), <http://www.nj.com/cumberland/index.ssf/2016/02/blue-acres-could-destroy-shore-communities-officia.html> (quoting Mayor Campbell describing the buyout program’s potential negative financial effect on his township and the projected combined loss from Sandy and Blue Acres).

163. See Christopher Flavelle, *A New Strategy for Climate Change? Retreat*, BLOOMBERG VIEW (Aug. 22, 2016 8:00 AM), <https://www.bloomberg.com/view/articles/2016-08-22/nj-s-blue-acres-program-a-new-strategy-for-climate-change> (describing that even though the program is voluntary, those that choose not to participate in the buyout may have limited assistance if future flooding occurs in the area).

Environmental Protection will increase regulations and reduce the value of their properties substantially without any compensation.<sup>164</sup>

Despite these criticisms, as of October 24, 2016, the Superstorm Sandy Blue Acres Buyout Program has obtained funding to acquire a total of 936 properties in 14 municipalities and eight counties across New Jersey.<sup>165</sup> On those properties, the state has made 891 offers, of which 685 have already been accepted.<sup>166</sup> Finally, the program continues to assist eligible owners who are upside-down on their mortgages.<sup>167</sup> According to the Department of Environmental Protection, the Blue Acres Program has facilitated the approval for short sales or payoffs for 66 homeowners, who have received in excess of \$4.8 million in total debt forgiveness.<sup>168</sup>

**New York Rising/Build It Back:** Beginning in August 2011, the state of New York experienced significant damage over the course of 14 months because of three major storms: Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy.<sup>169</sup> In the wake of these storms, the government created a series of programs to manage the disaster response and recovery.<sup>170</sup> Today, the “New York Rising” initiative represents many of these programs that fall under the purview of the Governor’s Office of Storm Recovery (GOSR), which Governor Cuomo established in 2013 to centralize state management of billions in federal funding and coordinate statewide efforts.<sup>171</sup>

Those efforts include the NY Rising Buyout and Acquisition Program, which the Housing and Recovery Program now manages—one of four main entities under the GOSR umbrella.<sup>172</sup> This state project consists of two distinct programs: buyouts and acquisitions.<sup>173</sup>

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164. *See id.* (claiming that the commissioner of the state DEP threatened to “regulate them out of their houses” if they did not participate in the program). The agency did not appear to flatly deny Campbell’s allegations. Rather, in an email response regarding Campbell’s statement, the DEP spokesman wrote that the DEP will hold homeowners to the same standard of environmental compliance as any other homeowner. *Id.*

165. *See* BUYOUT PROGRAM MODEL, *supra* note 151 (describing that even though criticism surrounds the buyout program, it has successfully acquired funding).

166. *Id.*

167. *Id.*

168. *Id.*

169. MICHAEL R. BLOOMBERG, CITY OF N.Y., A STRONGER, MORE RESILIENT NEW YORK 11 (2013); Steve Stanne, *Perfect Storms—How Hurricane Irene and Tropical Storm Lee Slammed NY*, N.Y. STATE CONSERVATIONIST, Aug. 2012, at 8, 12.

170. *About*, GOVERNOR’S OFFICE OF STORM RECOVERY, <https://stormrecovery.ny.gov/about> (last visited Nov. 29, 2017); Ladislav, *supra* note 46.

171. GOVERNOR’S OFFICE OF STORM RECOVERY, *supra* note 170.

172. *Id.*; *see also* Alexander F. Brady, *Buyouts and Beyond: Politics, Planning and the Future of Staten Island’s East Shore After Superstorm Sandy* 35 (May 18, 2015) (unpublished M.C.P. thesis,



First, “buyouts” include the voluntary sale of certain properties located within substantially damaged or “Enhanced Buyout Areas.”<sup>174</sup> Parcels purchased under this component are deed restricted and must be maintained for disaster mitigation purposes, such as coastal buffer zones.<sup>175</sup> The program entitles eligible owners up to 100% of the property’s pre-storm value plus a potential 5–15% resettlement incentive.<sup>176</sup>

