California Ocean Protection Council (OPC)
Executive Director's Report
March 2011

The Executive Director's Report provides an update on OPC outcomes and accomplishments since the previous OPC meeting. This report covers November 2010 to March 2011. This report is divided into four sections: Coordinated Governance, Policy Informed by Science, Innovative Solutions, and Supporting our Partners.

Coordinated Governance of Coastal and Ocean Management

Many different government agencies implement ocean and coastal management in California, and, consequently, multi-agency approaches are essential for complex management issues such as climate change, coastal water quality, and aquatic invasive species. The OPC coordinates actions across all relevant agencies to improve the development and delivery of successful management solutions.

OPC Strategic Plan Update:

OPC staff have begun updating the OPC's five-year strategic plan. Members of the OPC Steering Committee and OPC Science Advisory Team are assisting in developing goal statements and action plans for five focal areas: Climate Change, Sustainable Fisheries, Coastal and Marine Spatial Planning, Land-Sea Interface, and Emerging Industrial Uses of the Ocean. For details, see the updated OPC website.

Marine Debris Steering Committee:

The Marine Debris Steering Committee enhances the state's approach to reducing marine debris by coordinating agency implementation of marine debris reduction programs. Regular meetings were postponed in 2010 due to budget constraints and resulting lack of staff capacity. The Committee remains, however, a resource of internal state agency expertise to OPC on an as needed basis.

Marine Renewable Energy Working Group:

The OPC established the Marine Renewable Energy Working Group (MRE Working Group) in March 2010 to enhance collaboration and consistency among state agencies in their approaches to the development of offshore renewable energy. The working group's scope thus far includes issues related to permitting, planning, and managing renewable energy projects, and implementation of the Federal Energy Regulatory Commission (FERC) /California Memorandum of Understanding (MOU). The group is likely to play a key role in developing and implementing any future federal/state agreements.

Table 3. Marine Renewable Energy Working Group Members

Laura Engeman (Co-chair) – Ocean Protection Council
Eugenia Laychak (Co-chair) – California Energy Commission
Cy Oggins, Colin Connor, Mary Hays, Mark Meier, Ninette Lee, Jennifer DeLeon, John Dye, Madhu Ahuja –State Lands Commission
Tom Luster, Alison Dettmer – Coastal Commission
Vicki Frey, Steve Ingram, Annie Manji–Department of Fish and Game
Jaclyn Marks – California Public Utilities Commission

The Working Group met November 17, 2010 to discuss wave and tidal projects, including challenges arising with the canceled PG&E Humboldt project, and to consider key information gaps and research needs. The Working Group plans to meet in March or April of 2011 in coordination with FERC and the U.S. Marine Corps to discuss regulatory approaches for the San Onofre project, as well as other projects such as the Golden Gate Tidal energy pilot. The working group will also address implications of existing research needs for the West Coast Renewable Energy Guidebook (see WCGA activities for more information), and OPC efforts to improve geospatial data integration, viewing, and sharing.

Sharing Geospatial Data and Information:

The California Coastal and Marine Geospatial Working Group (CCMG-WG) was established in February 2010, in response to a 2009 OPC resolution. Working group members include technical users of geospatial data,[1] and staff from the OPC and NOAA Coastal Services Center co-chair the group. The CCMG-WG facilitates the exchange and analysis of geographic information to assist in resource protection, support environmental assessments, and improve comprehensive planning. The California Geographic Information System (GIS) Council formally recognized the working group in October 2010.

In August 2010, the CCMG-WG urged the state to systematically assess whether and what type of online tool(s) would make it possible for state agencies to efficiently manage, share, and download coastal and marine geospatial information for the benefit of natural resource management agency staff, decision-makers, and the greater public. In response, OPC staff released a Request for Qualifications to select a contractor to conduct a scoping study. Staff are currently reviewing proposals and expects to have a contractor begin work by April.

Climate Change:

The Coastal and Ocean Climate Action Team Working Group (CO-CAT Working Group) is comprised of senior level staff from 12 California state agencies with ocean and coastal resource management responsibilities. The CO-CAT Working Group's task is to coordinate state agency actions related to adapting to climate change impacts on ocean and coastal resources while supporting implementation of global warming emission reduction programs.

[1] To date: California Coastal Commission, California Department of Fish and Game, California Environmental Resources Evaluation System, California Ocean Protection Council, California State Lands Commission, San Francisco Bay Conservation and Development Commission, State Coastal Conservancy, NOAA Coastal Services Center, NOAA National Marine Sanctuaries, and Stanford University's Center for Ocean Solutions (COS).

