

Public Comment from Meg Caldwell, Stanford University, received via email on August 23, 2014

**Proposed Resolution of the California Ocean Protection Council  
On Implementation of the Safeguarding California Plan for Reducing Climate Risks**

August 27, 2014

**WHEREAS**, the State of California released the Safeguarding California Plan for Reducing Climate Risks: an Update to the 2009 Climate Adaptation Strategy (“Safeguarding Plan”), on July 31, 2014, to provide policy guidance for state decision makers as part of continuing efforts to prepare for climate risks; and

**WHEREAS**, the Safeguarding Plan sets forth policy on hazard avoidance for new development to minimize the adverse effects of sea-level rise, erosion and storms and calls for new development to be carefully considered in light of principles described in the Safeguarding Plan and any recommendations resulting from the State Coastal Leadership Group on Sea-level Rise, of which the Ocean Protection Council (“OPC”) is a member; and

**WHEREAS**, the Safeguarding Plan identifies several actions for OPC leadership, including working with the State Coastal Leadership Group on Sea-level Rise to lead a process to improve the capacity of entities at multiple scales to more effectively act to reduce risks from sea-level rise, storms and erosion; and

**WHEREAS**, the 2011 OPC Resolution on Sea-level Rise provides recommendations that are still relevant and important for all state agencies and non-state entities implementing projects or programs with state funds or on state lands, to include consideration of sea-level rise in all relevant decisions and to avoid high risk decisions.

**NOW, THEREFORE**, the California Ocean Protection Council hereby **RESOLVES** that OPC staff continue to collaborate with senior management of the agencies that comprise the State Coastal Leadership Group on Sea-level Rise and with others to develop a concise visionary action plan to describe what success looks like for different time periods; to present a framework for bold action to reduce climate risks and protect what Californians value about our coast and ocean; and to identify changes to state and federal policies and funding streams that are necessary to implement the vision. This process will include engaging entities working on many scales to learn what is working, what could be expanded and what else needs to be done. OPC staff will bring this visionary action plan to the Council by the fall of 2015; and

**Comment [mrc1]:** Facilitating and actively managing collaboration and cross-coordination while providing content expertise is an important and excellent function/service that OPC provides for the State’s ocean and coastal agencies. Developing a new common “visionary action plan” may detract from the enormous amount of (very important) work each of the ocean/coastal agencies is now engaged in that has been activated by the current administration, such as updating LCPs, implementing the MLMA, actively managing the network of MPAs (including pursuing co-management with tribal communities and local jurisdictions), and understanding and addressing ocean acidification and hypoxia in coastal waters. Each of the agencies (and their leadership) are over-committed already...OPC’s secret sauce is that it links them together and catalyzes their working together in ways they never have before. Working together with OST, OPC also expertly identifies common knowledge gaps and help address them through funding needed research and/or convening appropriate experts to fill those gaps.

**Comment [mrc2]:** A “common vision” runs the risk of undermining the important individual mandates of each of the state agencies that form the ocean leadership group. If the group isn’t careful, it could end up with the lowest common denominator as a vision, which wouldn’t serve anyone.

**FURTHER RESOLVES that state agencies and non-state entities implementing projects or programs with state funds or on state lands** should reduce risk from climate impacts to the coast and ocean, by implementing the Safeguarding Plan’s recommendation to incorporate climate risk considerations into all relevant decision-making, including related to infrastructure, in such a way that it:

- Encourages iterative approaches that enable active learning and avoid decisions that foreclose future options or create path dependency;
- Protects California’s most vulnerable populations;
- Achieves multiple benefits from efforts to reduce climate risks and prioritizes green infrastructure solutions;
- Integrates climate risk reduction with emissions reductions to the fullest extent possible; and
- Uses Develop metrics and indicators to track progress on efforts to reduce climate risk.