Second, “acquisitions” include the voluntary sale of substantially damaged properties within the 100-year or 500-year floodplains.<sup>177</sup> Unlike buyouts, properties purchased under the acquisition component might not be deed restricted against reconstruction.<sup>178</sup> Instead, the state has the discretion to choose to maintain acquisitions as green space or to redevelop them in a resilient manner.<sup>179</sup> Although property owners may qualify for similar resettlement incentives, the acquisition program only offers owners 100% of the property’s post-storm value.<sup>180</sup>

Originally, buyouts and acquisitions under the NY Rising Program were available only to residents outside the five boroughs of New York City.<sup>181</sup> That was because the CDBG separately allocated federal disaster-recovery funding to the City.<sup>182</sup> NYC created a parallel disaster-recovery strategy called the “Build It Back Program,” which, as the name suggests, focused primarily on redevelopment rather than relocation.<sup>183</sup> However, the City is now coordinating with the state—under this prong of the NY Rising initiative—so that eligible property owners within the five boroughs may participate in the Buyout and Acquisition Program on a limited basis.<sup>184</sup>

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Massachusetts Institute of Technology), <https://dspace.mit.edu/handle/1721.1/98926> (tracking the evolution and name changes of New York’s buyout and acquisition programs).

173. GOVERNOR’S OFFICE OF STORM RECOVERY, NY RISING BUYOUT AND ACQUISITION PROGRAM: POLICY MANUAL 8 (2016), [http://stormrecovery.ny.gov/sites/default/files/crp/community/documents/PO\\_20160930%20Buyout%20Acquisition%20Policy%20Manual\\_5%200.pdf](http://stormrecovery.ny.gov/sites/default/files/crp/community/documents/PO_20160930%20Buyout%20Acquisition%20Policy%20Manual_5%200.pdf).

174. *Id.* at 13 (“Enhanced Buyout Areas [are] certain areas in floodplains determined to be among the most susceptible to future disasters and therefore present the greatest risk . . .”).

175. *Id.* at 14.

176. *Id.*

177. *Id.*

178. *Id.* at 15.

179. *Id.*

180. *See id.* at 14–15 (stating that “[u]nder this Acquisition component, purchase offers begin at the post-storm FMV of the Property”).

181. NY RISING HOUSING RECOVERY PROGRAM FREQUENTLY ASKED QUESTIONS, GOVERNOR’S OFFICE OF STORM RECOVERY 7 (2014), <https://stormrecovery.ny.gov/sites/default/files/documents/02-04-14-NY-Rising-Housing-Recovery-Program-FAQ.pdf>.

182. *Id.* at 1, 7.

183. *Frequently Asked Questions*, N.Y.C. MAYOR’S OFFICE OF HOUS. RECOVERY OPERATIONS, <http://www.nyc.gov/html/recovery/html/faq/faq.shtml#e1> (last visited Nov. 29, 2017).

184. *Id.*

As of October 2015, the NY Rising Buyout and Acquisition Program reported a combined 1,198 purchase offers (totaling \$447,895,596) and 868 closings (totaling \$341,167,047).<sup>185</sup> Additionally, the state has completed over 108 demolitions under the Buyout Program.<sup>186</sup> Finally, as of 2015, under the Acquisition Program, the state had auctioned 134 properties to private buyers and sold an additional seven parcels to municipalities to be used as green space.<sup>187</sup> Interestingly, the state will reinvest the \$20,730,470 income those sales generated into other NY Rising projects.<sup>188</sup>

**Lessons Learned:** Looking back at all of these case studies, a few simple lessons emerge. First, buyout programs tend to produce the best results when they are focused on a relatively small or tightly clustered community of property owners.<sup>189</sup> Massive, large-scale programs tend to trigger massive, large-scale resistance from local officials fearful of seeing their local property tax base decimated, and from community leaders fearful of losing too many members of their community.<sup>190</sup>