Sea Level Rise Resolution: At the November 29, 2010 OPC meeting, OPC staff presented a draft resolution on sea-level rise and received comments from the Council and public. This draft resolution built upon the CO-CAT's recommendations in a Sea-level Rise Interim Guidance Document that was developed based on input from the 16 state agencies and the OPC's Science Advisory Team. The draft resolution was made available for public comment and subsequently revised in response.

National Academies of Science Study: The OPC is one of several state agencies that are collaborating with Oregon, Washington, and federal agencies to fund a study by the National Academies of Science (NAS) that will provide information on sea-level rise projections. OPC staff serve on the study's steering committee. On January 13, 2011, during the first meeting of the NAS expert panel, OPC staff gave a presentation describing CA state agency needs regarding sea-level rise projections and participated in a discussion to revise the study's scope of work related to assessment of coastal habitats.

Vulnerability and Adaptation Study: OPC staff also serve, with staff from other state agencies, on the steering committee for the California Vulnerability and Adaptation Study, a state-wide assessment of vulnerabilities from climate change funded by the California Energy Commission. The steering committee met with the scientists who are performing the study assessments on February 18, 2011, to coordinate and prioritize information needs.

The OPC is also helping to coordinate a state-wide survey of planners, managers, and decision-makers whose work is related to coastal and ocean management. This survey is being designed and implemented collaboratively by approximately 10 agencies and organizations and is anticipated to be completed by the summer of 2011. This initiative will provide information on the needs and attitudes of managers and decision-makers, with regards to coastal climate change impacts and adaptation.

Members of CO-CAT:

Below in Table 4 is a list of the CO-CAT members.

Table 4. Coastal and Ocean Climate Action Team Working Group Members

John Andrew—Executive Director, Climate Change Department of Water Resources
Brian Baird—Assistant Secretary for Ocean and Coastal Policy, Natural Resources Agency
Ruth Coleman—Director, California State Parks
Susan Hansch—Chief Deputy Director, California Coastal Commission
Garth Hopkins—Chief, Office of Regional and Interagency Planning Department of Transportation
Amber Mace (Chair)—Executive Director, California Ocean Protection Council
Sonke Mastrup—Deputy Director, Department of Fish and Game
TBD—Director, Department of Toxic Substance Control
Sam Schuchat—Executive Officer, State Coastal Conservancy
Frances Spivy-Weber—Vice-Chair, State Water Resources Control Board
Curtis Fossum—Executive Officer, State Lands Commission
Will Travis—Executive Director , San Francisco Bay Conservation and Development Commission

Policy Informed by Science:

A key purpose of the OPC, identified in its authorizing legislation, relates to ensuring that the state's decisions about coastal and marine management are based on the best available science. The OPC's key partner for accomplishing this science integration is the California Ocean Science Trust (OST), which helps facilitate science-based decision-making by connecting science to policy and management. The OST serves as an objective translator, identifying the best scientific knowledge and expertise available to inform ocean policy decisions. It also leverages state support with extramural funding and provides an institutional home to incubate specific programs that respond to state science, data, and information needs. While an independent organization, the OST works directly alongside the OPC and in coordination with state agencies that have coastal and ocean resource management mandates.

Technical Advice and Coordinated Peer Reviewed Studies

Institutionalizing science-based decision-making requires ensuring the OPC relies on authoritative sources and that the science used by the OPC is vetted through established processes for ensuring the accuracy of technical information.

Coastal and Marine Spatial Planning: The OST has leveraged private funding to explore, in partnership with the OPC, the development of a coastal and marine geospatial information management system and related data portals for California. OST staff met with policy makers, scientists, and data managers in New England to learn from their experiences. The OST anticipates a continued dialogue between the two regions that will accelerate progress by both.

Management Research and Information Prioritization Process (MRIPP): The OST has secured private funding to work with the OPC to formulate a process for identifying priority science and information needs of state agencies. This "Management Research and Information Prioritization Process," or MRIPP, will engage state agencies to identify ocean and coastal management priorities where science syntheses and limited new research will advance thoughtful management decisions by multiple agencies. The OST and OPC will then target priority projects for funding. The MRIPP process will identify cross-cutting information needs that will effectively direct resources where they will have the greatest impact.

