

# Making California's Coast Resilient to Sea Level Rise: Principles for Aligned State Action

## Background

- California's coast, bays, estuaries, and ocean are critical to the state's environmental and economic security, integral to our quality of life, and an iconic part of the state's legacy. Each generation of Californians has an obligation to be strong stewards of the coast and ocean for future generations.
- However, Californians' safety, local and state economies, critical infrastructure, and natural resources face increasing threats from sea level rise (SLR). Every scientific assessment since California's 2009 Climate Adaptation Strategy has revealed that coastal impacts from climate change-caused SLR will occur more quickly and be more severe than previously projected. **California's coast faces a significant risk of experiencing SLR of up to 1.0 feet by 2030 and 7.6 feet by 2100.**
- Warming temperatures and a higher frequency of extreme weather, in conjunction with high tide events, have already resulted in SLR impacts at Imperial Beach, Seal Beach, Del Mar, Pacifica, Arcata, areas along San Francisco Bay, and elsewhere.
- Projections of future SLR point to **significant impacts to California communities**, with considerable environmental justice implications, upwards of hundreds of billions of dollars in impacts to property and development, impacts to statewide and regional water supplies, as well as significant damage to and loss of many miles of beaches, tidepools, coastal rivers, estuaries, and wetlands.
- To improve effectiveness in addressing this immediate challenge, state and regional agencies co-developed and endorsed the following Principles for Aligned State Action.

Photo: Embarcadero, San Francisco, "King Tides," Mike Filippoff



# Goal

- As California has repeatedly demonstrated, **a bold, statewide climate agenda benefits our natural resources, health and safety, economy, critical infrastructure, and communities.** Our state has led global efforts on climate change mitigation and is poised to do so on climate change adaptation.
- These Principles will enable California to scale up its coastal resiliency efforts through aligned strategies that create consistent, efficient decision-making processes and actions coastwide and improve collaboration across state, local, tribal, and federal partners.
- **Action now saves up to six times the cost of action later,** allows time for the state and communities to test and leverage needed solutions, and prevents untold impacts.
- **By enhancing alignment and partnerships now, we will significantly improve the climate resiliency of our coast, bays, shorelines, and communities,** particularly frontline communities most vulnerable to the impacts of SLR.

California state agencies with coastal, bay, and shoreline climate resilience responsibilities, including for coastal infrastructure and Californians' safety, endorse the following Principles around **Best Available Science, Partnerships, Alignment, Communications, Local Support, and Coastal Resilience Projects.** These Principles will guide unified, effective action toward SLR resilience for California's coastal communities, ecosystems, and economies.



Photo: Coastal Commission King Tides Project 2019



# Principles

## 1. Develop and Utilize Best Available Science

- Apply best available science to planning, decision-making, project design, and implementation. Prioritize frequent engagement with stakeholders to ensure the science is actionable.
- Utilize SLR targets based on the best available science and a minimum of 3.5 feet of SLR by 2050. Develop and utilize more protective baseline 2050 and 2100 targets for road, rail, port, power plants, water and waste systems, and other critical infrastructure.

## 2. Build Coastal Resilience Partnerships

- Partner and coordinate regularly on SLR resilience issues, policies, planning, processes, mandates, permitting, information, funding, and projects, including with federal and local government bodies and tribes, and across issue areas and mandates.
- Regularly and collaboratively collect, share, and publicize the latest information on SLR and how agencies are using SLR projections to reduce risks to safety, property, infrastructure, natural ecosystems, and native species.
- Build strong relationships with all partners at all levels of government, and with the public, nonprofits, businesses, and other stakeholders.
- Consult, learn from, and coordinate and partner with tribes to ensure inclusive and multicultural stewardship of lands and waters subject to SLR.



Photo: Coyote Creek Flood, San Jose, Santa Clara Valley Water District

### 3. Improve Coastal Resilience Communications

- Enhance SLR and coastal resilience communications and engagement, including alignment on SLR messaging and implementation of a coordinated public awareness and education campaign.
- Increase transparency, efficiency, and alignment of state and local coastal resilience processes, policymaking, and decision-making.

### 4. Support Local Leadership and Address Local Conditions

- Support local planning and adaptation policies and projects that address local and regional conditions, meet baseline standards for climate impacts, and consider acute increases in SLR caused by storm surges, El Niños, and other events.
- Evaluate and learn from local conditions, including community priorities, health and safety, critical infrastructure, housing, culture, economies, patterns of development, local environment, and other characteristics, to inform risk tolerance and adaptation.
- Particularly in light of the fact that the environmental burdens of development and industry are often borne by under-resourced communities, prioritize early protection of and capacity building for the most under-resourced and vulnerable frontline communities in developing and implementing adaptation plans, projects, and strategies, toward greater social equity and environmental justice.

Photo: Rockaway Beach, Pacifica, "King Tides," Alan Grinberg





## 5. Strengthen Alignment around Coastal Resilience

- Develop and apply baseline, Administration-wide SLR assumptions, projections, targets, terms, and standards into coastal projects, retrofits, planning, funding, regulatory, and permitting initiatives. Consider statewide decision-making guidelines to help identify the strongest solutions, establish priorities, and ensure baseline success. Prioritize avoidance of initiatives that shift hazards and impacts elsewhere along the coast or shoreline.
- Ensure that up-to-date SLR resilience planning is in place coastwide and includes alignment on: consistent, minimum baseline targets; vulnerability assessments for communities (particularly frontline communities), infrastructure, property, and natural ecosystems and native species; SLR economic impact assessments, including the cost of resiliency projects and the potential cost of no action; and identification of multi-benefit SLR resiliency strategies.
- Plan for SLR impacts to regional and statewide water supplies and water management.
- Collaboratively work to pursue and develop specific funding sources for state, regional, and local coastal resilience planning, projects, and public outreach.
- Where possible, avoid creating unnecessary duplication of existing state agency authority.

