California Sea-Level Rise Guidance

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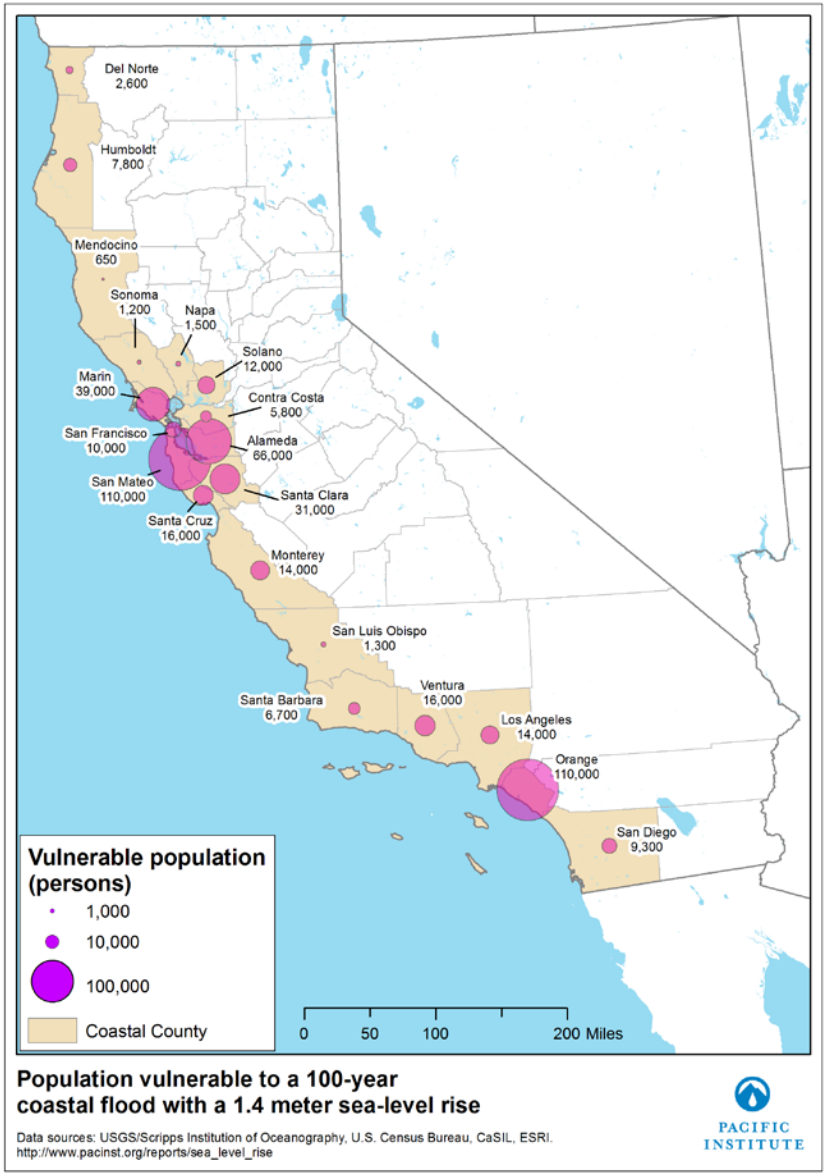

$100 billion in property damage

480,000 people at risk

San Francisco Bay Conservation and Development Commission

California Department of Toxic Substances Control

STATE OF CALIFORNIA BUSINESS, TRANSPORTATION & HOUSING AGENCY

DEPARTMENT OF WATER RESOURCES

CALIFORNIA COASTAL COMMISSION

Caltrans

CALIFORNIA STATE PARKS SINCE 1864

Coastal Conservancy

CALIFORNIA natural resources AGENCY

DEPARTMENT OF FISH AND GAME

The Governor's Office of Planning and Research

California Department of Public Health CDPH

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY STATE WATER RESOURCES CONTROL BOARD

CALIFORNIA Ocean Science Trust OST

Connecting Science to Ocean Management

December 2009 Proceedings of the National Academy of Sciences publication by Vermeer and Rahmstorf

