

Adaptation Strategies for Flood Management

	Strategy	Examples	Description
management/retreat	coastal and marine management	rolling easement	allow wetlands or beaches to migrate inland as sea levels rise
		ecological buffer zones	conserve natural habitat for plants and animals
		ecosystem protection and restoration	encourage corridor connectivity and restoration of native aquatic and terrestrial habitats
		open space preservation and conservation	preserves undeveloped areas, can be used to store floodwaters
		invasive species management	preserving native species/preventing spread of invasive species, under anticipated conditions of climate change
	growth and development management	zoning	restricts types of use appropriate for a parcel of land
		redevelopment restrictions	restrictions applying to a structure that is destroyed or substantially damaged.
		conservation easements	restricts use of areas, can be used to store floodwaters
		compact community design	reduces the footprint of development
		government purchase of development rights	provides landowners with compensation for their farmland or other property in order to prevent development
	loss reduction	acquisition, demolition, and relocation	federal, state or local government buyout of at risk properties
		horizontal setbacks	require development be located a fixed distance landward
		vertical setbacks	require development be located landward of a fixed elevation
insurance incentives/disincentives		cost of insurance, based on flood risk, can create a disincentive for building in high risk areas	
accommodation	emergency management	emergency response plans	detailed plan for managing floods
		early warning systems	siren or telephone warning system
	loss reduction	building codes	guidelines for construction and land use in areas likely to be inundated
		retrofitting	elevating, reinforcing, bracing and anchoring flood-prone structures, removing impervious surfaces, etc.
		raise roads	raising the elevation of parts of or a whole road
floodplain storage	create dry basins for holding storm water		
protection	integrated flood management	public infrastructure vulnerability reduction	relocation or institution of flood proofing measures for vulnerable drinking water and wastewater facilities
	loss reduction	shore protection structures	typically levees, which are a "wall" of earth and concrete designed to prevent flooding behind them
		coastal hardening	seawalls, revetments, breakwaters, groins etc.
		floodgates or tidal barriers	gates placed in a waterway that can open and close to control high tides, storm surges or flood waters
		stormwater management	stormwater drainage and storage systems to move water off roads and away from houses
	water resource management and protection	green infrastructure	measures aimed at slowing or retaining stormwater, includes green roofs, rain gardens, parks, etc.
		beach nourishment	addition of sand to an existing beach to widen
	soft engineering	dune building	artificial creation or enhancement of a shoreline dunes
wetland creation		artificial creation or enhancement of a wetland for shore stabilization and ecosystem services	