Second, offer prices in a buyout proposal need to be high enough to make property owners feel they are capturing most, if not all, of the pre-disaster value of their property, and provide enough money to enable property owners to relocate effectively to another community.<sup>191</sup> Also, offer prices cannot penalize people for selling or failing to insure their property, especially when property owners did not reside within a FEMA-designated flood plain. Incentives to relocate in a particular area, such as the same state, can work. Additionally, incentives may reinforce the desire of individuals and families to maintain social ties to their community.<sup>192</sup> Further, post-relocation assistance can be a crucial element in a successful voluntary acquisition program.<sup>193</sup>

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185. GOVERNOR'S OFFICE OF STORM RECOVERY, NY RISING 2012–2015: A REPORT FROM THE GOVERNOR'S OFFICE OF STORM RECOVERY 6, 10 (2017), <https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/GOSRreport102915.pdf>.

186. *Id.*

187. *Id.*

188. *Id.*

189. *See supra* notes 79–85 and accompanying text (discussing the success of the Franklin Creek Floodway Plan, a small-scale buyout plan targeted at 24 traditional homes and six mobile homes).

190. *See supra* notes 55, 70 and accompanying text (detailing large buyout programs, which were doomed due to political backlash).

191. *See supra* notes 87–92 and accompanying text (discussing buyout options that capture the pre-disaster value of the home when calculating the buy-out amount).

192. Jarvie, *supra* note 59.

193. *See supra* notes 169–88 and accompanying text (describing the success of the NY Rising Buyout Program, which offers resettlement incentives up to 15%).

Third, buyout programs need to address the subjective values people have in their homes.<sup>194</sup> Officials attempting to implement a buyout program will need to meet with potential sellers in small groups, or even one-on-one, so that the affected property owners can tell their stories and analyze potential trade-offs without being exposed to pressure from public officials or leaders who may have reasons for blocking buyouts.<sup>195</sup>

Finally, a successful buyout program will have to recognize that most people have incredibly sticky ties to their communities. Property owners will be unwilling to accept a buyout offer without assurances that they will regain the social capital of their former community lives.<sup>196</sup>

#### IV. TAKINGS LIABILITY AFTER RETREAT?

We now reach our final question. What responsibility do federal, state, and local governments have after all the buyout programs come to an end, particularly if significant numbers of property owners choose to remain behind in communities threatened by sea-level rise and climate change? Moreover, if buyout programs are simply not offered or are underfunded for threatened communities, should courts require state and local governments to maintain infrastructure and government services to those who voluntarily remain behind or to those who have no choice because buyouts were never offered? Are state and local governments required to maintain infrastructure and services until the last house is covered by the rising sea? Do federal, state, or local governments face takings liability if they literally retreat, leaving property owners behind? I do not have any definitive answers to these profound but important questions. However, a few recent judicial decisions and the speculations of several leading property law scholars offer tentative direction for further inquiry.

First, in *Jordan v. St. Johns County*, a Florida district court of appeals confronted claims made by homeowners from a subdivision located on a barrier island off the Atlantic coast of Florida.<sup>197</sup> “The only vehicle access to Summer Haven [this subdivision] is by a county-owned road known as Old A1A.”<sup>198</sup> This road, “Old A1A,” had formerly been a state highway,

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194. See *supra* notes 69, 90, 126 and accompanying text (discussing the recurring issues in determining fair market value of property during large buyouts).

195. See Tate, *supra* note 109, at 2056 (explaining that in the past, voluntary buyout programs have left some homeowners feeling coerced into a decision, creating distrust of the program).

196. See *supra* notes 97–99 and accompanying text (explaining how significantly more residents chose the buyout option in Louisiana’s Road Home program when they could recreate their community in a new location).

