



CALIFORNIA OCEAN PROTECTION COUNCIL

John Laird, Secretary for Natural Resources, Council Chair
Matt Rodriguez, Secretary for Environmental Protection
Gavin Newsom, Lieutenant Governor, State Lands Commission Chair
Fran Pavley, State Senator
Bill Quirk, State Assemblymember
Geraldine Knatz, Public Member
Michael Brown, Public Member

Item 2

Dear Council Members and Ocean Community,

It is time for a celebration! We have hit a major milestone with the completion of a multi-year, multi agency work plan for managing our Marine Protected Areas (MPAs). This effort is both a culmination of some very thoughtful work stemming from the MPA Partnership Plan and a launch pad into the new era of managing our MPAs that will be codified in Fish and Wildlife/Fish and Game Commission's MPA Master Plan. The work plan, which will be presented at the OPC meeting, represents the best thinking of our State MPA Leadership Team and lays out a detailed road map for action. This collaborative approach to MPA management is unique to California and is a reflection of our Chair's emphasis on coming together to solve problems.

Our work on ocean acidification and hypoxia, through the work of the Ocean Science Trust, continues to garner increasing national attention. The partnership with Oregon, Washington and British Columbia under the umbrella of the Pacific Coast Collaborative is flourishing. Our meeting with EPA and NOAA leadership last month has led to an enriched partnership and a request to brief the National Ocean Council Steering Committee this month.

We are excited to be presenting our Prop 1 Grant Guidelines to our Council at this meeting. These guidelines reflect both the intent of the bond passed last fall and OPC's priorities. We have been privileged to travel the coast and meet with people to harvest their ideas for drafting the guidelines and I think the final product reflects their advice. Should the Council adopt the guidelines on September 22nd, we are committed to putting out the first request for project concepts in October.

Finally I hope you will be able to attend the joint OPC/Scripps workshop on the morning of September 22nd. The [workshop](#) will focus on understanding the effects of El Niño on California's living marine resources. Our expert panel will detail past El Niño events and explore opportunities for science-informed action as this year's event unfolds.

I hope your summer has been wonderful and I look forward to seeing you at our meeting September 22nd.

Warm Regards,

Cat

Deputy Secretary for Ocean and Coastal Policy
Executive Director Ocean Protection Council



**California Ocean Protection Council (OPC)
Executive Director's Report
September 22, 2015**

The Executive Director's Report provides an update on OPC outcomes and accomplishments since the previous OPC meeting. This report covers August to September 2015¹.

Water Quality, Supply and Infrastructure Improvement Act of 2014: The OPC has been allocated \$30 million from the Water Quality, Supply and Infrastructure Improvement Act of 2014 (Proposition 1) passed by voters in November 2014. The proposed final grant guidelines are before the Council today for possible adoption. For additional information, please see Agenda item #4.

Strategic Plan Issue Area 1: Science-Based Decision-making

California Seafloor and Coastal Mapping Program: In an effort to assess the utility of OPC-funded seafloor and coastal mapping products, OPC staff and partners administered a survey to 36 state and federal end-users (please find survey results attached). The survey indicated that both state and federal agencies are supportive of continued development of program products paired with increased training for end-users and there is a high degree of interest in continued product development in the Los Angeles and Orange county area. The survey results are informing a state-federal steering committee convened by OPC, NOAA, and US Geological Survey who are charged with developing a 5-10 year vision for the program.

Closed grants within Science-Based Decision-making

California Seafloor Mapping—Southern California Data Gaps Project (CNRA Agreement #C0100200): The goal of the project was to coordinate seafloor habitat mapping surveys to collect, process, analyze, distribute and archive high resolution multibeam bathymetry and backscatter data covering previously unmapped areas along the Southern California mainland shoreline from the outer kelp canopy edge (~10m isobath) to the California State waters boundary out 3 nautical miles. As a result of this project, all mainland California state waters have now been mapped in high resolution (SF Bay is currently undergoing mapping via contract #0-07-083 and is expected to be complete by December 2015). The mapping data has been used to update NOAA nautical charts for safer navigation and to more accurately identify areas that may be more heavily impacted by tsunamis, among other applications.

¹The present ED report contains descriptions of OPC grants or contracts that have closed since the last OPC meeting. Each grant or contract is described under the header of the OPC strategic plan issue the work is intended to address.

Strategic Plan Issue Area 2: Climate Change

Update on Implementation of the Safeguarding California Plan

As we presented at the July 29th, 2015 meeting, OPC's Executive Director and staff have been designated by the California Natural Resources Agency as the sector leads for implementation of the climate adaptation policies of [Governor Brown's Executive Order B-15-30](http://gov.ca.gov/news.php?id=18938) (<http://gov.ca.gov/news.php?id=18938>), issued on April 29, 2015, which includes actions to implement the state's climate adaptation strategy, [Safeguarding California Plan](http://resources.ca.gov/climate/safeguarding/) (<http://resources.ca.gov/climate/safeguarding/>). OPC has coordinated the ocean and coastal sector agencies in drafting the chapter on Ocean and Coastal Ecosystems and Resources in the Safeguarding California Implementation Plan. A public draft of the Implementation Plan should be released towards the end of September with a few public workshops and a period for public comment in October.

