



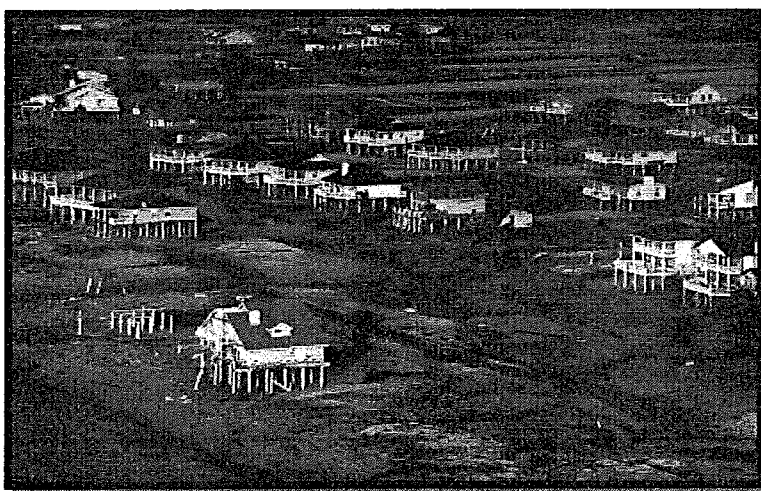
COLUMBIA LAW SCHOOL

CENTER FOR CLIMATE CHANGE LAW

# MANAGED COASTAL RETREAT

A LEGAL HANDBOOK ON SHIFTING DEVELOPMENT  
AWAY FROM VULNERABLE AREAS

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Excerpt: Table of Coastal  
Management Tools

## TABLE OF COASTAL MANAGEMENT TOOLS

Numerous legal and policy tools are available to promote coastal managed retreat, not all of which are discussed in depth in this Handbook. This table provides a brief overview of available tools, as consolidated from other sources in the managed retreat literature. See, especially:

J. GRANNIS, ADAPTATION TOOL KIT: SEA LEVEL RISE AND COASTAL LAND USE (GEORGETOWN CLIMATE CENTER, 2011).

J. Peter Byrne & J. Grannis, *Coastal Retreat Measures*, in THE LAW OF ADAPTATION TO CLIMATE CHANGE (M. Gerrard & K. Kuh, eds., 2012).

Tool	Description	Example
<b>Climate Adaptation Plans</b>	Climate adaptation plans can address coastal hazards as part of a state-wide or local adaptation effort	California Climate Adaption Strategy; Florida Governor's Action Team on Energy and Climate Change
<b>Development Plans</b>	Identifying areas for priority development and areas for retreat can promote managed retreat as part of a larger development strategy	Maryland Smart Growth Initiative
<b>Hazard Mitigation Plans</b>	Incorporate increased hazards from climate change into HMPs, and then use the HMPs to guide comprehensive plans/zoning process	FEMA-Approved State Hazard Mitigation Plans – Colorado’s Drought Plan and California’s State Hazard Mitigation Plan
<b>Coastal Management Plans</b>	Coastal management plans integrate a variety of managed retreat policies into a comprehensive and coherent plan to guide development	Texas Coastal Management Plan
<b>Capital Improvement Plans / Land Use Plans</b>	Use capital improvement plans to study the vulnerability of their infrastructure to projected climate change impacts and then decrease investment in infrastructure in vulnerable areas	Maryland Growth Act and Smart Growth Initiative; California Coastal Act
<b>Transportation Plans (and other Utility or Agency Plans)</b>	Incorporate managed retreat into siting decisions in federally-mandated state transportation plans; allocate infrastructure to less vulnerable areas	California Department of Transportation Guidance (2011): instructed staff on how to assess sea-level rise risks when planning infrastructure projects
<b>Flood Insurance Reforms</b>	Requiring insurance in flood-prone areas can protect homeowners and government funds by providing other means of relief; it can also signal the true costs of coastal living	National Flood Insurance Program

Tool	Description	Example
<b>Downzoning</b>	Limit potential uses and intensity of use in areas vulnerable to the effects of climate change to decrease development potential	Connecticut Coastal Management Act
<b>Zoning Overlay</b>	Provide an additional layer of zoning requirements in specialized areas such as coastal hazard areas	Greenwich, Connecticut
<b>Setbacks</b>	Require new development to be sited upland to avoid flooding; base setbacks on erosion rates or sea level rise to create a rolling setback	California Coastal Act; Maine Sand Dune Rules; Kaua'i, Hawaii
<b>Building and Rebuilding Restrictions</b>	Require strict construction standards in vulnerable areas; limit the extent or number of repairs after disasters	Maine Sand Dune Rules; South Carolina Beach Front Management Act; Florida Coastal Construction Control Line
<b>Building Moratoria</b>	Impose a temporary moratorium on new building permits while regulators update comprehensive plans and zoning schemes to account for projected sea level rises and other climate change impacts	Florida 1989 two-year moratorium on building on coastal islands; Nags Head, North Carolina
<b>Exactions</b>	Grant development permits with retreat conditions (e.g. no armoring, setback requirement, rolling easement)	California Coastal Commission prohibition on armoring
<b>Condemnation</b>	Establish policy of declaring homes too close to shore (and therefore exposed to erosion and storms) as being unsafe for habitation	Pacifica, California (condemnation due to erosion of coastal bluffs)
<b>Private Information Disclosure</b>	Require property sellers to disclose risks to the property from climate change, sea level rise, and erosion	<u>South Carolina</u> : S.C. Code Ann. Section 48-39-330 <u>California</u> : Cal. Civ. Code Section 1103.2
<b>General Information Disclosure</b>	Make publicly available all the maps and models used to create state climate change adaption plans; identify vulnerabilities and risks	New York City report "A Stronger, More Resilient New York"
<b>Buyouts (Acquisition in Fee)</b>	Acquire land in vulnerable areas and convert it to open space to protect remaining infrastructure and buildings	Ames County, Iowa; Grand Forks, North Dakota; Soldier's Grove, Wisconsin

Tool	Description	Example
<b>Conservation Easements</b>	Acquire an easement on all or part of the vulnerable property such that landowner agrees to limit development in specified manner	Maryland Environmental Trust; Wapello, Iowa; National Park Service
<b>Transferable Development Credits</b>	Sever development rights from property ownership; landowners in vulnerable areas can sell their development rights to landowners in less-vulnerable areas seeking to expand	City of Malibu, California, Local Coastal Program; Collier County, Florida
<b>Tax Incentives</b>	Base property tax assessments on current use values, instead of fair market values (which would be influenced by developers), making it more cost-effective for landowners to hold onto undeveloped land	Virginia Conservation Easement Tax Incentives