197. *Jordan v. St. Johns County*, 63 So. 3d 835, 836–37 (Fla. Dist. Ct. App. 2011).

198. *Id.* at 836.

but after the State of Florida rerouted the main state highway (A1A) further inland, the State transferred its interests in the old highway route to St. Johns County.<sup>199</sup> A 1.6-mile stretch of Old A1A “was bordered on the east by the Atlantic Ocean and on the west by the Intracoastal Waterway.”<sup>200</sup> At the time of the transfer from the state to the county, there were already some beachfront homes in the subdivision. But, over the years, the county issued more permits to property owners, who built additional homes.<sup>201</sup> Old A1A stood between the beachfront lots and the ocean and provided the only vehicular access to these parcels.<sup>202</sup>

Given the local geography, it is hardly a surprise that “Old A1A is subject to repeated damage from natural forces such as storms and erosion, which makes the road difficult to maintain.”<sup>203</sup> The county’s maintenance efforts failed to meet the expectations of Summer Haven’s residents.<sup>204</sup> Consequently, a group of Summer Haven residents filed a lawsuit against the county seeking relief for “the [c]ounty’s intentional failure to maintain the road in [a] useable condition.”<sup>205</sup> The trial court granted summary judgment in favor of the county, dismissing all of the property owners’ claims. The district court of appeals reversed on two counts.<sup>206</sup> First, the appellate court upheld the property owners’ foundational claim for a declaratory judgment, holding that the county had a duty to maintain the road.<sup>207</sup> Second, the appellate court resuscitated the property owners’ related and arguably more novel claim that the county’s failure to maintain the road constituted an inverse condemnation, based on the alleged diminished access to their properties.<sup>208</sup>

Addressing the foundational claim of the property owners—the assertion that the county had a duty to maintain the road in all contexts short of formal abandonment—the court of appeals relied heavily on an earlier Florida appellate court decision. This decision established that a

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199. *Id.* at 837.

200. *Id.*

201. *Id.*

202. *Id.*

203. *Id.*

204. *Id.*

205. *Id.* The plaintiffs in *Jordan* actually stated five distinct counts in their fourth amended complaint. *Id.* The first count, the foundation for the entire lawsuit, sought a declaratory judgment that the county had a duty to maintain the road. The second count sought a permanent injunction requiring the county to maintain the road. The third contended that the diminished access to the plaintiffs’ properties resulting from the failure to maintain the road amounted to an inverse condemnation. The remaining counts concerned more technical issues concerning a temporary moratorium and building permits. *Id.*

206. *Id.*

207. *Id.* 837–38.

208. *Id.* at 839.

county only has authority to terminate maintenance of a county road when it follows the formal statutory procedures. These procedures include relinquishing the county's right of way over the road and right to use the road.<sup>209</sup> With this precedent in mind, the court in *Jordan* held that St. Johns County "has a duty to reasonably maintain Old A1A as long as it is a public road dedicated to the public use."<sup>210</sup> Implicit in this narrow holding is the possibility that the county could relieve itself of reasonable maintenance responsibilities if it formally abandoned the road, following the applicable statutory procedures.<sup>211</sup>

Turning to the property owners' inverse condemnation claim, the court relied on another Florida appellate court decision, which held "[t]here is a right to be compensated through inverse condemnation when governmental action causes a substantial loss of access to one's property even though there is no physical appropriation of the property itself."<sup>212</sup> Although the earlier case focused on "governmental action" causing a loss of access, the court of appeals in *Jordan* extended the principle. The court held that when a county fails to reasonably maintain and repair a county road to such a degree that it has "effectively abandoned" the road, the affected property owners have a cognizable inverse condemnation claim.<sup>213</sup> In short, the court held that "governmental *inaction*—in the face of an affirmative duty to act—can support a claim for inverse condemnation."<sup>214</sup> The court emphasized that it was not ruling definitively for the property owners because some disputed issues of fact remained.<sup>215</sup> In particular, as the county had performed *some* maintenance on the road, the trial court still had to resolve on remand whether the extent of the county's efforts were reasonable or so deficient as to constitute an effective abandonment.<sup>216</sup> *Jordan* raises a number of interesting questions: does the court's holding open the door to other takings claims for governmental inaction in the face of climate change? Is the holding narrowly limited to road-abandonment