Aquatic Invasive Species Vector Risk Assessments Project: The OST coordinates the Aquatic Invasive Species Vector Risk Assessments Project, a scientific assessment of the relative risks of commercial fishing, recreational boating, aquaculture, live bait, live imported seafood, and aquariums and aquascaping. The study's purpose is to identify policy actions that enable early detection and rapid response, as well as prevent introduction of potentially harmful invasives. The three project teams gathered in Oakland at the beginning of February for a project kick-off meeting, where the researchers discussed project objectives and coordination.

Sources and Pathways for Plastic Debris and Subsequent Toxic Releases into the Pacific Ocean, Final Report: As plastic debris accumulates in the Pacific Ocean, one urgent concern is the potential impacts of toxic releases on marine species from plastics as they degrade in seawater. To understand this problem, the OPC coordinated with the Department of Toxic Substances Control (DTSC) to initiate an

assessment of the sources and pathways for chemicals related to plastic packaging and products that ultimately reside in the marine environment. To ensure the scientific integrity of the study's final report, the OST is partnering with USC Sea Grant for an expert evaluation. The final report will undergo external peer review prior to anticipated release in April 2011.

The OPC Science Advisory Team (OPC-SAT)

The OST coordinates the OPC-SAT to provide technical advice on OPC reports, evaluate the technical merits of scientific projects proposed to the OPC, and recommend outside experts to serve as peer reviewers for OPC proposals and projects, thus ensuring their quality. The OST also coordinates semi-annual meetings between the OPC-SAT and the OPC management team.

Joint OPC-SAT/OPC Management Team Meeting, January 31, 2011: At this meeting, the OPC-SAT and the OPC management team discussed critical issues facing the state, as well as ongoing OPC projects, including OPC strategic planning, the CA Sustainable Seafood Initiative, and the Marine Protected Areas Monitoring Enterprise. The current Secretary of the Natural Resources Agency, John Laird, and Former Secretary Lester Snow both addressed the OPC-SAT about the critical need to integrate science into policy.

Coastal and Marine Spatial Planning (CMSP) Special Seminar for the OPC-SAT, *The Prospects for CMSP in California*, December 13, 2010: As more and more users compete for increasingly limited ocean and coastal resources, interest in CMSP as a potential mechanism to sustainably manage our coastal uses continues to grow. The OST facilitated a special seminar for the OPC-SAT to consider the prospects for CMSP in California. Speakers included Dr. Amber Mace of the OPC, and members of the Center for Ocean Solutions team from Stanford University.

Coordination of Peer Reviews: The OST draws upon the expertise of the OPC-SAT to coordinate scientific peer reviews of *all* projects or proposals with a technical and/or scientific component. For projects that do not warrant formal peer review, the OST works with the OPC-SAT to provide informal scientific comment. Further, the OPC recently agreed to re-review proposals that have been sent back to the principle investigators for revision. This new element closes the loop on the peer review process, ensuring that all comments are appropriately addressed prior to any funding decisions.

Recent reviews include:

(Ongoing) The Aquaculture Programmatic Environmental Impact Report (PEIR): The Aquaculture PEIR is being prepared for the California Department of Fish and Game to identify potential environmental impacts of an expanded aquaculture industry along the California coast.

(Completed) Project proposal to support a collaborative research study on the impacts of bottom trawling gear on soft-bottom seafloor habitats in the central coast: Funding for years two and three of this five-year study was approved by the OPC in November pending scientific peer review.

Supporting the California Sustainable Seafood Initiative (CSSI): The OST is working with the OPC to explore ways to effectively incorporate OPC-SAT input on the CSSI.

Seafloor and Shoreline Mapping:

Accurate mapping of the coast and seafloor is vital for the sustainable management of California's highly productive coastal and marine resources. The OPC is developing these maps in partnership with state and federal agencies and academic institutions.

- Seafloor data collection in state waters (10m water depth to 3 nm) is nearly complete, with completion anticipated by mid-2011. Considerable progress was made in 2010 on ground-truthing the seafloor data. The new focus for 2011 will be determining a data collection strategy for San Francisco Bay.
- Experiments with different technologies in the nearshore continue in coordination with OR and WA. CSU Monterey Bay is leading an effort in CA to attach a sonar system onto a jet ski to collect data in the nearshore of selected marine protected areas.
- High-resolution coastal LiDAR and aerial imagery is being collected throughout California in collaboration with ACOE, NOAA, USGS and others. OPC-sponsored data collection was completed in December 2010, and those data are being processed. OPC data will be combined with federal datasets and be delivered to the public in late 2011.
- A team of state and federal agencies are discussing product development from these data sets (with sea level rise analysis being a priority). Merging the onshore elevation data with the offshore seafloor bathymetry data will be a first priority.

