



Humboldt BAYKEEPER
Klamath RIVERKEEPER
Russian RIVERKEEPER
San Francisco BAYKEEPER
Monterey COASTKEEPER
San Luis Obispo COASTKEEPER
Santa Barbara CHANNELKEEPER
Ventura COASTKEEPER
Los Angeles WATERKEEPER
Orange County COASTKEEPER
Inland Empire WATERKEEPER
San Diego COASTKEEPER



July 10, 2015

California Coastal Commission
c/o Sea Level Rise Working Group
45 Fremont Street, Suite 2000
San Francisco, CA 94105

Re: Comments on Draft Sea Level Rise Policy Guidance

To Whom It May Concern:

Thank you for the opportunity to comment on the Draft Sea Level Rise Policy Guidance (Guidance). The Nature Conservancy, Heal the Bay, and California Coastkeeper Alliance collectively have thousands of hours of experience working within communities struggling with coastal land use decisions, and facing the comparative unknown of sea level rise. Investing time and resources into identifying and working towards environmentally-sound adaptation solutions is imperative to successfully advance resilient coastal communities in the face of climate change. This Guidance represents a major advance in the resources that communities have at their disposal to guide their decision-making. We appreciate the complexity of the California Coastal Commission's (Commission) task in issuing this Guidance, and believe that this Draft is strong, and should be adopted with the revisions we suggest below.

The Guidance should outline the process for Commission decision-making on coastal power plants, desalination facilities and other infrastructure, and should create explicit standards for consideration of sea level rise in siting decisions for those facilities.

State regulations phasing out "once-through cooling" (OTC) practices used in many coastal power plants are forcing the repowering, retrofitting, or retiring of many coastal power plants.¹ These OTC regulations provide an opportunity for state and local governments to rethink whether power plants should be sited along the coast, and if so, how they can be retrofitted to increase resilience to sea level rise. Our thorough review of the policy context guiding the permitting process for coastal power plants suggests that the agency with the strongest mandate and

¹ CAL. CODE REGS. tit. 23, § 2922. Prior to the 2010 regulations, 19 electrical power plants (including two nuclear-fueled plants) in California collectively drew billions of gallons of marine or estuarine water every day to cool generators and then discharged the heated water back into the ocean or other body of water. Concerns over the environmental impacts of the increased ambient water temperature and the impingement and entrainment of marine life against the intake screens led California to phase out the practice of OTC. STATE WATER RESOURCES CONTROL BOARD FACT SHEET, *Once-Through Cooling Policy Protects Marine Life and Insures Electric Grid Reliability* 1-3 (2015) [hereinafter SWRCB OTC FACT SHEET] available at http://www.waterboards.ca.gov/publications_forms/publications/factsheets/docs/oncethroughcooling.pdf; see also LITTLE HOOVER COMMISSION, *Rewiring California: Integrating Agendas for Energy Reform*, 1,18, (Dec. 2012), available at http://www.lhc.ca.gov/studies/214/Report214_Final%20Complete.pdf.

incentive to consider sea level rise in its decision-making on power plants is the California Coastal Commission. However, the Guidance as currently written does not contain a process or standards to guide the Commission in evaluating coastal power plant siting. The Guidance should be revised to commit the Commission to a new stronger role in power plant siting, especially vis-à-vis the California Energy Commission, and to a more prominent role in introducing sea level rise vulnerability into the proceedings.

Furthermore, given the renewed interest in deploying desalination at scale to combat the impact of the drought, the Coastal Commission should use this Guidance to explicitly outline how it will handle sea level rise vulnerability as a consideration in desalination facility siting, especially since facilities have been proposed to be co-located with OTC power plants. We strongly oppose the siting of both power plants and desalination facilities in areas where they would adversely impact coastal natural resources or prevent wetland migration or restoration in the face of sea level rise.

As with power plant permitting, some development and planning activities require significant interagency coordination on both policy and practice. For many of these activities, an articulation of a uniform posture on the role of sea level rise vulnerability in siting decisions would be tremendously useful. For example, Caltrans makes frequent decisions regarding coastal infrastructure that should be guided by information on sea level rise vulnerability. This information, and the process for integrating it into decision-making, should be coordinated through the Coastal Commission in a manner that should be described in this Guidance.

