

CALIFORNIA COASTAL COMMISSION

Revised Draft

Sea Level Rise Policy Guidance

CA Coastal Resilience
Network Webinar

June 24, 2015



Oceanside, CA | May 2009 | CA King Tides Initiative | Dan Jarvis




CALIFORNIA
COASTAL
COMMISSION

SEA LEVEL RISE POLICY GUIDANCE


STATE OF CALIFORNIA NATURAL RESOURCES AGENCY
EDMUND G. BROWN, JR., GOVERNOR

CALIFORNIA COASTAL COMMISSION
41 FREEMONT, SUITE 2000
SAN FRANCISCO, CA 94104, 2119
VOICE (415) 984-1200
FAX (415) 984-1300
TDD (415) 975-0813



CALIFORNIA COASTAL COMMISSION
SEA LEVEL RISE POLICY GUIDANCE

*Interpretive Guidelines for Addressing
Sea Level Rise in Local Coastal Programs
and Coastal Development Permits*



Sunset Beach, Photo by Mario Fernandez
Chula Vista, Photo by Lisa Cox
San Francisco, Photo by Mike Baird
Arcata, Photo by Humboldt Baykeeper

PUBLIC REVIEW DRAFT – MAY 27, 2015

- Draft document released October 14, 2013
- 120 day public comment period closed February 14, 2014
- Received >100 comment letters with ~850 individual comments
- Presentations at the December 2013 and January 2014 Commission Hearings



ABOUT THE DOCUMENT

This document IS:

Guidance

Dynamic

Multi-purpose for multiple audiences

A menu of options

This document is NOT:

Regulations

Static

Meant to be read cover-to-cover

A checklist



ABOUT THE DOCUMENT

GUIDING PRINCIPLES



Chapter 2: Guiding Principles

Use science to guide decisions

Minimize coastal hazards
through planning and
development standards

Maximize protection of
public access, recreation, and
sensitive coastal resources

Maximize agency coordination
and public participation

REVISIONS

NEW Principles:

- #4, Use a precautionary approach
- #5, Design adaptation strategies according to local conditions
- #13, Recognize that SLR will cause the public trust boundary to move inland



ABOUT THE DOCUMENT

CHAPTERS OF INTEREST



Chapter 3:

Sea Level Rise Science

Time Period *	North of Cape Mendocino	South of Cape Mendocino
by 2030	-2 – 9 in (-4 – +23 cm)	2 – 12 in (4 – 30 cm)
by 2050	-1 – 19 in (-3 – +48 cm)	5 – 24 in (12 – 61 cm)
by 2100	4 – 56 in (10 – 143 cm)	17 – 66 in (42 – 167 cm)

* with year 2000 as a baseline

REVISIONS

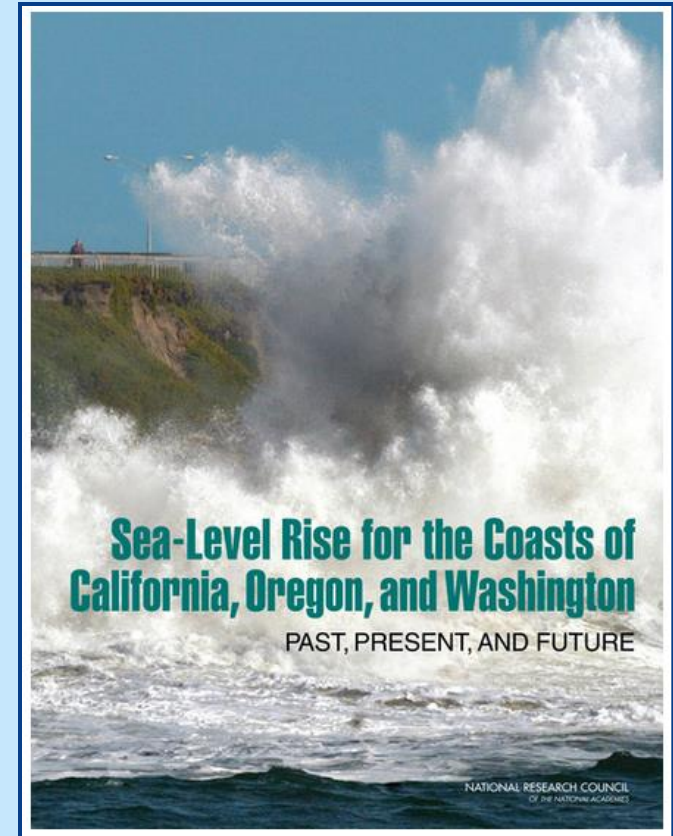
- **UPDATES** to best available science
- **NEW** section on storms, extreme events, and abrupt change
- **NEW** section on scenario-based planning