**FURTHER RESOLVES that state agencies and non-state entities implementing projects or programs with state funds or on state lands** should follow the guiding principles from the Safeguarding Plan:

- Use the best readily available science to identify risks and adaptation strategies;
- Understand that an effective strategy for preparing for climate risks should evolve as new information is available;
- Use effective engagement approaches to involve all relevant stakeholders;
- Establish and maintain strong partnerships across all levels of government, tribes, businesses, landowners, and non-governmental organizations;
- Give priority to strategies that simultaneously also achieve benefits for other than climate risk reduction benefits, including additional benefits to public health, the economy, environmental justice, and conservation of natural resources; and
- Ensure that strategies to reduce climate risk are coordinated, to the extent possible, with the state’s efforts to reduce GHG emissions and other local, national and international efforts.

**Comment [mrc3]:** The attached (very short) editorial that appeared in *Global Environmental Change* four years ago presents a clear and compelling set of criteria that may be used by public officials (indeed anyone) to ascertain whether a proposed project falls into the category of "maladaptation." It might be handy to reference this article when talking about the resolution, since the direction of the resolution is very much in keeping with the article’s recommendations.

The criteria can be phrased as the following questions:

1. Will the project result in a net increase in emissions of greenhouse gases?
2. Will the project (and/or its impacts) disproportionately burden the most vulnerable?
3. Will the project reduce incentives to adapt?
4. Will the project create "path dependency," i.e., commit capital and institutions to trajectories that are difficult to change in the future?
5. Will the project result in high economic, social, or environmental costs that are high relative to alternatives?

These questions could be re-phrased as principles. Ensure that any project sponsored or undertaken by the State:

1. Results in a net decrease in greenhouse gas emissions.
2. Does not disproportionately burden the most vulnerable.
3. Creates incentives to adapt.
4. Does not create "path dependency," i.e., commit capital and state agencies (including local jurisdictions) to trajectories that are difficult to change in the future.
5. Does not result in high economic, social, or environmental costs that are high relative to alternatives.

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**Comment [mrc4]:** "readily" underscores the importance of not waiting for perfect information



August 25, 2014

John Laird, Secretary for Natural Resources Chair  
California Ocean Protection Council  
California Natural Resources Agency  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

Via email: [Catherine.Kuhlman@resources.ca.gov](mailto:Catherine.Kuhlman@resources.ca.gov)

RE: Support for Resolution of the California Ocean Protection Council on Implementation of the Safeguarding California Plan for Reducing Climate Risks

Dear Chairman Laird and Honorable Ocean Protection Council Members:

On behalf of Surfrider Foundation's 20 local Chapters throughout California and our 250,000 supporters, activists and members worldwide, we submit the following comments for the Proposed Resolution of the California Ocean Protection Council on Implementation of the Safeguarding California Plan for Reducing Climate Risks (Resolution). The Surfrider Foundation (Surfrider) is a non-profit grassroots organization dedicated to the protection and enjoyment of our world's oceans, waves and beaches. Surfrider now maintains over 90 chapters worldwide and is fueled by a powerful network of activists.

As climate change and Sea Level Rise (SLR) bear down on the future of our coastlines, it is imperative that California stays ahead of the curve by proactively planning for changes at the local level. Surfrider applauds the Ocean Protection Council (OPC) for providing leadership during this pivotal time of SLR adaptation planning. We support the proposed Resolution and would like to offer the following comments to various aspects of the Resolution.

"WHEREAS, to provide policy guidance for state decision makers as part of continuing efforts to prepare for climate risks."

Providing policy guidance to decision makers and collaborating with the State Coastal Leadership Group on Sea-level Rise is a critical step to building a bold action plan to reduce climate risks and protect our coast, ocean, economy and public safety. Surfrider supports OPC working to streamline ocean governance in relation to sea level rise. **We believe it is necessary to identify areas of fragmented governance in order to improve interagency cooperation throughout the State to truly tackle climate change and SLR.**

Surfrider is confident that with continued focus the OPC can reduce fragmented governance within the State and improve coordination between local, state and federal agencies to properly address SLR.

