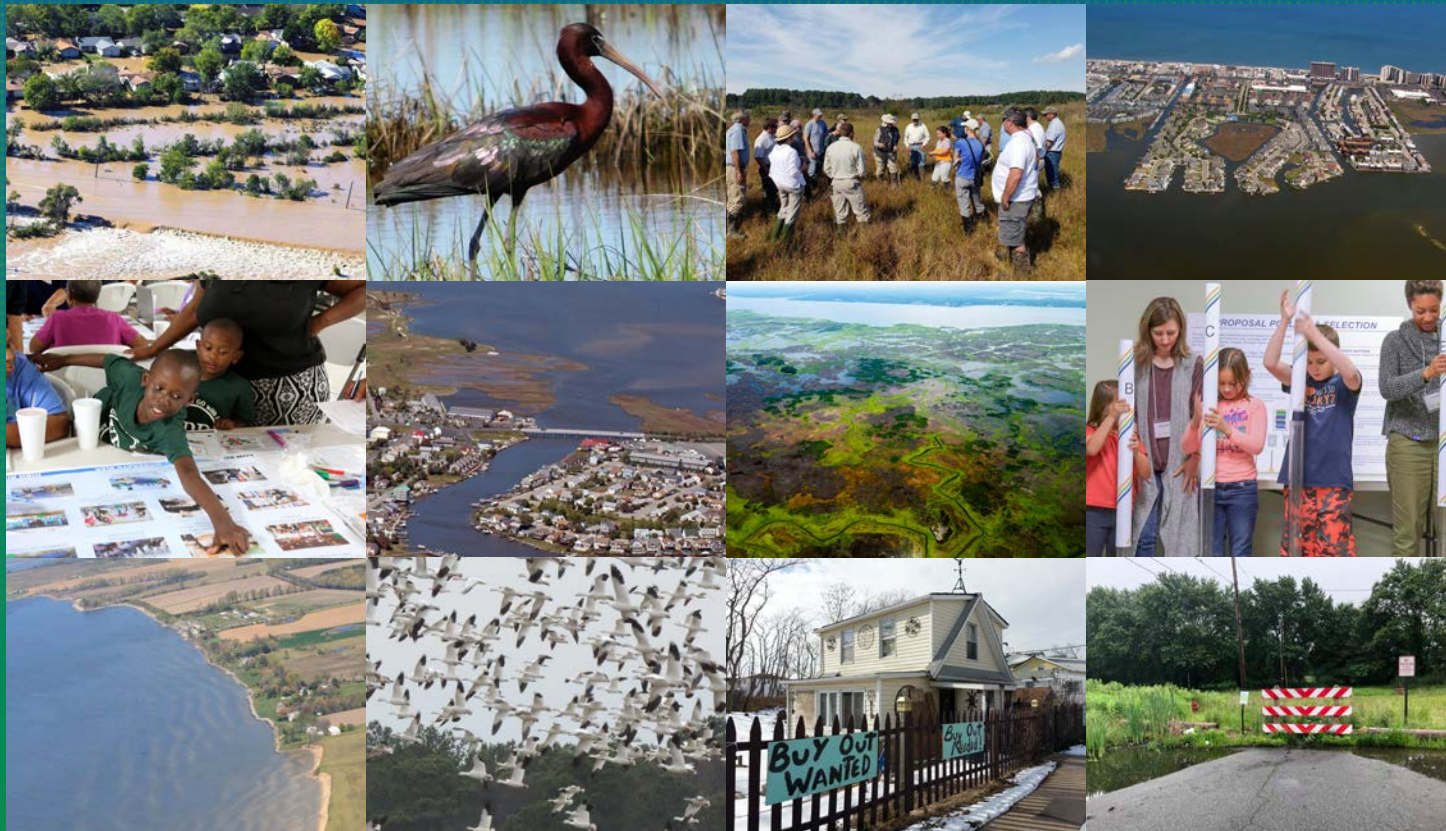


# Managing the Retreat from Rising Seas

## Long Beach, California: Los Cerritos Wetlands Restoration and Land Swap



GEORGETOWN CLIMATE CENTER



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

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## 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:

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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**.

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# Long Beach, California: Los Cerritos Wetlands Restoration and Land Swap

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## Executive Summary

The Los Cerritos Wetlands Oil Consolidation and Restoration Project (project) provides an example of how public-private land swap arrangements can be aligned with environmental restoration and protection plans, and used to advance long-term visions for managed retreat. The Los Cerritos Wetlands Complex, located in Long Beach, California, has faced decades of degradation from human activities and development. As a result, the original 2,400 acres of wetlands on the site have been reduced to a few hundred acres of wetlands today. Much of this remaining wetlands area is privately owned and used to conduct oil operations. The proposed project would transfer 154 acres of privately owned wetlands to public ownership as part of a land swap arrangement. Specifically, as a part of the land swap, the 154 acres currently used for oil production will be exchanged for five acres of wetlands currently owned by the Los Cerritos Wetlands Authority. The land swap will facilitate restoration of a major portion of the wetlands via a mitigation bank, increase public access, and reduce the oil production footprint and consolidate operations. The land swap plan also involves a number of environmental and social tradeoffs, however. For example, state and local decisionmakers have had to address an expanded lifespan for the oil production facilities, a continuing or increased amount of greenhouse gas emissions, and risks for potential oil spills. These considerations can provide lessons and recommendations for other local governments studying land swaps as a legal tool to facilitate retreat in coastal areas.

