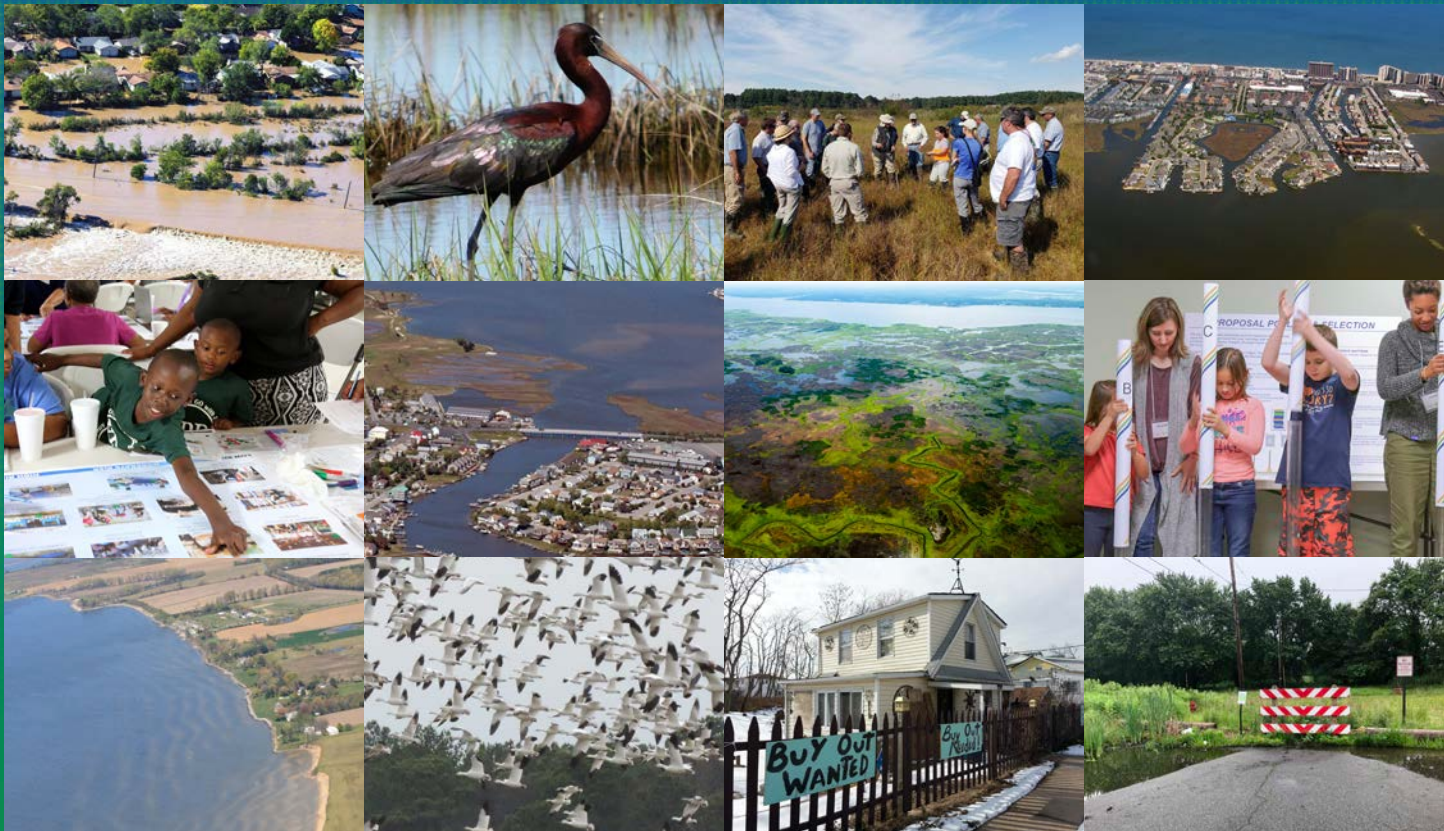# Managing the Retreat from Rising Seas

Staten Island, New York: Oakwood Beach Buyout Committee and Program

GEORGETOWN CLIMATE CENTER

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Managing the Retreat from Rising Seas: Lessons and Tools from 17 Case Studies

About This Report

As seas continue to rise and disaster events and extreme weather increase in frequency and intensity, climate change is driving state and local policymakers to evaluate strategies to adapt to various risks affecting many communities. In addition to protection (e.g., hard shoreline armoring) and accommodation (e.g., elevating or flood-proofing structures) measures, coastal governments and communities are increasingly evaluating managed retreat, where appropriate, as a potential component of their comprehensive adaptation strategies. Managed retreat is the coordinated process of voluntarily and equitably relocating people, structures, and infrastructure away from vulnerable coastal areas in response to episodic or chronic threats to facilitate the transition of individual people, communities, and ecosystems (both species and habitats) inland.

