Managing the Retreat from Rising Seas

Charlotte-Mecklenburg County, North Carolina: Floodplain Buyout 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**.

Charlotte-Mecklenburg County, North Carolina: Floodplain Buyout Program

Executive Summary

Charlotte-Mecklenburg Storm Water Services (CMSS) — a county-wide regional utility in North Carolina — has been administering a Floodplain Buyout Program to relocate vulnerable residents out of floodplains and reduce long-term flood damage. The buyout program is focused on risk reduction and flood mitigation best practices, where once bought out, properties are returned to open space uses to restore their natural beneficial flood retention and water quality improvement functions and provide other community amenities, like parks and trails. CMSS has purchased more than 400 flood-prone homes and businesses and enabled over 700 families and businesses to relocate to less vulnerable locations outside of the floodplain. CMSS has also supported a number of leaseback arrangements on a case-by-case basis with property owners to increase participation in the buyout program and reduce the county's property maintenance costs. As a result of the floodplain buyouts, the community has gained an additional 185 acres in open space and recreational assets and encouraged the development of newer, more resilient buildings in less vulnerable locations within Mecklenburg County. The program has been funded through a combination of federal and local government sources, with leasebacks also supporting the recapture of some costs. CMSS has invested more than \$67 million to acquire flooded properties. As a result, the county estimates it has avoided an estimated \$25 million in property damage and related losses to date, and prevented \$300 million in future losses. Charlotte-Mecklenburg's Floodplain Buyout Program is an example of a nationally recognized approach to supporting voluntary retreat in a riverine floodplain. Other local governments could consider adopting a comprehensive buyout program like Charlotte-Mecklenburg's or individual program elements, like local funding options or leasebacks, to help support voluntary retreat decisions in coastal areas experiencing sea-level rise, impacts from disaster events, and land loss.

Background

Mecklenburg County, which includes the City of Charlotte, is located in southwestern North Carolina. The county has a population of over one million people and is the state's most populated county. More than 5,000 individual properties are located within Mecklenburg County's regulated floodplain.1 Charlotte-Mecklenburg Storm Water Services (CMSS) provides floodplain services and acts as a regional entity for the entire county by collecting utility fees. After two 100-year (one-percent annual chance) flood events occurred in the 1990s, CMSS implemented a Floodplain Buyout Program in 1999 to acquire repetitive loss structures and restore natural floodplain functions. CMSS's program model now combines several unique features, including a local funding source, non-disaster related buyouts, and post-acquisition leasebacks, that can provide transferable lessons for other state and local governments and stormwater, floodplain, and coastal agencies.

Managed Retreat Examples

Buyout Program

The Floodplain Buyout Program is a voluntary buyout program and properties are not acquired through eminent domain. CMSS prioritizes eligible properties for the Floodplain Buyout Program according to two primary factors: (1) a property's overall flood risk (based on the future likelihood of flooding and damage and financial impacts); and (2) the long-term cost effectiveness of a buyout (i.e., benefitcost analysis). CMMS scores, ranks, and prioritizes properties according to the methodology provided in the Storm Water Services' *Flood Risk Assessment and Risk Reduction Plan* for public transparency and consistent project implementation.² All of the properties located within Charlotte-Mecklenburg's regulated floodplain are included in the plan and help CMSS to prioritize and group properties that are volunteered to be bought out.

Leasebacks

As a part of the program, CMSS has also allowed some participating property owners to "leaseback" acquired properties for a set period of time and on a caseby-case basis. A leaseback is a legal tool where a property owner sells his/her property to a buyer; once the property's title has transferred, the seller or a new lessee (e.g., an adjoining property owner) leases the property back from the buyer. As a condition of a leaseback, the lessee must pay rent (either monetary or in-kind services) to the buyer or lessor, here CMSS; in exchange for rent, the lessee can use his/her property according to the terms and conditions of the lease, but does not own it.

CMMS considers leasebacks to maximize the scale and timing of area-wide buyouts to reduce the number of holdouts and project inefficiencies from pursuing one-off rather than a collective number of buyout offers. CMSS has implemented leasebacks since 2008; however, as of 2019, only approximately a dozen have been used — around one per year — mostly in cases where CMSS has encountered difficulties with otherwise interested property owners, like the elderly who may want to stay in their homes until they pass away or people who need gap time to find or buy a new home at a price they can afford. Leasebacks can allow CMSS to better balance the needs and concerns of individual property owners and long-term flood mitigation benefits for communities. To those ends, CMSS is utilizing two types of leasebacks: triple net leasebacks and orphan parcel leasebacks, which are discussed below.

Triple Net Leaseback

A triple net leaseback option provides an innovative funding source to offset some of the costs of buyouts and maintains a person's ability to stay in his/her own home longer; this in turn reduces relocation costs and supports community cohesiveness. In a triple net leaseback, the lessor is not responsible for any costs or services associated with maintenance or improvements to the property beyond those required to ensure decent, safe, and sanitary conditions. The lessor's limited legal obligations are reflected in a reduced rental price for the lessee because the lessor is not providing any services or guarantees.

CMSS works with individuals participating in the program to determine the length of their leases on a case-by-case basis. Generally, CMSS avoids longterm leasebacks to ensure that floodplain management objectives are ultimately met and people are not kept in a vulnerable situation any longer than necessary. A triple net lease may also contain certain "triggers" or precipitating events that can end the lease, such as the death of the homeowner or a major flooding event. These leases are not transferable and do not allow a lessee to make substantial improvements to the property or accept any government funds to make repairs for future flood damages.