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209. *Id.* at 838 (citing *Ecological Dev., Inc. v. Walton County*, 558 So. 2d 1069, 1071–72 (Fla. Dist. Ct. App. 1990)).

210. *Id.*

211. *See id.* (explaining that while the court never explicitly stated that the county could be relieved of its reasonable maintenance responsibilities, the court's holding implies that a county could formally abandon a public road if it "follow[ed] the statutory procedures").

212. *Palm Beach County v. Tessler*, 538 So. 2d 846, 849 (Fla. 1989).

213. *Jordan*, 63 So. 3d at 839.

214. *Id.* (emphasis added).

215. *Id.*

216. *Id.*

situations?<sup>217</sup> How can state and local governments minimize their financial obligations to maintain roads compromised by environmental change?<sup>218</sup>

Even more recently, in *Litz v. Maryland Department of the Environment*, the Court of Appeals of Maryland relied on *Jordan* and other decisions from various courts to hold that a property owner may plead inverse condemnation based on governmental *inaction* when there is an affirmative duty to act.<sup>219</sup> In *Litz*, the failure to act stemmed from the failure of the Maryland Department of the Environment (MDE) to respond to a pollution crisis in the town of Goldsboro.<sup>220</sup> In 1948, the plaintiff's parents purchased property in the town. Then, in the mid-1950s, they constructed a dam creating a 28-acre water body known as "Lake Bonnie."<sup>221</sup> "The Litz family opened also a recreational campground business on the property . . ."<sup>222</sup> Unfortunately, contamination of Lake Bonnie ruined the family business. The contamination resulted from septic system failures on other properties overflowing into two local streams, which drained into Lake Bonnie.<sup>223</sup> County and state public health and environmental officials knew of the problem as far back as the 1970s and 1980s.<sup>224</sup> In 1996, town officials and the MDE entered into an administrative consent order, which explained the problem, ordered the town to take remedial action, and imposed mandatory reporting obligations to MDE and penalties for non-compliance.<sup>225</sup> The town failed to meet the timetable or achieve the remedies.<sup>226</sup> In the end, the campground ceased operations. Because of the loss of revenue, Litz was "unable to pay the mortgage on the Litz property . . ."<sup>227</sup> The property was sold at a foreclosure sale.<sup>228</sup>

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217. There is a substantial body of case law addressing takings claims brought by property owners against state and local governments in the context of road abandonment or closure. JULIUS L. SACKMAN, NICHOLS ON EMINENT DOMAIN § 6.02[5][c] (Matthew Bender, 3d ed. 2017). According to one source: "In general, the discontinuance of a public roadway does not, by itself, constitute a taking of abutting lands. The result is not as clear, however, if the discontinued street represents the *only* access to the impacted land." *Id.* § 6.02[5][c][2]. In the latter subset of cases, other issues, such as "availability of access through acquisition of a private right-of-way, through ownership of land underlying the discontinued street, or otherwise" are typically dispositive. *Id.*

218. See ENVIRONMENTALLY COMPRISED ROAD SEGMENTS: A MODEL ORDINANCE § 1 (FLA. SEA GRANT 2015), [https://www.flseagrant.org/wp-content/uploads/Envirtly-Comp-Rds-FINAL\\_10.20.15.pdf](https://www.flseagrant.org/wp-content/uploads/Envirtly-Comp-Rds-FINAL_10.20.15.pdf) (offering a model ordinance in direct response to *Jordan v. St. Johns County*).