California Climate Change Symposium

This symposium held in late August in Sacramento was jointly coordinated by CNRA, CalEPA, OPR, and the IPCC and focused on using climate science to plan for a resilient future. OPC staff, Abe Doherty, moderated a panel on climate impacts and adaptation options for coastal resources. This panel consisted of scientists, NGOs, and Executive Director Kuhlman. Cat Kuhlman highlighted the changing ocean conditions through the lens of ocean acidification and hypoxia, emphasizing the interconnectedness between ocean health and human activity. OPC staff, Jenn Phillips, furthered the discussion by presenting a poster on the West Coast Ocean Acidification and Hypoxia Science Panel and OPC's role in linking the science to policy and management action.

West Coast Ocean Acidification and Hypoxia Science and Policy Efforts

Science Panel Updates

The West Coast Ocean Acidification and Hypoxia Science Panel, convened by Ocean Science Trust in 2013 at the request of Ocean Protection Council, is continuing to develop a series of products that address priority knowledge needs identified by decision-makers. Consisting of 20 leading scientists from California, Oregon, Washington and British Columbia, the Panel is working diligently to finish their suite of products, which include: (1) peer-reviewed publications addressing topical themes identified by decision-makers (e.g., ecosystems, physiology, and oceanography), (2) translational 'science-to-policy' documents tailored to specific agency needs, (3) more visionary translational documents that provide innovative ideas for how science can inform management now and in the future (e.g., a monitoring framework and research priorities for the West Coast), (4) an executive summary for decision-makers which will encapsulate the key messages and insights that are emerging from this coast-wide effort. The Panel most recently released, "Multiple stressor considerations: Ocean acidification in a deoxygenating ocean and a warming climate" (<http://westcoastoah.org/multiple-stressors/>). Many products are completed and can be accessed on the Panel website (<http://westcoastOAH.org>), and the remaining products are drafted and rapidly progressing. As the Panel wraps up later this fall, the key messages emerging from the Panel and suite of products will be presented in a way that lays the foundation for policy and management next steps.

Decision-Maker Engagement

The Ocean Protection Council staff and the Pacific Coast Collaborative will continue to play a central role in communicating and translating the Panel's work to inform policy and management decisions at both the state and federal level. During the week of July 15, the Pacific Coast Collaborative Ocean Acidification and Hypoxia Subcommittee (which includes OPC Executive Director Cat Kuhlman) traveled to Washington, D.C. to meet with federal partners, including congressional members and staffers, agency administrators and subject matter experts at NOAA and EPA, as well as the White House National Ocean Council. The group discussed how we can better partner and align priorities across state and federal government to respond to the Panel's findings, and act on ocean acidification and hypoxia to build resilience and strengthen ocean health for the long-term. In response to those meetings, the Pacific Coast Collaborative is drafting a series of papers and vision statements discussing policy and research planning on the West Coast and how to best collaborate with the federal government in light of the scientific recommendations provided by the Panel. In addition, the group has been invited back to Washington, D.C. to discuss ocean acidification and hypoxia science and policy activities along the West Coast at the National Ocean Council Steering Committee meeting on September 17. Furthermore, the Ocean Protection Council and Ocean Science Trust co-hosted a workshop on the role of Panel's work in future coastal management and policy before the July 29 Ocean Protection Council meeting. A summary is available at the following website:

<http://www.oceansciencetrust.org/wp-content/uploads/2015/08/7-29-15-OAH-Workshop-Key-Messages-FINAL-.pdf>.

Strategic Plan Issue Area 3: Sustainable Fisheries and Marine Ecosystems

Whale Entanglement Workshop

On August 20, 2015 the OPC, the California Department of Fish and Wildlife, and NOAA Fisheries hosted a discussion about whale entanglements in equipment used by the Dungeness crab fishery. Over 50 fishermen, environmental NGO representatives, and engaged citizens gathered in Oakland to share information and explore ways to reduce the risk of entanglements. Several exciting next steps were identified, including the formation of a working group that will further explore a variety of potential gear modifications and other strategies to reduce entanglements. Plans are also underway for the NOAA West Coast Marine Mammal Entanglement Response Network to work directly with fisherman to enhance identification and tracking of entangled whales.