Orphan Parcel Leasebacks

CMSS also utilizes orphan parcel leases, in which a nearby property owner is willing to maintain a bought-out property in exchange for exclusive use of the property. Specifically, lessees provide in-kind services, like yard maintenance, in exchange for the use of a property and are not charged any monetary rent. In a limited number of instances, orphan parcel leases have reduced maintenance costs for CMSS. CMSS conducts periodic inspections of orphan parcels to ensure that the properties are being maintained according to the terms and conditions of the lease and, if bought-out with funds from the Federal Emergency Management Agency, not violating federal requirements.

Environment

Once acquired, physical structures are removed from the properties, which are then converted to and preserved as open space, providing a community asset and environmental and species benefits and allowing the floodplain to act as a natural buffer during heavy rain and storm events. Examples of the final uses for acquired properties include community gardens, greenway trails and paths, and floodplain restoration areas. In certain circumstances, after buyouts within a given large-scale area are completed, streets and utilities may also be removed or left unmaintained to further restore the floodplain and reduce costs to the county.

Community Engagement

CMSS engages Mecklenburg County's residents throughout all stages of the buyout process from initial education and outreach to finalizing a property's transfer. The Floodplain Buyout Program has seen high participation rates from eligible property owners, which has allowed more than 400 floodplain homes and businesses to be acquired.3 Around 85 percent of property owners within priority floodrisk reduction areas have elected to participate in the Floodplain Buyout Program after taking part in the property appraisal and offer process.4 CMSS also works with community members to design and realize a vision for each largescale bought-out area once all homes are purchased and demolished. CMSS hopes that bought-out properties become community assets, in addition to serving as natural floodplains and providing ecosystem benefits.

Funding

CMSS utilizes three funding sources to buy out different types of properties; together they comprise a comprehensive local program.

 Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Buyouts (1999–present): These buyouts are funded by FEMA Hazard Mitigation grants.⁵ To qualify for a FEMA grant, the property must meet eligibility and priority criteria set by the federal and/or state governments. CMSS has used this option less frequently since 1999; as more buyouts are completed, fewer and fewer remaining properties meet the federal and state criteria, including for FEMA's benefit-cost analysis.

- Local Risk-Based Buyouts (2012present): CMSS funds these buyouts through a local storm water fee and prioritizes properties based on local risks and needs. One subset of local risk-based buyouts includes an "orphan" property program for properties that do not meet federal grant criteria but that are adjacent to other properties that are being bought out with federal funds. The goal of the orphan property buyout program is to encourage the last homeowners living in a high risk neighborhood to move so that the site can be restored to its natural floodplain functions and services can be discontinued to the area, increasing cost savings to the city and county.
- Quick Buys (2003–present): Quick Buys allow CMSS to acquire significantly damaged properties in the immediate aftermath of a flood or storm event, before substantial repairs are made, through "rainy day" funds allocated by the Mecklenburg Board of County Commissioners.

Since the program was established in 1999, CMSS has invested more than \$67 million to acquire flooded properties.⁶ As of 2019, CMSS invests \$4 million annually in buyouts and most buyouts are funded completely by local government funds.⁷ Using both local and federal funding sources, CMSS can buy out properties on a larger scale to restore the floodplain and reduce human and property risks in a pre-disaster context and work with property owners who are otherwise ineligible for post-disaster buyouts. As a result, the county estimates it has avoided an estimated \$25 million in property damage and related losses to date, and prevented \$300 million in future losses.⁸ For example, by purchasing homes in the floodplain and allowing water to flow more naturally, other downstream areas can be preserved.

Considerations and Lessons Learned

Charlotte-Mecklenburg Storm Water Services has successfully implemented a comprehensive and strategic voluntary buyout program to reduce the impact of flooding events on people and property located within the floodplain. Charlotte-Mecklenburg's model leverages both federal grants and local stormwater utility fees to fund an increased number of buyouts in the county's floodplain and provides support to interested property owners in both disaster and non-disaster recovery contexts.

Leaseback arrangements may be a valuable tool for planners and policymakers to reduce the costs of buyout programs and support increased flexibility in buyouts. Although the Charlotte-Mecklenburg program uses leasebacks in a relatively small number of cases, the leaseback option has provided additional benefits to individuals and the larger community by enhancing community cohesiveness, offsetting acquisition costs, reducing property maintenance costs, and addressing the specific needs of property owners.

Based on up-to-date property data and buyout criteria that evaluate flood risk and cost effectiveness, the county estimates the acquired properties have provided high returns on investment relative to other flood mitigation and resilience tools. The program models flood mitigation best practices by supporting maintenance of acquired properties (either directly or through orphan parcel leasebacks) to boost natural floodplain functions and improve community flood resilience. Other local governments or stormwater, floodplain, or coastal agencies could consider adopting Mecklenburg County's model as part of their riverine and coastal retreat strategies.

Endnotes

- 1 Floodplain Buyout (Acquisition) Program, CITY OF CHARLOTTE, https://charlottenc.gov/StormWater/Flooding/Pages/ FloodplainBuyoutProgram.aspx (last visited Dec. 17, 2019).
- 2 CHARLOTTE-MECKLENBURG STORM WATER SERVICES, FLOOD RISK ASSESSMENT AND RISK REDUCTION PLAN (Jan. 2012), *available at* https:// charlottenc.gov/StormWater/Flooding/Documents/Flood_RARR_Plan-Final.pdf.
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- 4 *Id.*
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- 7 Id.
- 8 *Id*.

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