“WHEREAS the Safeguarding Plan sets forth policy on hazard avoidance for new development to minimize the adverse effects of sea-level rise, erosion and storms and calls for new development to be carefully planned...”

Surfrider strongly supports this portion of the Resolution and we believe this logic can also be applied to existing development. Unfortunately, the status quo of recent years has been to frequently utilize structural solutions such as sea walls and armoring. However, decision makers are increasingly recognizing the limitations and impacts of armored solutions. Local communities must accept the reality that armoring is costly to build/maintain and can increase flooding and erosion of neighboring properties; and seawalls often increase risks from catastrophic failure because it facilitates development in vulnerable areas.

The below recommendations elaborate on some of the most important principles contained within the Resolution:

1. **Establishment of Baselines, Identify thresholds, and Monitor for changes:** We encourage the OPC to work with local governments to *understand* where thresholds have been exceeded in the past, and where they may be exceeded in the future. Surfrider believes local planners must establish current baseline conditions, model a range of possible climate change impacts and system responses, monitor actions to detect changes in baseline conditions and determine efficacy of adaptive measures.
2. **Evaluate Setbacks and Buffers:** We urge the OPC to work with local governments to better understand how setbacks are a critical component to SLR planning. Surfrider believes local government should leave open space that support natural and beneficial functions (such as wetlands that prevent runoff and flooding). Governments should increase mandatory setbacks from the coast, establish setbacks based upon projected shoreline position using calculations of increased flood and/or erosion rates, or create a tiered setback system permitting smaller structures with less of a setback and requiring greater setbacks for larger development. Governments could require that development adjacent to the shore leave buffers to provide natural protection to development while allowing for upland migration of beaches and wetlands.
3. **Rebuilding Restrictions:** Surfrider supports local governments limiting a property owner’s ability to rebuild structures destroyed by natural hazards, such as flooding. Governments can limit when and how structures are rebuilt by prohibiting reconstruction, or conditioning redevelopment on a landowner’s agreement not to armor in the future.
4. **Living and soft structures:** Instead of relying on hard structures, we encourage the OPC to work with local governments to promote “living shorelines”. Surfrider believes governments could create permitting programs to require the use of soft-structure techniques where feasible in order to lessen environmental impacts of shoreline armoring. Living shorelines, restoration projects (i.e. kelp, wetlands, etc) vegetative plantings/ organic materials (e.g., biologs, matting, oysters beds), are all valid ways to keep sediment in place and reduce wave energy.

### **Surfrider Recommendations for Seawall Policy in Light of SLR**

- If a seawall is on public land and blocks sand and recreation, the State should

require some type of lease **and** mitigation for use of the public trust.

- Incorporate other means to combat erosion instead of blanket seawalls, based on some of the examples listed above about living shorelines and soft structures.
- Make sure there are armoring removal provisions and/or an identified financial mechanism (i.e. seawall removal bond) to finance the armoring removal upon expiration of the armoring permit.
- Work to establish some kind of “impact threshold” for impacts to access, recreation, and habitat which, when the thresholds are exceeded, it triggers expiration of seawall.

Finally, restoration of coastal watershed ecosystems can help promote the resumption of natural sediment transport to the coast. In addition, we urge the OPC promote policies that reduce further impacts to sediment supply. For example, the removal of dams in coastal watersheds that have starved our beaches of sand to the point where the reservoir no longer serves an important part of our water supply portfolio, will dramatically improve natural beach replenishment. Further, “managed retreat” will allow a more natural cycle of beach erosion and replenishment.

The last portion of the Resolution that we support is: “Develops metrics and indicators to track progress on efforts to reduce climate risk; Involve all relevant stakeholders; Establish and maintain strong partnerships across all levels of government, tribes, businesses, landowners, and non-governmental organizations...”

Surfrider suggests the OPC directly work with local communities and planners to identify practical areas of implementation. Perhaps the OPC could host symposiums with local communities and planners. Attendees of the symposium should include local planners, coastal engineers, biologists, and other experts to clearly identify practical ways to implement policies recommendations.