Closed grants within Sustainable Fisheries and Marine Ecosystems

The Future of the California Chinook salmon fishery: Roles of climate variation, habitat restoration, hatchery practices and biocomplexity (CNRA Agreement #0-09-014): California's Chinook salmon fisheries have become increasingly variable, with recent record abundances followed by record lows leading to a fishery closure. This research project explored why this is happening and what can resource managers do about it. Through empirical analysis, the researchers quantified environmental and managerial factors occurring at each life-stage that have an influence on the survival, growth, distribution, and maturation dynamics of Chinook salmon from California waters. From this, river flow and forage conditions at first ocean entry

was identified as one of the dominant determinants of later adult abundance. This project represents a significant step towards understanding and explaining the variability of the California Chinook salmon fishery and identifying what managers can do to improve the sustainability of the fishery.

North Central Coast MPA Baseline Monitoring (CNRA Agreement # 0-09-015): The baseline program is the first step in MPA monitoring. It establishes a baseline – or benchmark – of the ecological and socioeconomic conditions when the regional MPA network took effect and documents any initial socioeconomic and ecological changes in the region. The North Central Coast MPA Baseline Program was launched in 2010. Researchers across 11 different projects monitored a suite of ecosystems, from sandy beaches, rocky reefs and kelp forests, to the 380-foot deep waters around the Farallon Islands. Data were also collected on human activities, including commercial and recreational fishing, beach use, and boating activities.

A [Regional Snapshot](#) report shares highlights of initial results and can be downloaded along with final technical reports and data for each project (http://oceanspaces.org/sites/default/files/regions/files/ncc-regional-snapshot_0.pdf). This program was guided by the North Central Coast MPA Monitoring Plan and overseen by a collaboration among the California Ocean Science Trust, California Department of Fish and Wildlife (CDFW), California Ocean Protection Council, and California Sea Grant

Related Initiatives

Big Blue Live was a three day live presentation of PBS and the BBC that aired August 31 – September 2 on television and online that celebrated the Monterey Bay as a success story in ocean conservation. There was a focus on how many divergent groups have come together to protect, conserve and restore the Monterey Bay through the designation of the Monterey Bay National Marine Sanctuary in 1992. Further leadership was provided by California to bolster this effort by establishing a network of MPAs under the Marine Life Protection Act and a commitment to a more ecosystem-based approach to fisheries management under the Marine Life Management Act. Big Blue Live brought together scientists, filmmakers and photographers, animal behaviorists, and other experts over the course of three spectacular nights. Viewers watched one of nature's great "reality shows" delivered through state-of-the-art filming technologies and live reports from air, sea, and below the waves. Secretary Laird submitted an op-ed in the Sacramento Bee highlighting the federal and California policy successes that have been critical in allowing the ecosystems of the Monterey Bay Area to thrive (see attached).

Closed grants within Related Initiatives

California Thank You Ocean Public Awareness Campaign (CNRA Agreement #0CA12014). This \$147,500 grant of Environmental License Plate Funds to the National Marine Sanctuary Foundation (NMSF) significantly advanced the Thank You Ocean campaign. Through this grant, the campaign produced 37 biweekly video podcasts, with a total viewership of over 70,000. The most popular video podcast (viewed more than 4,700 times) featured Oceans Future Society President Jean-Michel Cousteau discussing efforts to protect orca whales. To view Thank You Ocean podcasts, please visit: <http://thankyouocean.org/videos/>.

This grant also resulted in the publishing of new website content and over the grant period, more than 42,000 people visited over 75,000 webpages. The grant also allowed the Thank You Ocean campaign to continue to partner with the California Coastal Commission on the California Ocean and Coastal Amateur Photo Contest (<http://mycoastalphoto.com/>). Specifically, the funds were used to develop a website by which contest entrants could upload their photos via the web and members of the public could vote on these photos. In 2014 there were over 1,200 entries, a significant increase in participation over the previous system whereby entrants submitted photos via mail.



2015 Viewers' Choice Award: *Family Reflections* by Slater Moore

**California Seafloor and Coastal Mapping Program (CSCMP)
State and Federal End-User Survey Summary
August 2015**

Background

At the direction of the California Seafloor and Coastal Mapping Program (CSCMP) Steering Committee¹, staff administered a survey to state and federal end-users with the purpose of better understanding if agency staff were using the information produced through the California Seafloor and Coastal Mapping Program (CSCMP) and what barriers exist that limit the utility of the program's products.

Steering committee members identified 3-5 employees within their organization to participate in the survey. Steering committee members were asked to identify employees who, when considered as a group, are representative of the type of work that agency conducts (e.g. regulatory, research focused). Steering committee members were also asked to identify employees who, when considered as a group, are representative of the range of skills in using geographic information systems (GIS) software. Each identified individual was invited to participate in one of three online webinars conducted by USGS. These webinars provided a brief orientation to the program as a whole and the range of CSCMP product suites before taking the survey. Survey respondents were asked to take the survey as soon as they could after each webinar; the survey was administered online through Google Forms.

