

Healthy Ocean California

sharing your perspective

Workshop Proceedings

Workshop Summary

From managing coastal, marine, and water resources to planning for a changing climate, ocean health is the thread that links across state agencies, policies, and mandates. Led by the Ocean Protection Council (OPC), the state is embracing the opportunity to build a shared vision for California's ocean health. At this workshop, the OPC and California Ocean Science Trust brought together a panel of scientists, decision makers, tribal representatives, and constituents to lead a public discussion about what 'ocean health' means across our diverse coastal communities. Underlying a spirited discussion was a common theme - ocean health can be a unifying concept. Across the broad range of perspectives and ideas expressed by participants, a vision of ocean health offers a shared goal, opportunities to collaborate, and a foundation to celebrate collective progress.

Reflections on Ocean Health as a Unifying Concept

- In California, we have always been committed to promoting ocean health. It is reflected in the laws our coastal communities have supported – from the Clean Water Act, the Porter-Cologne Act, and the Coastal Act, to the more recent Marine Life Management Act, Marine Life Protection Act, and California Ocean Protection Act, among others.
- Ocean health, in the face of a changing climate, is a state priority. Developing a shared vision and tracking progress advances key initiatives prioritized by our leadership; from the Governor's office to the agencies mandated to protect, restore, manage and sustain our coasts and oceans.
- A healthy ocean is central to the history, culture, perspective and vision of California tribes. A new dialogue presents opportunities to learn from each other, expand our horizons, and renew our collective relationship with the natural environment. Doing this together will be critical not only to envisioning a healthy ocean, but also to achieving it.
- Lessons from these emerging conversations are an opportunity to build bridges—between communities, tribes, science and policy, traditionally disparate stakeholders, and agencies—to foster constructive collaboration and sharing of knowledge.

August 27, 2014
9:30 to 11:30 AM
Natural Resources
Agency Auditorium
1416 Ninth Street
Sacramento, CA 95814

“A healthy ocean is something we can all agree that we want. We value it; we believe in achieving it both for current and future generations.”

Tom Weseloh
Consultant, Joint
Committee on Fisheries and
Aquaculture, Assemblyman
Wesley Chesbro's Office



“There is no more room for single-species or single resource management. We will simply have to work across sectors in a way we haven't before, but ocean health is a concept by which we can build these bridges — between communities, science and policy, traditionally disparate stakeholders, and agencies.”

Louise Bedsworth
Deputy Director, Governor's Office of Planning and Research

Perspectives on What Ocean Health Means

- Ocean health should address the intrinsic value of the ocean alongside the benefits it provides to humans. In other words, include humans as part of the overarching system.
- A definition of ocean health could take a number of forms, but it is likely to be more qualitative than quantitative. Whether or not a final definition is reached, the conversation itself, and the questions that it raises about the benefits and limitations of existing laws and processes, is valuable.

Next Steps

- Further examination of a shared vision of ocean health will be led by the OPC, working with decision makers across jurisdictions, and interested stakeholders. Initially:
 - The OPC heard interest in expanding the range of stakeholder perspectives they are hearing from and is currently exploring the possibility of holding another public workshop similar in style and format in southern California.
 - The OPC will begin scoping a kick-off meeting or workshop with state decision makers to begin building a common definition of ocean health.

“Ocean health is embodied in the indigenous worldviews of native Californians. A solid understanding of this foundational perspective is the first step to providing possible solutions for a healthy ocean.”

Briannon Fraley
Self Governance Director,
Smith River Rancheria

Introduction & Welcome

John Laird, Secretary, California Natural Resources Agency, Chair, California Ocean Protection Council

California is passionately committed to a healthy ocean. In leading the Ocean Protection Council (OPC), I have been moving us toward a sharper focus on priorities: stewarding the marine protected areas (MPAs) in a way that delivers the most value to the broadest constituency, ocean acidification, marine debris, and climate change adaptation. They are priorities because they are key activities in moving us toward our aspiration of a healthy ocean. But what exactly do we mean by ‘a healthy ocean?’ This is not a new conversation. We have been having it for decades, but now we have entered into a new era: building new pathways for academic science to inform decision making, and breaking down barriers by establishing new partnerships among agencies, California tribes, stakeholders, and the scientific community. We have been particularly proactive in reaching out to tribal governments around the statewide network of MPAs. Collaboration is essential to successful adaptive management and to gain the attention and support of the federal government.