The aim of managed retreat is to proactively move people, structures, and infrastructure out of harm's way before disasters occur to maximize benefits and minimize costs for communities and ecosystems. For example, policymakers may maximize opportunities for flood and risk reduction by conserving wetlands and protecting habitat migration corridors and minimize the social, psychological, and economic costs of relocation by making investments in safer, affordable housing within existing communities.

This report is composed of 17 individual case studies. Each one tells a different story about how states, local governments, and communities across the country are approaching questions about managed retreat. Together, the case studies highlight how different types of legal and policy tools are being considered and implemented across a range of jurisdictions — from urban, suburban, and rural to riverine and coastal — to help support new and ongoing discussions on the subject. These case studies are intended to provide transferable lessons and potential management practices for coastal state and local policymakers evaluating managed retreat as one part of a strategy to adapt to climate change on the coast.

Collectively, these case studies present a suite, although not an exhaustive list, of legal and policy tools that can be used to facilitate managed retreat efforts. Legal and policy tools featured include: planning; hazard mitigation buyouts and open space acquisitions, as well as other acquisition tools like land swaps and reversionary interests; land use and zoning; and Transfer of Development Rights programs. The case studies also highlight various policy tradeoffs and procedural considerations necessitated by retreat decisions. Each jurisdiction is confronting different challenges and opportunities and has different, perhaps even competing, objectives for retreat. In addition, stakeholders in each of these cases are attempting to balance multiple considerations, including:

protecting coastal ecosystems and the environment; fostering community engagement and equity; preparing "receiving communities" or areas where people may voluntarily choose to relocate; and assessing public and private funding options and availability. The case studies included in this report were selected to reflect the interdisciplinary and complex nature of retreat decisions and underscore the need for comprehensive solutions and decisionmaking processes to address these challenging considerations.

Where possible, all of the case studies share a consistent organizational format to allow easier cross-comparison of strategies, processes, and takeaways:

- The **Background** section introduces state or local context for each case study, including the risks and hazards facing each jurisdiction and its road to considering or implementing managed retreat strategies.

- The **Managed Retreat Examples** section focuses on the legal and policy tools that have been designed and implemented to support managed retreat strategies on the ground.

- The **Environment** section highlights how floodplains and coastal ecosystems have been restored, conserved, and protected as a part of comprehensive managed retreat strategies to provide ecosystem and community benefits, like reducing flood risk and creating community assets such as parks and trails.

- The **Community Engagement** section summarizes how affected residents have been contributing to planning and decisionmaking processes for climate adaptation and managed retreat.

- The **Funding** section identifies how the programs, plans, and projects discussed have been funded by federal, state, and local

government and private sources.

- The **Next Steps** section captures the anticipated future actions that jurisdictions may take in implementing these managed retreat strategies.

- The **Considerations and Lessons Learned** section concludes with the primary takeaways from each example that other coastal state and local policymakers and communities may consider when developing or implementing their own managed retreat strategies using these legal and policy tools.

The case studies in this report were informed by policymakers, practitioners, and community members leading, engaging in, or participating in the work presented in this report. No statements or opinions, however, should be attributed to any individual or organization included in the *Acknowledgements* section of this report. It is also important to note that the programs and planning processes described in each case study are ongoing and the content included in this report is current as of early 2020. Future updates about these case studies will be captured in Georgetown Climate Center's online resources on managed retreat.

These case studies were written to support Georgetown Climate Center's Managed Retreat Toolkit, which also includes additional case study examples and a deeper exploration of specific legal and policy tools for use by state and local decisionmakers, climate adaptation practitioners, and planners. For future updates about these and other case studies and the Managed Retreat Toolkit, please visit the **Managed Retreat Toolkit** and the **Adaptation Clearinghouse.**

Staten Island, New York: Oakwood Beach Buyout Committee and Program

Executive Summary

Following Hurricane Sandy in 2012, Oakwood Beach on Staten Island in New York City became the first community to take advantage of New York State's post-Sandy buyout program to plan for retreat in a model that could be replicated in other vulnerable coastal locations. The members of the small community formed the Oakwood Beach Buyout Committee, and petitioned the state government to buy out entire neighborhoods, which resulted in large-scale risk reduction and cost-saving benefits compared to individual buyouts. Less than three months after Sandy, Governor Andrew Cuomo announced a state-funded buyout program, pledging upwards of $200 million in funding and financial incentives to relocate families in high flood risk areas in places like Oakwood Beach.[1] One year later, 184 out of 185 homeowners applied to the program — and by 2015, 180 of those homeowners were accepted to participate in the state's voluntary buyout program.[2] This process can serve as an example of a successful, community-led voluntary buyout effort that can be supported by state and local government retreat programs or projects in other jurisdictions.