Survey Highlights

- No substantial difference in preference for particular map product suites (e.g. backscatter vs. seafloor character)
- Substantial preference for future mapping in state waters off Los Angeles and Orange Counties and a small area off Humboldt Bay.
- Overall, unfamiliarity with the program was cited as the biggest reason respondents were not using the product suites.
- Need for training, need for data collection in the "white zone", inadequate equipment/lack of access to software, and need for data collection in federal waters were the four most frequently cited barriers to use (in that order).

¹ At the time, the steering committee included representatives from the following agencies: California Ocean Protection Council, US Geological Survey, NOAA, California Geological Survey, US Army Corps of Engineers, State Coastal Conservancy, Bureau of Ocean Energy Management, California Coastal Commission, FEMA, California Department of Fish and Wildlife, California State Lands Commission, and US Department of Defense. The San Francisco Bay Conservation and Development Commission has since joined.

Survey results

Prior to the USGS presentation, had you heard of the California Seafloor and Coastal Mapping Program?

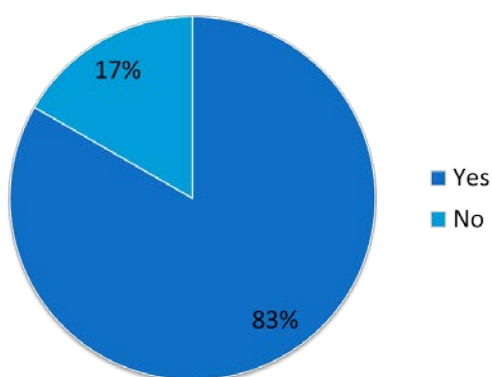


Figure 1

If you answered yes, have you ever used CSCMP data in your work?

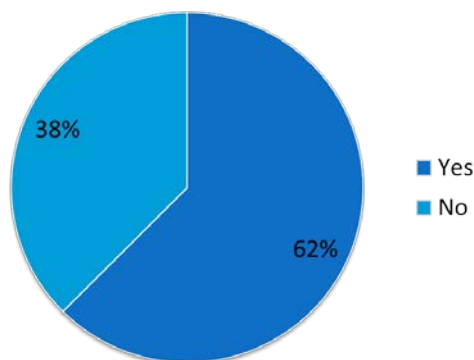


Figure 2

83% of respondents said they had heard of the CSCMP before the USGS presentation and 62% responded that they had already used the CSCMP data in their work (Figures 1 and 2).

The survey respondents were then asked the same series of 6 questions for the 9 CSCMP product suites². For the sake of brevity, the responses to each of these 6 questions across all product suites are presented in a single chart or image.

In response to the first question “Have you used the above product suite in your work?”, almost 50% of respondents indicated they had used the bathymetry data. Roughly 38% indicated they had used the backscatter data; responses for the remaining map product suites ranged from 5-20% (Figure 3). These results are not surprising given the

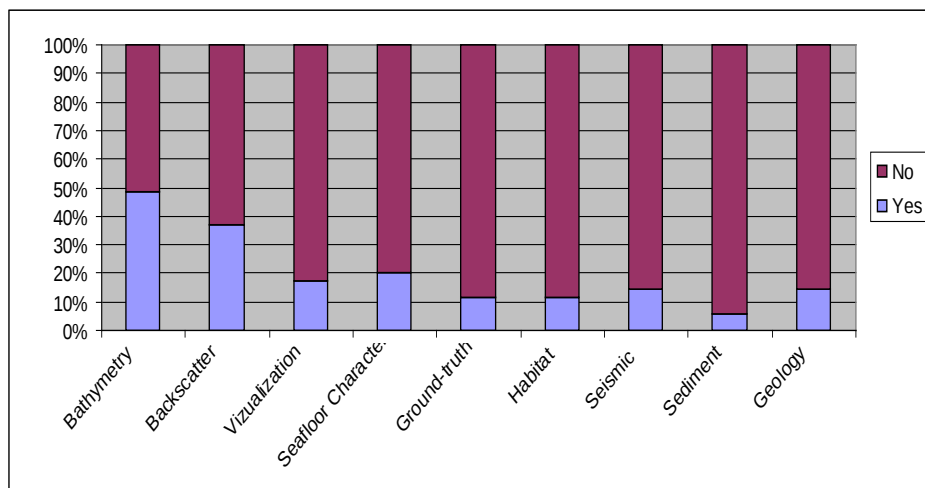


Figure 1

² The 9 map product suites include: seafloor bathymetry, acoustic backscatter, data integration and visualization, seafloor character, ground-truth survey, potential habitat maps, seismic reflection profiles, sediment distribution and thickness and geologic mapping.

fact that the bathymetry data for the entire mainland California coast has been available for some time. The decreased use of the remaining map product suites relative to bathymetry is also not surprising due to the fact that only a portion of this information has been available to end-users (as of summer 2014, 5 mapping blocks were published; as of summer 2015, 21 mapping blocks have been published).

Survey responders were then asked the following question: “If yes, how have you used this product suite? Which elements do you find most helpful?”. There were no demonstrable trends in the response to this question; each narrative answer will be provided to the steering committee in the August 6, 2015 meeting packet.