Ecological Habitat Mapping: Evaluating the health of marine ecosystems requires understanding what is out there. OST staff are supporting OPC staff in their efforts to build off of the seafloor mapping program to provide information on ecological habitat types. This will helps resource managers better understand, monitor, protect, and/or restore unique biotic assemblages, protected species, critical habitat, and important ecosystem components.

OPC has partnered with the OST and NOAA to facilitate a webinar series starting March 2011 on the Coastal and Marine Ecological Classification Standard (CMECS), an effort to create a marine ecological classification scheme with a simple standard format using a common terminology. CMECS is under consideration as the national standard for marine habitats. A subsequent workshop will evaluate the practical application of CMECS to address the state's priority management questions.

Ocean Observing:

The Coastal Ocean Currents Monitoring Program (COCMP) is a collaborative statewide program to monitor and map the surface currents off the coast of California. This unprecedented program is a partnership of academic and government institutions working with industry and non-governmental organizations to design a real time monitoring system along the state's 1,100 miles of coastline.

The implementation phase of COCMP will end in May, 2011, with a network of more than 50 shore-based HF Radar (high frequency radar) operating along the coast. During the past five years, COCMP data have been used in oil spill response, wastewater discharge monitoring, beach water quality monitoring, plume tracking at urban rivers during storm events, search and rescue efforts, climate change analysis, harmful algal bloom (HAB) tracking and forecasting, and coastal inundation modeling.

OPC partners in the COCMP are the Regional Associations (RAs; the Southern CA Coastal Ocean Observing System and the Central and Northern Coastal Ocean Observing System). The RAs and OPC staff are developing operational funding for COCMP at the state and federal level. ***To date, no operational funding has been found***. Additional federal funding is unlikely before 2012. In the absence of new operational funding, the RAs will be unable to retain trained staff and individual installations will begin to be removed. The consequences for California will be immediate (e.g. will not be able to track discharge plumes from outfalls and manage beach water quality) to long-term (e.g. cannot effectively evaluate the impacts of climate change on critical coastal habitats). As was the case in the Gulf of Mexico, in the event of an oil spill, California will not be able to respond effectively to minimize impacts.

A consultant report evaluating the effective and efficient use of ocean observing data for ocean management (the Synthesis of Coastal Ocean Observing Products) will be released for review in spring of 2011.

Sea Grant Research Program 2011:

California Sea Grant and USC Sea Grant recently released Requests for Proposals for the 2011 round of OPC funding for research projects to improve management decisions affecting the ocean and coastal environment. Research proposals must address one of the research priority issue areas that were developed through working groups of resource managers and scientists convened by OST. Proposals will undergo extensive scientific and state agency management review at which point they will then be presented to the OPC for concurrence prior to award of the subgrants.

Innovative Solutions to Coastal and Ocean Challenges

The OPC is a national and international leader in the design and implementation of innovative solutions for ocean and coastal management issues. Below are highlights of a few key projects OPC is working on with its partners.

The MPA Monitoring Enterprise

One of the keystone programs of the Ocean Science Trust is the Marine Protected Areas (MPA) Monitoring Enterprise, created in 2007 to lead development of monitoring of the statewide MPA network established under the Marine Life Protection Act (MLPA). This program is developing a ground-breaking approach for identifying monitoring priorities that relies upon stakeholder input as well as scientific understanding. The MPA Monitoring Enterprise uses future management decisions as the starting place for setting monitoring priorities, and it relies upon the rich scientific expertise available throughout the state combined with leveraged funding to deliver a scientifically sound program that is also cost-effective.

- **Planning South Coast MPA Monitoring:** On December 15, 2010, the California Fish and Game Commission adopted a network of marine protected areas (MPAs) for the South Coast region (Point Conception to the Mexican border), as part of implementing the Marine Life Protection Act

(MLPA). The MPA Monitoring Enterprise is continuing to develop a South Coast MPA Monitoring Plan to guide long-term monitoring of the regional MPA network. Currently the technical elements of the draft plan are being reviewed by the Department of Fish and Game, after which a revised draft plan will be released for public comment.