## 6. Implement and Learn from Coastal Resilience Projects

- Protect and enhance public trust natural and cultural resources, such as beaches, wetlands, other habitats, biodiversity, and culturally important areas.
- Protect critical public water-dependent infrastructure, ports, harbor districts, and other evolving public trust needs and uses, given the unique characteristics, significance, constraints, and values of these public trust uses.
- Prioritize the use of nature-based adaptation measures where appropriate.
- Build coastal resilience by increasing the number of restoration and adaptation projects, such as wetland restoration; ensure that adaptation projects do not shift hazards and impacts elsewhere along the coast or shoreline.
- Streamline permitting for high-need coastal restoration projects.
- Realize multiple benefits from coastal resilience projects where feasible.
- Take action to prevent impacts from SLR to public access as feasible, toward the continued protection and enhancement of public coastal access for all.



Photo: Dune Restoration, Cardiff State Beach, NOAA

# Endorsing and Participating Entities

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In early 2020 Secretary Crowfoot, California Natural Resources Agency (CNRA) and Secretary Blumenfeld, California Environmental Protection Agency (CalEPA) convened two high-level meetings of 17 state agencies (listed below under Participating Entities) to develop and approve Sea Level Rise Principles for use in planning, policy setting, project development, and decision making. The Principles have been endorsed by both CNRA and CalEPA secretaries and all departments within these agencies. The Principles are a living document, and formal endorsement of the Principles from other agencies will be added as received.

## Endorsing Entities

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Wade Crowfoot, Secretary, CNRA, and CNRA Agencies  
Jared Blumenfeld, Secretary, CalEPA, and CalEPA Agencies  
Betty Yee, State Controller

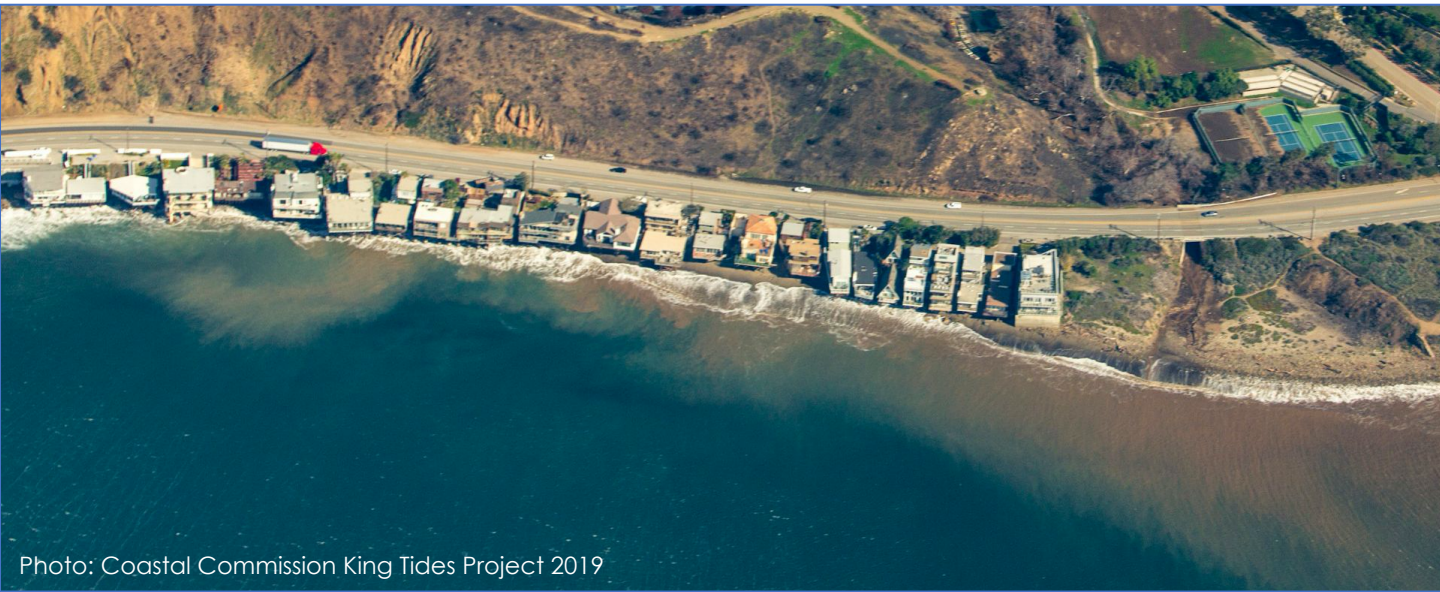


Photo: Coastal Commission King Tides Project 2019

## Participating Entities

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CNRA  
CalEPA  
SF Bay Conservation and Development  
Commission  
California Coastal Commission  
California Energy Commission  
California Department of Fish and Wildlife  
Caltrans  
Delta Stewardship Council

Department of Water Resources  
Ocean Protection Council  
Governor's Office of Planning and Research  
Office of Emergency Services  
State Coastal Conservancy  
State Lands Commission  
State Parks  
State Water Resources Control Board  
Strategic Growth Council