219. *Litz v. Md. Dep't of the Env't.*, 131 A.3d 923, 931–32 (Md. 2016).

220. *Id.* at 925–27.

221. *Id.* at 925.

222. *Id.*

223. *Id.* at 926–27.

224. *Id.* at 926.

225. *Id.*

226. *Id.* at 927.

227. *Id.*

228. *Id.*

Litz eventually filed suit and asserted numerous claims against the town, the county, and the MDE, including an inverse condemnation claim against the MDE.<sup>229</sup> After a circuitous path through the courts, Maryland's highest court has recently held that Litz stated a valid cause of action for inverse condemnation—i.e., an unconstitutional taking—against MDE.<sup>230</sup> As the court explained:

Upon this review, it seems appropriate (and, in this case, fair and equitable, at least at the pleading stage of litigation) to recognize an inverse condemnation claim based on alleged “inaction” when one or more of the defendants has an affirmative duty to act under the circumstances. Therefore, we hold, as a matter of Maryland law, that an inverse condemnation claim is pleaded adequately where a plaintiff alleges a taking caused by a governmental entity's or entities' failure to act, in the face of an affirmative duty to act.<sup>231</sup>

The court's opinion in *Litz* emphasized the importance of pleading—and eventually proving—“an affirmative duty to act under the particular circumstances.”<sup>232</sup> Here, it drew specifically on *Jordan* and also on a noteworthy California Appellate Court decision, *Arreola v. County of Monterey*.<sup>233</sup> In *Arreola*, a California court held that inverse condemnation liability could be founded on a governmental entity's awareness of a risk posed by a public infrastructure improvement it controlled.<sup>234</sup> In this case, a river-levee breach produced flooding and subsequent property damage.<sup>235</sup> The court found the governmental entity could be held liable due to a failure to act in response to the known risk, regardless of whether it was responsible for operation of the project.<sup>236</sup> In light of these authorities, the

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229. *Id.*

230. *Id.* at 927–28, 930, 934.

231. *Id.* at 931.

232. *Id.* at 932.

233. *Arreola v. County of Monterey*, 122 Cal. Rptr. 2d 38, 70 (Cal. Ct. App. 2002).

234. *Id.* at 55.

235. *Id.* at 44.

236. In *Arreola*, the court specifically held that “to prove the type of governmental conduct that will support liability in inverse condemnation it is enough to show that the entity was aware of the risk posed by its public improvement and deliberately chose a course of action—or inaction—in the face of that known risk.” *Id.* at 55. Because *Arreola* involved damages resulting from a levee breach, much of the decision focused on issues that sound in negligence and, in particular, on the alleged unreasonableness of the local governmental actors' maintenance plans. *See id.* (noting that at the heart of the plaintiffs' claims was the allegation that local counties had failed to maintain a river channel as required by the Corps; and, that this failure led to the channel becoming clogged with silt and

court in *Litz* found that plaintiffs' allegations—that the combined failures of MDE and the town effectively “condemned” her property in “the face of an affirmative duty to abate a known and longstanding public health hazard”—stated a cause of action for inverse condemnation, particularly in light of her allegation that the 1996 Consent Order created an affirmative duty to act under state law.<sup>237</sup>

It is noteworthy that the decision in *Litz* was not unanimous.<sup>238</sup> Three judges on the Court of Appeals dissented from the majority opinion on the question of whether governmental inaction can provide the basis for an inverse condemnation claim.<sup>239</sup> Citing several Maryland cases, Judge Watts explained that he would have required an inverse condemnation plaintiff to allege “that some kind of affirmative action by a governmental entity constituted a taking . . . .”<sup>240</sup> He worried that the majority opinion essentially creates a new “private right of action anytime that a plaintiff’s property decreases in value as a result of a governmental entity’s noncompliance with a statute—even if nothing in the statute’s language or legislative history indicates” such an intent.<sup>241</sup>