## Background

The Los Cerritos Wetlands Complex — located on the border of Los Angeles County and Orange County in California in Long Beach — once encompassed more than 2,400 acres of tidal salt marshland, lagoons, bays, and alkali meadows.<sup>1</sup> The wetlands consist of two functioning marshes and several seasonal brackish ponds that are home to a number of endangered species. Approximately 500 acres remain of the original wetlands area, much of which is privately owned and used for oil operations.<sup>2</sup> This loss of wetlands has increased coastal vulnerabilities posed by sea-level rise, coastal erosion, and flooding. Despite this loss in acreage, the current size of the Los Cerritos Wetlands Complex presents a rare opportunity in California to preserve a coastal wetlands ecosystem on such a large scale.

Currently, the Los Cerritos Wetlands Authority (LCWA) is leading the development of a land swap arrangement — the Los Cerritos Wetlands Oil Consolidation and Restoration Project (project) — that will restore significant portions of the Los Cerritos Wetlands owned by Synergy Oil and Gas.<sup>3</sup> The project will assist LCWA to accomplish its mission to enhance the Los Cerritos Wetlands area. LCWA is a governmental entity established in 2006 by an agreement between the California State Coastal Conservancy, the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy, and the cities of Long Beach and Seal Beach focused on conservation and restoration of the Los Cerritos Wetlands. The land swap will help LCWA to implement its Conceptual Restoration Plan (CRP) by restoring a portion of the Los Cerritos Wetlands in a manner that will adhere to the restoration principles contained in the CRP.

## Managed Retreat Examples

### Land Swaps

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The project proponents aim to use a legal tool called a land swap to facilitate the transfer of land and enable restoration of important coastal habitats. Land swaps provide a way to facilitate the gradual retreat or upland migration of those coastal habitats in the face of rising seas while enhancing environmental, economic, and community benefits. As a part of the land swap, multiple parties plan to transfer ownership of 154 acres of the Los Cerritos Wetlands, currently owned and operated by Synergy Oil and Gas, to LCWA. The 154 acres will be exchanged for a five-acre site owned by LCWA. In addition, ongoing oil production at an adjacent 33-acre site owned by the City of Long Beach will be phased out, and that site will be restored to tidal wetlands. Synergy will replace 74 old wells with 120 new wells at the five-acre LCWA site and a seven-acre site already owned by Beach Oil Mineral Partners, which includes Synergy. The wells on the five-acre and seven-acre sites will be connected by a 2,200-foot above-ground oil pipeline.

LCWA will acquire title to all of the privately owned properties excluding subsurface mineral rights that will be retained by Synergy. The overall project, including the consolidation of oil operations, relocation of existing structures, and wetlands restoration, will be phased over the long term. For instance, title to the southern portion of the 154 acre site will not transfer to LCWA for 20 years and Synergy can continue oil and gas operations over that time period as a part of the current agreement (as proposed, in 10 years, 50 percent of the active wells have to be removed; all operations have to cease in 20 years). In addition, Synergy must meet many environmental remediation and other criteria, like the removal of existing infrastructure, before it will transfer those lands to LCWA.





Several factors may have influenced LCWA's and Synergy's decision to pursue a land swap. First, LCWA and its governmental members have limited public funds to acquire the wetlands complex. This land swap presents an opportunity to voluntarily acquire a large, environmentally valuable coastal ecosystem. Second, technological advancements for oil and gas operations through Horizontal Directional Drilling (HDD)<sup>4</sup> made it feasible for Synergy to physically consolidate its activities on a smaller footprint and participate in the land swap.<sup>5</sup> Third, the five-acre parcel owned by LCWA was not suitable for other uses (e.g., a visitors center) and swapping this smaller parcel with Synergy enabled LCWA to pursue a much larger scale restoration project that would maximize environmental benefits for the area. Although these factors are context specific, they illustrate the creative and opportunistic thinking that precipitated and contributed to a complex land swap arrangement that can result in multiple public and private benefits and tradeoffs.

## Policy Tradeoffs

The state and local decisionmakers involved in this project have had to navigate challenging and competing policy tradeoffs raised by different stakeholders. Specifically, the land swap plan

has been controversial due to split opinions over the benefits of wetlands restoration and wildlife protection compared to increased oil production. As a result, there are diverging views regarding whether the overall anticipated benefits of the land swap will exceed potential costs.