California continues to lead by using science and sound policy to secure our ocean resources for future generations. Among key efforts, was the [California Ocean Protection Act \(COPA\)](#), which created the OPC. COPA speaks directly to the intent to provide for the health of our oceans. Today, I want to see the conversation advance, knowing it will be broad ranging and iterative and informed by the diverse perspectives of our partners (e.g., fishermen, tribes, scientists, and others). We are laying the groundwork for how we will talk about the ocean for the next ten years. This effort aligns with the strategic goals of our ocean and coastal management agencies and with the Governor’s work. Our ocean resources are vibrant, our ocean constituencies are engaged; and the OPC is the perfect venue to advance this important dialogue.

Catherine Kuhlman, Deputy Secretary for Ocean and Coastal Policy, California Natural Resources Agency, and Executive Director, California Ocean Protection Council

As Californians, we are deeply connected to our coast and ocean, which is reflected in many of the statutes that guide the state agencies that do marine and coastal work. The California Ocean Protection Act (COPA), a pivotal law, directs us to work together and engage in dialogue about ocean health as a guiding principle.

When I was growing up in California, I remember hearing about how incredibly stressed our kelp beds were. It generated a lot of attention, and California took action. Things got better. We have better coastal access. Our beaches are

cleaner. We have recovered species. Back then, when we realized degradation of our ocean and coastal systems was unacceptable, when we supported landmark laws like the Clean Water Act, the Porter-Cologne Act, and the Coastal Act—that is when the conversation around California’s ocean health really started. Now we are challenged with moving this dialogue beyond just conservation, and halted degradation to manage for sustainability. We must be stewards for resilience.

Climate change is altering things drastically, so we must act quickly. First, we must consider issues at a larger scale. Second, we must get emerging scientific knowledge to our decision makers more efficiently. And third, we must build innovative partnerships that cross the traditional boundaries. The [West Coast Ocean Acidification and Hypoxia Science Panel](#) is an example of scaling up and bringing the best science to the table. As part of this effort, we’ve even been able to leverage conversations with the White House. What that means is we now can work with the White House Council on Environmental Quality (CEQ), National Oceanographic and Atmospheric Administration (NOAA), and U.S. Environmental Protection Agency (USEPA). Thus, we can have a dialogue about policy at the highest levels.

So let’s advance this dialogue—through what I am now calling ‘Healthy Ocean California’. And let’s kick off this conversation by first learning from each other. It’s not about making decisions yet; it’s about hearing each other’s perspectives, and finding meaningful ways to onboard information.

Skyli McAfee, Science Advisor, California Ocean Protection Council, Executive Director, California Ocean Science Trust

This is a conversation that began decades ago because California has always valued ocean health. It doesn’t matter what stakeholder group, ocean organization, or coastal community we’re talking about; we all care about it. We just have different concepts of what it means. My role is to figure out where the science fits in, often in the context of multiple agency mandates.

This new conversation—now called Healthy Ocean California—was initially launched at the [OPC-SAT workshop on June 11, 2014](#). At this event, Ocean Science Trust brought together scientists and decision makers to explore ocean health as a scientific concept and management goal. It was here where the notion of engaging in a process to build a shared vision of ocean health was first introduced.

Leading up to the OPC-SAT workshop, Ocean Science Trust conducted a series of interviews with departments and commissions within our state ocean and coastal agencies to better understand how they think about and use the concept of ocean health in their work. These interviews directly informed the agenda of the workshop, and we learned that there is a guiding principle worth exploring. There is common ground; we’re just talking about it a little differently. And all of our interviewees went on to recognize the potential value in coming together around some kind of shared vision, especially if it offered a way to collaborate more effectively with the scientific community.