**Surfrider also suggests conducting another specific workshop that brings together all agencies who are will be responsible for implementing statewide SLR policies in order to flesh out agency roles and responsibilities.**

Outside of our policy recommendations, Surfrider strongly urges the OPC to seize the opportunity to exercise leadership that will truly help coordinate the actions of multiple agencies, and accomplish critical reforms of fragmented governance that will improve overall climate change adaptation planning.

We want to assure the OPC that we are committed to assisting you in achieving the goals set out in the Resolution, and look forward to cooperating on actions that will collectively result in progressive SLR and climate change planning.

Sincerely,



Stefanie Sekich-Quinn  
Surfrider Foundation  
California Policy Manager



1444 9th Street  
Santa Monica CA 90401

ph 310 451 1550  
fax 310 496 1902

[info@healthebay.org](mailto:info@healthebay.org)  
[www.healthebay.org](http://www.healthebay.org)

August 26, 2014

The Honorable John Laird, Chair and Councilmembers  
Chair, California Ocean Protection Council  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

Via email: [COPCpublic@resources.ca.gov](mailto:COPCpublic@resources.ca.gov) and [adoberly@resources.ca.gov](mailto:adoberly@resources.ca.gov)

**Re: SUPPORT (WITH AMENDMENTS) Resolution on Safeguarding California Plan Implementation**

Dear Secretary Laird and Ocean Protection Council Members:

On behalf of Heal the Bay, a non-profit environmental organization with over 13,000 members dedicated to making Santa Monica Bay and Southern California coastal waters and watersheds safe, healthy, and clean, I am writing to express strong support for the proposed resolution on the Implementation of the Safeguarding California Plan for Reducing Climate Risks (proposed resolution). The Ocean Protection Council (OPC) has been a leader in providing guidance and support for climate change adaptation efforts along the California coast, and we hope that it continues this leadership by strengthening the proposed resolution to incorporate language that prioritizes efforts to enhance natural ecosystem resiliency

The U.S. Geological Survey's Coastal Vulnerability Index rates Humboldt, San Francisco, and Monterey Bays, as well as most of the Southern California coast as "highly vulnerable" to coastal change due to sea level rise and climate change.<sup>1</sup> Approximately 85% of California's residents live or work along bay or coastal areas and are facing sea level rise without the means to adjust to expected impacts.<sup>2</sup> As higher sea levels, high tides, storm surges, and inland flooding coincide, projected inundation will impact sensitive habitats, water supply canals, wastewater treatment plants, power plants, and other critical infrastructure throughout California.<sup>3</sup> Increasing rates of coastal erosion, beach loss, and saltwater intrusion into groundwater are already occurring, and are projected to worsen over time.<sup>4</sup>

The 2009 Climate Adaptation Strategy states that California "should pursue activities that can increase natural resiliency, such as restoring tidal wetlands, living shoreline, and related habitats; managing sediment for marsh accretion and natural flood protection; and maintaining upland buffer areas around tidal wetlands."<sup>5</sup> The OPC's role in implementing this plan, along with the ocean and coastal aspects of the Safeguarding California Plan is critical. Sound climate change adaptation policies are important to ensure that our valuable coastal natural resources are afforded the best protection possible against climate change impacts, such as sea level rise and increased storm intensity. Beach, dune, and wetland habitats create a natural buffer zone to protect coastal communities, and associated infrastructure, from surging seas.

We commend OPC for incorporating a strong list of recommendations and guiding principles in the proposed resolution to provide direction for decision-makers to assess and reduce their climate risk. We further encourage the OPC to incorporate an additional clause to the proposed resolution to reflect the importance of protecting, restoring,

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<sup>1</sup> E. Hanak and G. Moreno, California Coastal Management with a Changing Climate, Public Policy Institute of California at p. 4 (November 2008)

<sup>2</sup> "Considering sea level rise as a coastal hazard," Proceedings of Coastal Zone '07 Portland, OR, (July 22-26, 2007); California Climate Adaptation Strategy at p. 3.