Survey responders who had previously indicated they were not using a particular product suite were asked why (respondents were asked to mark a series of check boxes and could mark all that applied) (Figure 4). The most common response across all product suites was “not familiar with this product suite before USGS presentation” followed by “not relevant to my work”. For potential habitat maps and seismic reflection profiles the most common response was “not relevant to my work”. USGS reports that the seismic maps are foundational maps for the sediment distribution and thickness maps and geology maps and that USGS doesn’t hold the expectation that the seismic reflection profile maps would be helpful as a stand-alone product. There were very few responses indicating that format or inability to find the product on the USGS website as significant barriers. However, it should be noted that the large number of responses about respondents not being familiar with the map product suite before the USGS presentation indicates that a substantial portion of the respondents have not visited the USGS website for the purposes of accessing the product suites.

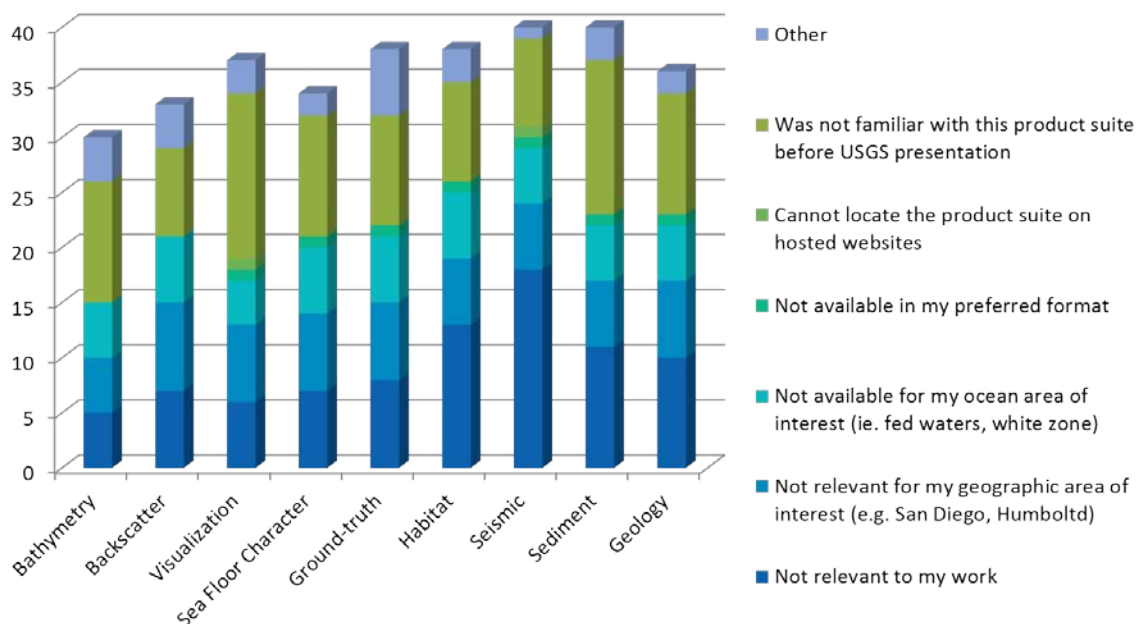


Figure 4

Survey respondents were then asked to provide a written or narrative response to the following question “regardless of the degree to which you are or could use this product suite, what barriers exist that limit its utility?” The most frequent type of response across all map product

suites was the need for training with 35 responses. The need for data collection/mapping in the nearshore “white zone” followed with 20 responses. Inadequate equipment/lack of access to software and the need for data collection/mapping in federal waters followed with 15 responses each.