The decisions in *Jordan* and *Litz* both point in the same direction as a provocative law review article authored by Professor Christopher Serkin.<sup>242</sup> Serkin suggests that governmental actors could be liable for a taking not only when governmental or regulatory *action* substantially or completely reduces the value of private property, but also for governmental or regulatory *inaction* in the face of exogenous ecological change.<sup>243</sup> In Serkin’s formulation, a property owner must demonstrate one of two alternative preconditions before governmental liability for a “passive taking” would be possible.<sup>244</sup> The property owner would have to show that the governmental entity either: (1) has “effective control” over the ecological condition that caused an injury to the property owner; or (2) has

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vegetation, which in turn caused water to back up during a storm and caused the federally constructed levee to breach).

237. *Litz*, 131 A.3d at 932, 934. The court suggested further discovery regarding the origins and apparent failure to enforce the Consent Order before the trial court could definitely determine whether an inverse condemnation had occurred. *Id.* at 934.

238. *Id.* at 939. Four Judges signed onto the majority opinion—Barbera, C.J., Greene, J., Adkins, J., and Glenn T. Harrell, Jr., J.—while Watts, J., Battaglia, J., and McDonald, J. dissented. *Id.* at 924 (majority opinion); *id.* at 939 (Watts, J., concurring in part and dissenting in part).

239. *Id.* (Watts, J., concurring in part and dissenting in part).

240. *Id.* at 940.

241. *Id.* at 941. Judge Watts pointed out that nothing in the Federal Water Pollution Control Act or applicable Maryland statute created this kind of private right of action. *Id.* at 942.

242. Serkin, *supra* note 8, at 346.

243. *Id.*

244. *Id.* at 378.



“rendered the property especially susceptible to adverse changes in the world.”<sup>245</sup> More broadly, Serkin contends that before passive takings can arise, a property owner must demonstrate some substantial “level of entanglement” between the state actor and the property’s vulnerability to an ecological threat.<sup>246</sup> Serkin’s theory has obvious resonance with the cases discussed above. The theory could explain why the Corps was not liable for a taking based on its inaction in *Allain-Lebreton Co. v. Department of Army*,<sup>247</sup> why the local county was potentially liable for a taking in *Jordan v. St. Johns County*,<sup>248</sup> and why the State of Maryland might be liable for a taking in *Litz v. Maryland Department of the Environment*.<sup>249</sup> In the latter two cases, plaintiffs convinced the courts that—at least at the pleading stage—there was enough involvement by the governmental actor with the plaintiff’s property to constitute an entanglement between the state actor and the property’s ultimate vulnerability to ecological harm. Plaintiffs did so through the provision of infrastructure<sup>250</sup> or regulatory intervention,<sup>251</sup> creating a prima facie duty to act in the interest of the property owners.<sup>252</sup>

While admiring Serkin’s doctrinal dexterity in explicating the theory of passive takings, Professor David Dana has cautioned that there might not be any limiting principle that could cabin passive takings liability given government’s general heavy involvement in so many spheres of economic and social activity.<sup>253</sup> Further, he worries that the threat of passive takings, especially to small and local governments that may be most threatened by the financial costs of uncertain future passive takings claims, will lead governmental actors to short-circuit their most well-intentioned and justifiable regulatory efforts that might otherwise respond effectively to climate change threats and protect vulnerable communities.<sup>254</sup> Serkin shares these concerns and, to his credit, acknowledges that passive takings liability

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245. *Id.*

246. *Id.*

247. *Allain-Lebreton Co. v. Dep’t of Army*, 670 F.2d 43, 45 (5th Cir. 1982).

248. *Jordan v. St. Johns County*, 63 So. 3d 835, 839 (Fla. Dist. Ct. App. 2011) (holding that appellant stated a “cognizable claim” but “[d]isputed issues of material fact . . . preclude[d] summary judgment”).

