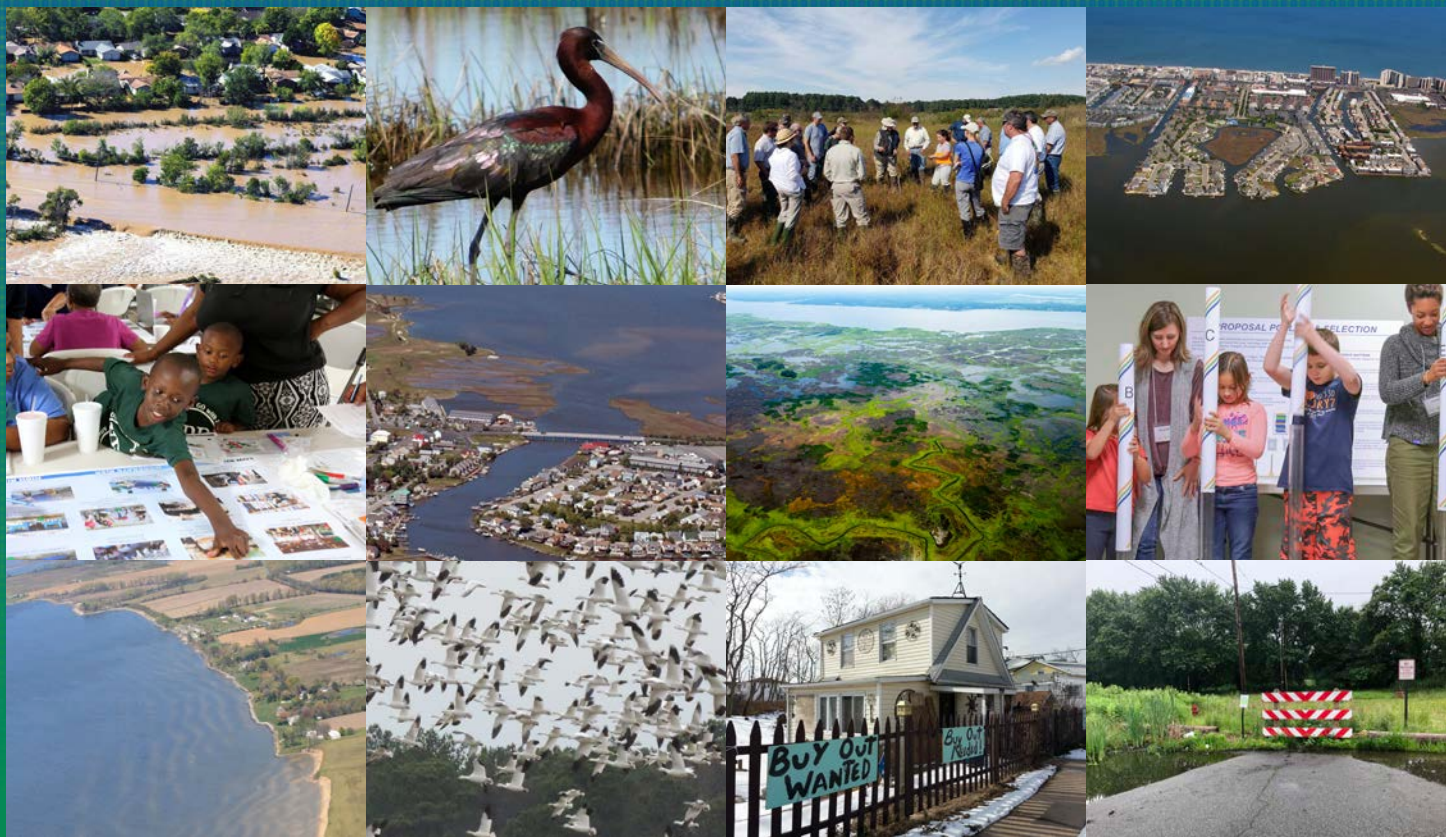


Managing the Retreat from Rising Seas

City of Austin, Texas: Flood Risk Reduction Buyout Projects



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**.