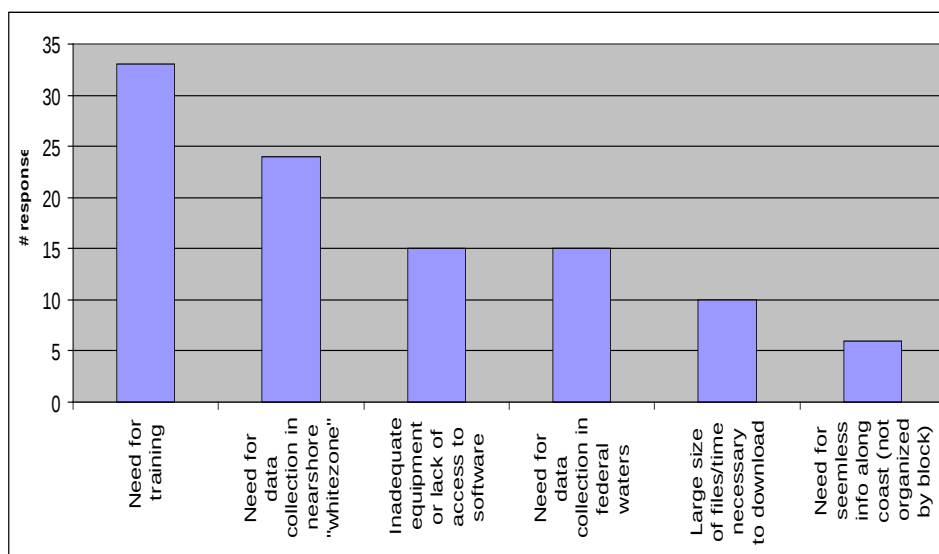


Figure 2

Survey responders were then asked to answer the question “After hearing the USGS presentation, to what degree could you see using this product suite as a resource to help you do your job better?” For seafloor bathymetry, over 50% of respondents responded that it would “very much” or “a good bit” help them do their job better and no responses saying it would help “not at all”. For the eight remaining map product suites, there is no substantial difference in the degree to which respondents said it would help them do their job better (Figure 6).

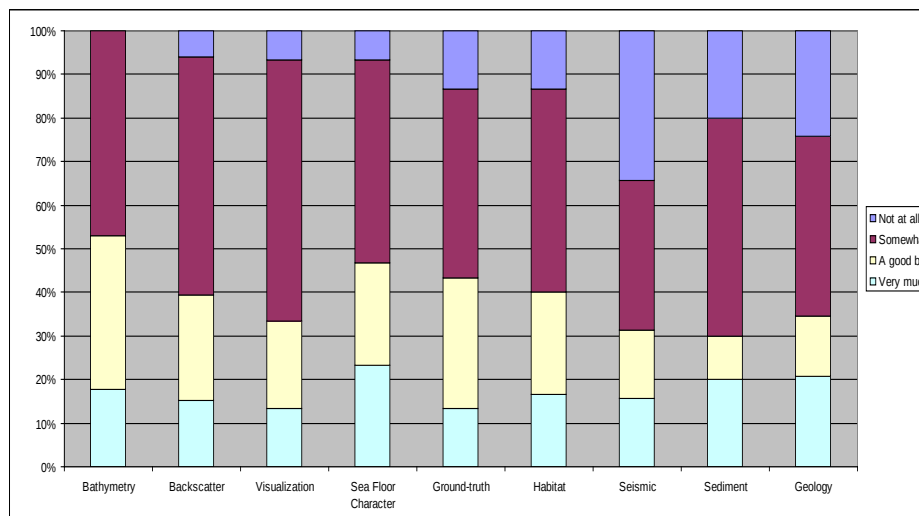
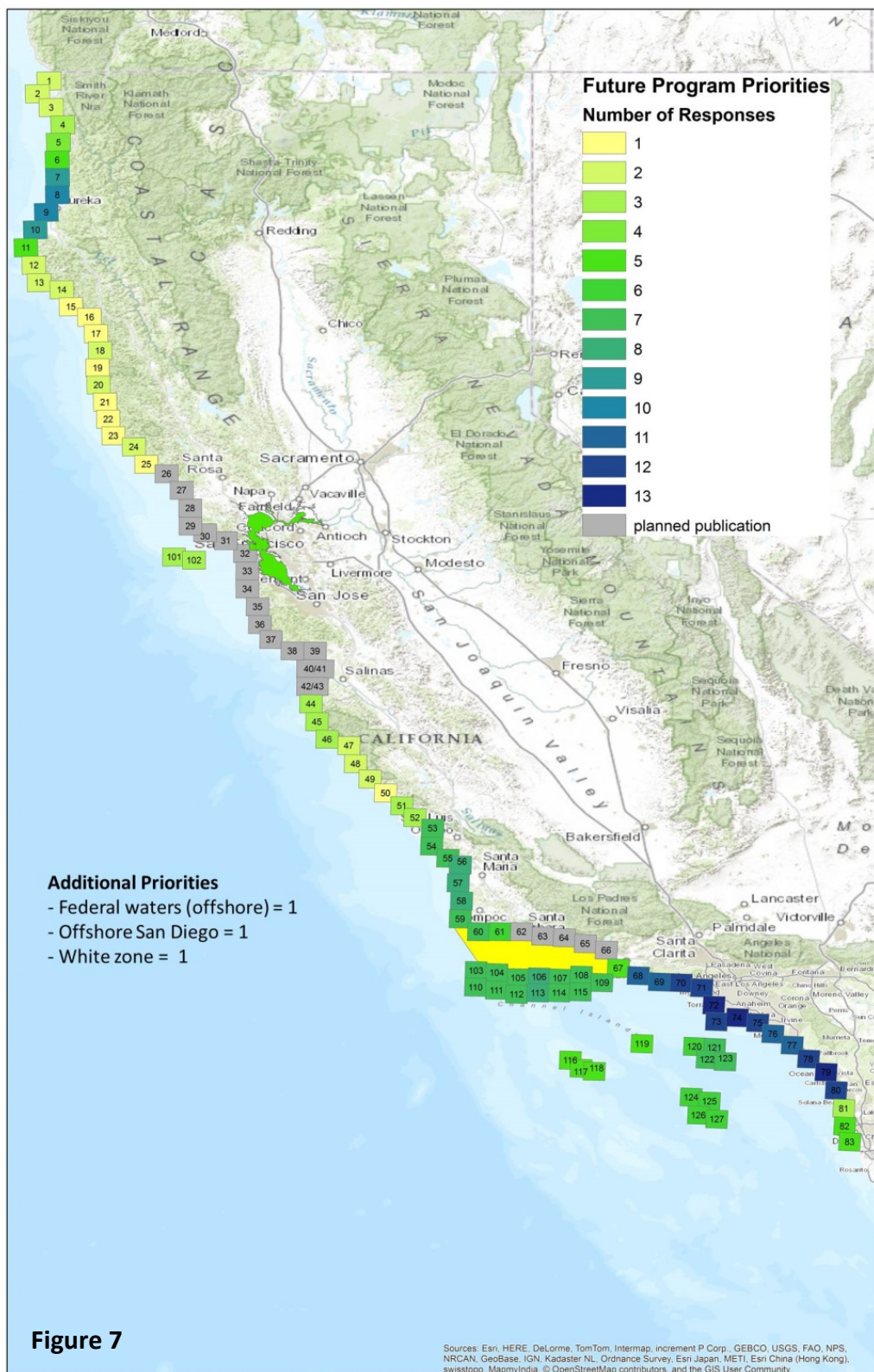