To address environmental benefits, 76 acres of degraded wetlands in the northern end of the 154-acre site will be restored via a mitigation bank. Synergy seeks to establish and operate a wetlands mitigation bank (pending federal and state approvals) to fund its restoration efforts on this part of the complex through the sale of "credits" to mitigate or offset wetlands losses from new development in other locations. LCWA is also working with Synergy and the City of Long Beach to plan the restoration of tidal wetlands on the 73 acres at the southern end of the Synergy Oil Field and on the 33-acre city-owned property, including through a potential second wetlands mitigation bank, once existing wells and other oil production facilities are removed. In addition, the land swap will allow new public access and recreational opportunities including a visitors' center and perimeter trail and consolidate oil production — which will reduce the oil operations' footprint from 187 acres to 10 acres.

## Map of Los Cerritos Wetlands Project Site.

This map illustrates the different properties and property owners that would be involved in the Los Cerritos Wetlands land swap in Long Beach, California if the project is implemented.

Credit: **Project Site**, LOS CERRITOS WETLANDS OIL CONSOLIDATION & RESTORATION PROJECT (last visited Sept. 6, 2019).

Although implementation of the land swap plan would reduce the amount of land owned by Synergy, it is estimated that oil production could increase 80-fold if all necessary permits are issued. Furthermore, as previously stated, part of the land swap will not occur for 20 years and oil and gas operations can continue over that period. Some environmentalists, area residents, and local tribes have expressed concern over continued greenhouse gas emissions due to the extended lifespan of oil production, and the potential risk of spills, particularly given seismic activity in the area.

## Funding

As with many land swap arrangements, the project would be implemented through in-kind exchanges of land compared to money. The plan, however, includes a discussion of long-term restoration and site remediation funding sources (e.g., 76-acre wetlands mitigation bank to fund restoration), and the possibility of establishing an endowment fund with Synergy Oil for long-term wetlands maintenance and monitoring.

## Next Steps

In August 2018, the California Coastal Commission (CCC) — the state's regulatory coastal management agency — approved the project concept. In December 2018, CCC held a second hearing, which granted LCWA a Coastal Development Permit for the project; however, CCC conditioned its permit upon other studies that must be completed and permits being obtained from the U.S. Army Corps of Engineers,

California Department of Fish and Wildlife, and the Regional Water Quality Control Board. As of September 2019, the project has not been implemented and is undergoing permit and environmental compliance review, which may take several months to a few years.

## Considerations and Lessons Learned

The Los Cerritos Wetlands Project highlights some of the policy tradeoffs posed by land swaps and the viewpoints presented by different stakeholders. The City of Long Beach's role as a landowner and convener may have helped to facilitate this process in a more comprehensive way than if it had been led by a single agency or another entity with a specific or more focused mission or mandate (e.g., economic development, natural resources management). Depending on local context, cities may be uniquely positioned to balance various interests on behalf of the public-at-large, which could result in bringing more people to the decisionmaking table. The City of Long Beach's experiences can inform how other municipalities define their respective roles in land swap arrangements.

In addition, land swaps may necessitate multiple "swaps within a swap" and creative thinking to find properties that are attractive to private property owners with different interests (e.g., corporation, homeowner) and encourage them to participate in the process. For a land swap to be successful, the swap must be

mutually beneficial to the participating parties. The more parties that are involved, however, can make the process more difficult to administer. Project proponents should consider these types of factors upfront to best navigate land swaps.

If final studies are completed and permits are granted, the land swap arrangement will result in a substantial portion of the Los Cerritos Wetlands Complex currently held in private ownership restored and conveyed to public ownership. The Los Cerritos Wetlands Project demonstrates how land swaps can be used to acquire, restore, consolidate, and preserve wetlands habitat areas that would otherwise be too expensive to purchase outright. Local governments may use this example to align land swaps with existing or future plans, and implement longer-term, comprehensive visions for managed retreat in coordination with public-private partnerships.



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## Endnotes

- 1 LOS CERRITOS WETLANDS AUTHORITY, LOS CERRITOS WETLANDS STEWARDSHIP PROGRAM 4 (Dec. 2011), *available at* [http://www.tidalinfluence.com/uploads/1/6/2/7/16274920/lcstewardshipprogram\\_2012.pdf](http://www.tidalinfluence.com/uploads/1/6/2/7/16274920/lcstewardshipprogram_2012.pdf); *see also* Deborah Schoch, *Tension Over Wetlands*, L.A. TIMES (July 29, 2007), <https://www.latimes.com/archives/la-xpm-2007-jul-29-me-marshes29-story.html>.
- 2 *See supra* n.1.
- 3 *Reducing Our Footprint, Restoring Our Wetlands*, LOS CERRITOS WETLANDS RESTORATION PLAN, <http://loscerritoswetlandsrestorationplan.com/the-plan-los-cerritos-wetlands-restoration/> (last visited Feb. 18, 2020).
- 4 Horizontal Directional Drilling (HDD) is a method of installing underground pipelines or cables by drilling horizontally below the surface through a single vertical well, which avoids the need to trench or dig up as much ground compared to traditional drilling methods.
- 5 The advent of HDD was important in designing the land swap and ultimately removing privately owned infrastructure from the wetlands complex that would otherwise prevent the implementation of restoration and retreat efforts.

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