Liz Whiteman, Program Director, California Ocean Science Trust

The time is now to expand the dialogue around ocean health, with forward-looking legislation already on the books (e.g., the Marine Life Protection Act, the Marine Life Management Act, and the California Ocean Protection Act) and the statewide network of MPAs in place. We must leverage those opportunities to understand as a whole what we’re managing toward and how best to track progress toward those goals.

The MPAs are the backbone of this dialogue. More than just understanding their performance, we must put the MPAs to work as tools in California’s toolbox to adaptively manage for climate change. They offer us the ability to understand the health of ecosystems both inside and outside MPA boundaries, and the health of our coastal communities and industry.

But there are challenges. Our job is how to make monitoring smarter, to find ways to do it better. We must invest our resources strategically, which lies in building new, innovative partnerships—across agencies, stakeholders, the scientific community and more. A shared vision or goal for California’s oceans is the foundation on which we can build new collaborations and new partnerships. It focuses us on the common ground we already have instead of the differences.

Through the statewide network of MPAs, this work is underway. The opportunity now is to harness our collective momentum towards a shared vision that leads to a new level of collaboration.

Panel Presentations & Discussion

Across California ocean and coastal agencies and beyond – embedded in legal mandates, management plans, and policy guidance – there is a common theme: shared goals for a healthy, resilient California ocean. Based on their experience working with California’s ocean community, panelists shared their perspectives on ocean health.

Linda Sheehan, Executive Director, Earth Law Center

We have made important strides. There used to be sewage on our beaches. Our kelp forests were degrading. Our progressive coastal management and policy has tackled many of these problems. The challenges we face today are different; rather than singular disasters, it is more chronic degradation. In response to those events that caught our attention, ocean ‘health’ now runs throughout all of our state ocean laws. But, ‘health’ is not defined, even though it’s the most important metric of success. In current governance schemes, it is often defined indirectly by clarifying what is ‘unhealthy.’ But we need to do more than that. Not only do we need to define what it is, and what we want, we also need to start changing our relationship with the ocean. The Ocean Protection Council provides the structure for that conversation. As an ocean and coastal institutional ecosystem, the Ocean Protection Council has the ability to bring the agencies together to create management systems that reflect the interconnectedness of natural systems.

Ocean health is hard to define, or we would have done it already. So we can start with what it’s not. It is not just about stopping or slowing degradation; we need to improve the state of the ocean overall, and steadily. Ocean health is also not just about us, or the ‘resources’ the ocean provides to humans. The ocean’s own intrinsic right to health must be a consideration. Ocean health is not solely a report card either, though the tools to develop a system-based report card can help us track health. Ocean health is really a policy decision, informed by science. The words we use shape those choices—an ecosystem that is ‘functioning’ may not be as healthy as one that is ‘thriving.’ We need to start having this policy discussion together, so that we can better articulate what ocean health means in our laws as well as in the implementation of those laws. Science will be a critical part of this discussion.

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Senior Attorney, Yurok Tribe

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Co-management with tribes is a necessary component to defining a healthy ocean for California. But what is co-management? The first step is recognizing that under tribal care and decision making, we have a system with a 10,000-year track record of success. This is a tremendous resource, and has been built upon by traditional practices as well as analytical science. Of course defining success in the long-term is difficult, but ocean health could be a powerful concept for Tribes and California to embrace. It is a holistic concept that fits the Yurok desire to see things from many angles—protection, diversity, and sustainable resource extraction. A healthy ocean has to include ocean habitat—clean water, diverse marine species, including salmon and other fish, and plants. Every part

of it is important for a living, vibrant ocean. The management steps that will make up the whole are critical: water quality standards, sustainable fisheries management. For these, we must have the right benchmarks in place to track our progress, and ultimately have a bigger, more positive impact on marine ecosystems. So far, we have done much, completed a marine plan, and have an active traditional ecological knowledge program combined with an analytical science program. Let us bring these sources of knowledge to the table in service of ocean health.