In addition, the Guidance should recognize how sea level rise decisions made by the Commission and LCP communities impact the assets and mandates of sister agencies. For example, the Guidance should recognize the state's network of marine protected areas (MPAs), administered by the California Department of Fish and Wildlife, and discuss how coastal planning and development have an increased significance for the health of MPAs in the face of sea level rise.

The Guidance should highlight complimentary state guidance on the importance of green infrastructure and wetland restoration in mitigating flooding and other sea level rise impacts.

This Guidance is a significant improvement over the previous draft in terms of linking its policy statements to those in other state policy documents, including the Safeguarding California Plan (SCP), but it still under-emphasizes the inherent value and importance of natural shoreline areas. The Guidance should strengthen its protection of natural shorelines by incorporating existing state policy prioritizing green infrastructure, protection and restoration of natural shoreline features, and identifying habitat restoration opportunities.

Specifically, the Guidance should include the following:

- The SCP's recommendation to "Achieve Multiple Benefits from Efforts to Reduce Climate Risks and Prioritize Green Infrastructure Solutions." Efforts to reduce climate risk should also achieve other types of benefits, including public health benefits, economic benefits, and other environmental benefits. Furthermore, actions that reduce climate risks across multiple sectors and actions that address multiple climate risks should be prioritized. Natural infrastructure – including the restoration and conservation of natural systems such as forests, grasslands and shrublands, agricultural lands, and wetlands – can provide more resilient natural systems that also offer protection from

climate impacts. Prioritizing these solutions can maximize the benefits of investments to reduce climate risks by providing a broad portfolio of benefits across several sectors. (SCP, page 12)

- The SCP recommends that the state “Continue to Study and Support Investment in Cost-Effective Green Infrastructure to Reduce Flood Risk and Stormwater Runoff and to Maximize Associated Co-Benefits.” As noted above, there can be significant cost savings and co-benefits associated with the use of green infrastructure, such as wetland restoration and urban forestry, to improve water quality and flood protection. Co-benefits may include greenhouse gas reductions that can reduce the pace and scale of climate impacts, habitat for wildlife, and improved air quality. For example, wetlands have the potential to reduce subsidence in the Delta, thus reducing pressure on levees which in turn reduces risk of levee failure and flooding. See DWR’s Twitchell Island Project in the Biodiversity and Habitat section for more information. (SCP, page 181)

The Guidance should highlight the merits of non-structural protective measures, and specifically delineate the techniques available so that local governments and stakeholders can use it as they develop sea level rise plans and policies.² The U.S. National Oceanic and Atmospheric Administration (NOAA) has been restoring natural ecosystem features, or “Living Shorelines,” such as eelgrass beds to stabilize coastal ecosystems for more than two decades on the East Coast and in areas of the Gulf Coast, with a project currently being explored on the San Francisco Bay.³ New York’s recent Sea Level Rise Report to their Legislature also provides some instructive language on the importance of natural adaptive capacity in light of sea level rise: “natural shoreline features ... currently provide large-scale services, such as flood protection, storm buffering, fisheries habitat, recreational facilities and water filtration, at almost no cost. These services would be prohibitively expensive to replicate with human-built systems.”⁴

In addition, the Guidance should encourage local governments to begin identifying which coastal areas and infrastructure will receive protection from sea level rise, such as those that are vital to public safety and services. A clear list of areas and projects vital to public health and safety will help California to limit the loss of our beaches and coastal areas. The Guidance should encourage state agencies to develop and implement policies for managed retreat and/or removal of existing non-essential development in hazard-prone areas, as well as public projects that impede natural sand replenishment along our coastline.

The Guidance should encourage communities to work with the robust science that is publicly available throughout California, and adopt a precautionary approach with respect to areas of uncertainty.

The Draft declares that the NRC report⁵ represents the best available science for sea level rise planning and permitting, and Appendix B describes how to translate the projections from the NRC report into actionable, local hazard conditions. Despite this, many communities will wait until they receive a grant to hire a consultant to do additional modeling to support a sophisticated

² *Id.* at 11.

³ See National Oceanic and Atmospheric Administration (NOAA), Habitat Conservation and Restoration Center, Living Shorelines Webpage, available at <http://www.habitat.noaa.gov/restoration/techniques/livingshorelines.html>.

⁴ New York State Sea Level Rise Task Force: Report to the Legislature (2010), at p. 9.