Background

Oakwood Beach is located on the eastern shore of Staten Island — one of New York City's five boroughs — facing Raritan Bay. Staten Island's position on the New York Bight makes it more susceptible to experiencing the worst and most intense storm waters that funnel into Raritan Bay.[3] Staten Island's flood risk is further compounded by a large amount of development that is located in or near floodplains. Specifically, a lot of the residential development on Staten Island was constructed on filled wetlands that, in their natural state, would have otherwise served as a buffer.[4] When Hurricane Sandy traveled through Raritan Bay in 2012, it produced tides on Staten Island measuring as high as 16 feet that increased the amount and severity of damage in built areas like Oakwood Beach.[5]

Because the community of Oakwood Beach had long dealt with flooding issues, its response to Hurricane Sandy was quick and decisive, and came from the community itself. In the early 1990s, a powerful storm struck, inundating the community in upwards of five feet of water.[6] In response, community residents formed a committee to study the effects of flooding on the area and advocate for better coastal protection.[7] This initial committee was essentially reformed two decades later in response to Hurricane Sandy as the Oakwood Beach Buyout Committee, which worked with the State of New York to implement a large, neighborhood-scale buyout through a community-led process.

Managed Retreat Examples

Community Engagement

The Oakwood Beach Buyout Committee (committee) and process started with one person gaining information that benefited the broader neighborhood in evaluating post-Sandy disaster recovery options, namely retreat through voluntary buyouts. Specifically, one community member, Joseph (Joe) Tirone, Jr., learned about the potential for a government-funded buyout for his rental investment property in discussions about disaster relief funding with the U.S. Small Business Administration. Mr. Tirone shared information about the potential for buyouts at an initial meeting of Oakwood Beach residents who were trying to collectively assess neighborhood damage and identify recovery resources. A few people at this initial meeting expressed interest in buyouts, some who did not even know about the possibility of government-funded buyouts. Eight residents, including Mr. Tirone, initially formed the Oakwood Beach Buyout Committee to educate residents and coordinate efforts. Oakwood Beach residents were informed about the committee and its objectives through monthly meetings, outreach, and word-of-mouth that government buyouts were a viable option for homeowners.[8] As a result, the committee developed a buyout plan that had the support of nearly 200 Oakwood Beach households.[9] After developing the plan, committee members directed their efforts towards educating state and local officials about interest in voluntary property buyouts.[10] The state responded to the committee's requests, launching a program three months after Sandy.

Buyout Program

The committee's partnership with the State of New York led to the development of a buyout program that was designed to be responsive to community requests for relocation assistance. The goal of the state buyout program was to return bought-out properties to their natural state and prohibit future development. Homeowners accepted into the buyout program could have their properties purchased at their appraised pre-storm fair market value. To further encourage comprehensive community participation, the

state also created financial incentives. The State of New York offered residents in an "Enhanced Buyout Area" on Staten Island — which included Oakwood Beach — a ten-percent incentive above the pre-storm fair market value of their homes to increase the number of volunteers to maximize flood risk reduction on a neighborhood scale.[11] In addition, the state offered a five-percent incentive for participants who would relocate within the same five boroughs of New York City or county to maintain local tax bases.[12]

Environment

The promise of comprehensive ecosystem restoration in Oakwood Beach was largely the result of and a motivating factor for residents to participate in the state's buyout program instead of the City of New York's program — and is an important takeaway from this example of retreat. After Hurricane Sandy, the city launched its own buyout program shortly after the state program commenced. Under the city plan, the municipality of Oakwood Beach would retain ownership over bought-out properties and allow for their potential redevelopment.[13] In contrast, under the state plan, all existing structures would be demolished, and the land would be rezoned and restricted to open space uses, barring any further development on the property.[14] As a result of this difference in property disposition, over 180 residents of Oakwood Beach ultimately chose the state-led program.[15] Specifically, residents preferred the state buyout program to the city's largely to protect future buyers from the same flood risks they experienced. One explained, "[I]f this is an area that takes in water, that becomes a sponge, that goes back to nature. Everybody wins. It's a hell of a sacrifice for the greater good."[16]