Figure 3

Finally, the respondents were asked the following question: “Which geographic areas would you prioritize for future product suite development?” Respondents could answer this question by identifying specific mapping blocks (as outlined below) or by describing an area. The most frequently cited areas for product suite development are in state waters offshore Los Angeles and Orange Counties. A small area offshore Humboldt Bay was also cited frequently by survey responders (Figure 7).



Info about survey responders

Thirty-six individuals from 11 state and federal agencies participated in the survey (Figure 8). The majority of survey responders said that they use geospatial information “often” or “frequently” in their work (Figure 9).

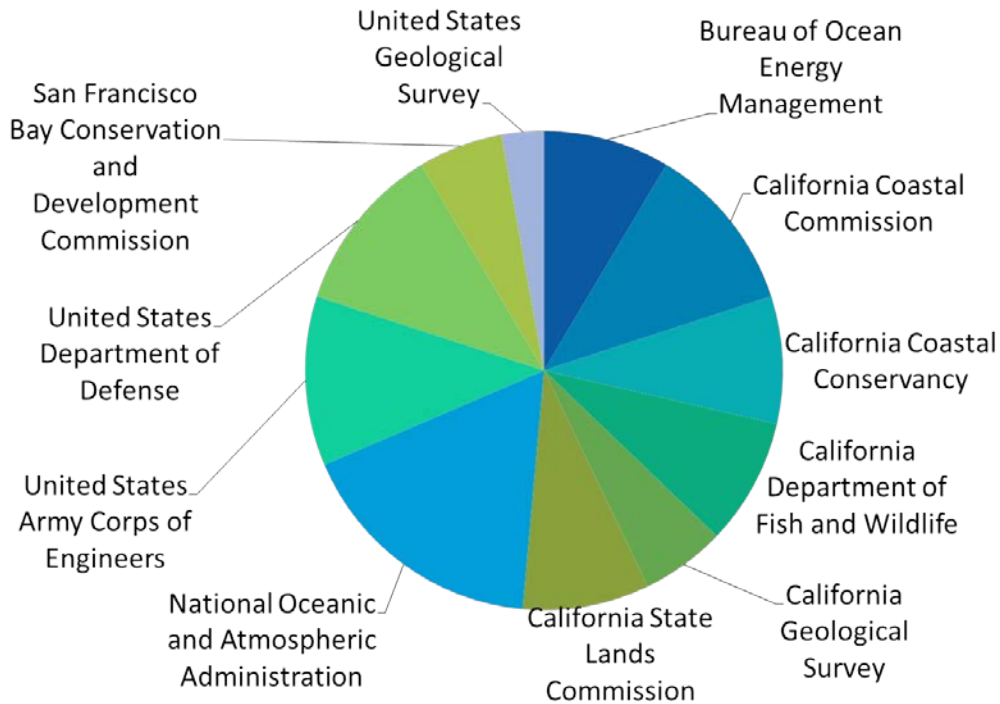


Figure 8

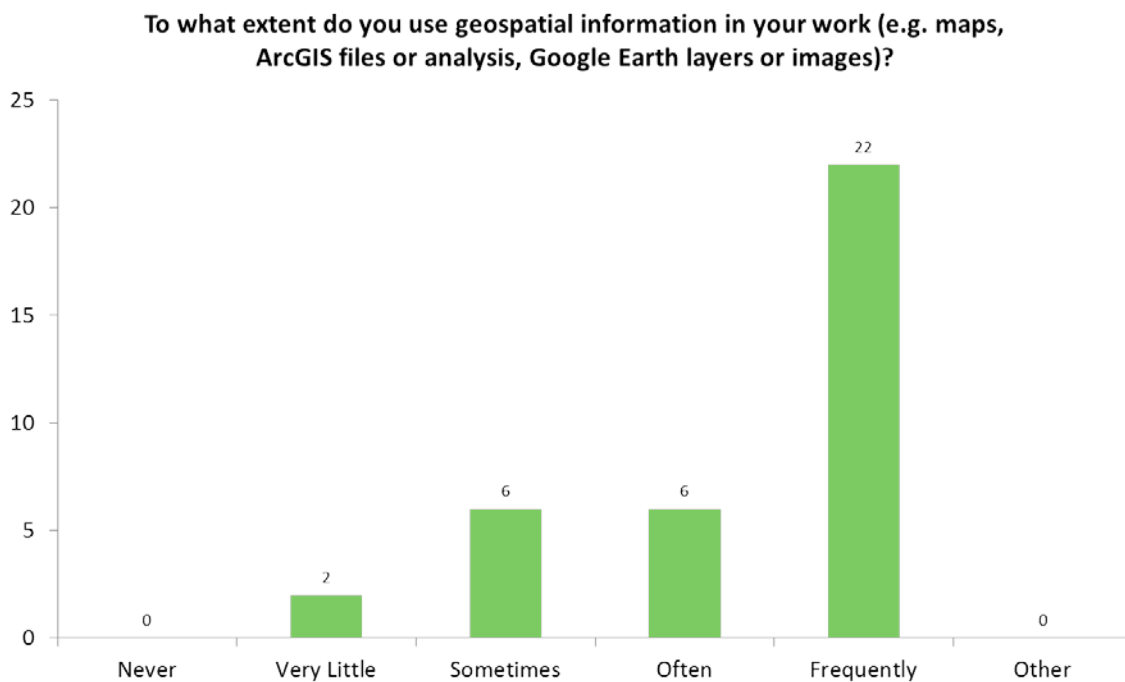


Figure 9

SOAPBOX SEPTEMBER 1, 2015

How we saved Monterey Bay

HIGHLIGHTS

TV specials this week highlight efforts to protect marine sanctuary

Diverse collection of groups and individuals collaborated and used science

Effort can be a model for protecting the ocean



A humpback whale leaps from Monterey Bay in an image released by PBS to promote a three-night special called "Big Blue Live." **Bertie Gregory** - Nature Picture Library

BY JOHN LAIRD
Special to The Bee

This week, the BBC and PBS are showcasing the success story of Monterey Bay in a series of live prime-time television events called "Big Blue Live."

Behind the TV shows stretches a long history of citizen, scientific and government efforts to protect the greater Monterey Bay area, which contains the country's largest kelp forest, one of the continent's largest underwater canyons and hundreds of species of fish and shorebirds.

As a member of the Santa Cruz City Council in the 1980s, I was part of a regional effort to designate the Monterey Bay as a National Marine Sanctuary. At the same time, the community mobilized to prevent oil development on this stretch of California's coast.



John Laird

When the sanctuary was designated in 1992, oil extraction was prohibited, giving additional protections to the many sea species that call Monterey Bay home.

