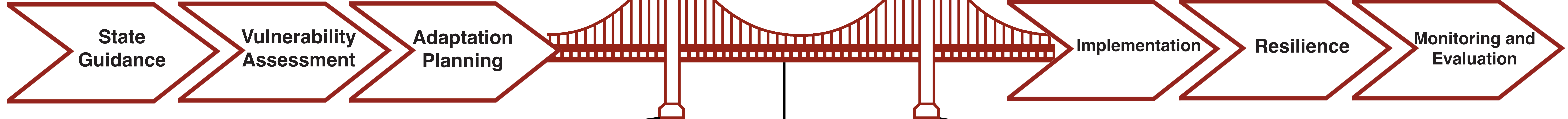


Beyond the Vulnerability Assessment: Moving from Sea Level Rise Adaptation Planning to Implementation in the San Francisco Bay Area

This guidance is intended to help local governments unsure of how to take the next step in choosing and implementing sea level rise adaptation strategies. It includes a categorization and analysis of planning, regulatory, market-based, and engineering tools that jurisdictions can use as a first step to catalyze action on adaptation strategy implementation. Additionally, this report provides a discussion of undertaking legal, coordination, and equity considerations when adapting to sea level rise.

Problem: Sea Level Rise



Example Tool #1: Overlay Zones/Districts

Tool Type: Regulatory
Strategy: Zoning

“Overlay zones superimpose additional regulations on an existing zone based upon special characteristics of that zone,” (Grannis 2011).

Purpose: Protect/Accommodate/Retreat/Preserve
Current Development Stage: Pre-Development/Existing Development/Redevelopment
Example(s): East Hampton, NY; Model SLR Overlay Zone for MD; Tillamook Co, OR

Example Tool #2: Rebuilding/Redevelopment Restrictions

Tool Type: Regulatory
Strategy: Rebuilding/Redevelopment Restrictions

“Limit a property owner’s ability to rebuild structures destroyed by natural hazards...” (Grannis 2011).

Purpose: Accommodate/Retreat/Preserve
Current Development Stage: Redevelopment
Example(s): Maine’s Sand Dune Rules, South Carolina’s Beach Front Management Act

Example Tool #3: Transferable Development Credits (or Rights) Programs

Tool Type: Market-Based
Strategy: Tax and Other Development Incentives

“Restrict development in one area and allow for the transfer of development rights to another area more appropriate for intense use.” Includes the creation of a development rights bank and identification of “sending and receiving” areas, (Grannis 2011). These programs are also a zoning tool and can be paired with overlay zones to identify sending and receiving areas. To ensure that sending areas are preserved, sending landowners should execute a permanent conservation easement, (Herzog and Hecht 2013).

Purpose: Accommodate/Preserve
Current Development Stage: Pre-Development/Redevelopment
Example(s): Hillsborough Co, FL; Collier Co, FL; Malibu, CA; Ocean City, MD

Common Barriers



By the Numbers

GENERAL	#	TOOLS BY TYPE	# of tools
TOOL TYPE	4	PLANNING	5
STRATEGY	13	REGULATORY	36
TOOL	68	MARKET-BASED	21
SUB-TOOL/COMPONENTS	37	ENGINEERING	6
		CURRENT DEVELOPMENT STAGE	# of tools
PURPOSE	# of tools	PRE-DEVELOPMENT	49
PROTECT	23	EXISTING DEVELOPMENT	38
ACCOMMODATE	48	REDEVELOPMENT	58
RETREAT	40		
PRESERVE	48		

Guiding Principles