Bought-out neighborhoods have been replaced with natural flood and coastal buffers, which include maritime forests, tide gates, tidal wetlands, breakwater reefs, and earthen levees.[17] Moreover, portions of the land have been converted to hiking trails, walkways, and wildlife observation

areas, making up at least two miles of trails.[18] In addition to ecosystem restoration, some properties may also be converted to community assets, such as sports fields. As of June 2019, however, there is no comprehensive or long-term management plan from the state or city for these bought-out properties. The U.S. Army Corps of Engineers is also evaluating project plans — the South Shore of Staten Island Coastal Storm Risk Management Project[19] — to build a 5.3-mile coastal barrier from Fort Wadsworth to Oakwood Beach that will include the bought-out properties.[20]

In September 2017, the city rezoned residential areas in Oakwood Beach that are located near the homes bought out by the state to minimize risks for future development. Specifically, the New York City Council established a special district, the East Shore Special Coastal Risk District, in the city-bought-out areas of Oakwood Beach, Ocean Breeze, and Graham Beach to decrease density and protect the environment restored as part of the state's program in accordance with open space and infrastructure plans.[21] Through the special district, the city will prohibit all new residential development and community facilities with sleeping accommodations, except single-family detached houses, and require authorization from the City Planning Commissions for all new development and horizontal enlargements to limit impacts on wetlands.[22] Zoning amendments can be designed and implemented to support public investments to relocate people away from vulnerable areas.

Funding

The state-managed buyouts in Oakwood Beach were funded by U.S. Department of Housing and Urban Development Community Development Block Grants (CDBG).[23] The state, under Governor Cuomo's leadership, chose to use CDBG to expedite buyouts for affected residents in need of immediate assistance. The governor announced buyouts in January 2013, a few months after Hurricane Sandy hit in October 2012, and most

buyouts in Oakwood Beach occurred within one year. After Hurricane Irene in 2011, the state received funding from the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program (HMGP) to conduct buyouts in upstate New York.[24] In upstate New York, it took more than four months for the state to receive HMGP funds from FEMA to implement these buyouts. In addition, the scale of buyouts in upstate New York was smaller than in New York City. Comparing the two experiences, the state decided to utilize CDBG because the availability of funds was not contingent upon a presidential disaster declaration or supplemental appropriations by U.S. Congress.

Considerations and Lessons Learned

The Oakwood Beach example is notable for several reasons, including three primary factors that other jurisdictions and community leaders and residents can consider when designing and implementing buyouts and other retreat tools. First, the state's relocation financial incentives helped to increase participation in the buyout program and keep people local to maximize environmental and local benefits, including minimizing impacts to New York City's tax base. Second, members of the Oakwood Beach Buyout Committee cite the state's use of CDBG rather than disaster recovery funds and commitment to maintaining bought-out properties as open space as the keys to gaining such a large number of volunteers on Staten Island. The willingness of residents to accept buyout offers may have otherwise decreased if they had to wait a longer period of time for relief after Sandy or had not received assurances that the land would not be redeveloped. Third, and most important, the process in Oakwood Beach demonstrates the need for — and value of working with — people through community-led organizations to navigate difficult and complex decisions to relocate away from vulnerable coastal areas. Both state and local

governments should evaluate opportunities for integrating community engagement into all stages of climate adaptation and retreat decisionmaking efforts. In particular, members of the Oakwood Beach Buyout Committee recommend several engagement strategies to achieve more widespread support for buyouts:

- Hold some meetings open only to residents and experts providing necessary information for group consideration. Having the opportunity to meet in private — without government officials and media — can promote more candid conversations and build relationships among community members without fear of public retribution, loss of privacy, or misrepresentation.

- Take every effort to provide people with accurate information and correct rumors or mistruths as soon as possible. Inaccurate information can discourage otherwise interested residents from participating and disrupt community processes.

- Design community processes to be inclusive and involve people in active roles, including by offering volunteers different duties or tasks (e.g., outreach lead, meeting organizer). Delegating responsibilities beyond a small leadership team can have many benefits including: promoting community cohesion; developing and deepening community relationships; increasing buy-in for the process; increasing the number of people who can correct public misperceptions or misinformation; reducing negative psychological impacts, like stress, by allowing people to have some control in a chaotic disaster recovery context; and expanding the program's reach. Volunteers can also help to reduce administrative burdens often placed on leaders, which could potentially encourage more people to take on leadership roles if they know they will be supported by a team.

Endnotes

1   *Three Years Later, Buyouts Help Sandy-Battered Residents Retreat to New Homes,* PBS (Oct. 31, 2015), **https://www.pbs.org/ newshour/show/sandy-battered-homeowners-take-buyouts-rather-rebuild** [hereinafter *"Three Years Later"*].