Briannon Fraley, Self Governance Director, Smith River Rancheria

As an Indian people, we have a responsibility to educate others on how to properly value and take care of the natural environment. Ocean health is embodied in the indigenous worldviews of native Californians. A solid understanding of this foundational perspective is the first step to providing possible solutions for a healthy ocean. The fear of sharing

our worldviews is present; however, we recognize that we must work together to provide a healthy environment for future generations while ensuring tribal sovereignty and tribal rights are respected.

By fomenting relationships, mutual respect, and sharing of each other's unique knowledge and expertise, we have begun to create new models on how to govern resources. A collective shift has occurred; the realization that upholding of tribal rights is an opportunity to protect the resources we all share. Jurisdictions aside, we all are responsible for stewarding our environment. I challenge us to reeducate ourselves—to contemplate and renew our relationship with the natural world, and what it means to truly respect our environment. Doing this together will allow us all to expand our horizons—and that is what is critical to envisioning and achieving a healthy ocean.

Brendan Kelly, Director of Conservation Research and Chief Scientist, Monterey Bay Aquarium

It is very encouraging that this conversation is taking place. We are working with complex ecosystems, within a complex policy and management system. It might be impossible to develop a precise definition (for ocean health) that we all agree upon, but the discussion itself is highly informative. Indeed, the sciences are full of examples of important concepts (e.g., “species” in biology) that do not lend themselves to precise definitions, but debates about the definitions elucidate the complexities of the systems under consideration.

Ocean health, like human health, has to be considered holistically. A physician needs more than numerical values from the laboratory to assess your health; she/he also needs to see and interact with you. I would argue that we similarly need to supplement measurement of key ocean parameters with a whole-of-patient view, and developing that view is the challenge ahead. I suggest that we cannot talk about ocean health without addressing the importance of ecosystem services people use. Ocean health is a concept that allows us to do that—explore human uses alongside our shared conservation goals. I encourage us to discuss ocean health in terms of the living environment—the scientific community can describe the range of ocean conditions important to sustaining marine and

terrestrial life, and we need to consider humans as part of the system. From both conservation and use perspectives, we can talk about what is and is not compatible. Ocean health should serve as the concept through which we build a holistic view of complex, interactive systems.

Tom Weseloh, Consultant, Joint Committee on Fisheries and Aquaculture, Assemblyman Wesley Chesbro's Office

A healthy ocean is something we can all agree that we want. We value it; we believe in achieving it both for current and future generations. But what is it? There is a clear need to develop a common definition. We must help decision makers better navigate the inherent conflict between the intrinsic value of the ocean and the services it provides. How far do we tip the balance? We all love our beautiful beaches, the experience of our marine ecosystems, but then that's easy. Nobody wants to put themselves or others out of business, so the core challenge in envisioning ocean health is finding how our common goals can intersect. That is the way to move forward. Also, looking ahead, what will ocean health mean to us in the future? For example, if we shut down our fisheries, we're limiting the prospects for our society, and placing additional pressure on working inland, potentially creating other problems.

On the North Coast, fishing is core to our society and lifestyle. We not only fish, we are harbormasters, retailers, and purveyors of fish and farmers markets. We also want people to be able to experience both the coastline and the unique

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Committee on Fisheries and
Aquaculture, Assemblyman
Wesley Chesbro's Office

habitats under the waves. Through use of strong policy guidance and science, we must use the dialogue around ocean health to strive for common ground, find greater consensus. Then by bringing people together, we can make choices around how best to measure progress and adaptively manage.

Louise Bedsworth, Deputy Director, Governor’s Office of Planning and Research

The Governor’s Environmental Goals and Policy Report (EGPR) is the state’s vehicle to create a vision and roadmap for the state’s future. In particular, the EGPR considers how to accommodate continued population growth, while preserving and enhancing the state’s natural resources, environment, and economy. The document lays out a series of goals and links them to state-level metrics and indicators to help us track our progress and develop more adaptive management and policy. For ocean and coastal resources, ocean health is the framework within which to have this conversation, and looking forward—to help direct management.