The state joined in with broad initiatives. The Marine Life Protection Act was enacted to help bring back crashing fish populations off the coast. It resulted in the designation of 124 protected areas covering nearly 1,000 square miles through a process driven by stakeholders and based on science. The Marine Life Management Act directed resource managers to shift state efforts from conserving single species to entire ecosystems. These two laws underpin California's commitment to manage marine resources for the health of the entire ocean.

A key part of the story of the Monterey Bay and its thriving marine environment is the diversity of groups and individuals who have come together over the years to protect this amazing area. "Big Blue Live" gives us an opportunity to view in real time the spectacular ocean life just below the waves. We can reflect on how we were able to achieve this success and focus on the future.

While "Big Blue Live" focuses on the Monterey Bay, as chairman of the Ocean Protection Council, I consider how we can replicate partnerships like these throughout California and beyond.

The council – set up a decade ago to bring together different state agencies on ocean issues – continues to develop policy and fund work that ensures we have the best information available. We coordinate with tribes, local governments, nongovernmental organizations, businesses and community members. We cross jurisdictions and mandates in our recognition that ocean health has reached a critical point.

Ocean conditions are changing in ways and at a speed we have never before seen. Sea-level rise, warmer ocean temperatures, increasingly acidic waters and low-oxygen dead zones threaten habitats and sea life. No one agency or group has the knowledge, capacity or resources to address these challenges alone, but Monterey Bay shows we can act for tomorrow if we act together. We must do so to give the next generation a healthier ocean than we inherited.

John Laird is California secretary for natural resources.