2   *Id.*

3   A bight is defined as a curve or recess in a coastline. "Staten Island sits right in the crook of the New York Bight, the slight indentation in the Atlantic coastline from the northeastern tip of Long Island to southern New Jersey. The bight forms a sharp angle at Staten Island, which means the island, along with adjacent segments of New Jersey and Long Island, bears the brunt of surging storm waters." Crystal Gammon*, Why Hurricane Sandy Hit Staten Island so Hard*, LIVESCIENCE (Nov. 7, 2012), **https://www.livescience.com/24616-hurricane-sandy-staten-island-effects.html**.

4   *Id.*

5   *Id.*

6   *Three Years Later, supra* n.1.

7   Liz Koslov, *The Case for Retreat*, 28 Pub. Culture 359, 375 (2016), **https://climateaccess.org/system/files/The%20Case%20for%20 Retreat%20-%20Public%20Culture.%20pdf.pdf**.

8   Caroline Craig, *This NYC Realtor's Most Memorable Deal? Selling His Flood-Ravaged Neighborhood to the Government*, Nat'l Res. Defense Council (Feb. 22, 2018), **https://www.nrdc.org/stories/nyc-realtors-most-memorable-deal-selling-his-flood-ravaged-neighborhood-government/**.

9   Koslov, *supra* n.7.

10   *Id.* at 376.

11   *See* Press Release, N.Y. Rising, N.Y. State Office of Storm Recovery, State Announces Expanded Enhanced Buyout Area to Include the Graham Beach Community (Apr. 5, 2014), *available at* **https://stormrecovery.ny.gov/sites/default/files/uploads/graham_beach_ release.pdf**. In addition to Oakwood Beach, the state also designated the Staten Island neighborhoods of Graham Beach and Ocean Breeze and seven neighborhoods in Suffolk County as Enhanced Buyout Areas eligible for these incentives. For more information on Enhanced Buyout Areas, including the state's selection criteria, see N.Y. Governor's Office of Storm Recovery et al., NY Rising Buyout and Acquisition Program Policy Manual Version 3.0 14-15 (Apr. 2015), *available at* https://stormrecovery.ny.gov/sites/default/files/uploads/ po_20150415_ buyout_and_acquisition_policy_manual_final_v3.pdf.

12   *See supra* n.11.

13   Koslov, *supra* n.7.

14   *East Shore Buyout Areas Special Coastal Risk District and Rezoning*, NYC Planning (May 10, 2017), **https://www1.nyc.gov/assets/ planning/download/pdf/plans-studies/resilient-neighborhoods/east-shore/east-shore-presentation-cb3.pdf**.

15   Anamaria Bukvic et al., *The Role of Proximity to Waterfront in Residents' Relocation Decision-making Post-Hurricane Sandy*, 154 Ocean & Coastal Mgmt. 8, 9 (2018).

16   Koslov, *supra* n.7.

17   Jane Gray, *Coastal Recovery Plan Emphasizes 'Living Shorelines'*, Epoch Times (Jan. 10, 2014), **https://www.theepochtimes.com/coastal-recovery-plan-emphasizes-living-shorelines_441938.html#axzz2q1XbkdD4**.

18   *Id.*

19   *South Shore of Staten Island Coastal Storm Risk Management Feasibility Study*, N.Y. Dist., U.S. Army Corps of Eng'rs, **https://www.nan.usace.army.mil/Missions/Civil-Works/Projects-in-New-York/South-Shore-of-Staten-Island/** (last accessed Dec. 18, 2019).

20   Nathan Kensinger, *On Staten Island, a Massive Barrier Will Rise to Protect Against Climate Change*, Curbed N.Y. (Apr. 25, 2019), **https://ny.curbed.com/2019/4/25/18515213/staten-island-usace-seawall-climate-change-photo-essay**.

21   *East Shore Neighborhoods*, NYC Planning, **https://www1.nyc.gov/site/planning/plans/resilient-neighborhoods/east-shore-rezoning.page** (last accessed Dec. 18, 2019).

22   *Id*.

23   Georgetown Climate Ctr., *HUD Community Development Block Grant Program*, Adaptation Clearinghouse, **https://www.adaptationclearinghouse.org/resources/hud-community-develop ment-block-grant-program.html** (last visited Dec. 18, 2019).

24   Georgetown Climate Ctr., *FEMA Hazard Mitigation Grant Program*, Adaptation Clearinghouse, **https://www.adaptationclearinghouse.org/resources/fema-hazard-mitigation-grant-program.html** (last visited Dec. 18, 2019).

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