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In general, the Coastal Commission recommends using **best available science (currently the 2012 NRC report)** to identify a range of sea level rise scenarios including the **HIGH projection, LOW projection, and one or more INTERMEDIATE projections**



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Scenario-based analysis

includes choosing several possible sea level rise amounts as a starting point to evaluate impacts to coastal resources and potential risks to development over time.

Helps to address uncertainty in sea level projections by:

Revealing the range of possible consequences of sea level rise

Revealing the tipping points for if/when sea level rise will impact an area

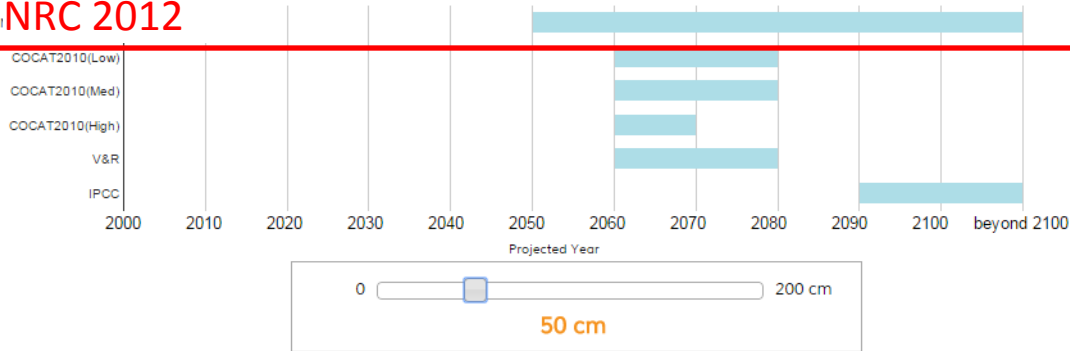


1. Identify range of SLR amounts, then relate to likely time period(s) of occurrence

When is a projection likely to occur?

Move the slider control below the graph left and right to see how different climate experts projections of when sea level rise will occur compare to one another.

NRC 2012



get started

clear

recenter

1) Choose a topic.

Flooding shows the inundation due to SLR, waves, and storm surge.

Flooding

Waves

Current

Duration

Flood Potential

[What do the Topics represent?](#)

Compare Flooding Scenarios

2) Choose an Amount of Sea Level Rise (cm).

0	25	50	75	100	125
150	175	200	500	[Use feet]	

[What Sea Level Rise scenario should I use?](#)

3) Choose an Event

Choose
Storm Scenario Frequency

None Annual 20 year 100 year

Or Choose
King Tide Scenario

King Tide

[What are Storm Scenarios?](#)

[What is a King Tide scenario?](#)

You are currently in 

Flood and Sea Level Rise

Choose a Region Selected Region: Ve

 Combined Erosion Risk Combined Hazards

2. Select the time and amount of sea level rise

Year

Current 2030 2060 2100

Sea Level Rise Scenario

Low Medium High

Layer Properties:

Opaque Transparent

[Download Data](#)[View Technical Report](#)[View Overview](#)

2. Choose applicable years, then identify **HIGH, INTERMEDIATE,** and **LOW SLR** scenarios



Map Layers



Community Planning



Future Habitat



Economic App



Flood and Sea Level Rise

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CHAPTERS OF INTEREST



Chapter 4:

**Consequences of SLR for
Communities, Coastal Resources,
and Development**

REVISIONS

- **NEW CHAPTER** (split off from Ch.3)
- **NEW** section on environmental justice



