

California's Climate Change  
Adaptation Strategy  
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# Sea Level Rise Amounts

- 7 in measured at tidal gauges last 100 yrs
- Current state reports – 20-55 inches 2100
- Recognition of low-probability, high-impact events such as Greenland ice sheet melting
- National Academy of Sciences report due December 2010

# Executive Order S-13-08

- **Sea-level rise vulnerability** (Consistent with Executive Order S-13-08, for new projects located in areas vulnerable to future sea-level rise, planning shall consider a range of sea-level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea-level rise.)
  - a. 16 inches (40 cm) by 2050, and
  - b. 55 inches (140 cm) by 2100.

# CA Climate Adaptation Strategy Ocean & Coastal Resources Sector Guiding Principles

- 1) CA must protect public health and safety and critical infrastructure.
- 2) CA must protect, restore, and enhance ocean and coastal ecosystems, on which our economy and well being depend.
- 3) CA must ensure public access to coastal areas.
- 4) New development and communities must be planned and designed for long-term sustainability in the face of climate change.
- 5) CA must look for ways to facilitate adaptation of existing development and communities to reduce their vulnerability to climate change impacts over time.
- 6) CA must begin now to adapt to the impacts of climate change. We can no longer act as if nothing is changing.

## Strategy: Establish State Policy to Avoid Future Hazards and Protect Critical Habitat

- “State agencies should consider project alternatives that avoid significant new development in areas that cannot be adequately protected from flooding due to climate change”

- “State agencies should generally not plan, develop, or build any new significant structure in a place where that structure will require significant protection from sea-level rise, storm surges, or coastal erosion during the expected life of the structure.”
- “Vulnerable shoreline areas containing existing and proposed development that have regionally significant economic, cultural, or social value may have to be protected, and in-fill development in these areas should be accommodated.”

# Decision Guidance – Key Questions

- 1) Is the existing or proposed structure either necessary for the health, safety, or welfare of an entire region, or is it located within a hazard area for which protection will be provided because of surrounding high-value development?
- 2) Is it infeasible to relocate an existing structure or site a new structure outside the hazard area and still provide this health, safety, or welfare function?
- 3) Will relocating an existing or proposed structure provide environmental protection or recreational opportunities that may be otherwise lost if that structure is built or protected along the coast?

# Additional Questions

- Is there a feasible “soft” protection solution (i.e. can a barrier beach or wetland be used instead of a seawall)?
- Will the protection approach, retrofit, or new design:
  - Be necessary to protect an existing structure threatened by erosion?
  - Allow continuation of important natural processes, such as littoral drift, and avoid any impacts to neighboring habitats or structures?

# Additional Questions

- Will the protection approach, retrofit, or new design:
  - Provide a long-term solution to the threats caused by sea-level rise?
  - Be resilient over a range of sea-level rise possibilities?
  - Provide broad protection to existing developed areas?

# Additional Questions

- Will the protection approach, retrofit, or new design:
  - Protect structures of high cultural or social value?
  - Provide for a natural shoreline (i.e. can seawalls be designed to include habitat)?
  - Be coordinated with proposed actions for other infrastructure in the same flood hazard area?

# Additional Questions

- Will the protection approach, retrofit, or new design:
  - Cost less than the value of the structures to be protected?
  - Provide mitigation for adverse impacts that cannot be avoided?

# State Coastal Conservancy – Required Project Selection Criteria

**Sea level rise vulnerability:** consistent with Executive Order S-13-08, for new projects located in areas vulnerable to future sea level rise, planning shall consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise.

# State Coastal Conservancy – Additional Project Criteria

- **Minimization of Greenhouse Gas Emissions:** project design and construction methods include measures to avoid or minimize greenhouse gas emissions to the extent feasible and consistent with the project objectives.
- **Vulnerability from climate change impacts other than sea level rise:** project objectives, design and siting consider and address vulnerabilities from climate change impacts other than sea level rise.

# State Websites

- [www.climatechange.ca.gov](http://www.climatechange.ca.gov)
  - Portal for research, reports, calendar of events, updates on state's work on climate change
- [www.scc.ca.gov](http://www.scc.ca.gov) (State Coastal Conservancy)
  - Climate change policy adopted at June 2009 Coastal Conservancy Board mtg – list of adaptation projects encouraged for applications
- [www.opc.ca.gov](http://www.opc.ca.gov) (Ocean Protection Council)
  - Sign up for mailing list for meeting & other announcements.