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California Coastal Commission  
c/o Charles Lester, Executive Director  
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Email: [SLRGuidanceDocument@coastal.ca.gov](mailto:SLRGuidanceDocument@coastal.ca.gov)

**Re: Comments and Priorities on the Draft Sea-Level Rise Policy Guidance**

Dear Charles:

Thank you for the opportunity to comment on the Draft Sea-Level Rise Policy Guidance (“Guidance”). The Nature Conservancy (“TNC”) is very pleased that the California Coastal Commission (“Commission”) has taken the important step of developing and releasing this guidance, thereby bringing California communities closer to understanding what is needed to create resilient coasts in the face of climate change. The California Coastal Act (“the Act” or “the Coastal Act”) is the strongest regulatory tool in the United States for protecting natural coastal resources, recreation and agriculture, and this Guidance will help the Act evolve to effectively protect those resources far into the future.

Overall, we find the Guidance to be very strong. It provides clear, step-by-step instructions with examples and expected outcomes, and should be easy to use. Furthermore, the descriptions of adaptation strategies provide a strong starting point for evaluating the true costs and benefits of various approaches to managing our shores in the face of coastal change. Communities are in very different places with respect to the process of planning for sea level rise (“SLR”), and the Guidance is flexible enough to be used by communities no matter what their status is.

TNC has been involved in sea level rise adaptation planning in Ventura County and elsewhere in California for three years. We offer the following comments from our perspective as a ground-level proponent of vulnerability assessment and adaptation planning. The communities we work with are very enthusiastic to receive this guidance and put it into practice.

Overall Comments:

- (1) The Guidance is overly focused on mitigating risk to people and property. While this is laudable, the main objective of the Act is the protection of natural, scenic and recreational resources of the state of California. The Guidance should develop the connections to avoiding the impact of people and property on Coastal Act resources.

- (2) The Guidance rightly recognizes other statewide efforts (e.g., the Safeguarding California Plan) to provide guidance on handling sea level rise, but doesn't clearly describe how communities should consider those other principles and guidelines in developing their policies. This Guidance should cross-reference other state policies providing additional insight or constraints on elements relevant to local sea level rise policy. Furthermore, the Guidance should emphasize the important role of state agencies in the local planning process. Specifically, the California Department of Parks and Recreation should be consulted in Local Coastal Program ("LCP") amendments in planning units where it manages coastal land within the planning unit. Similarly the California Department of Transportation should be consulted in almost all LCP amendments because of the vulnerable position of the Pacific Coast Highway.
- (3) Many local communities have already taken important steps toward planning for SLR, and these efforts should be recognized in this document. In the same vein, many other local governments would undertake such planning, but lack the expertise or resources. This Guidance document must recognize the very significant resource need, and propose a state-level solution that would provide an ongoing, dedicated funding stream to support local planning. Increasingly, the main impediment is not a lack of will – it is a lack of ability.
- (4) Several other policy tools exist that facilitate local planning for adaptation to sea level rise. Among these are Local Hazard Mitigation Plans, General Plans, Regional Sediment Management Plans, and others. The Guidance should discuss these and suggest an approach to building an integrated coastal resilience policy through a combination of these planning tools.

#### Specific Comments:

- (1) The Guidance's discussion of best available science specifically identifies the 2012 National Research Council report as the best available science on sea level rise (p23). While this is the case for most of California's coast, in locations where there are higher resolution or dynamic projections that incorporate local processes, communities should be specifically directed to use these (p30). In addition, the discussion of best available science should make reference to other relevant processes, for which we need more robust information and projections. Specifically, we generally lack projections for changes in fluvial flood frequency and magnitude, changes in local precipitation patterns, changes in coastal storm frequency and magnitude, local sediment transport processes and changes, marsh accretion processes, and sediment budgets. In the case of habitat evolution, the existing models (i.e., SLAMM) may not even be suitable for the generation of projections of future locations of California marshes. The Guidance should reference this information gap and propose an approach for communities to either fill this gap or build contingencies around it.
- (2) We are very pleased to see the emphasis on avoiding coastal hazards (p24), but this section should be strengthened. Proposed new development in known future hazard zones should be required to overcome a strong presumption of incompatibility, and any permits should contain conditions that mitigate impacts to Coastal Act Resources (i.e., that the development will be engineered to accommodate coastal change, including habitat evolution, and that the development will never seek permits for armoring of any kind). Furthermore, the principles should direct applicants and municipalities to prioritize green infrastructure approaches to minimizing hazard risk – for both new and existing development. Grey approaches should never be permitted for new development. The section discussing application for new development in hazard zones

should be reframed to discourage applications for development in the future locations of beaches and other coastal habitat (p52). There should be no loss of future habitat from the combined impacts of SLR and development.