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CHAPTERS OF INTEREST

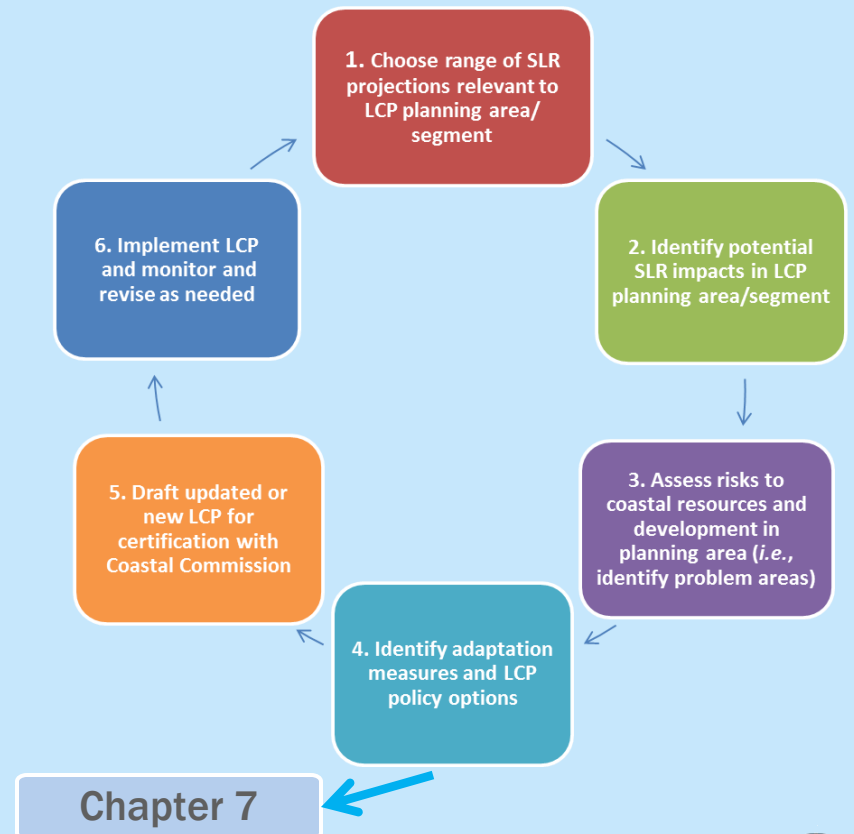


Chapter 5:

Addressing Sea Level Rise in Local Coastal Programs

REVISIONS

- **NEW sections on:**
 - Using scenario-based analysis
 - Including other topics
 - Leveraging analyses/sharing information
 - Coordinating regionally



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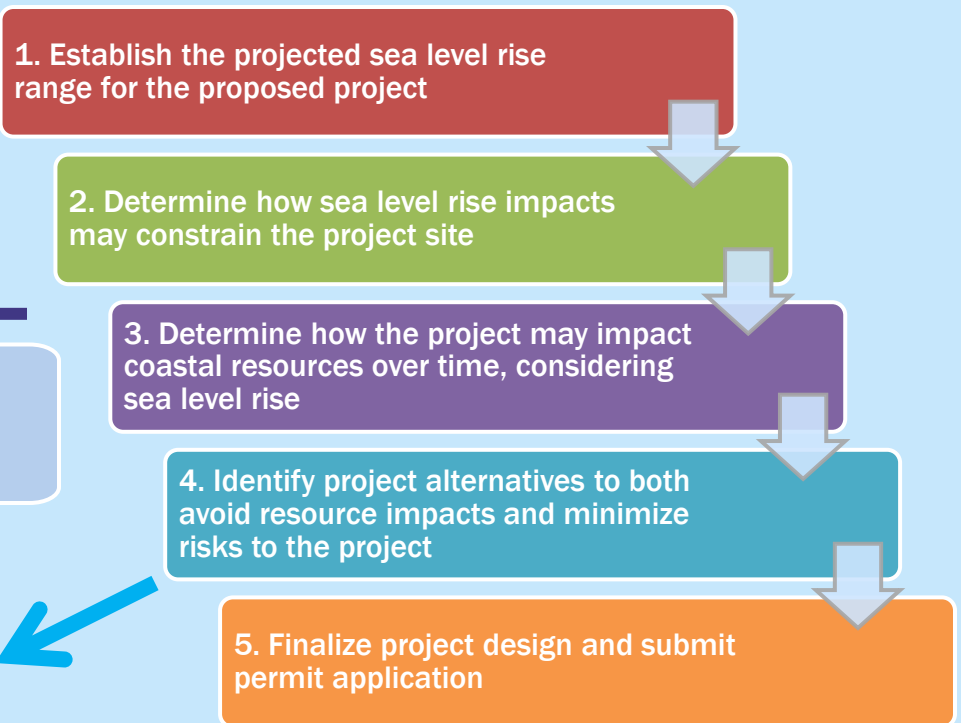
CHAPTERS OF INTEREST