Climate change will alter how we do business. Decisions that we make now and in the future will be inherently cross cutting. There is no more room for single-species or single resource management. We will simply have to work across sectors in a way we haven’t before, and that will be a challenge to our governance institutions. But ocean health is a concept by which we can build these bridges—between communities, science and policy, traditionally disparate stakeholders, and agencies. The first step is building a common vision—we have to know what we want to accomplish across the various management realms (e.g., ecosystem structure and function, water quality, and sustainable resource extraction, etc.). It can help us establish a baseline to understand the impacts of management decisions we make about the ocean, and serve as a model for other ecosystems from forests, to rivers, and more.

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Office of Planning and
Research

Part 2: Group Participation & Discussion

S. Aminzadeh, California Coastkeeper Alliance

- Addressing ocean health in light of climate change is critical. Both are interconnected, thus we cannot have this conversation in parallel. Through the Ocean Protection Council, which has the dual mandates of coordinating across agencies and more science-informed policy, we have a forum where the agencies can have these conversations together, and with the best available science at the table.

Z. Grader, Pacific Coast Federation of Fishermen’s Associations

- Fishermen don’t care about process, they don’t want to come to meetings or have endless dialogue. They want to see things get done. California has policies and laws in place already that provide the right kind of kind of guidance. What is often missing is implementation and enforcement. And much of this ties back to a lack of resources and funding. To get things done, we need to support enforcement, research and monitoring in the long-term (especially across sectors including water quality). Rather than just focus on a definition of ocean health, let’s put the pieces in place to track progress and adaptively manage toward a healthy ocean.

M. Ross, Department of Water Resources

- I work in the water recycling and desalination section. Society’s viewpoint tends to be very freshwater centric. In thinking about developing a definition for a healthy ocean, we must challenge ourselves in that conversation to illustrate the interconnectedness of the freshwater and marine ecosystems.

L. Sheehan, Earth Law Center

- The theme of interconnectedness illustrates how this holistic discussion about ocean health can help advance practical implementation of existing laws. For example, NOAA Fisheries did a biological opinion of the impacts of over-diversions of water in the Central Valley and found that the diversions were threatening the existence of

endangered killer whales, who depend on fish that need that water. Thinking about ocean health forces us to think holistically before marine species become endangered. Thinking about interconnections also allows us to see why some laws work and some don't, and apply lessons learned. For example, the Clean Water Act has had successes in part because of its citizen suit provision—citizen enforcement could be something that we consider applying to other environmental laws as well.

T. Weseloh, Joint Committee on Fisheries and Aquaculture, Assemblyman Wesley Chesbro's Office

- With fisheries there's a burden of proof to find the impact of the fishery. The burden can't always be there, and that is why we need to continue getting information from baseline monitoring. Monitoring gives us the ability to know where we are, and help us envision where we're going. Perhaps we start with developing ideas or criteria for what we want. For example, a healthy ocean is one teeming with salmon. This is useful to me because you can make this more tangible, and people can more easily visualize the key components to a healthy ocean. That will start us down the right path because we can then discuss those as key components of the whole, rather than as singular issues. I also choose this example because it bridges the land and the sea.

B. Kelly, Monterey Bay Aquarium

- We can't monitor everything, and yet priorities are hard to identify while we're in the throes of unprecedented global change. We have to think really carefully about this, and try to identify the things we will regret not monitoring down the road. Prioritize based on what we need to know now, but also anticipate what the key indicators will be as things change.

S. Sikich, Heal the Bay

- I agree that we shouldn't just focus on the exercise of defining ocean health. Often, it is thought of as a luxury—we want to enjoy our beaches, and go on vacation. But it's so much more. It's necessary. It will be important to bring home its importance if we want to pass laws that do important work. I think the economic aspects must be included as a way to demonstrate how we depend on it.