<sup>3</sup> California Climate Change Center, "The Impacts of Sea-Level Rise on the California Coast," (May 2009), available at [www.pacinst.org/reports/sea\\_level\\_rise/report.pdf](http://www.pacinst.org/reports/sea_level_rise/report.pdf); CA Climate Adaptation Strategy, p. 65, 68.

<sup>4</sup> California Climate Adaptation Strategy, p. 69.

<sup>5</sup> California Natural Resources Agency, 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2006, 1, 68 (2009), available at [http://resources.ca.gov/climate\\_adaptation/docs/Statewide\\_Adaptation\\_Strategy.pdf](http://resources.ca.gov/climate_adaptation/docs/Statewide_Adaptation_Strategy.pdf).



1444 9th Street  
Santa Monica CA 90401

ph 310 451 1550  
fax 310 496 1902

[info@healthebay.org](mailto:info@healthebay.org)  
[www.healthebay.org](http://www.healthebay.org)

and enhancing natural habitats, consistent with the OPC 2011 Sea Level Rise Resolution. Heal the Bay has consulted with California Coastkeeper Alliance to develop the following suggested language as a basis for discussion:

***FURTHER RESOLVES that OPC collaborate with agencies that comprise the State Coastal Leadership Group on Sea-level Rise and with others to encourage initiatives to protect, restore, and enhance coastal and estuarine habitats that naturally buffer climate change impacts, and to prioritize ecosystem-based approaches over coastal armoring wherever feasible in order to build the natural resiliency of California's shoreline.***

Coastal armoring should be the last resort to shoreline protection in California. Beach armoring, including the use of hardened structures such as seawalls and rock revetments increases wave reflection and associated erosion, resulting in the narrowing of beaches, reduced intertidal beach widths and habitat.<sup>6</sup> Instead, softer strategies that enhance an ecosystem's natural adaptive capacity are the preferred option, such as managed retreat and beach, dune, and wetland restoration. Coastal marshes and wetlands provide protections from sea level rise and storm surges,<sup>7</sup> while restored oyster reefs have been found to prevent coastal erosion<sup>8</sup> and sequester carbon.<sup>9</sup>

We appreciate the OPC's leadership in preparing California's valuable coastline and associated ecosystems for climate change by providing scientific guidance and fostering collaboration across agencies. We look forward to continued partnership with you in advancing climate change adaptation efforts throughout California. Please feel free to contact me if you have any questions at [ssikich@healthebay.org](mailto:ssikich@healthebay.org) or 310.451.1500 x163.

Sincerely,

Sarah Abramson Sikich  
Science & Policy Director, Coastal Resources

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<sup>6</sup> Dugan, J.E., and Hubbard, D.M., 2010, Ecological effects of coastal armoring: A summary of recent results for exposed sandy beaches in southern California, in Shipman, H. et al., eds., 2010, Puget Sound Shorelines and the Impacts of Armoring—Proceedings of a State of the Science Workshop, May 2009: U.S. Geological Survey Scientific Investigations Report 2010-5254, p. 187-194.

<sup>7</sup> Costanza, R., Pérez-Maqueo, O., Martinez, M. L., Sutton, P., Anderson, S. J., & Mulder, K. (2008). The value of coastal wetlands for hurricane protection. *AMBIO: A Journal of the Human Environment*, 37(4), 241-248.

<sup>8</sup> Grabowski, J. H., & Peterson, C. H. (2007). Restoring oyster reefs to recover ecosystem services. *Theoretical ecology series*, 4, 281-298.

<sup>9</sup> Brevik, E. C., & Homburg, J. A. (2004). A 5000 year record of carbon sequestration from a coastal lagoon and wetland complex, Southern California, USA. *Catena*, 57(3), 221-232.