Chapter 6:

Addressing Sea Level Rise in Coastal Development Permits

Chapter 7



ABOUT THE DOCUMENT

CHAPTERS OF INTEREST



Chapter 7:

Adaptation Strategies

REVISIONS

- **NEW CHAPTER** (contains information from original Ch. 4 and Appendix C)
- **NEW** section on general adaptation categories, including pros and cons
- **NEW** adaptation strategies, particularly relating to redevelopment



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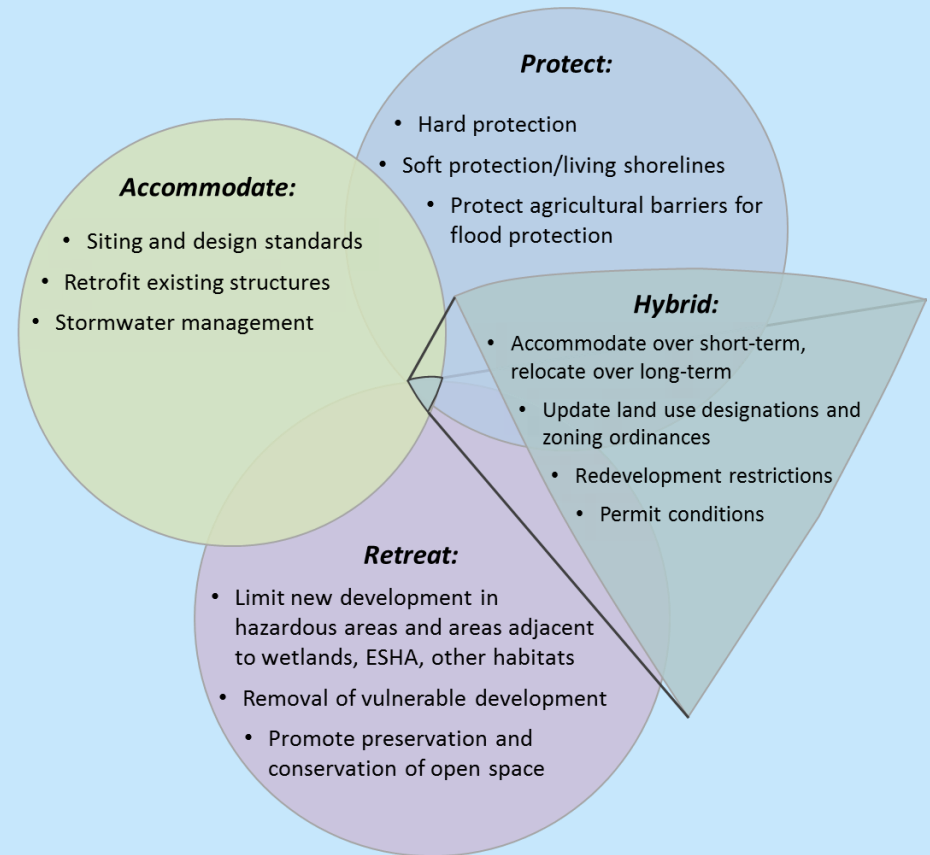
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Choose Adaptation Strategies based on:

Applicable Coastal Act and LCP requirements
(and other relevant laws and policies)

Specific risks and vulnerabilities
of the region or project site

Consideration of local conditions



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A. Coastal Development and Hazards

The Coastal Act requires that new development be sited and designed to be safe from hazards and to not adversely impact coastal resources (Coastal Act Sections 30235 and 30253). The main goals that relate to hazards and coastal development are:

- Update land use designations, zoning maps, and ordinances to account for changing hazard zones
- Include sea level rise in hazard analyses and policies
- Plan and locate new development to be safe from hazards, not require protection over its entire lifespan, and be protective of coastal resources

Goal: Plan and locate new development to be safe from hazards, not require protection over its entire lifespan, and be protective of coastal resources

A.4 Limit new development in hazardous areas: Restrict or limit construction of new development in zones or overlay areas that have been identified or designated as hazardous areas to avoid or minimize impacts to coastal resources and property from sea level rise impacts.

