

December 10, 2015

California Natural Resources Agency
Delivered electronically to climate@resources.ca.gov

Re: 2015 Draft Safeguarding California Implementation Action Plan

Thank you for the opportunity to comment on the draft Safeguarding California Implementation Action Plan (SCIP). Our comments are focused on the Ocean and Coastal Resources and Ecosystems Sector Plan section of the SCIP. Ocean Conservancy has worked to help protect California's coast and ocean for more than two decades. As the SCIP notes, a healthy ocean and coast are vital to the current and future well-being of California's environment, people, and economy. California's global leadership on climate change is exemplary, and the SCIP is an important step forward in confronting the challenge of climate change. We are submitting comments to offer recommendations for improving and strengthening the ocean and coastal sector chapter of the SCIP.

In our earlier comments on the 2012 Climate Adaptation Strategy, we focused on three main recommendations:

- Develop goals and objectives around core impacts of climate change
- Identify all activities, strategies, and tactics under each core impact
- Emphasize the key role of natural systems in each core climate impact

We also noted that while sea level rise was rightly central to the impacts discussed in the strategy, other climate change impacts on ocean and coastal ecosystems and resources should receive increased attention. These included ocean acidification (OA) in particular, as well as other changes in oceanographic conditions, notably:

- elevated ocean temperatures;
- reduced levels of dissolved oxygen;
- altered timing and intensity of upwelling events; and
- changed patterns of precipitation with concomitant changes in runoff, freshwater flow, and estuarine and coastal circulation.

We are pleased that the draft SCIP has identified some of these impacts, and has highlighted the importance of ocean acidification (including identifying the need for indicators of the effects of ocean acidification on marine organisms). However, climate change impacts beyond SLR are still largely glossed over in the report. We therefore focus our comments on these impacts, and note that we

concur with the recommendations on the coastal and ocean chapter and appendices in the December 9, 2015 comment letter submitted by The Nature Conservancy.

The chapter notes, “California’s ocean and coastal areas are currently subject to a range of climate change-related stressors, including sea-level rise, extreme storm events, and ocean acidification and hypoxia.... In most cases, it will be the combined impacts of multiple stressors that will pose the greatest risks to coastal and ocean health.” We agree wholeheartedly with this statement, and encourage the state to act accordingly as it moves forward in implementation. This includes continued work on ocean acidification and hypoxia (as addressed in the chapter), as well as climate-smart fisheries management. However, the latter merits substantially more than the one sentence it receives in the chapter; we recommend adding a separate section on fisheries to the appendix on next steps for state agencies.

Appendix C, State Coastal Agencies’ Current Actions to Prepare for Climate Change Impacts, is indicative of the need for additional focus on climate change impacts beyond sea level rise. In over four pages of ‘current actions’, there are only two direct references to activities not related to sea level rise: a mention of renewable energy, and one mention of ocean acidification. We recommend that current actions, where possible and relevant, include a broader view of impacts of ocean climate change, including for research, data collection, monitoring, modeling and prediction; communication of impacts of climate change; assistance to local jurisdictions and communities (including understanding how climate change effects on fisheries and other ocean resources may disproportionately affect underrepresented communities); and funding allocation.

Similarly, figure 4 (Office of Environmental Health Hazard Assessment (OEHHA) indicators relevant to coastal and ocean areas) does not include a full range of impacts on physical systems (although some of these, like OA, are referenced in the text). We recommend adding OA and changes to waves and currents to the “impacts on physical systems” column, and clarifying whether the “impacts on biological systems” is a comprehensive list of the indicators the OEHHA uses. We concur with the report’s statement that “it will be necessary to identify metrics that target priority coastal and ocean management issues” (p. 112) and recommend that these include adequate offshore ocean indicators in addition to the coastal indicators that are largely related to SLR.

Inclusion of offshore renewable energy as a relevant issue in the SCIP, including in the appendices, is important, given the greenhouse gas mitigation potential of offshore renewable energy sources. We would recommend adding a reference to the work of the West Coast Regional Planning Body in implementing the National Ocean Policy, which includes a strong focus on coordinated, smart ocean planning for offshore renewable energy, to the actions listed in Appendix D(2).

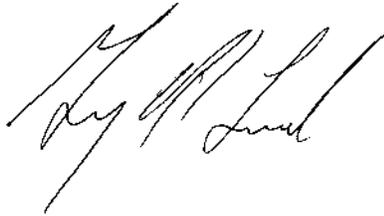
Appendix D, Next Steps, is similarly focused on SLR. As noted above, we recommend adding a section on fisheries, as well as calling out activities on ocean acidification and hypoxia more explicitly. The state’s focus on ocean acidification and hypoxia is laudatory. We appreciate the statewide effort better to understand the current and potential future impacts on both ecosystems and economies through local efforts (like the role of nutrients in acidification in the Southern California Bight), statewide activities, and engagement in regional efforts (like the West Coast OAH Panel and the Pacific Coast Collaborative). This engagement should be reflected more clearly in the appendices.

We are pleased to see that the state recognizes the importance of the statewide network of marine protected areas (MPAs) as both “living labs” and refugia from climate stressors, and strongly support the referenced creation of a long-term monitoring strategy to improve MPA management. Adaptive management of the MPA network will be especially important as ocean conditions change over time.

On a more minor note, we would also note that ocean and coastal chapter of the pdf posted at [http://resources.ca.gov/docs/climate/Safeguarding%20California Implementation%20Action%20Plans %202015%20\(CNRA\).pdf](http://resources.ca.gov/docs/climate/Safeguarding%20California%20Implementation%20Action%20Plans%202015%20(CNRA).pdf) has some formatting issues (changing font size) as well as a repeated paragraph on pp. 102-3.

Thank you for providing us the opportunity to comment. The ocean is critical to both mitigation and adaptation to climate change, and we welcome the opportunity to continue to work with the state to ensure that California’s coast and ocean continue to survive, thrive, and provide for the well-being of residents and visitors to our state.

Sincerely,



George H. Leonard, PhD
Chief Scientist



Anna M. Zivian, PhD
Senior Research Fellow