⁵ National Research Council (NRC). 2012. *Sea Level Rise for the Coasts of California, Oregon and Washington: Past, Present and Future*. Report by the Committee on Sea Level Rise in California, Oregon, and Washington. National Academies Press, Washington, DC.

vulnerability assessment. These consultants are often remote, with little practical experience of the community they serve, and a limited ability to effectively engage with stakeholders. While we understand the inclination to seek the best possible modeling, we ask the Commission to encourage communities to proceed with LCP updates incorporating sea level rise, and utilize existing regional sea level rise models, even in the absence of a grant/modeling contract.

In order to facilitate this, we recommend that the Commission establish a process through which Commission staff can support local planners directly as they incorporate planning for sea level rise in LCPs. Local Commission staff should be robustly trained in the procedures outlined in Appendix B, the adaptation strategies in Chapter 7, and best practices for translating vulnerability assessments into policy, and they should be deployed to assist local planners who need to implement the Guidance on their own. As a practical matter, the Guidance should provide contact information (in the text or as a hyperlink) for the local Coastal Commission staff-people who can provide this support.

In addition, the Guidance should discuss how the NRC report squares with (or not) the IPCC's AR5 and the National Climate Assessment, both of which postdate it. These are mentioned in the text, but the differences are not highlighted.

To the extent that scientific uncertainty persists in the sea level rise projections and maps at California's disposal, the Guidance should explain how to move forward through uncertainty with the use of the precautionary principle, rather than simply citing the existence of uncertainty and leaving local authorities to guess how best to move forward. We strongly support the Commission's recognition of the precautionary approach in Principle 1.4, and encourage the Commission to further integrate the principle throughout the Guidance.

The 1998 Wingspread Statement on the Precautionary Principle states that "when an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically ... the proponent of an activity, rather than the public, should bear the burden of proof..."⁶ Since some level of uncertainty will likely persist with sea level rise projections, the Commission should advise state and local decision-makers to take precautionary measures that place the burden of proof on those who propose action or inaction that is at odds with addressing the threats posed by sea level rise. A precautionary approach with respect to sea level rise is also warranted because storm surges, king tides, and other extreme weather events will continue to cause episodic flooding sooner and to more areas than would be evident from assuming gradual sea level rise.⁷

The Guidance should explain how Scenario Planning within the vulnerability assessment process can translate into on-the-ground policy in the LCP documents.

The Guidance recommends Scenario Planning as a means of confronting uncertainty in the sea level rise projections. We agree that Scenario Planning offers a robust way of evaluating multiple potential physical futures; indeed, The Nature Conservancy's Coastal

⁶ See Science & Environmental Health Network Precautionary Principle Webpage: <http://www.sehn.org/precaution.html>.

⁷ Impacts of Sea-Level Rise on the California Coast at p. 2 ("The issue is not simply one of impacts from a gradual rise in the average water levels; higher averages also imply more frequent and more powerful storms and wave attacks, which will exacerbate erosion and shoreline retreat.").

Resilience Program was built to support Scenario Planning from its inception in 2008 – providing illustrations of multiple climate and hazard scenarios at multiple time horizons. While the utility of this approach is clear for vulnerability assessments, it is less clear for articulations of local policy. Specifically, the Guidance should clarify how LCPs and CDPs can articulate multiple scenario-dependent decision pathways, the triggers for choosing one pathway over another, and the political or administrative context in which these choices are made. In addition, a case study of a scenario-based policy instrument for sea level rise adaptation would be illustrative.

We greatly appreciate Coastal Commission staff for developing this draft sea level rise policy guidance and for the opportunity to provide input on this important document. This Guidance will be a driver for sea level rise and coastal climate change adaptation planning throughout California. As an agency leading the way on climate change preparedness for the state, we encourage the Coastal Commission to ensure that it provides protection and stewardship over California's coastal resources comprehensively, while balancing community needs at the local scale. We applaud your leadership on this important issue, and look forward to continued work with your agency.

Please contact us if you have any questions regarding our comments.

Sincerely,



Sarah Newkirk
Coastal Project Director
The Nature Conservancy - California



Sara Aminzadeh
Executive Director
California Coastkeeper Alliance



Dana Roeber Murray
Senior Coastal Policy Manager
Heal the Bay