K. Garrison, Natural Resources Defense Council

- Whether it is a group of people or group of agencies, coordination is hard. There are different missions and mandates, and even cultures at play. There are different constituents that agencies serve, and different kinds of tradeoffs. It is complex. I suggest that alongside a shared definition of ocean health, there will also have to be guidelines that help agencies act in accordance with the definition.

P. Hobi, MPA Collaborative Implementation Project

- Using local communities to implement our laws is absolutely necessary to helping make any shared definition real. People on the ground see the symptoms, and can convey that to scientists and policymakers. We must have networks and pathways in place that help harness what people are seeing, and use that information.

G. Leonard, Ocean Conservancy

- There's a real value in developing a shared definition of ocean health, as well as sharing perspectives on it as a concept. We should not get hung up on the math, but rather use this as an opportunity to find new ways to integrate our thinking across a lot of ocean issues and sectors. Ocean health is inherently a moving target. Climate change is an unknown much of which is beyond our control—so the best path forward is to use ocean health as a framework within which our management structures can better collaborate and through their decisions embrace change.

- Adjourn -

Supplementary Materials

Visit <http://www.opc.ca.gov/2014/10/healthy-ocean-california/> for the complete workshop proceedings and other supplementary materials, including:

- Ocean Protection Council Science Advisory Team [Workshop Proceedings, June 11 2014](#)
- Earth Law Center, [Ocean Health in Environmental Law and Policy](#)

Workshop Participants

Speakers: L. Bedsworth, J. Corbett, B. Fraley, B. Kelly, C. Kuhlman, J. Laird, S. McAfee, L. Sheehan, T. Weseloh, E. Whiteman

Ocean Protection Council Staff: A. Doherty, K. Kayfetz, M. Umezawa, L. Parissenti, D. Santillano, A. Vierra

Ocean Science Trust Staff: B. Duncan, L. Kellner, Y. Kim, E. Knight, E. Meyer, M. O'Donnell, E. Robinson, M. Villareal

Other Workshop Participants: S. Aminzadeh (CA Coastkeeper Alliance), M. Armsby (Resource Legacy Fund), S. Ashcraft (Fish and Game Commission), M. Brown (Ocean Protection Council/Brown & Wilmanns Environmental LLC), M. Caldwell (Center for Ocean Solutions), S. Christie (CA Coastal Commission), J. Diamond (UC Berkeley), L. Duguay (CA Sea Grant, USC), J. Eckerle (Natural Resource Defense Council), K. Garrison (Natural Resource Defense Council), M. Gjerde (CA State Water Resources Control Board), J. Giovannetti (Smith River Rancheria), Z. Grader (Pacific Coast Federation of Fishermen's Associations), D. Gregg, N. Hapner (Kashia Band of Pomo), J. Herbert (Resource Legacy Fund), J. Jonas (Docktown, Redwood City), K. Jones (CA Water Quality Monitoring Council), G. Knatz (Ocean Protection Council/University of Southern California), D. Koepke (McHugh, Koepke & Associates), T. Lee (CA Senate Committee on Natural Resources and Water), G. Leonard (Ocean Conservancy), R. Lovell (CA Department of Fish and Wildlife), J. Marshak (CA Water Quality Monitoring Council), R. Ota (CA Department of Fish and Wildlife), D. Padgett (Smith River Rancheria), L. Pagni (LightHawk), C. Ridings (Ocean Conservancy), H. Rosales (InterTribal Sinkyone Wilderness Council), M. Ross (CA Department of Water Resources), J. Savage (Northcoast Environmental Center), T. Sawyer (Hog Island Oyster Co.), S. Sikich (Heal the Bay), T. Sole (Docktown, Redwood City), S. Sullivan (Smith River Rancheria), S. Tezak (Gulf of the Farallones National Marine Sanctuary, NOAA), K. Tuttle (InterTribal Sinkyone Wilderness Council), J. Weston (CA State Water Board), G. Wilson (Earth Law Center), R. Williamson (Humboldt State University), K. Wiseman (Natural Resources Agency)