- (3) Please further develop the recommendation to require mitigation of unavoidable impacts to Coastal Act Resources (p26). Mitigation is a reasonably familiar concept in the wetlands context, but the Commission should elaborate on when and how mitigation should be required in the context of sea level rise. We recommend that mitigation be required any time new development would reasonably be expected to constrain the evolution of coastal natural habitat as sea level rises. In addition, the discussion of minimizing impacts on coastal wetlands and Environmentally Sensitive Habitat Areas would be made stronger by treating the construction of structures in future wetlands the same way we treat construction in existing wetlands – by forbidding or mitigating it (p57).
- (4) The consideration of public infrastructure in local coastal planning is critically important and requires additional elaboration (p32). In particular, the California Department of Transportation (“CalTrans”) is a critical stakeholder for almost all coastal communities as a result of the vulnerable location of the Pacific Coast Highway (“PCH”). The planning, repair and maintenance of transportation infrastructure has a very long lead time, and communities should ensure that CalTrans is part of the process of updating LCPs to integrate sea level rise. Coastal Act resources are at substantial risk from being lost in the squeeze between sea level rise and the PCH.
- (5) Wetlands and other coastal natural habitats have substantial asset values that require further discussion (p34). Wetlands, beaches and estuaries provide a critical natural buffer against sea level rise and coastal storm impacts to communities. In addition, wetlands have a measurable carbon sequestration value. All of these values should be articulated and assessed in LCP amendments, and the protection or restoration of these areas should be prioritized among the adaptation strategies (p58). Innovative tools – like rolling easements – should be discussed.
- (6) It may be valuable to set up a paradigm for assessing both primary and secondary impacts from SRL (p39). Primary impacts are those that occur as a direct result of sea level rise interacting with the landscape – things like inundation, erosion and saltwater intrusion. Secondary impacts are those that result from the actions people take in response to sea level rise – loss of habitat as a result of seawall construction, etc. Both of these impacts should be discussed and evaluated in LCP amendments.
- (7) Projecting future impacts of saltwater intrusion is difficult (p40). There is very little information about this, and the models for estimating it are complex and site-specific. It would be very useful if the Guidance could set up rules of thumb for dealing with this paucity of information.
- (8) We find the “expected outcomes” and examples to be very practical and outcome oriented (p45). However, much of the Example 3 (p46-48) is confusing and impractical. Specifically, in the absence of any additional modeling in the local area, there would not be adequate information on coastal erosion, sediment supply, habitat evolution, or engineering-level information on infrastructure assets to make reasonable management recommendations.
- (9) The impacts of sea level rise, saltwater intrusion and other related impacts to California’s coastal agriculture industry are poorly characterized in the literature, and these interests are poorly represented in most of our sea level rise planning activities. There needs to be a push at the state level to enhance the state of our knowledge about the future impacts of saltwater intrusion to this

very valuable resource. In addition, this guidance should encourage local governments to include agricultural interests in their outreach for LCP amendment development (p59).

- (10) The section on additional research needs (p86) should mention:
- a. The inadequacy of existing habitat evolution models (i.e., SLAMM) to estimate the future locations of west coast marshes, as a result of the seasonal changes in the hydrology of many of our coastal confluences;
  - b. Future projections of saline intrusion are required for many coastal communities. In particular, communities with high value coastal agriculture should include such projections in their vulnerability assessments, and provide for adaptation strategies to manage their impacts.

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Once again, thank you for the opportunity to provide these comments. Please feel free to contact me if you have any questions.

Sincerely,



Sarah Newkirk  
Coastal Project Director