- **Implementing the South Coast MPA Baseline Program:** The MPA Monitoring Enterprise has continued to develop the Baseline Program. An RFP was released in February 2011 to seek proposals to implement baseline monitoring in the South Coast region. The OPC has allocated approximately $4 million to support the Baseline Program in this region.
- **Planning North Central Coast MPA Monitoring:** Following adoption of the North Central Coast MPA Monitoring Plan by the Fish and Game Commission in April 2010, the MPA Monitoring Enterprise has recently developed a summary version of the monitoring plan. This 'In Brief' version of the plan is now available for download on the OST website http://www.calost.org/North_Central.html.

Sustainable Fisheries:

The OPC is supporting the implementation of several innovative sustainable fisheries projects.

California Sustainable Seafood Initiative (CSSI): Assembly Bill 1217 (Monning, 2009) requires the OPC to develop and implement a voluntary seafood promotion program for California fisheries. The intent of AB 1217 is to encourage California fisheries to seek certification in accordance with internationally accepted standards for sustainability and to promote the purchase and consumption of certified sustainable California seafood. The CSSI panel met three times in 2010 to discuss the important elements of creating a sustainable seafood program for California fisheries. The next meeting is scheduled for March 15, 2011 in Sacramento at the CalEPA building.

Collaborative Fisheries Research (CFR) Organization: The OPC assisted the Pacific States Marine Fisheries Commission (PSMFC) in establishing an organization to support collaborative research throughout the state. The CFR organization will develop, solicit, and fund projects with the goal of creating partnerships between fishermen and scientists to develop fisheries data necessary to resource managers including the Department of Fish and Game, the Fish and Game Commission, NOAA National Marine Fisheries, and the OPC.

- Hired an Executive Officer, Dr. Pete Nelson; establishing Executive Board and Advisory Committee.
- Developing organizational business plan and Request for Proposals.
- Received authorization from the OPC in November 2010 to disburse an additional $1.5M to implement projects and continue organizational support contingent upon an approved business plan.
- Working on initial projects with PSMFC and Department of Fish and Game.

Instream Flow Studies: Authorized in 2008, the OPC has launched rigorous instream flow studies for three coastal watersheds: The Shasta River, the Big Sur River and the Santa Maria River. These studies will help the Department of Fish and Game (DFG) make instream flow recommendations to the State

Water Resources Control Board (SWRCB), thereby complying with their obligations embodied in Public Resources Code 10000-10005. Highlights from the three priority coastal rivers include:

Shasta River – OPC staff reviewed and approved the first phase of the Shasta River Interim Instream Flow Assessment, and the contractors await final review and comments by DFG. The issuance of the final report and timely implementation of the recommendations by DFG prior to the spring irrigation season in the Shasta Valley will be critical to the protection of the few remaining Coho salmon of the Shasta River, as well as for the Shasta River's Chinook salmon, steelhead, and overall aquatic health.

Big Sur River – OPC-funded efforts on the Big Sur River are part of a larger instream flow study and include an estuary study and habitat suitability study that will be completed in December 2011. Simultaneously, DFG and United States Fish and Wildlife Service are conducting three separate comparative instream flow studies. This comprehensive effort will provide recommended instream flow levels for the Big Sur, and a useful comparison of different methodologies for assessing instream flows on coastal rivers. By comparing the outcomes of these instream studies in one location, DFG will be able to develop a "Habitat Suitability Criteria" for Steelhead in Central Coast streams, and a thorough assessment of the condition of the Big Sur lagoon.

Santa Maria River – OPC-funded efforts on the Santa Maria River represent the most significant percentage of the original authorization. The Santa Maria is an adjudicated and highly-contested basin that has experienced at least 12 years of litigation over water rights. Funds allocated to this project will enable rigorous analyses of groundwater-surface water interactions on the Santa Maria, develop a recommended instream flow level that would enable steelhead to ascend from the Pacific Ocean to the relatively pristine wilderness of the Sisquoc River (a tributary), and enable determination as to whether the Santa Maria estuary is capable at present of supporting steelhead. All available historic data has been collected and synthesized, and a scope of work has been agreed upon.

Supporting Our Partners

OPC staff are actively engaged in supporting the work of partner organizations such as the following programs of the Natural Resources Agency.