City of Austin, Texas: Flood Risk Reduction Buyout Projects

Executive Summary

The City of Austin, Texas has adopted a model to provide consistent relocation benefits for voluntary home buyouts in the city's floodplains as a part of its "flood risk reduction projects." In addition to the cost of a person's original home, the city will provide homeowners with moving and closing costs, and a replacement housing payment if the cost of a new comparable home (located outside of the city's 100-year floodplain) is more than the original home. Floodplains cover nearly ten percent of Austin's land area. This policy encourages owner participation in the buyout program and helps to minimize the economic and social costs of relocation. Since the 1980s, the city has implemented ten buyout projects, with each project encompassing anywhere from a handful to more than 800 properties. The city's Watershed Protection Department prioritizes buyouts in accordance with a *Watershed Protection Master Plan* that strategically guides related city actions, including potential buyouts, to reduce the risks associated with erosion, flooding, and poor water quality. A mix of municipal bonds, federal grants, and local funds (primarily through a drainage fee paid by owners of properties based upon impervious surface cover) have been used to fund the buyouts. Austin's example is noteworthy for its emphasis on implementing buyouts in accordance with a comprehensive flood mitigation program and facilitating transitions for people located in floodplains through relocation assistance. Other jurisdictions considering managed retreat could implement an interdisciplinary buyout approach across different sectors and government agencies (e.g., floodplain and emergency management and housing and community development). An integrated local response can reduce flood risk in a riverine or coastal context and also minimize the social and economic costs of buyouts.



Localized flooding in South Austin.

Local flooding occurs in South Austin's Del Curto area due to heavy rainfall events.

Credit: Watershed Protection Master Plan "Problem Score" Viewer, WATERSHED PROT. DEP'T, CITY OF AUSTIN (last visited Dec. 12, 2019).

Background

Austin, the state capital, is located in Central Texas. The city's population is growing — it increased 20 percent from 2010 to a population of over 960,000 in 2018.¹ The median home value in Austin is \$285,900.² The city is susceptible to extreme fluctuations in precipitation that require planning for impacts from both droughts and serious flooding. Floodplains cover nearly ten percent of Austin's land area and a number of creeks are subject to flash flooding. For example, in Fall 2018, Austin experienced a flash flood emergency from Hurricane Sergio. The city seeks to restore natural floodplain functions to protect people and property through a variety of flood risk mitigation projects, including voluntary buyouts, and provides relocation assistance to help residents transition to less vulnerable areas.

Managed Retreat Examples

Austin's Flood Risk Reduction Projects

Buyouts in Austin currently occur on a project-by-project basis through multi-faceted "flood risk reduction projects" managed by the city's Watershed Protection Department (WPD). The city guides selection of flood risk reduction projects

according to a *Watershed Protection Master Plan* developed by WPD.³ The master plan provides an assessment of Austin's erosion, flood, and water quality problems and prioritizes solutions, like buyouts, that can be implemented to address those problems in targeted areas across the city, including residential areas.⁴ Engineering studies are used to evaluate potential options available for WPD to reduce erosion, flooding, and/or water quality impairment at each location. If buyouts are the preferred options to advance the master plan's objectives — minimizing risk and maximizing community benefits — a buyout project will proceed, contingent on whether funding can be secured. The speed of project implementation depends on multiple factors including the level of risk assigned to the property. Projects that encompass multiple buyouts may be phased over time to account for total project costs, available funding, and real estate market conditions.

Relocation Assistance

Homeowners participating in Austin's buyout projects are generally eligible for the following home purchase and relocation expenses:

- Original home payment (determined by a property's fair market value);
- Moving and closing costs;
- Appraisal costs (to determine an original home's fair market value) and inspection costs (for a replacement home); and
- Replacement housing payment: A replacement housing payment is determined by what the city considers to be a "comparable home" — a home in Austin that is functionally equivalent to the original home but is not located in Austin's 100-year floodplain. Rental assistance may also be available for tenants as well as business reestablishment assistance for landlords. In addition, internal city relocation guidance, managed by WPD, only looks at the price of comparable homes both within 50 miles of the original home and within Austin's city limits, which can indirectly encourage people to stay

in Austin and help to maintain the city's tax base in less risky areas. As needed, Austin may also consider updates to its 100-year floodplain maps (and thus where replacement homes may be located) as new scientific data becomes available (e.g., new precipitation projections).

Austin's model is noteworthy for providing full replacement housing assistance for voluntary buyouts, in contrast with programs in other municipalities that may provide no relocation assistance at all, or may set a limit or cap on the assistance available to property owners. The Austin flood buyout process often lasts approximately nine months per home and involves four key steps:

1. An independent appraisal to determine the original home's fair market value;
2. A purchase offer to the homeowner based on the original home's fair market value;
3. Assistance (both financial and city staff support) for the displaced owner to buy and move into a new home; and
4. Demolition of the original home and maintenance of the land as open space or other floodplain-compatible uses desired by the surrounding neighborhood.

A new property will be inspected for health and safety standards before being approved, and a relocation benefit is then provided once a replacement house is purchased.