A.5 Cluster development away from hazard areas: Concentrate development away from hazardous areas. Update any existing policies that cluster development to reflect additional hazard zones due to sea level rise.

A.5a Concentration of development/smart growth: Require development to concentrate in areas that can accommodate it without significant adverse effects on coastal resources. This strategy is applicable for community wide planning through an LCP, but may also apply to CDPs for subdivisions or for larger developments involving large or multiple lots.

A.5b Transfer of Development Rights programs (TDR): Restrict development in one area ("sending area") and allow for the transfer of development rights to another area more appropriate for intense use ("receiving area"). LCPs can establish policies to implement a TDR program to restrict development in areas vulnerable to sea level rise and allow for transfer of development rights to parcels with less vulnerability to hazards. A TDR program can encourage the relocation of development away from at-risk locations, and may be used in combination with

Coastal Development and Hazards

Public Access and Recreation

Coastal Habitats, ESHA, & Wetlands

Agricultural Resources

Water Quality and Supply

Archaeological and
Paleontological Resources

Scenic and Visual Resources



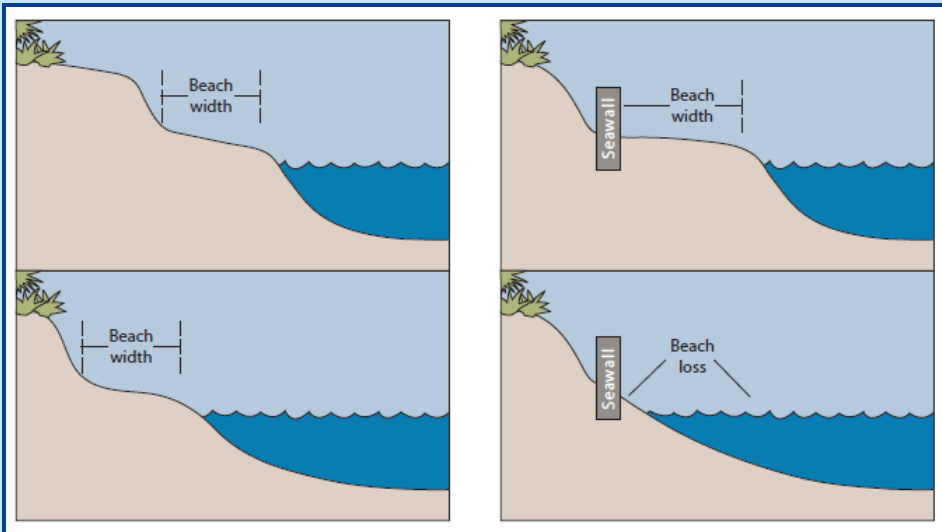
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Chapter 8:

Legal Context of Adaptation Planning




REVISIONS

- NEW CHAPTER
- Addresses:
 - Seawalls and other shoreline protective devices
 - The public trust boundary
 - Potential private property takings issues



REVISIONS

 Intro **Updates to State and Federal actions**

 Ch. 3 **Updates to best available science**
NEW section on storms, extreme events, abrupt change
NEW section on scenario-based planning

 Ch. 4 **NEW section on environmental justice**

 Ch. 7 **NEW chapter on adaptation strategies**

 Ch. 8 **NEW chapter on the legal context of adaptation planning**

+ Edits throughout for clarification



NEXT STEPS

Ongoing Efforts:

- LCP Updates/grant coordination
- NOAA Project of Special Merit to develop policy guidance and model ordinance language for resilient shoreline residential development
- Coordination with partners

Coming Soon:

- Coordinating implementation of the SLR Policy Guidance
- Trainings...



THANK YOU! QUESTIONS?

To view the Revised Draft SLR Policy Guidance, visit:

<http://www.coastal.ca.gov/climate/slrguidance.html>

To view the Comment and Response document, visit:

http://documents.coastal.ca.gov/assets/slr/guidance/Final_MAST_ERCommentResponseDoc.pdf

To view Commission staff presentations on sea level rise, visit:

<http://www.coastal.ca.gov/climate/SLR-Outreach-Presentations.html>