249. *Litz v. Md. Dep’t of the Env’t.*, 131 A.3d 923, 934 (Md. 2016) (“We conclude only that it was improper to decide as a matter of law, at the present stage of the litigation, that Ms. Litz failed to state a claim for inverse condemnation.”).

250. *See Jordan*, 63 So. 3d at 839 (“Appellants argue that the [c]ounty has so failed in its duty to reasonably maintain and repair Old A1A that it has effectively abandoned it, thereby depriving them of access to their property without compensation.”).

251. *See Litz*, 131 A.3d at 934 (“Ms. Litz’s property was alleged to have been ‘condemned’ by the failure of the State . . . to abate a known and longstanding public health hazard.”).

252. *Jordan*, 63 So. 3d at 838; *Litz*, 131 A.3d at 934.

253. Dana, *supra* note 8, at 288–89.

254. *Id.* at 295–97.

might have regressive distribution consequences in that relatively well-off, coastal residents are likely to be the first to bring successful claims.<sup>255</sup> Yet, he still hopes that passive takings liability might encourage governments to adopt regulatory positions that minimize aggregate losses from climate change.<sup>256</sup>

#### CONCLUSION

This paper cannot offer any definitive answers to the questions raised in the preceding sections, but in conclusion it might be useful to return to Isle de Jean Charles and quickly review how the tentative lessons I have drawn might be applicable to that community's interaction with government. At the outset, we recall that long before Hurricanes Katrina and Rita came ashore in Louisiana, the leaders of that island community, like other property owners in remote coastal communities on the Louisiana Gulf Coast, sought to have the federal and state government realign a major levee project so that their properties would be landward of the levee.<sup>257</sup> As we learned in Section I of this paper, the property owners of Isle de Jean Charles would probably not succeed on a takings claim against either the federal government or state agencies based on the decision not to include their land within a hard infrastructure project of this nature.<sup>258</sup> After all, at this stage, the level of governmental involvement in protecting the property of the community would be too slight to justify takings liability.

Next, as we learned in Section II of this paper, if state or federal actors then proposed to use the power of eminent domain to acquire the residents' property, the community would have recoiled and government officials would have backed down.<sup>259</sup> Then, with eminent domain off the table, concerned government officials might be willing—as they seem to be right now—to call on public resources to fund a voluntary buyout program that holds the promise of incentivizing the property owners of the community to sell their land and homes and relocate to higher and safer ground,

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255. Serkin, *supra* note 8, at 400.

256. *Id.* at 399.

257. *See supra* note 30 and accompanying text (discussing the desire of the community of Isle de Jean Charles to be located within the "Morganza to Gulf" levee project).

258. *See supra* notes 28–33 and accompanying text (stating that because no liability exists for a takings claim when the government elects not to protect land, the decision to leave Isle de Jean Charles outside of the "Morganza to the Gulf" levee project is not grounds for a takings claim).

259. *See supra* notes 40, 41 and accompanying text (providing an example of public backlash to the use of eminent domain and the government's response to it).

particularly if governments utilized several of the best practices for community buyouts detailed in Section III of the paper.<sup>260</sup>

But if the voluntary acquisition and relocation project now underway fails to relocate most or all of the affected property owners on Isle de Jean Charles, those who remain behind might have a potential passive takings claim. As we learned in Section IV of this paper, liability might arise if local, state, or federal government actors remove services, unilaterally abandon infrastructure, or simply leave the remaining members of the community to face the rising tides of the Gulf of Mexico on their own.<sup>261</sup>

It seems, then, that we have come full circle. From a position of no takings liability, the government's inevitable impulse to help and provide infrastructure and support to a community may ironically lay the foundation for future takings liability.

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260. *See supra*, Section III (overviewing various post-disaster voluntary buyout programs and offering design lessons for future programs).

261. *See supra*, Section IV (discussing potential government liability for removal of services).