The city modeled its relocation assistance benefits after a federal law, the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (URA),⁵ that provides predictable real property acquisition and relocation expenses for homeowners and tenants of land acquired through eminent domain. Specifically, URA ensures consistent treatment for people displaced through federal programs or with federal funding. Austin has exceeded federal and state requirements⁶ and adopted URA's relocation assistance model for voluntary buyouts, in addition to those implemented through eminent domain, for flood risk reduction projects.⁷



Although Austin is not legally required to provide relocation assistance for voluntary buyouts (in contrast to compensation requirements under eminent domain), WPD nonetheless routinely provides relocation assistance to minimize the social consequences of buyouts for participating landowners. Currently, like URA, the City Code section that provides relocation benefits only applies to eminent domain and not voluntary projects. When WPD wants to offer relocation benefits as part of a voluntary buyout project, it must seek exceptions from City Council on a project-by-project basis to waive the code's application to voluntary buyouts. Although there is no citywide comprehensive or standalone buyout program, the expenses and relocation benefits offered to property owners are nevertheless consistently applied, according to internal WPD guidance and reference to URA.

Large-Scale Flooding in Union Creek.

This image depicts large-scale flooding, known as the "Halloween Flood of 2013" in Austin's Onion Creek neighborhood. As a result of incidents like this one, Onion Creek has also been the site of several buyouts by the city's Watershed Protection Department.

Credit: Watershed Protection Master Plan "Problem Score" Viewer, WATERSHED PROT. DEP'T, CITY OF AUSTIN (last visited Dec. 12, 2019).

Environment

Post-buyout land uses are determined by the city with the support of the community. The city may use the land to maximize flood reduction benefits. Alternatively, the community may take ownership of smaller areas for local neighborhood gardens or maintain land as open space with native grasses and wildflowers. The final uses of bought-out land depend on different factors including community preference and funding.

Community Engagement

Austin has taken a hands-on approach to helping residents relocate. WPD consults with residents early-on in each project, beginning with community education and outreach during the initial engineering study phase, and concluding with a successful relocation and restoration of the original property to natural conditions. For example, if a resident decides to participate in a buyout and is eligible for relocation assistance, WPD conducts an initial interview with property owners to learn about their housing needs and priorities. Following that interview, a real estate expert from the city is assigned to work closely with individuals and families as they search for a comparable property on the market. This commitment to public service helps residents interpret and understand engineering studies, creates understanding of flood risks, and ensures community engagement throughout the buyout process.

Funding

The majority of Austin's flood risk reduction projects are funded by a "drainage fee," which is calculated individually for each property in Austin, based on the amount and percent of impervious cover on a property.⁸ This funding for capital improvement projects has been supplemented by municipal general obligation bonds, bond elections, and Federal Emergency Management Agency grants. U.S. Army Corps of Engineers funding has also been used for civil works projects in partnership with Austin, such as for the acquisition and conversion of flood-prone land into public recreation areas.

Next Steps

In 2016, the Office of the City Auditor audited the city's buyout program to evaluate whether management of flood buyout projects was efficient and cost-effective. The audit report, released in February 2017, found that the decision to provide full replacement housing assistance for voluntary home buyouts had resulted in significant costs for the city, particularly given the increasingly expensive housing market in Austin.⁹ The audit report recommended that future policy discussions focus on developing a citywide relocation benefits policy for voluntary flood buyout projects rather than relying on a project-by-project model.¹⁰ As of 2019, Austin is in the midst of considering developing a citywide voluntary buyout program for individual properties that may not rank as high priorities in the *Watershed Protection Master Plan*, but would nonetheless contribute to the comprehensive restoration of Austin's floodplains. The city may also consider amendments to the City Code that would enable WPD to streamline the administrative process for providing voluntary relocation benefits without having to apply to City Council for an exception for each project.

Considerations and Lessons Learned

Austin's example is noteworthy for its process to implement buyouts in accordance with a comprehensive flood mitigation plan, the *Watershed Protection Master Plan*, and facilitate the transition of residents outside of floodplains through relocation assistance. Relocation benefits can increase participation in buyouts and enable people to afford safer, comparable homes. Austin also demonstrates how decisionmakers can start with existing laws and guidance, like URA or state complements, to build

retreat strategies in other jurisdictions in lieu of expending limited resources to “reinvent the wheel.” The city, however, has balanced its approach to adopt federal and state standards by managing its watershed protection and relocation assistance programs to respond to local context and needs. Overall, models like Austin's seek to work across multiple government agencies for floodplain and emergency management and community development and housing to reduce local flood risk in a riverine or coastal context and minimize the personal and economic costs of buyouts. All of these lessons could inform buyout or retreat programs or policies at the state and local levels in other jurisdictions.

Endnotes

- 1 *QuickFacts: Austin City, Texas*, U.S. CENSUS BUREAU, <https://www.census.gov/quickfacts/fact/table/austincitytexas/LND110210> (last visited Aug. 27, 2019).
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