Coastal Sediment Management Workgroup:

The Coastal Sediment Management Workgroup (CSMW) is a collaborative taskforce of state, federal, regional, and local entities working to reverse the adverse impacts of coastal erosion through the augmentation and restoration of natural processes. The CSMW is developing coordinated regional strategies to manage sediment imbalances for specific portions of the California coast. These strategies aim to maintain coastal beaches, sustain recreation and tourism, enhance public safety and access, restore coastal sandy habitats, and identify cost-effective ways to address sediment imbalances. Regional strategies will be guided by a Sediment Master Plan. The OPC is participating in this workgroup, staffed by its new Sea Grant Fellow.

West Coast Governor's Agreement (WCGA) – Action Coordination Team (ACT) Updates

The West Coast Governors Agreement on Ocean Health was signed on September 18, 2006 and a subsequent Action Plan was released in mid 2008. The Action Plan includes 26 actions, agreed upon by all three governors working in collaboration with federal counterparts in NOAA, DOI, and the USEPA. The WCGA Executive Committee established workgroups (Action Coordination Teams or ACTs) to coordinate and develop work plans for coast-wide implementation of the actions identified in the Action Plan. Ten ACTs are presently in place; eight of which have finalized implementation plans to carry out specific actions in the 2008 plan. Each team includes representatives with subject level expertise from each of the three states, federal, and tribal governments; and in some cases, industry, academia, and NGOs. OPC staff serve on five of the ten ACTs.

Notable accomplishments of the five ACTs that include OPC participation include:

Seafloor Mapping: All three states share a substantial data gap in their seafloor maps: the very nearshore (10m water depth to shore). No single technology has yet proved appropriate for this location, which is generally turbid, rocky, full of kelp, and subject to rough conditions. The Seafloor Mapping ACT was awarded a WCGA grant to evaluate the cost effectiveness of various nearshore data techniques, and create example onshore-offshore data products for WA, OR, and CA.

Renewable Energy: Several areas potentially suitable for wave and tidal energy development occur along the West Coast. All three states need methods to evaluate and manage these types of emerging industries. The Renewable Energy ACT is developing a "Guidebook for Marine Renewable Energy Planning" that will establish preliminary principles for planning at a regional scale, identify baseline information essential for this planning, as well as critical data gaps that could undermine informed and effective decisions. The ACT was recently awarded $100,000 from the WCGA to fund the initial development of this guidebook with the assistance of contractor, Pacific Energy Ventures.

Sustainable Communities: The Sustainable Coastal Communities ACT is implementing the Governors' Charge related to:

- *Action 7.1:* "Support local planning efforts for working waterfronts to promote sustainable fisheries and prioritize coastal-dependent businesses and infrastructure through grant processes and federal assistance programs."
- *Action 7.2:* "Promote and expand environmentally responsible operations and infrastructure at ports and harbors, such as through Green Ports and Clean Marinas programs. Support revitalization efforts for struggling ports."

The ACT released a draft action plan for public comment on December 1, 2010. The comment period closed January 24, and the ACT is now updating the action plan in response. The draft plan is available at: http://westcoastoceans.gov/teams/#communities.

Sediment: The Sediment ACT is implementing the Governors Charge regarding Action 7.4: "Develop regional sediment management plans that increase beneficial use of sediment in an environmentally responsible manner to protect and maintain critical community economic and environmental infrastructure." The final report is available on the WCGA website at http://westcoastoceans.gov/teams/. In addition, the CSMW was recently awarded funds from the

WCGA for a May 2011 workshop in Portland to share case studies and compile lessons learned on regional sediment management in California.

Climate: The Climate ACT meets monthly. The OPC and State Coastal Conservancy, working in conjunction with Ocean Science Trust, were awarded internal WCGA funding for an intern to coordinate several sea-level rise adaptation tasks over the coming year. An intern has been selected and will work primarily on climate change-related shoreline classification and ecosystem impacts.

Thank You Ocean Campaign:

The California Thank You Ocean Campaign is a nonprofit partnership supported by the State of California (Natural Resources Agency and OPC), the NOAA Office of National Marine Sanctuaries, and the Ocean Communicators Alliance. The campaign's mission is to raise awareness of the benefits the ocean provides to us and to identify ways each of us can help protect the ocean in our everyday lives. In 2008, the Thank You Ocean Campaign received the Coastal America Award, the highest award from the White House, for its ocean and coastal initiatives. The Thank You Ocean campaign is increasing outreach and education through its website and social media to engage Californians on four important issues threatening the State: Climate Change, Marine Debris, Water Pollution, and Marine Life Decline.