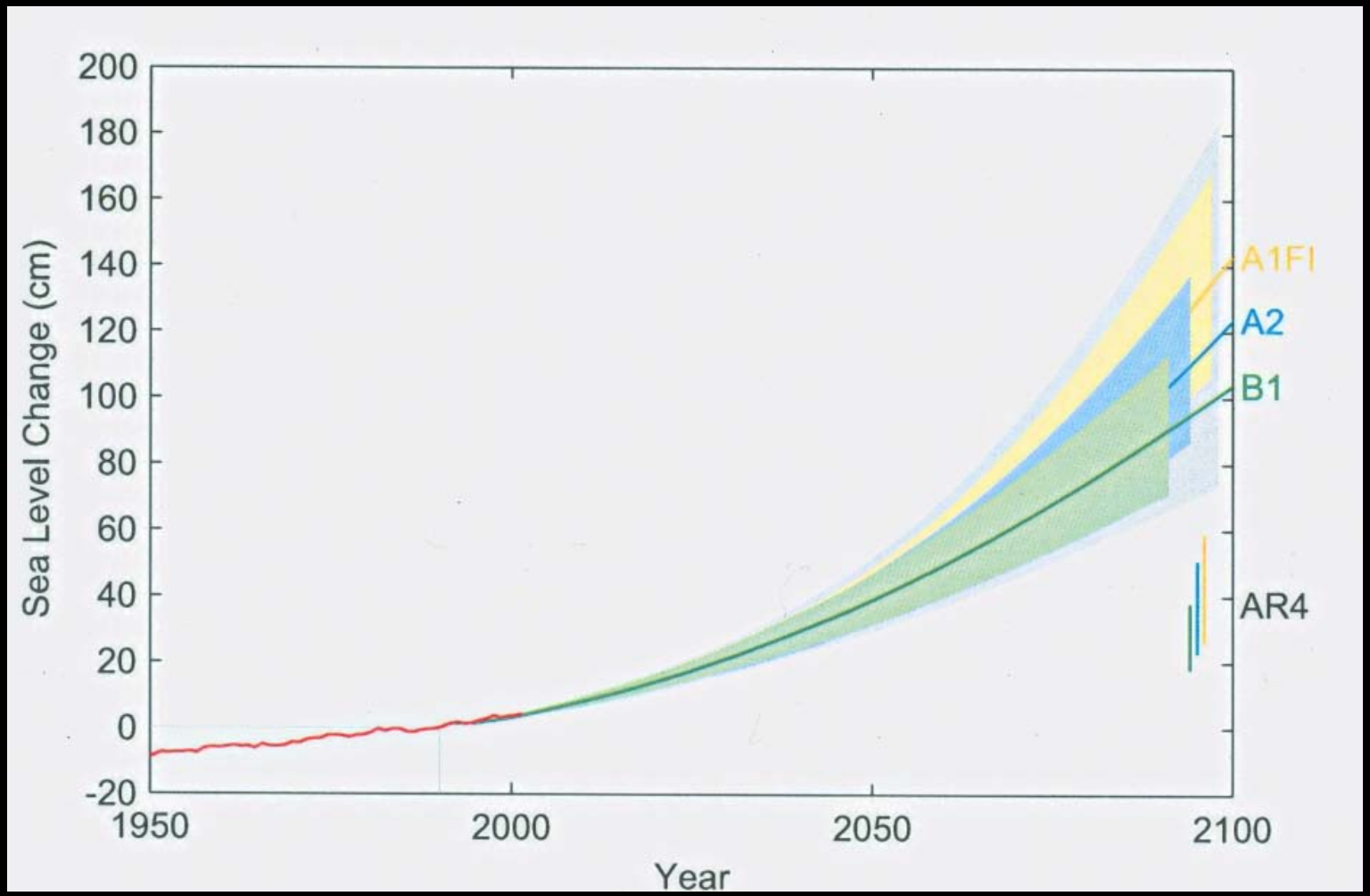

Table 1. Sea-Level Rise Projections using 2000 as the Baseline

Year		Average of Models	Range of Models
2030		7 in (18 cm)	5-8 in (13-21 cm)
2050		14 in (36 cm)	10-17 in (26-43 cm)
2070	Low	23 in (59 cm)	17-27 in (43-70 cm)
	Medium	24 in (62 cm)	18-29 in (46-74 cm)
	High	27 in (69 cm)	20-32 in (51-81 cm)
2100	Low	40 in (101 cm)	31-50 in (78-128 cm)
	Medium	47 in (121 cm)	37-60 in (95-152 cm)
	High	55 in (140 cm)	43-69 in (110-176 cm)

Figure 2. Example of:

Risk = Consequence x Likelihood

For projects where too much sea-level rise would cause project impacts such as flooding,

	if use lower estimates of sea-level rise	if use medium estimates of sea-level rise	if use higher estimates of sea-level rise
	Higher Likelihood Impacts	Medium Likelihood Impacts	Lower Likelihood Impacts
High Consequence	HIGH RISK	HIGH RISK	MEDIUM RISK
Medium Consequence	HIGH RISK	MEDIUM RISK	LOW RISK
Low Consequence	MEDIUM RISK	LOW RISK	LOW RISK

This figure demonstrates how the amount of risk is determined by the consequences (impacts and adaptive capacity) and the likelihood of impacts occurring. In this example, using higher SLR estimates lower the project risks."

2009 California Climate Adaptation Strategy

A Report to the Governor of the State of California
in Response to Executive Order S-13-2008

California natural resources Agency

Figure 1. Consequence = Impacts x Adaptive Capacity

	Low Adaptive Capacity	Medium Adaptive Capacity	High Adaptive Capacity
High Impact	HIGH CONSEQUENCES	HIGH CONSEQUENCES	MEDIUM CONSEQUENCES
Medium Impact	HIGH CONSEQUENCES	MEDIUM CONSEQUENCES	LOW CONSEQUENCES
Low Impact	MEDIUM CONSEQUENCES	LOW CONSEQUENCES	LOW CONSEQUENCES

This figure demonstrates how the consequences of a decision are determined by the amount of impact and by the adaptive capacity. There are higher consequences when there are greater impacts and lower adaptive capacities.

CA SLR Guidance Document

- Coordinate with other state agencies and use the same SLR projections.
- Future SLR projections should not be based on linear extrapolation of historic sea level observations.
- Consider trends in relative local mean sea level.
- Consider storms and other extreme events.
- Consider changing shorelines.

For More Information

- Documents available at www.opc.ca.gov

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